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**The Cyborg, Cyberspace, and North American Science Fiction**

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in Partial Fulfillment of the Requirements  
of the Degree of Doctor of Philosophy**

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## ABSTRACT

This thesis argues that the interface between human and machine has been an important system of metaphors since the beginning of the twentieth century in North American science fiction (SF) and nonfictional writings. In examining these texts, this study intends to discuss positions and responses regarding technological developments and the social and political experiences underlying it. In my parallel analyses of fictional (SF) and nonfictional (philosophical, scientific, theoretical) texts, I wish to signal similarities and differences among the two fields. In different ways, the treatments of cyborgs and cyberspace in both nonfiction and SF have addressed, through these metaphors, notions of mass culture, democracy, as well as individual and collective agency and subjectivity. I also argue that these critical strategies are best understood as the strategies of two social groups--one of them in a dominant position (that of a professional, mainly technocratic class) and one in an ambivalently marginal position (that of the readers of a mass genre such as SF). In nonfictional writings, the strategy is as a rule one of either uncritical embrace of the present state of affairs, or a specular one of utter rejection, with the only exceptions emerging from contemporary feminism. In SF, attitudes of both consensus and problematization emerge. Thus, my study also calls for a qualification of claims about "postmodernity" as the privileged period in which technology acquires center stage. My first two chapters foreground some theoretical concepts and issues related to both the study of mass culture and of the SF genre. The next three chapters focus on specific texts about the instrumental body and of the virtual frontier, and on the critical responses (by women, and by dissenting male figures) to them. The conclusion stresses the notions of democracy allegorically presented in these texts.

## RÉSUMÉ

Cette thèse soutiens que dès le début du vingtième siècle l'intégration entre l'être humain et la machine a constitué un important système de métaphores à l'intérieur de la production nord-américaine de science fiction (sf) et du discours doxologique. En examinant ces textes, mon étude discute les points de vue et les réponses concernant les développements de la technologie et les expériences sociales et politiques qui en sont à la base. Dans mon analyse parallèle de textes de sf et d'essais philosophiques, scientifiques et théoriques, je'entendes souligner les analogies et les différences entre les deux domaines. De manières différentes, les approches aux cyborgs et à l'espace virtuel, soit dans la sf que dans les essais, ont été rapporté à des notions de culture de masse, de démocratie, de subjectivité ainsi que d'action individuelle et collective. Je soutiens aussi que ces stratégies critiques peuvent mieux se comprendre en tant que stratégies de deux groupes à l'intérieur de la société--l'un ayant une position dominante et l'autre ayant une position marginale ambiguë. Dans les essais, cette stratégie est, généralement, une acceptation passive de l'actuel état des choses, ou bien un refus total, avec la seule exception des positions du féminisme contemporain. Dans la sf on remarque soit des attitudes de consentement, soit de problématisation. Mes deux premiers chapitres introduisent des concepts fondamentaux relatifs à l'étude de la culture de masse et de la sf. Le trois chapitres suivants analysent des textes spécifiques sur le corps instrumentale et la frontière virtuelle ainsi que les utilisations critiques des thèmes du cyborg et de l'espace virtuel dans la sf (en particulier celle écrite par les femmes ou par les hommes en dehors de la vision hégémonique). La conclusion met l'accent sur les notions de démccratie qui sont allégoriquement présentées dans ces textes.

## ACKNOWLEDGMENTS

I would like to thank my thesis adviser, Darko Suvin, for his patience in this cross-continental endeavor. I also wish to thank the many people, among the community of SF readers and critics, who have--often inadvertently--contributed, in countless conversations, to the shaping of this work; let the names of Sandro Portelli (also for a friendship and a mentorship which go far beyond SF) and David Ketterer stand for this collective subject. Mirella Martino and Richard Ambrosini read various versions of the manuscript: hopefully, they will recognize some of their suggestions.

Some of this work has been discussed in panels and seminars in various occasions; let the record show the name of the organizers: Agostino Lombardo, Giorgio Mariani, John Moore, Alessandro Portelli, Umberto Rossi, and Karen Sayer.

An early version of some of the discussions of nonfiction has been published in Italian. See "Intorno al cyberpunk," *Àcoma* 12 (1998): 63-76.

This work is dedicated to my parents (working-class readers and book-lovers, who never doubted that Gramsci and SF could belong on the same shelf); to everyone at the Centro Sociale Brancalione collective in Rome (who even let me practice some politics), and to Mirella of course.

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## INTRODUCTION

Let us commence with a passage from John Steinbeck's *The Grapes of Wrath* (1939): "The man sitting in the iron seat did not look like a man: gloved, goggled, rubber dust mask over nose and mouth, he was part of the monster, a robot in the seat" (37).

This is the first major climax of the novel: the sight of the bulldozer driver coming to evict the sharecroppers from their Oklahoma land. For lack of a better term, Steinbeck calls the driver a robot, but he is the compound entity we now call a cyborg, and he is less than human. The sharecroppers are, ethically and politically, the positive pole of the book, and their world almost literalizes the phrase "body politic." They completely identify with the land; now their integrity and their very humanity are under threat:

[T]hem sons-a-bitches at their desks, they jus' chopped folks in two for their margin a profit. They jus' cut'em in two. Place where folks live is them folks. They ain't whole, out lonely on the road in a piled-up car. They ain't alive no more. (55)

The sharecroppers' standpoint had been predicated on a pastoral "unity" with the cycles of nature; their social antagonism was purely a matter of inherent essence, not one of agency or conscious choice. Facing the Leviathan of corporate finance, they are utterly powerless: "The bank is something more than men, I tell you. It's the monster. Men made it, but they can't control it" (35). Within the world of (capitalist) production no opposition is conceivable. The cyborg-driver is a worker, clearly introduced as such; yet, wage laborer or not (Steinbeck repeatedly uses the word "slave"), his condition of alienation brings him daily into economic and bodily contact

with the sphere of capitalism: this contact makes him fully co-opted and co-responsible in the despicable politics of the Powers That Be (cf. Portelli, *Text* 258-65).

Later in the novel, we have another important encounter between the protagonists and technology:

A high wire fence faced the road, and a wide-gated driveway turned in.

A little way inside the gate there was a small house with a light in the window. Tom turned in. The whole truck leaped into the air and crashed down again. (314)

The wide gate is a promise of openness that leads the Joad family into a New Deal relief camp. This space is defined by the pervasive presence of technology: water-closet, showers, and running-water tubs are unheard-of feats of user-friendliness for the Okies, whom we had only seen fighting an endless battle with the ever-breaking truck. In this space, the migrant farmers' community is supposed to (and, according to Steinbeck, does) experience a collective, autonomous self-management, with democratic institutions of their own--what Habermas could call a public sphere. Yet, behind the open gate there lurk new forms of closure: the decisional jurisdiction of the workers' organization is severely limited (cooking, latrine-cleaning, and the like), without ever allowing for a participation in the dynamics of politics and production--and generally of the outside world--which have made the existence of the "liberated" space of the camp possible and necessary.

Patently, the driver and the camp are allegories on modernity itself, translated into the vehicles of the reified body and of the idyllic space. Conspicuously and programmatically absent from the novel is the option of a standpoint capable of reconciling oppositional collective identity, technology, and the prefiguration of an

antagonistic democratic social contract. Like all interpretive allegories, *The Grapes of Wrath* also leaves open the space for admitting its own limits (Jameson, *Unconscious* 58); during the relief-camp episode, the protagonist Tom Joad, at work with a friend, ends a conversation about the need for union activism (an otherwise stale piece of social realism) by pointing to the need for a new integration with his work instruments: "a pick is a nice tool . . . if you don't fight it. . . . You an' the pick . . . workin' together" (Steinbeck 329). This glimpse of a possible conjunction of humans and tools powerfully points toward a new, non-alienated alliance, beyond mere instrumentality, between subject and objects. Such a hopeful longing, though, remains the statement of *individual* emancipation (each with his pick), while the novel had been discussing the loss of a *collective* integration with nature. Also, this does not dispel the overall negative role of modernity as herald of false, unnatural needs.

The following work is a study of the cognate metaphors of the cyborg and of cyberspace, or virtual space, in twentieth-century North American science fiction (hereafter SF) and in nonfictional writings. My thesis is that North American social discourse has articulated the themes I am discussing along three main lines: the cyborg as agent of authority and power, the technologically defined space as idyll under tutelage, and the affirmative uses of the cyborg and/or cyberspace.

Within each group, I shall proceed in a roughly chronological fashion, and deviate from it whenever necessary in order to follow the continuities and developments of ideological and thematic sub-patterns, as they have concretely emerged since the appearance, in the between-the-wars decades, of the two versions of the human-machine interface. In discussing nonfictional works, I shall consider both

philosophical and scientific writings, including popularizations. In discussing SF, I shall mostly focus on novels, limiting my consideration of short stories to a small number of relevant cases (chiefly from the pre-1950s period, in which they are the privileged form for SF writing in the US). I shall provide extended readings only of the most significant or representative entries in my primary bibliography, endeavoring to construct an interpretive framework capable of tacitly accommodating "minor" items. Despite its bulk, the bibliography itself will inevitably be incomplete: practical as well as methodological reasons prevent the positivist's self-confidence in encyclopedic exhaustiveness. Nevertheless, I shall keep the bibliography in its present bulky size: the canon-maker's risk of generalization from too narrow a basis is, in mass genres as in all serious cultural analysis, a much greater one.

I argue that there are two reasons for clustering cyborg and cyberspace together. First, the cyborg--a compound, sentient entity, organic and inorganic at the same time--and cyberspace--a simulated spacetime; allowing for interaction with the body and mind of its operators--have simultaneously come to occupy a central place in the North American cultural imagination. Particularly in the last fifteen years, they have given rise to a substantial body of literature.

More importantly, these two notions have come to address specular problematics. The cyborg is a body which renders meaningless all notions of a split between monadic subjectivity and external instrumentality. It is the site of an identity which does not define itself as the unspoiled, authentic haven against a corrupt and corrupting heartless world; instead, cyborgs assert their autonomous presence by selectively internalizing the technological environment. Analogously, virtual space is

posited as a space of artificiality, a result of hi-tech production, which only exists as an arena for human agency.

Early precursors of the cyborg and of virtual space are to be found in North American discourse throughout this century, and in SF as far back as the 1920s. However, these two notions find a name and a complete formulation, respectively, only in the early 1960s and in the mid-1980s. Along with the proliferation of fictional treatments, the most recent, cybernetic versions of these themes have received emphasis in a number of studies in the political and philosophical--including prominent feminist--theories of postmodernism, which have referred to the two cultural icons as being representative of contemporary anxieties and hopes. In such views, the cyborg and cyberspace challenge the boundaries between the "natural" and the "artificial" or "cultural" (whether in the variant of prosthetic contiguity or of biochip integration), and literalize concepts of multiple, fragmented subjectivity and boundless identity, and/or the promise of a reformulated practice of social action.

In these fictional and nonfictional allegories or parables, the interpretive stake is the technologizing of experience, whether "modern" or "postmodern," literalized in the technologizing of the body and of space. As Steinbeck's classic suggests, in specific texts "organic" and "inorganic" are not stable sites of positive or negative values, even within the same work, and indeed they should not be. My hypothesis is that the degree to which these metaphoric conjunctions of selfhood and technology are explored, articulated, and subjected to critical testing will provide a simultaneously ideological and esthetic yardstick for individual texts.

I intend this study to be a comprehensive analysis of the literary versions of these metaphors. So far, only brief or incidental discussions of these images have been

devoted to the subject (e.g., in Wolfe's and Bukatman's books). Also, recent scholarship most effectively focusing on the technologizing of modern American culture and poetics has, as a rule, limited the analysis to pre-Depression, highbrow texts (e.g., Benthall, Seltzer, Tichi). Similarly, postmodern literary critics such as McHale, while granting some SF texts a small niche at the periphery of their canon, are clearly very dubious about the possibility of attributing esthetic significance to texts associated with lowbrow institutions, and indeed with the idea itself of a literary genre, and in general tend to foreground postures of recoil with regard to social change.

My "single-issue" study will provide a reading of the transformations of this twin technological metaphors in a "lowbrow" development which parallels and often directly interacts with nonfiction. I shall emphasize the highly self-conscious intertextual nature of these metaphors. To begin with, they are icons built, logically and chronologically, on other existing items in SF's repertoire (from the "Frankenstein monster" to robots and clones) and on the tensions predicated by these. Most importantly, the context of SF is a mass genre which has always sustained an ostensible rhetoric--and, often, a genuine attitude--of critical self-reflection, and which has brought into existence an "insiders" subculture that has often portrayed itself as the *engagé* side of mass literature.

Before embarking on the textual analyses, I shall endeavor to provide a general framework for my discussion of SF and of its metaphors. Under the heading of "critical presuppositions," the first two of the following chapters will survey theories of mass culture (Chapter 1) and of SF (Chapter 2). These chapters aim at foregrounding and emphasizing how the criticism of mass culture and of SF always

and inevitably presupposes an interplay of ideological and political stances and assumptions with regard to notions such as "masses," "culture," "science," and "fiction." My survey will be briefer in the better known field of mass culture studies and more detailed in the field of science fiction theory, where I shall also address the development of "inside" criticism. No critical analysis can be free of these presuppositions, including this study: these chapters will ground in theory my own approach to (mass) culture and (science) fiction as problematic, neither mere ideological instruments nor mere autonomous ivory towers, but rather as ongoing, ever-unstable sites of co-optive and emancipatory tensions. In the specific thematic of my study, these tensions will be all the more pertinent: my analysis will discuss the ways in which these presuppositions have been literalized, finding privileged sites, in the metaphors of cyborgs and of virtual space.

My study will then try to isolate a rhetorical history of the ideological uses of cyborgs and virtual space, with a special emphasis on overtly ideological and didactic works of nonfiction, in other words, my study will assume that in mass culture hegemonic pressures do exist, and often dominate texts. Thus, under the rubrics of the "body instrumental" (Chapter 3) and of the "virtual frontier" (Chapter 4) I shall reconstruct the history of these co-optive forces. Their own monologizing function will emerge both in their inner unidirectional, teleological structure, and in the direct political agendas of the works under scrutiny. In my view neither icon should be associated or identified with the postmodern age. In fact, my work can be read also as an argument on the limits of telescoping periodizations: in cultural history, some interfaces are much older than many critics would contend.

As straightforward and often crude Cartesian incarnation, the prosthetic instrumental body of contemporary cybernetics and genetics is rooted in early twentieth-century Darwinism. Its history can be connected to the ideology and rhetoric of US national expansionism--in a rhetoric that can be traced as far back as Emerson--and produces a fantasy of absolute control over the material body, with the latter's ultimate disappearance. This erasure of the materiality of needs and social marks is at the same time a fantasy about unconstrained individualism and about a wished-for body politic free from the burdens of the body and of politics. In SF, I shall follow this strand from the early dictators of the early pulps to the preoccupations about mass culture in the post-1945 years (with an emphasis on the ambitious turning points by Heinlein and Bester), to the contemporary avatars in the "military" subgenre and in much cyberpunk.

Virtual space is often theorized concomitantly with the cyborg, as the public space presupposed by it, or presupposing it. In my reading it functions as an updated version of the democratic-nationalistic US myth of the frontier, as an empty and potentially limitless space for individual expansiveness. Here, the nonfiction emerges as a conscious effort in this direction, while SF--although early examples presented cyberspace as the *denial* of the open frontier--is at its most lyrical in works concerned with the depiction of an inherently liberating space of dematerialization, that can be enjoyed without taking into account its own conditions of possibility. In both cases, the underlying teleological vision and the emphasis on dematerialization place these texts on the verge of metaphysical fantasy.

Finally, Chapter 5 will examine works in which these materials are used without the overall stress on finalism, disembodiment, and expansive ultra-

individualism. The first cluster stresses interpersonal relations, in a sentimental tradition of women's writing that starts around 1940. In Dick, an important turning point is reached in polyphonic novels which present different characters with different paths to embodiment or disembodiment, individualism or interdependence--none of which is granted superior metaphysical status. This is also what happens in Gibson and in women's cyberpunk, who stress as well the role of body and affect. Here, both political and formal complexity converge in a fully secular, materialist vision which provides a good example of the critical potential of the SF genre, which ties in with the theoretical feminist work of Donna Haraway, with its stress on embodiment, technology, and mass culture as sites of emancipatory hopes.

## Chapter 1

### CRITICAL PRESUPPOSITIONS. 1: ON MASS CULTURE

#### 1. Science Fiction in the Mass Market

Many an oxymoron can be associated with science fiction. One is textual, inherent to the term itself, and defines it as a genre. Another one, at least as far as most twentieth-century SF is concerned, is extratextual, institutional: to put it in a slogan, SF is a self-critical commodity. This is to say that the social institutions which ensure its dissemination among the readers sustain, and are sustained by, features commonly assumed as incompatible within the same step of the ladder of literary prestige. As a branch of lowbrow literature, an SF tale is a commodity, produced and sold by professionals. At the same time, since the inception of the pulp-magazine era the genre professionals, like their highbrow colleagues, are the authors of a continual body of criticism, theory, and history of SF, whose pressure helps to shape editorial policies, the exploration of particular motifs, themes, and subgenres, etc. Starting with the very beginning of the SF pulps in 1926, the packaging of an SF story or novel surrounds it with an array of editorials, manifestoes, reviews, essays, and letters to the editors, as well as with a proliferating outer circle of mimeographed little magazines ("fanzines"), readers' clubs and conventions, discussing SF and SF publishing. These institutions are testimonies to a whole subculture, the network of "fandom," that functions as an interface between professionals and readers. The social composition of this subculture, in its various phases, as well as that of the wider general readership of SF, remains only partly analyzed, and the available information about it is still largely anecdotal. Thus, some of my claims in this chapter should be considered as hypotheses, whose

conclusive testing, in terms of quantitative sociology and of discourse analysis, falls beyond the scope of this work.

What is certain is that in the SF market, peaking in the US between the early 1930s and the late 1970s, the usual separation between producers and consumers of written fiction appears to be blurred. Readers/fans become writers, editors, critics, agents, and even publishers: many professionals work in more than one role, in some cases simultaneously. As a result, the concept of individual authorship is sometimes strongly put into question. This happens not only because of editorial interference, censorship, and self-censorship--all of which are robustly present. Also, and most importantly, the SF text is acknowledged, by its producers, consumers, and intermediaries, as part of an intertext. Its features and articulations will be exemplified in the following chapters.

Historians of the SF fandom agree in saying that what starts around 1930 as a network of letter-writers and readers' clubs promoted by the pulp publisher Hugo Gernsback soon acquires a high degree of autonomy.<sup>1</sup> The SF fans do not simply accept the vertical communication channels set for them by the official promoters, but start creating horizontal channels of their own (such as the fanzine) to discuss SF among themselves. In about ten years, they virtually replaced the old generation of "pros." In the late 1940s it is from the ranks of fandom that a flurry of minuscule specialty presses develops, with circulation in four digits at the best (cf. Eshbach, *Shoulder*); these outlets represent for a few years the only market for SF published in book-form. In different ways, the fans keep making their interacting presence felt after the 1950s as well (cf. Moskowitz, "Fanzines"), even after the *Star Wars* boom, when some SF becomes part of the general bestseller market (cf. Sedgewick). Thus, to

analyze the SF subculture simply as a hard core of enthusiastic readers appears to be of limited usefulness. Rather, the effects of this collective action can be illustrated, following Stableford (*Sociology* 25-26) and Parrinder (42), in the terms of Robert Escarpit's classic distinction between "connoisseur" and "consumer" readership, formulated in his *Sociology of Literature*:

The role of the connoisseur is to go "beyond appearances." to perceive the circumstances which surround literary creation. to understand its intentions. to analyze its means. For him. there is no such thing as aging or death of a work. as it is possible at any given moment to reconstruct in his mind the system of references which restores to any work its aesthetic attitude. . . .

The consumer . . . lives in the present. . . . He has no active role. merely an existence. He tastes what is offered to him and decides whether or not it pleases him. The decision has no need of being explicit; the consumer reads or doesn't read. (89)

In SF, given the overlapping of roles, this in-group includes self-appointed genre-lovers among both writing and/or institutionally mediating professionals and readers, and it functions as an interacting assumed audience for editors and writers. These connoisseurs are a discriminating audience (cf. Hohman); after the inception of the paperback boom, they use their awareness of SF history in order to help shape the canon of the genre. Among other things, it is due to their activity that the successful SF book assumes traditionally the form of the slow but continuous seller--while in the general popular-fiction market a book is either a flop or a flash in the pan, selling well for a year or two and quickly forgotten. Before the *Star Wars* boom in the late 1970s,

which is a turning point marking SF's admission to the realm of cultural Big Business (cf. Sedgwick, and Spinrad *Alive*), very little SF reached the best-seller list--none at all from the specialized book series or with the explicit "SF" label. Among the members of the SF subculture, only Arthur C. Clarke enters the best seller list, and only with his novelization of Kubrick's *2001*.<sup>2</sup> When Richard Ohmann, in his 1983 article on the shaping of the US literary canon, compares a list of best-selling authors with a list of "established" ones, SF is almost totally absent. Because of the connoisseurs' action, the SF market does not entirely and mechanically follow the classic expectations about mass consumption: thus, the paradox of a critical readership in an admittedly commercial field reinforces the genre's own marginality and quasi-invisibility.

The fans are painfully aware that they appear too market-oriented to be taken seriously by the literary establishment, which has decided that, in Arthur Koestler's words (obsessively cited by many insiders, e.g., Amis, Gold, and Knight *Search*), good SF books "are literature precisely to the extent to which they are not SF." Confronted with segregation and exclusion from the "mainstream," the fans, in a somewhat snobbish compensation, distance themselves from the rest of the lowbrow realm, and start taking themselves very seriously. The most visible result of this is the output of secondary writing on SF, which at first appeared in fanzines, and began to spill over into book form after World War Two, often published by specialty presses (one of which--Chicago's *Advent*--specializes solely on SF criticism). To date, this output comprises over a hundred volumes and countless articles and essays. Among other things, these "insider" writings determine most of the points that will (and still do) animate the academic debate on SF theory and criticism. If not always providing

satisfactory answers, as a rule the SF fans/critics have been asking the thorniest and most challenging questions.

## **2. Between Apocalypse and Dialogue**

SF is a part of the "pop. lit." realm and mass culture. But this is hardly a self-evident category; the assumptions underlying claims and debates about it deserve a brief survey.

What is at stake in the opposition between high and low literary prestige in the present historical moment can be approached by Franco Moretti's observation that at the beginning of this century, when "avant-garde literature abandoned plot," it also pretended it was possible to abandon history; the "ever increasing relevance" of "mass literature" is but the result and the manifestation of an irrepressible need for storytelling, and, ultimately, for agency within history (344). Moretti's is an implicit call for a reinscription of the high/low debate under the rubric of canonicity and canon-revision. More directly, according to John Guillory, the "distinction between serious and popular writing is a condition for the distinction of canonicity" (489).

In looking at two recent critical collections, coming from two opposite ideological positions, one can have a discouraging impression about the course of this debate. From the Right, Charles Altieri insists that "popular literature" is only a source of "sociological information"; only works stemming from the intellectuals' "own imaginative projections" and from nothing else can provide those "idealizing forces" that "allow us to distance ourselves from . . . sociological categories," thus performing a genuine educational function: the "very idea of fostering better and richer selves requires our sustaining idealizable frameworks." Esthetic quality and canonical status

are, in sum, idealized as inversely proportional to historical rootedness (28-29). More bluntly, Christopher Clausen declares in the same collection that the traditional canon upholds a utopia of "timelessness." In this view, SF is a perfect candidate for exclusion: according to Clausen a work such as Orwell's *1984*, whose "theme and plot derive from technology of a particular kind," is "topical" and not "timeless." A classic is a work that can potentially be read by any human being at any point in history. Orwell's technology could only have been conceived in his era: this constitutes an impenetrable barrier to "classic" status (211-12). Significantly, in the same collection, Johnson's cogent essay on the US literary anthologies does not find any problem in the exclusion of popular literature.

On the Left, the feminist critics Carey Kaplan and Ellen C. Rose see their revisionary effort on behalf of women's fiction as incompatible, and directly competing, with popular literature. A widening of the canon should be used in order to reclaim from common readers the "time they would rather spend on Stephen King or *Infoworld*" (xvi), thus also implicitly denying *any* literary status to the former. Although Doris Lessing is discussed in detail, and Ursula Le Guin is referred to very appreciatively, these writers' frequentation of the SF field (and the word SF itself) is never mentioned.

For both these competing "highbrow" views, only "if art is granted some . . . supra-historical, transcendent status" (Wolff 75), can esthetic or political significance be within reach. Yet in SF, and in popular fiction in general, it is impossible to ignore or bracket the way in which a work is, among other things, a commodity sold in the market.

Most approaches to popular culture still fall into the categories labelled in 1964 by Umberto Eco as "apocalyptic" vs. "integrated":

The mistake of the [integrated] apologetes is to hold that the multiplication of industry's products is positive in itself, not needing critique or re-orientation. The mistake of the aristocratic apocalypics lies in their thinking that mass culture is radically bad because of its nature as an industrial fact, and that today it would be possible to have culture outside of industrial pressures.(46-47)

In the "apocalyptic" view, as formulated in one of Eco's direct targets (Zolla, *Eclissi*), "mass-man" is not only a victim of unidirectional conditioning from the Powers That Be but also a consenting participant, hence all the more responsible for the aberrations of mass culture. A "diabolical" force in modern society (129), mass-man is aware of his conditions and nihilistically rejoices in it. Thus, the intelligentsia ought to have an attitude of "indifference when faced with the problem of efficacy," i.e., of active participation in society, which would mean "to be reduced to society's logic, and to lose all critical distance" (216).

On the other hand, the "integrated" field accepts the "apocalyptic" division and inverts the moral connotations. In fact, the upholders of "taste pluralism" are no less satisfied with the status quo (e.g., Cawelti, Nye, Gans, and later, in an often vulgarized fashion, the articles of the *Journal of Popular Culture*). Those "empirical" descriptions and "sociological" analyses evade both the esthetic and the political issues: modernity's drive toward limitless expansion will endow each new public with specific forms of expression, with no need for conflict or disruption of social and cultural hierarchies. The two lists could go on endlessly, claiming that one can be

either apocalyptically outside of or integrated into mass society, but never critically within it.

Until very recently, apocalypticism and canon-making were synonyms. In Zolla, and more recently in Allan Bloom, low and high art are incommensurable. In Left apocalypics such as Theodor Adorno or Dwight MacDonal, a state is being lost of separated, hence antagonistic, "innocence" (Enzensberger 15), embodied by the working class of the past, and later in works by women (cf. Felski's critique) or the Third World; only the elite nature of high art can allow a free and uncontaminated development of an alternative among subaltern groups. The rise of mass culture is an invasion of mind-snatchers, whose mere presence ensures eventual co-optation.

To admit of critical feedback as compatible with mass culture means to reject rigid approaches, and such reductionist dichotomies as intelligentsia/masses or base/superstructure. As a useful model for such an operation I am taking in this study Antonio Gramsci's repeated insistence, building on a discussion of folklore, on popular fiction's crucial role in contemporary culture.<sup>3</sup>

First of all, against any pastoral idealization of working-class autonomy, but also against any dystopian portrait of the masses as a sheepish mob, Gramsci sees folklore as not being monolithic and systematic; it is instead "an undigested agglomerate of fragments of all conceptions of the world and of life which have succeeded one another in history, and of most of which, indeed, only in folklore do we find the surviving documents, mutilated and contaminated" (*Writings* 189). Within folklore the people ("the sum total of the instrumental and subaltern classes": *ibid.*), by definition, cannot provide a consistent and all-encompassing counter-force, but can only assimilate messages from past and present official culture. This, of course, limits

folklore's conceptual horizons and its oppositional potentialities, but nevertheless entails a process whereby cultural texts created neither "by" nor "for" the people can be "adopted," adapted, and put to different uses (195).

Gramsci's crucial concept is "hegemony," which implies precisely the existence of an endless, conflictual dialogue between social groups (Gramsci's term is "strata," which never allows the reader to neglect the existence of power hierarchies). Thus, no dominant group asserts its position solely through enforced, "dictatorial" coercion: it can only maintain power if its socio-cultural institutions and conventions are continually capable of generating a widespread consensus around it. *Pace* Marcuse & Co., the people's mind has always, inevitably, been one of the major stakes in the political game. As reformulated by Raymond Williams:

[The notion of hegemony] sees the relations of domination and subordination, in their forms as practical consciousness, as in effect a saturation of the whole process of living--not only of political and economic activity, but of the whole substance of lived identities and relationships, to such a depth that the pressures and limits of what can ultimately be seen as a specific economic, political and cultural system seems to most of us the pressures and limits of simple experience and common sense. . . . It is a whole body of practices and expectations, over the whole of living. . . . It thus constitutes a sense of reality for most people in the society, a sense of absolute beyond which it is very difficult . . . to move. (110)

Any given society creates a hegemony, internalized and naturalized as "common sense" for all its members: "We are all conformists of some conformism or

other, always man-in-the-mass or collective man" (Gramsci, *Notebooks* 324). Given its many-sided nature, common sense "is not something rigid and immobile, but is continually transforming itself, enriching itself with scientific ideas and with philosophical opinions which have entered ordinary life" (326); all these "sedimentations" are left by different classes and cultures, and are differently perceived by members of different groups. If the official culture is the main active factor, still the ideology of the rulers can only strive to set "limits" to the subordinates' thought, in a continuing process (420); within hegemony and common sense, both retrograde elements of social oppression and visionary prefigurations of a utopian future are simultaneously present (cf. also Angenot, 1889 26).

Thus, popular fiction earns Gramsci's interest because, while a powerful ideological instrument, it is an open channel for the voice of its audience--the "people," that is, those who are outside the ruling positions in the apparatuses of political, economical, and cultural control. It can be an opiate, but also a catalyst for the cultural interaction of the subaltern worlds. Just as any project of political alternative must start from the conflictual reality of common sense, the existence of a body of popular fiction is a precondition for cultural renewal (*Writings* 196 ff.). More precisely, "only from the readers of serial literature can we select a sufficient and necessary public for creating the cultural base of the new literature" (102). Gramsci repeatedly insists that popular appeal and esthetic quality are not mutually exclusive. Politically speaking, the importance of popular literature is that it simultaneously "replaces" and "promotes" the people's "daydreaming"; this daydreaming, though, stems precisely from social subordination (349). In other words, popular culture can

potentially reveal the subaltern class to itself. Not only is it an "arena of consent and resistance" (Hall 239): it is the best possible stadium for the game.

### 3. Science Fiction and the "Cultural Capital" of Pulp America

Let us now resume with the SF critic R. D. Mullen, reminiscing about 1930s culture in the US:

Quality, slick, pulp--[soon] I learned that the term "quality magazine" originated not out of respect for the intellectual level of *The Atlantic*, *The Century*, *Scribner's*, and *Harper's*, but as a short form of "magazines for people of quality." The big slicks--*The Saturday Evening Post*, *Collier's*, *The American*, *Cosmopolitan*--were the magazines of the great American middle class, respectable enough in that they represented, if not prosperity plus cultural refinement, at least prosperity and good behavior. And then there were the pulps, with their garish covers, cheap paper, and correspondence-school advertising, obviously attractive only to lower-class readers of little education and low-brow tastes. . . . You studied English, . . . so that your speech and writing would not mark you as at best uneducated, at worst as of working-class origin. You studied literature to achieve cultural refinement, to be counted among those who read *The Atlantic* rather than *The Saturday Evening Post* and so among those who had risen above the crass materialism of ordinary people. (371)

Value, prestige, social position, genre-- it is in the interplay and frequent conflation among these concepts that the debate on mass culture and on SF has

developed. In order to address the stakes in this clustering of categories, I shall touch on some further theoretical points, which have emerged within and around the framework of Cultural Studies.

First, a few notes on the social composition of what, for lack of a better term, I shall call SF's "insider" group. The birth of the fandom, during the Depression era, marks also the entrance into literary activity of a very different generation from that of earlier authors *à la* Edgar Rice Burroughs, grown on latter-day dime-novels and on generalist pulps such as *Argosy*, with their orientalist/exotic writings.<sup>4</sup> It seems possible to postulate in this period a fairly direct homology between the lowbrow status of the SF pulps and the class origins of their contributors/readers. If the biographical information included in Damon Knight's *In Search of Wonder* and Sam Moskowitz's *Seekers of Tomorrow* can be trusted, almost all of the major figures in US SF of the 1935-45 period come from the working class or the lower middle class (small farmers, family-run-store owners, etc.), or have an "ethnic" background. The post-1945 paperback boom's new readership arises from postwar affluence; from the 1960s onwards, the field is revitalized by the new social movements and above all by the irruption of women.

My working hypothesis is therefore that in discussing SF as a set of institutions we should avoid references to dubious abstractions such as "middle-class" culture, even as broad approximations.<sup>5</sup> Instead, I would suggest that the history of the SF insiders (at least up to the late 1970s) can be better described as a history of several, possibly heterogeneous, socially subaltern groups in a phase of upward mobility--a relative mobility, though, that does not entail full empowerment within the existing ladder of social prestige.

The upward mobility of mass culture's readership becomes, as Ross's *No Respect* argues, a crucial point in the 1950s US debate culminating with the Rosenberg/White collection, *Mass Culture* (1957). Cold War fears, cultural elitism, and a defense of class hierarchies are constructed as almost synonymic elements of a paradigm. Even among ostensible Left-wing dissenters, apocalyptic critic such as Dwight MacDonal and Leslie Fiedler follow the steps of classic conservatives such as Tocqueville (with whom the anthology opens) and of late-nineteenth-century genteel shapers of modern cultural hierarchy (cf. Levine), and describe the incoming advent of a technologically induced dictatorship of the majority. The collapse of High Art in the advanced industrial world is blamed on the claims to social and cultural empowerment of a newly risen literate class, whose pressures pose the threats of massification and "totalitarianism" and bring these critics to equate the dream of classlessness with the nightmare of monoculture. Mass culture's alleged "fear of difference" is a signifier both for esthetic and for political fears; the constant rhetoric of "contamination" and "containment" embodies the political agendas that accompanies blanket theories of kitsch and mass culture as formal esthetic categories (Ross, *No Respect* 15-64).<sup>6</sup>

The French sociologist Pierre Bourdieu has tackled the issue of the relation between historical contingency and esthetic value by talking of "the economy of cultural goods" in his *Distinction: A Social Critique of the Judgement of Taste* (1). In Bourdieu's keywords, the category of "taste" is both the legacy and the building factor of a social group's "cultural capital." Culture becomes an arena in the struggle over the group's public legitimacy and social position ("distinction"). In modern societies, the rhetoric of artistic "detachment" becomes the main tool in this process of

legitimation, while “popular” consumption of fiction is instead rooted in practice of affective involvement, as in TV watching or in *feuilleton* reading. Bourdieu moves from a powerful contextualization of esthetic practices, and yet his own distinguishing between high and low esthetics appears too rigid: most importantly, how can one account for cultural conflict if it is all about the accumulation of capital (cf. Denning)? This impasse is partly superseded by another French text appropriated in Anglophone cultural studies, Michel de Certeau’s *The Practice of Everyday Life*. Starting from a similar analysis of the “scriptural economy” of imposed self-legitimation, for de Certeau it is the dominant medium of writing itself, which presupposes the reader’s “bodily distancing” from the text, which provides the means for the subalterns’ subversive practices. Deprived of socially sanctioned “institutions” (xix), subaltern readers endeavor to overcome their powerlessness through “tactics” of “making do” (29 ff.), of reappropriation and “poaching” (65-76), which recreate cultural conflict as a socially determined struggle over the interpretation of texts.

Both Bourdieu and de Certeau assume that reading written fiction is a strictly individual activity, and emphasize the reader’s position as powerless consumer, hopelessly separated from any real chances to interfere with the official apparatus of fiction-production. Their theories have led to Brown’s and Jenkins’s engaging studies on soap-opera and television-SF viewers. Yet the discursive arenas and the specific mode of intertextuality brought about by the SF connoisseurs call for further qualifications.

In addressing fan discourse, I would refer to the notion of subaltern “counterpublic spheres,” proposed by feminist theorists Rita Felski and Nancy Fraser. In both critics, Habermas’s model of the public sphere is criticized and refashioned in

order to foreground the role of those collective institutions "where members of subordinated social groups invent and circulate counterdiscourses [and] interpretations of their identities, interests, and needs" (Fraser 489). In the case of the SF fandom we are. I would add, confronting not an overall political but a specifically *cultural* counterpublic sphere, which nevertheless functions as a "relatively autonomous discursive space which can define itself critically against . . . power" (Felski 165).

In order to avoid charges of idealization, I wish to emphasize the phrase "relatively autonomous." Within Gramscian hegemony, "the people" is never a "culturally homogeneous collectivity," and even its inner "stratifications" are never to be found in a state of "purity" (*Writings* 196). By definition, both the dominant and the subaltern culture are multifarious forces, resulting from a plurality of pressures, inextricably enmeshed in each other; any attempt to seek for fully autonomous cultural antagonism would be bound to failure (cf. Ross, *No Respect* 10; Grossberg 244-47). Gramsci calls for a critical stance (a "theory of praxis") which does not forget that all cultural or ideological formations are historical formations, situated in concrete events and relations: contradictions, even devastating ones, are traces left by the historical context. Critics, from their own concrete historical standpoint, can only endeavor to engage with those traces, seeking for potentially subversive fault-lines. In this sense, my study of a metaphorical system could be defined as a study in what Bercovitch, the best Gramscian in American Studies, calls "cultural symbology," the constellation of "meanings that encompasses text and context alike" and is "built upon multilayered connections between dominant patterns of cultural expression." Cultural expression is predicated on formations, such as metaphors, which must be "flexible enough to accommodate upheaval and transformation," and whose "flexibility may extend in

extraordinary cases across time and place" and "become the vehicle . . . also of personal agency and social subversion" (*Office* xvii-xviii).

Similarly, in Bakhtin's theory of dialogue, to which I have often alluded, cultural activity and ideology are "the process of selectively assimilating the words of others" (341), wherein conflicting forces intersect in ever-shifting positions, in any given social and historical moment (272). Syncretism is the "always-already" general condition of any discourse. "Low genres" are not inherently oppositional; rather, they partake in a lesser degree of the universalizing ("monologic") tension proper of dominant cultures, and dialogically tend to "historicize what is generally taken to be immutable and eternal" (Gardiner 48).

In an explicitly Gramscian vein, two late 1970s essays that functioned as manifestoes of cultural studies (Stuart Hall's "Notes on Deconstructing 'The Popular'," and Fredric Jameson's "Reification and Utopia in Mass Culture") moved precisely from a denial of notions of "subaltern esthetics" (*à la* Bourdieu or de Certeau). Both denied that mass culture, however defined, could do away with hegemonic pressures, but nevertheless inscribed into it a hopeful "utopian" opening. For Jameson, just as "the 'popular' as such no longer exists" (15), in mass culture "genuine social and historical content must first be tapped and given some initial expression if it is subsequently to be the object of successful manipulation and containment" (29). Culture, moreover, is nothing less than "the very element of consumer society itself" (22).

In his essay, Jameson was also placing "low" art as a crucial aspect of postmodern culture (Denning 257), and stressing the centrality of genre. In effect, if postmodernism has made self-reflexivity the center of its theorizing, genre appears

like an ideal candidate for scrutiny. Genres "are essentially literary institutions, or social contracts between a writer and a specific public, whose function is to specify the proper use of a particular cultural artifact" (Jameson, *Unconscious* 106); they anchor texts (and critical practices) both in literary traditions and in the historical circumstances of their production and reception (cf. Bolongaro). Also, genres remind us that all acts of reading move from a pattern of expectations, fulfilled and/or transgressed in each text: as Peter Rabinowitz puts it, "'reading' is always 'reading as'" (421). To insist on the category of genre is to reclaim literary texts from the illusions of metaphysical, unhistorical value and of the convention-free masterpiece, which have resulted in the ideology of cultural hierarchy. Genre has been eagerly dismissed by apocalyptic critics with their anathemas against "repetitiveness" and seriality, and later by post-structuralists in the name of notions of discourse as an undifferentiated (if self-effacing) continuum. Yet, in mass literature, genre ought to be valorized as the trace of the reader's position in the economics of cultural taste--a trace which furthers esthetic self-awareness.

This leads us back to the notion of the SF intertext. As John Guillory writes, the "category of the popular bears the marks of non-writing, of orality, within writing itself, since its productions are consumed, from the point of view of High Culture, as the textual simulacra of ephemeral speech" (489). The SF text seems to share, to an appreciable degree, the variability of the oral narrative.<sup>7</sup> A few examples: the passage from magazine to book version often substantially modifies the content of a story; a story can be incorporated and recontextualized within a novel. e.g., in those cycles of interconnected short stories labelled "fix-up novels" (like Asimov's *Foundation*); in recent years, we have the successful packaging of "shared world" book series, with

many authors writing within the SF universe created by somebody else. Also, very often a story is conceived as variant, or counter-story, in reply to a previous one (by the same or other author). In all this, the role of fans as sources of feedback is often crucial, and we should keep in mind that the roles of fan, writer, and critic are often interchangeable. De Certeau's poaching *bricoleur* is also a counter-writer who engages in direct cultural conflict. The SF intertext, rooted in SF's "genericity" and in its "low," illegitimate institutions, puts consciously into question the "high" mythology of individual authorship thanks to, and not in spite of, the dynamics that leave on the genre the marks of class and cultural subalternity. *Pace* theorists such as Andreas Huyssen, mass culture did not wait for official postmodernism to do such a boundary-breaking move.

Thus, my work will presuppose an interpretive hypothesis which sees SF as self-conscious example of both co-opting (even didactically so) and critical forces, linked--institutionally and intertextually--both to the genre's own tradition and history, as well as to the uses of SF metaphors in North American social discourse.

In this sense, my parallel reading of fictional and nonfictional texts will be a search for the hegemonic determinants underlying the cultural symbology of interface metaphors. Building also on Gramsci, Marc Angenot has described cultural analysis precisely as an intertextual endeavor, aimed at accounting for the complexity of "social discourse," that is, for "the generic systems, the topical repertoires, the rules for connecting utterances, all of which, in a given society, organize the *sayable* . . . and ensure the division of discursive labor" (1889 13). On the one hand, hegemony shapes social discourse as "a regulating system which predetermines the production of concrete discursive forms" (21). As such, Angenot argues, its privileged realm is that

of the unspoken “presuppositions” which bestow social legitimation on all ideological units (*idéologèmes*) and “social representations” (*Parole* 169-89). As Leps adds, their ideological force can only be detected by going beyond the boundaries of the single text or the single cultural form: “presupposed maxims belong to common opinion . . . and form the basis for the social construction of reality: they can be traced throughout the intertext where they establish both the internal coherence and the outer limits of discourse” (11), in “both the institutional and the marginal forms” (227). Yet hegemony, in drawing the cultural boundaries of the *dicible*, builds a “social common denominator” which can only emerge as internally “stratified” by the presence and action of specific social groups (Angenot, 1889 29); acknowledging the existence of hegemony, in other words, should not prevent us from acknowledging the existence of continual negotiations with those “multiple strategies which contest and antagonize it, and alter its elements” (21). Rhetorical formations such as metaphors emerge in a context of ideological presuppositions and hegemonic pressures. In this study, my references about dominant groups and discourses will have to be partly hypothetical. Still, my discussions of both fiction and nonfiction texts will attempt to reconstruct how the metaphors and the rhetorics of the cyborg and of virtual space have emerged as ideological units in the legitimate domain of theory and nonfiction, and presupposed, finding a fertile ground for various degrees of critical reappropriation, in the subaltern cultural sphere of SF.

## NOTES

<sup>1</sup> For a history of SF with an ample discussion of fandom, cf. James. See also Knight *Futurians*, Moskowitz *Storm*, and the books by Warner.

<sup>2</sup> Other authors of SF best-sellers include Orwell, Huxley, Nevil Shute, James Hilton, Ayn Rand, William Golding; such thrillers as *Fail Safe* and *Seven Days in May* should also be added to the list (cf. Hackett and Burke; Mott). For a history of the US hardcover market, cf. Long.

<sup>3</sup> Gramsci is far from having been completely translated in English. I will refer to the extant standard anthologies, occasionally emending the translations on the basis of the Italian critical edition.

<sup>4</sup> Any detailed explanation of concepts such as "schools" and "generations" of SF writers and insiders, and any attempt to supply biographical informations about them would render this study virtually infinite in length; I can only mention, as the best of all reference books on SF, those edited by Nicholls, and by Clute and Nicholls.

<sup>5</sup> The best analysis of the socio-economic composition of the fandom is Berger "Fans." His data would seem to indicate, in the early 1970s, a mainly middle-class audience. Interestingly, however, some discrepancies bring him to admit that the only unquestionable conclusion he can draw is that the fans "identify with" the technocratic/professional class (243), and that therefore the actual average class position is likely to be lower down the scale. Furthermore, his analysis was dealing with with the attendants of a national US festival--presumably, among the better-off of fans.

<sup>6</sup> For a broader perspective on technology and the mass culture debate, see Brantlinger's *Bread and Circuses*. For a Marxist overview, cf. Suvin *Positions* (3-21) and "News."

<sup>7</sup> For a reflection on the oral/written dialectic that bears directly on the high/low divide, see Portelli's *The Text and the Voice*.

## Chapter 2

### CRITICAL PRESUPPOSITIONS. 2: ON SCIENCE FICTION

#### 1. A Premise

To engage critically with the SF genre means, inevitably, to come to terms with the interpretive allegories constructed by theorists and critics. This chapter will review these strategies, as they have been deployed by the academic "outside" and by the subculture's "inside." I will not do so in order to claim any kind of superiority for either of them. Rather, I wish to show how the various notions of SF have been constructed as articulations of somewhat differing anxieties and hopes about modernity, technology, and the role of culture in mass society. Insider and outsider criticism, as affirmations of and/or reactions against the hegemonic systems in twentieth-century North American history have much in common. Still, in their efforts to define, delimit, and describe the genre, the two groups' different interests (e.g., their positions in the pyramid of cultural prestige and other distinctions) may serve as opposite poles in a continuum where the stake is the possibility of arguing for, at least, esthetic significance on different grounds from those of the canon and of the canon-makers--and whose ultimate horizon, following Gramsci, can be no less than that of sociopolitical, utopian action.

#### 2. Outside

Like no other genre in mass literature, SF has been a target for theorists. With higher or lesser degrees of methodological rigor, North American SF studies have been theorizing SF into or out of existence for at least thirty years, starting (to pick a

practical *terminus ad quem*) with the founding of the journal *Extrapolation* in 1959. Analyzing the features of SF, academic critics have articulated a range of assumptions that amount to a highly unjustly neglected debate.

## 2.1. Definition

I would start with Darko Suvin's classic definition in his *Metamorphoses of Science Fiction*:

a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment (7-8).

First of all, I wish to emphasize the implicit starting point in such a defining move: the recognition of the genre's *differentia specifica*. Beyond reductionist dictionary formulas or sociological explanations, the need is rather that for a textual anchor capable of accounting for the emergence of (what is empirically or intuitively labelled as) SF in various cultural-historical contexts. In this sense, Suvin's *three* parameters (estrangement, cognition, alternative world) provide a grid that roots definition in the dynamics of history. Also, definition rejects the merely rhetorical or impressionistic listings of motifs, present in early works (e.g., those surveyed in Suvin "State"). Definition, of course, does not deny the relevance of the genre's specific metaphors: from the mid-1970s on, later analyses of formulas and icons will not be aimed at contesting the need for theoretical and defining rigor, nor claim exhaustiveness of definition, but presuppose and emphasize SF's inner intertext (Rose *Encounters, Wolfe Known*), "a repertory of functions, conventions, and devices"

(Suvin, *Metamorphoses* 10) which extends and articulates the generic expectations of SF's "specialized" readership--a readership whose competence arises precisely from its familiarity with the repertory.

## 2.2. "Science"

The interpretive feedback of the readers, however free and playful, is nevertheless injected and legitimated by the text. This is the role of "science": for Suvin (cf. also Philmus), "cognition" is the epistemological basis of the SF narrative, and separates it from the supernatural or metaphysical fantastic. However "other" and far-fetched, the agents, events, and spacetimes of an SF tale assume a secular notion of *scientia* or "cognition" as method and "encompassing horizon" (*Metamorphoses* 67). In other words, the estrangement of an SF tale is predicated on a worldview (an epistemology and a cosmology) wherein "ethics is in no significant relation to physics" (11). SF's own author-reader pact brings protagonists and reader in touch with a fictional universe incompatible with any form of determinism; this universe, however estranged, may be, at least in principle, reconstructed according to analogous procedures to those accepted in the "zero world," the "author's empirical environment." The "science" in SF, that is, the logic of the scientific method, is a hermeneutics embedded in the genre, as well as the channel connecting the tale to the "zero" universe of the readers.

Those critics who dismiss science tend, obversely and not surprisingly, to negate or belittle the autonomous existence of the genre; their approach, as a rule, regards SF as fairy-tale with different props. In Mark Rose's words:

Call your magic a "space warp" or a "matter transformer," your enchanted island the planet Einstein . . . call your giants and dragons "extraterrestrials," and what you have is merely the contemporary form of one of the most ancient literary kinds. ("Introduction" 1)

Rose's case for the influence of "romance" on SF is convincing, but he transforms historical antecedence and ancestry into theoretical preemption, on the basis of a Fryean essentialism of sorts, and denies the genre's methodological "modernity." Cognition and science are granted an even smaller role in Leslie Fiedler's nostalgic invocation of timeless essentials and prelogical reflexes in order to reclaim a place for SF within an overt stance "against theory": a successful SF author (his example is A. E. Van Vogt) writes ineffably beyond history, technology, and indeed beyond written words:

[T]he challenge to criticism which pretends to do justice to science fiction is to say what is *right* about him: to identify his mythopoeic power, his ability to evoke primordial images, his gift for redeeming the marvelous in a world in which technology has preempted the province of magic and God is dead. To do this, structuralism and its spin-offs, those strange French (or naturalized Slavic) gods after whom recent scholars of fantasy and popular literature have gone a-whoring, are of little help--as, indeed, they are of little help with any good-bad literature, whose virtues are independent of the text and therefore immune to semiotic analysis. ("Criticism" 10-11)

This is not a simple matter of right-wing appeals to SF as resurgent religion in the abhorred age of reason (e.g., Lowentrou). In different ways, we are dealing with

views of mass culture as a sort of modern *pensée sauvage*, and of SF as its best contemporary exemplar: this is the strategy of the first generation of postmodern criticism. On this basis, Fiedler can reclaim SF for postmodernism, in his famous essay "Cross the Border--Close the Gap," as a last hope for the permanence of an Anglo ethnic *Zeitgeist*: "If there is still a common Anglo-Saxon form, it is Science Fiction" (474). Yet, the admission of "low" aliens on the "high" side of the border is conditioned on the official intelligentsia's accepting the role of Immigration Police, producing works "mitigated without essential loss by parody, irony" (469), and keeping out, as we have seen before, the alien pressures towards a critical rethinking of "low." In Luckhurst's words, if "popular cultures are somehow closer to some concept of a national collective unconscious, and that because they are popular (that is, 'simple'), they *transparently* reveal it," then, for good or bad, they "must be spoken (up) for" by someone with more prestige ("Border" 363). Thus, Robert Scholes invokes a psychological, and not an esthetic, ground for the genre's "function" ("sublimation", in *Structural Fabulation*), and salutes the potentialities of SF as bearer of a newer form of innocence, whose simple values (vigor, earthliness) may refresh a high literature "threatened by over-elaboration of its own complexities" (*Fabulation and Metafiction* 218). Specularly, Rosemary Jackson faults SF, as opposed to "fantasy," because of the latter's greater closeness to psychoanalytical processes: behind ostensible references to dialogue and poststructuralism, canonical notions of individual subjectivity and psychological realism reappear. In all of these cases, cognition is incompatible with poetic value, or at best irrelevant and merely epiphenomenal.<sup>1</sup>

### 2.3. Estrangement

Both Suvin and Scholes accept the Formalist and Brechtian notion of estrangement in their definitions. In Suvin, though, the formal becomes the basis for the political: "In SF the attitude of estrangement . . . has grown into the *formal framework* of the genre" (*Metamorphoses* 7), absorbing a long-standing tradition of lower-class, dissident fabulation (from utopias to carnival) whose very reason for existence is a longing for difference as critical distortion of the real. Through the kinds and degrees of estrangement, ideology and esthetic evaluation in SF are predicated on the genre's own terms (see next section). Instead, Scholes and Rabkin, while linking SF with science and technology, also maintain traditional standards for "good writing style" and esthetic judgment. One of the casualties of their attitude is the pulps' readership; their historical overview starts with a division between a "political Europe" (26), which produces a few respected works of the dystopian tradition, and a "pulpy America" (35), largely made of a multitude of "trivial, ephemeral works of 'popular' fiction which are barely literate, let alone literary" (vii). In this perfect allegory of the elite vs. mass cultural divide, in the unnamed "barely literate" mass of lower class readers lie the shortcomings of US SF, as opposed to the "high" and allegedly less crowded tradition of European SF: the idea of a mutual fertilization (crucial in Suvin) between different canonical levels is not even considered.

The theoretical point here is both what Suvin calls SF's oxymoronic quality (its bringing together the historically separated categories of estrangement and cognition), and the fact that SF, as a full-fledged genre, allows for different avenues of inquiry. As Parrinder argues, sociological, genological, and rhetorical analyses need not be mutually exclusive but can be and are mutually supportive. Indeed, one can

only lament the virtual absence of SF from literary histories, connecting the genre's thematic and rhetorical concerns with those of the various tradition in which it develops: SF is an autonomous genre, but is not hermetically sealed off from the rest of literature.<sup>2</sup> The result is an often mystifying conflation of categories; in Scholes and Rabkin the dismissal of the pulps' sensationalistic insistence on gadgetry goes together with a belittling of the role of science, so that the cluster of texts they sympathize with is the nostalgic "anti-science fiction": to minimize estrangement. In this attitude, means also to minimize cognition. A frequent deployment of this rhetoric is the dichotomy between "hard" and "soft" SF. Whereas in fact much US SF revolving around engineering achievements is a shamefaced fantasy of fatalistic determinism under the disguise of scientific "neutrality" or "hardness" (Huntington 70-85), this "hard core" is taken, rather tendentiously, to be *per se* the epitome of SF as the expression of a negative paradigm which includes items such as rationality, Americanness, low prestige, bad quality, and, occasionally, reactionary-technocratic politics, denying the role of the scientific method in the so-called "soft" sciences, and finally denying the very existence of SF.<sup>3</sup>

#### **2.4. Novum: The SF World and Its Boundaries**

The third parameter of Suvin's definition is that of possible world. Estrangement is crucial in SF in grounding the "narrative dominance of a novum or cognitive innovation," that is, "a totalizing phenomenon or relationship deviating from the author's and implied reader's norm of reality" (*Metamorphoses* 63-64). The novum is totalizing in that it gives rise to "a narrative reality sufficiently autonomous and intransitive to be explored at length as to its own properties and the human

relationships it implies" (71). The worlds of SF cannot be analyzed without reference to the novum, and to the estrangement and the cognition it furthers; thus, its mention is, *de facto*, a paraphrase of the tale itself, a description of the conditions of possibility which allow the events to take place (cf. Spencer). In shaping the spectrum of possible events in the narrative, it becomes its central foreground: Fredric Jameson stresses this aspect when he labels SF a "spatial genre" ("Genre"). More accurately Suvin, in the later *Positions and Presuppositions in Science Fiction*, stresses this point by recurring to Bakhtin's category of the chronotope, the spacetime organizing and arising out of the relationship in the tale, which is in SF an elaboration of the novum or central metaphor (185 ff.: cf. also Malmgren *Worlds*). Not only is SF heterodox with respect to the canonical tradition in moving its main concerns away from the primacy of interiority and subject, but it strives, through allegoric or parabolic procedures, to place its elements in a consistent network of relations and agencies: "It does not ask about The Man or The World, but which man?: in which kind of world?: and why such a man in such a kind of world?" (*Metamorphoses* 7). On the other hand, consistency is as such a problem with some strands of poststructuralism; for example, Jackson calls for a literary *pars destruens* without any *pars construens*, always equated with oppressive modernity: her displaced subjects seem to need no material arena in which to move.

Theories that diffuse SF within a larger non-mimetic supra-genre are predicated on the dismissal or downplaying of the parameters of the novum (and consequently of the possible world) and of science. Thus, Eric Rabkin postulates a "continuum" of the "fantastic," based on "difference" from "an organized body of knowledge" (120), and David Ketterer discusses a tradition of texts centering on an

estranging "apocalyptic" rupture (*Worlds*). Rabkin's continuum offers useful reflections on generic contamination, and Ketterer's apocalyptic literature is a milestone *thematic* study of US literature; both, though, seem to take the science-fictionality of some texts as self-evident, without much help from their own systems.

What seems to move most critics who neglect novum and world (Rabkin and Ketterer are exceptions) is a quest for legitimation under the (often very thin) disguise of genre theory; if the novum's narrative dominance is a mark of SF, as opposed to marginal or contaminated cases (Suvin, *Positions* 70-72), then--in a revealing move--consistency and density bear the mark of pulpishness and "genericity" (taken as synonyms), while lyrical sparseness of detail bespeaks the respectability of "mainstream" allegory (cf. Nicol). This quest goes far beyond the recognition of affinity with some avant-garde (already in Ketterer "Allied"), and finds, for many years, its champions among postmodern critics. For example, Teresa Ebert praises Samuel Delany's "self-reflexivity" and ontological "indeterminacy" as "it *transcends* the restricting didactic and entertainment function of mimetic science fiction" ("Convergence" 99; my emphasis). Later, Brian McHale, while ostensibly saluting the twin "ontological" concerns of both SF and postmodernism, makes it very clear that the latter has only borrowed motifs from the former, while SF has anyhow "tended to lag behind canonized or mainstream literature in its adoption of new literary modes" (*Fiction* 98-99): the canon remains unshaken as monopolistic holder of taste. Rejoining Koestler, for them good SF is no longer SF or above SF.

Among feminist critics, for Marleen Barr and Veronica Hollinger a change of name is needed, and their respective corpuses, with their concerns for gender and representation are renamed "speculative fiction" (Barr *Alien*), and "specular SF,"

which "simulates SF, but is not itself SF" (Hollinger "Allegory"). Barr's agenda is clear: "It is time to redefine feminist SF, to ensure that this literature's subversive potential is not nullified (and shunned by most Anglo-American feminist theorists) because of a generic classification connoting literary inferiority" (*Fabulation* 3). In order to gain "a space within the canon" (xv), the critic's task is to select significant texts and to take them away from the subaltern reader's to the theorist's separate domain. The supergenre of "feminist fabulation" will break the genre boundary (concomitant with the presence of novum, science, etc.) by including non-SF tales, but will reinforce the high/low divide among texts and among readers: at the same time, if the feminist or transgressive stance is formalistically equated with genre identity, politics itself ultimately disappears. The importance of the cyberpunk debate, as we will see in the following chapters, will be that of gaining back a critical space, simultaneously, both for SF (its novums, its history) and for politics.<sup>4</sup>

The implicit stance among the defenders of the canon's walls is the incompatibility, *in principle*, between "postmodern" parameters such as self-reflexivity or openendedness and "pop. lit.", as embodied in the formal statute of SF. In a very different stance, Marc Angenot suggests that it is precisely in its world-building legacy that SF achieves and promotes openness and readerly cooperation. Far from being ornamental to the narrative, the estranged and scientific elements irreversibly marked with low status are central; acting as textual traces during the reading process, they evoke--and invite the construction of--the "missing paradigm" of a fictive possible world. Through a "conjectural" procedure, which entails a continual hermeneutic feedback--not unlike the scientific method itself--with the expectations derived from the known, empirical world, leading to a tentative blank-filling process

aimed at making sense of the available information. Moreover, the "delusive" otherness evoked by these textual clues must be acknowledged in its own terms:

In a fiction set on an alien planet, what represents for the "Terran reader" the utmost strangeness must be perfectly trivial and banal for the Alien narrator. It would therefore be totally abnormal for the narrator to stress this obvious feature at the outset. It seems more "realistic" that such data be given *en passant*, late in the narrative, and in a rather indirect way. ("Paradigm" 16)

A "reality effect" is needed, but it is built precisely on the estrangement and on its cognitiveness. For this effect to take place, all these elements--including sentient agents--are to be considered as representatives or tokens for the possible world, rejecting, as in Bakhtin's chronotopes, the classical notion of the independent subject in favor of a material network of interdependent agencies. SF is, first of all, allegory, morality-play, or parable (Jameson "World"; Suvin, *Positions* 185 ff.). Moreover, SF's linguistic strategies keep the world open to a dialogue with the reader: consistency is necessarily also built on absence and on readerly presuppositions, promoting the emergence of both ideological worlds:

An immanent aesthetics of SF is implied here: if the mechanical transposition of "this-worldly" paradigms is sufficient to account for every narrative utterance, we have a witless, even infantile, type of SF. If, on the contrary, a maximum distance is maintained between the empirical and the "exotopic" paradigms, although the alien rules tend to organize themselves into a consistent whole, the reader's pleasure increases. (Angenot, "Paradigm" 16)

As Suvin adds, the immanent esthetics is (can potentially be) an immanent liberating politics:

In optimal SF, the interaction of the vehicle (relations in the fictional universe) and the tenor (relations in the empirical universe) makes . . . for the reader's parabolic freedom: *this freedom is rehearsed, traced out and inscribed in the very act of reading, before and parallel to forming a conceptual system.* (*Positions* 70)

This attitude shows many similarities with the dialogism many critics have put at the heart of SF's twin genre of utopian literature (cf. Suvin "Locus" and its bibliography), also described as the dialogue between an "other" and the author's world: utopia as well gives rise, through this confrontation, to a delusive pointing towards a possible "not-yet" universe connecting the two by accepting the text's implied call to action.

Also, and finally, Angenot's model indicates a link to the twentieth-century North American context. The textual paradigms may benefit from higher degrees of absence and complexity precisely because of the institutional circumstances surrounding the SF work, that is, the extreme sophistication achieved by the SF repertory of metaphors, icons, or, in Suvin's terms, novums. In this context, however disgraceful to some, SF's generic awareness and self-reflexivity develops along autonomous lines, as Jameson observes in many essays (e.g., "Genre"). Damien Broderick, taking a cue from Christine Brooke-Rose, calls SF's intertextual repertory a "megatext": "the sf mega-text works by embedding each new work . . . in an even vaster web of interpenetrating semantic and tropic givens" (59). Inescapably connected to the "low" realm of pulps and paperbacks, the reading knowledge of the

fans has given the main thrust to the literary sophistication of SF: to reject this influence *in toto* means to reject SF in its historical development of its novums in the North American tradition.

In this sense, the following chapters will analyze one specific novum (or cluster of novums), and the chronotopes revolving around it, mapping the relative portion of the SF megatext in its twentieth-century history, and establishing some connections with the general megatext of North American social discourse.

### **3. Inside**

Among insiders' criticism, the founding tension could be summarized in the authors' oscillating attitude toward the pulp origins of contemporary Anglophone SF. The emergence of magazines devoted to the genre injects the fans' process of self-awareness (in the form of editorials, letter-columns, etc.) into the foundations of the commercial field, guarantees an amount of privileged, if marginal, visibility, and at the same time ensures its neglect in the general literary scene. On the other hand, the legitimate dissatisfaction with this state of affairs brings a number of authors and critics, particularly after 1960, to throw away the baby with the dirty bath and to identify the roots of the problems with the genre itself.<sup>5</sup>

#### **3.1. Self-Image: The SF Writer as Superman**

The writers that emerge in the post-Depression era and establish the SF subculture are mostly from a subaltern-class background, often first- or second-generation non-WASP immigrants. In their criticism, class tensions are translated into what Hebdige calls a mythology of "classfulness" (89) that addresses socioeconomic and cultural

subordination indirectly, in terms of the public performance of self-presentation. Thus, the SF professionals express and emphasize their condition of economic subordination and cultural marginality through a pervasive self-image which we might call the Suffering Accountant. In this perspective, we could say that, whereas Modernist "high lit." authors tend to conceal the ideology in their writings by denying that their products are commodities in a market, the SF writers strive towards the same goal by creating, around the stress on "story-selling," an illusion of esthetic--and ultimately of ideological--neutrality (cf. Portelli, "Presente" 140-44). Virtually all of their autobiographies center on proud reports about the authors' attempts to comply with editorial policies and whims, on detailed description of the amount of stories (often of the sheer wordage) sold per year, and on the impossibility to make a decent living out of the pulp and, later, the paperback market. Author/editor Horace L. Gold, around 1950, reminisces about the author's rates in the 1930s, and quantifies them in "microscopic fractions of a cent [per word] payable upon lawsuit" (qtd. in Boucher 39). Similarly, in 1947 Robert Heinlein sounds more like the anxious exponent of a precarious underemployed intelligentsia than like a self-confident businessman of culture when he lists the "actual" rules in "the writing of speculative fiction":

1. You must write.
2. You must finish what you start.
3. You must refrain from rewriting except to editorial order.
4. You must put it on the market.
5. You must keep it on the market until sold. (Heinlein, "Writing" 19)

Thirty years later, the imagery of suffering reaches a climax in Knight's description of the fortunes of a politically Leftist group of SF professionals emerging

from fandom in the late 1930s in New York--for most of whom writing and editing had been a low-paid and highly unstable job. Towards the end of the book we find a grotesquely charged cameo about editor Robert A. W. Lowndes, still working for third-rate magazines, living in deep poverty, but comforted by the memories of the glorious pulp past and by honorific "citations and plaques" awarded to him by fans and colleagues (*Futurians* 248).

As in *Superman*--a cultural icon whose creators came from the ranks of the SF fandom--the self-image of the SF insiders is sustained by a tension between a public subalternity and a secret or unseen glory. As in Hebdige's rock subcultures, they see their position with regard to the "mainstream" as one of marginality and not of antagonism: from this, both openings and limitations result. When they describe the social role of SF writing, they move between the poles of a proud denunciation of, and a complacent acquiescence into, the rules of the cultural industry. If Cyril Kornbluth identifies the strictures of the market as cause of the "failure of SF as social criticism," and admits that such criticism is in SF rare and as a rule rather mild, he carefully shies away from proposing solutions. The lowbrow status of SF publishing, he says, makes it inevitable for even the best products to remain ineffective in the cultural debate, "ignored by the nation": notwithstanding, and perhaps thanks to this, he still calls the SF readers "the happy few" (84).

Thus, the pseudo-solution of that generation of writers is articulated as a self-consolation: SF is exalted as a force of resistance against cultural subalternity, but without questioning the ineluctability of that condition.<sup>6</sup> A recurring argument appeals to popular sociology and futurology *à la* Toffler, and to the world-building (utopian, or estranging) principle of SF in order to claim for the genre an educational

function that becomes almost messianic. The SF writers, in Heinlein's words, have realized that "the world does change" and have committed themselves to the propagation of this discovery, thereby filling a void left by the "mainstream." This makes SF a serious and mature form--"[b]ut serious and mature literature has never been mass entertainment" ("Science Fiction" 61): no illusions about a wider change beyond this "underground" action should be cultivated. It takes a Clark Kent to imagine powerful fantasies about a different yet possible world, but no recognition, and no change in the socio-cultural and power hierarchies of this world is to be expected. The powerlessness of the SF subculture becomes the main evidence of its unrecognized powers.

After the 1960s, the esthetic affinities between certain SF and the postmodernist avant-garde will be readily detected and sometimes praised (e.g., Aldiss, Greenland, Gunn, Spinrad *Real*), but, as I am going to show in the next sub-chapters, they often recuperate the elitist high/low separation. Only a few voices will argue that SF and "high lit." had always been, to a degree, communicating, even in the magazine era (Blish 46-66; Delany, *Jaw* 193-94; Lundwall). Ghettoization may be a tragedy, but it is also the requisite for identity.

The earlier SF insiders perceived the segregation as absolute and irreversible, and reacted, as a compensation, by seeing themselves as another sort of avantgarde within mass culture, as popular literature for the few, thereby never fully challenging the separation and paving the way for the "new" SF's claims to para-canoncity. The most widespread view sees the SF writers as resistant dissenters in a deaf world, committed to social change but, within this consolatory register, ultimately exempted

from responsibility for their shortcomings. The writer E. E. "Doc" Smith, for example, addressed a gathering of Chicago fans and colleagues as follows in a 1940 speech:

The casual reader does not understand SF, does not have sufficient imagination or depth and breadth of vision to grasp it, and hence does not like it. . . . We are imaginative, with a tempered, analytical imaginativeness which fairy tales will not satisfy. We are critical. We are fastidious. (qtd. in Warner *Yesterdays* 96)

Given these assumptions, it is no surprise that in Heinlein, who best brings this argument to a conclusion, in the end "the world" and "society" are completely forgotten.<sup>7</sup> It ain't necessarily so, and if we endure long enough, he says, we shall overcome someday, but his utopia is finally reduced to achieving literary respectability, and his tone is nastily anti-intellectual: contemporary Modernism is dominated by "neurotic and psychotic fiction"; his hope for the future of SF is that "editors and critics will someday begin to catch up with the real world and quit nursing such nonsense" ("Science Fiction" 62).

In the mid-1970s Thomas Disch argues for the subaltern class roots of pulp SF, but at the same time identifies the reactionary views in many of his precursors as the *inevitable* outcome of "lower-class resentment." In Disch and in the "New Wave" authors he belongs to--college-educated, esthetically sophisticated, often overtly Leftist--both mass culture and its audience are regarded with suspicion, and equated with bad quality and worse politics. For him, the "fantasies of powerless individuals" imagining themselves--through their protagonists and readers--as superheroes are *inherently* para-fascist: in actually existing US SF, this is a largely correct diagnosis. Nevertheless, the possibility that the powerless might also be sending other messages

through these fantasies, beyond the reifying constraints of dominant ideologies, is not considered at any length ("Embarrassments" 149-53). Furthermore, the fact that the New Wave experimenters operate and qualitatively thrive within the lowbrow market is totally removed from the picture (as also in Aldiss and Greenland).

### **3.2. SF Histories: Telos, Technology, and Canon**

Having established this paradigm, the discussion of insiders' literary histories of SF can be sketched relatively briefly. There are two main characteristics in those of their works that have ambitions of exhaustivity.

First, they are organized as histories of the market rather than of esthetic or ideological movements--and this is their main strength. The basic structuring periodization is that of the history of SF publishing in the USA: the turn-of-the-century dime novels; the generalist pulps between 1910 and 1930; the SF pulps proper between 1930 and 1945; the post-War period where the hardcover specialty presses, the nascent paperback industry, and the new digest-size magazines coexist; the final dominance of the book market in the 1960s and the 1970s; and the apparent subsumption of SF into the movies, TV, and best-seller industry in the 1980s. Any other consideration is superimposed upon this background. For example, Gunn hypothesizes that the "early" pulp phase, the "Campbellian tradition" of the 1930s and 1940s, and the New Wave could also be seen as, respectively, a "romantic," a "realistic," and a "subjectivistic" phase (236). Similarly, Asimov reads in the "early pulp era" an "adventure-dominant stage," in the Campbell era a "technology-dominant" one, and in post-1950 SF a "sociology-dominant" phase (*Asimov* 168). As evident in Asimov's use of the word "stage," the basic framework is a teleological one,

with SF proudly and necessarily growing from hackdom to acceptance. the turning point being identified with the Bomb in 1945. In both Gunn and Asimov, it is a movement away from plot and technology, and toward subject-centeredness.

In all historians, a central position--whether positive or negative--is attributed to Hugo Gernsback, founder of the first specialized magazine in 1926. At one extreme, figures associated with the New Wave such as the British author Brian Aldiss and the Swedish professional Sam Lundwall see SF in a trajectory of liberation from a deleterious pulp matrix: for Aldiss, Gernsback "was one of the worst disasters ever to hit the SF field," bringing about its "segregation" from "any thriving literature" (251). In his reconstruction, Gernsback is a metaphor for the class composition of the pulp readership: the "segregation" has a precise class and ethnic basis, and is a well deserved one. His nationalist opposition pits the "intelligent middle-class audience" of the British tradition against the "simpler audience" of the US, summarized in the "million immigrants" who had "steamed" across the Atlantic and were looking for a "cheap and easy escape from the harsh verities of life, not criticism of those verities" (217-18). For Aldiss, not only must the SF ghetto be destroyed, but its inhabitants, with their institutions and influence, must go as well. At the other extreme, Del Rey and Wollheim exalt and uncritically propose Gernsback's role and influence as continuing antidote to the formal ambition of much recent SF. More ambivalently, the Panshins (*World*) and Hartwell write veritable jeremiads which, while praising contemporary achievements, turn to the pulp era as a golden age of innocence, and (for Hartwell) a hopeful repository of tools that could reinvigorate a sophisticated but exhausted field.

Another recurring feature is the deliberate attenuation of the principle of selection. All these authors agree that a major outcome of the pulp era was the inception of a conscious intertextual network, the "sharing of a useful background" (Del Rey, *World* 84) which allowed the development of motifs, plots, subgenres. In Wollheim's dictum, "SF builds on SF" (16); this, it is suggested, is one of the reasons for the readers' specialization and for the subculture's existence (cf. also Davenport, *Inquiry* 3-4). The emphasis on intertextuality prevents the canonizing extremism of Scholes and Rabkin's "academic" history. On the other hand, it shapes many of these works as interminable lists of plot summaries; an encyclopedic pretence is meant to function as a mask for the inevitable selection of a canon (if a wide one). The downplaying (Aldiss) or the overblowing (Del Rey *World*; the Panshins' *World*) of Gernsback's role is thus a revealing signpost.

Beside chronological subsets, the other interesting operation is the recurring construction of the opposition between "hard" and "soft" SF. As Spinrad argues, this classification has been present in too many moments of SF history to be dismissed as irrelevant; yet we find that works built around similar estranging factors (or novums) are not consistently included in the same category (*Real* 93-95). Spinrad does not attempt to provide a rationale. Previous critics, though, had argued the existence of an underlying *ideological* opposition; for Wollheim a "Vernean" and a "Welisian" principle have been interacting in modern SF history. The first is technocratic, falsely naive, embedded in fictions organized around world-saving gadgets and inventors; the second is visionary and utopian, viewing technology as part of social change, "always utilizing science in context with its influence on the changing of humanity" (22).

Between technocracy and humanism, some New Wave readings of this paradigm (Aldiss, Greenland, Lundwall) transmute technocracy into human agency *tout court*, and the visionary principle into a profoundly nihilistic view of "fallibility" (cf. also Budrys's critique of Ballard, 90). In Aldiss, furthermore, the emphasis is exorcistically shifted from ideology to genology, and SF itself ends up reductionistically pigeon-holed in the reactionary slot. For him, SF's motifs are only gadgets and have no bearing on the reader's understanding of the fictional world; therefore, the one possible way out of the "hard" horizon lies in writers like Bradbury--whose softness stems from their using the "scientific" motifs as mere "props"--without caring too much about the construction of consistent fictional spacetimes (305). For Aldiss, SF's model should be Thomas Hardy (125), a naturalistic author who uses scientific metaphors within a mimetic framework. Hardness is the mark of SF itself; in Rottensteiner's definition, it is "a kind of story in which the scientific element is central and not just tagged on as an element" (135): hard SF is that SF which cannot be mistaken for, or which does not try to disguise itself as, some other literary genre. It is the creation of a sustained metaphorical vehicle around the SF novum that Aldiss sees as the mark of bad art; a good SF story is as close as possible to the genre of moral allegory, and the SF vehicle should be as tenuous as possible. The ideal SF tale is, Platonically, a tenor without a vehicle: this conceptual impossibility would no longer be SF.<sup>8</sup>

### **3.3. Limits of the Field**

The culmination of the insiders' self-awareness is the neglected fact that, before and parallel to the emergence of academic criticism, the SF subculture has produced--in

reviews, editorials, handbooks, etc.--what we must today, retrospectively, call a body of literary theory.

First of all, the SF insiders have no doubt about the status of their field as a full-fledged literary genre, not merely a commercial label. Thus, it includes also works not published as SF (e.g., Orwell and Huxley), as well as works published prior to 1926 (e.g., Verne and Wells), as long as they share the genre's features. These critics, though, are quite exclusive in granting only to post-Gernsback SF the privilege of generic self-awareness. The most outstanding result of this attitude is the neglect of the plethora of utopian and SF books produced in the Victorian and turn-of-the-century periods; a few individuals may be discussed, but the possibility of a self-conscious intertext arising from that huge production is not considered (except in the British semi-academic Stableford's *Romance*). As early as 1957, Kornbluth was taking umbrage at the annexationistic expansionism of some unnamed "veritable Hitler" among SF critics (47), guilty of bestowing the SF label to works published outside the "ghetto"; in later years, only a few are so strict (e.g., Amis; Delany *Jaw*). In most cases, the starting point is the nineteenth century: Mary Shelley in Aldiss and Gunn, Verne for Stableford (*Sociology*). When "science" is not narrowly taken in the sense of post-Industrial-Revolution technology, but as "the body of known and hypothesized facts" available in the author's historical epoch (Del Rey 12), the presence of SF can be traced further back in time, and Ur-SF texts are found in Swift (Amis), *Gilgamesh* (Del Rey), and *Cyrano* (Moskowitz *Explorers*).

An embryonic case for SF's ambitious generic nature had been argued, perhaps surprisingly, by Gernsback himself; in the oft-quoted editorial manifesto for the first issue of *Amazing Stories* in 1926, he described the genre as follows: "By

'scientifiction' I mean the Jules Verne, H. G. Wells and Edgar Allan Poe type of story--a charming romance intermingled with scientific fact and prophetic vision," admitting the existence of a previous tradition and defining SF in quasi-Bakhtinian syncretistic terms. A frequent self-indulgent argument would in the following years be that SF can take mimetic literature as one of its subsets; according to John Campbell, the latter is "that SF which restricts its setting to either the unaltered here and now or the historical past" (paraphrased by Spinrad "Prince" 172-73). Less vacuously, Delany argues that SF is a form that brings back together those components of playful make-believe and of cognitive reflection--present in what he calls the tradition of "prose commentary"--that in the nineteenth century had separated and given rise to the bourgeois novel and the scientific report (*Shore* 232). Moreover, "mundane fiction" has a narrower semantic scope than SF; in the latter, sentences that would be read as either meaningless or metaphorical in a mimetic work may be interpreted also literally, thus potentially making for a richer linguistic texture (*Wine* 88). In an overt Bakhtinian vein, Delany finds a tendency towards generic "appropriation" in SF (99).

The problem of the genre's boundaries seems to be the most pressing issue for these critics, and the most revealing one. It should be remarked that absolutely nobody tries to describe SF in opposition to other commercial labels such as the Western, the spy story, etc. Unanimously, categories of a higher level of abstraction, i.e., mimetic and fantastic literature, are invoked. The most encompassing and the most clearly discriminating system is the one devised by Delany, who therefore implicitly argues (as opposed to other pronouncements of his) that rhetoric alone is not sufficient to describe a genre's specificity. Delany distinguishes between factual "reportage," "mundane" (i.e., mimetic) fiction, fantasy, and SF; respectively, they impinge upon

events that "have," "could have," "could not have," and "have not" happened (*Jaw* 43-45).

With this exception, the common practice is to oppose mimetic vs. non-mimetic fiction, including SF in either the one or the other. Heinlein is the only example that regards SF as a subset of realism: if "[a]ll fiction is storytelling about imaginary things and people," realism is "imaginary-but-possible," and "fantasy fiction" is "imaginary-and-not-possible: within such a grid. SF cannot but fall into the first slot, as "realistic future-scene fiction" ("Science Fiction" 22-27). Meritoriously, Heinlein admits that his framework does not account for the whole genre: his argument is both descriptive and evaluative, in that significant SF is for him based on extrapolation, and deals with "what might be." This is the position that became dominant in the late 1930s, superseding Gernsback's view of SF as "prophecy" and prediction, and that found a first expression in John Campbell's editorial policy in *Astounding Stories*.<sup>9</sup> More frequent is the annexation of SF to the realm of the fantastic, either as a filiation (Aldiss; Gunn) or as a subset (Asimov, De Camp, Wollheim). This connection is rejected by Campbell, Lem, and Stableford, who argue that SF's specificity, that which separates it from fairy-tales, should be looked for in the ontology of the fictional worlds. The worlds of SF, as in the "real" and the realist ones, are the bearers of no intentionality towards their inhabitants. This discovery, a refreshing one for a heterodox rationalist such as Lem (35), is a little disappointing for Stableford who writes about the "disenchanted" universe of SF (*Masters* 4-5), while for Campbell it ratifies a reactionary, Social-Darwinist view: "the factors in the Universe . . . are not subject to popular democracy" (247).

In reaction to such views as Campbell's, many post-1960 writers find themselves denying any distinction between fantasy and SF, postulating a super-genre often called "speculative fiction," which receives in 1989 a cyberpunk update with Bruce Sterling's "slipstream." Both the Panshins (*SF* 29) and Lundwall (53-54) see in the American pulps the origin of an unnatural separation from the rest of the fantastic (which for Lundwall, includes the Dadaist and Futurist avantgardes), that now must be superseded in the name of quality. They concur in saying that the differences between fantasy and SF lie primarily in their vocabularies, and that SF's specificities stem from a tradition which is both "low" and anti-humanist (cf. also Aldiss and Le Guin). For the Panshins, SF "is fantasy," only "more disciplined" and with more "inner consistency" (*SF* 10); the pulps have imposed a straitjacket of "rational definitions" onto SF, almost thwarting its legacy as a "joyful" quest for "transcendence" (239-40). Not only is pulp SF, in principle, bad: pulp SF is bad because it is SF, the only possible kind of SF. Hence, it is the whole genre that should be done away with: "SF was Hugo Gernsback's dream. We should bury it decently with him" (29). No self-respecting SF writer should "bother" with any reality-effect, focusing instead on playful, "imaginary" fabulation, writes Lundwall in a proto-Derridean fashion (53-54). In agreement, Aldiss translates this into a Forsterian theory of characters: the bad SF story, rooted in the depersonalizing mass society of the US, has forgotten the ideal of the rounded, unrepeatable individual; SF appears to him dominated by the anti-humanistic vein of those tales which "rely on a gadget, a marvel, or a novum for their central attention" (100). For them as well, SF is impossible to tell from fantasy, in proportion to its value. Along similar lines, with a reference to Virginia Woolf's "Mrs Brown" essay, Ursula Le Guin laments the lack of attention to characterization in SF

(101-09); hers, though, is a deliberate polemical provocation, aimed at denouncing the reticence of US SF in dealing with "the Other." Yet, her rhetorical ploy still equates technocracy, SF, and Americanness. Her basic point, nevertheless, exemplifies the long and tangible presence of women's and of feminist SF in the genre and in the insiders' public sphere (cf. Lefanu and her bibliography). We should at least mention Merril's call for historicization--"science" and "SF" have meant different things for different figures and groups--and Russ's denunciation of the false opposition between "technophobes" and "technophiles," both being an evasion of politics ("SF").

The issue of genre, coherently, remains a very delicate one. Some definitions are too vague and inclusive: Aldiss (30) and Heinlein ("Science Fiction" 20) work with the single parameter of "knowledge" or "the scientific method." The most complex ones rely on two interacting principles, of which the first is called a hypothetic "innovation," a "fantastic event," an "imaginative speculation," or a "fantasy"; and the second, "science or technology," "rationality," "an atmosphere of scientific credibility," or a "scientific possibility" (respectively, Amis 18; Gunn 32; Moskowitz, *Explorers* 11; Wollheim 10). Still, all of them are too wide in the sense that, by not spelling out that there is such a thing as an SF world which concretizes the metaphors supplied by estrangement and cognition, they would all include naturalistic fiction describing scientific research. A concept such as the "idea," argued by numerous writers (Amis, Blish, Budrys, *Del Rey World*, *Knight Search*, Moskowitz *Seekers*, Wollheim), is never integrated in the definition.

### 3.4. Samuel Delany: Theorizing Otherness

It might be right to conclude this chapter with a few pages on the most complex and aware theorist in Anglophone SF: Samuel R. Delany, Black, gay SF writer, who, starting in 1968, has produced a body of criticism directly inscribed within the discourse of contemporary semiotic and poststructuralist theory. With some of his essays appearing first as sections or appendices of his novels, his theory is an explicit, "postmodern," attempt at reading SF and SF theory as, first of all, allegories on contemporary power relations within US culture and society.<sup>10</sup>

Let us start with a quotation from his autobiography:

The parallel column containing the discourse . . . of desire . . . forever runs beside one of positive, commercial, material analysis. Many of us, raised on literature, have learned to supply the absent column when the material is presented alone. And a few of us have begun to ask, at least, for the column of objects, actions, economics, and material forces when presented only with . . . desire. (*Motion* 204)

For these "few," including the narrator, social and cultural subordination has nevertheless supplied tools for focusing on the "material." SF's worlds are, among other things, an enactment of this process:

Heinlein, in *Starship Troopers*, by a description of a mirror reflection and the mention of an ancestor's nationality, generates the datum that the first-person narrator, with whom we have been travelling now through 250-odd pages (of a 350-page novel), is non-caucasian. . . . What remains with me, nearly ten years after my first reading of the novel, is the knowledge that I have experienced a world in which the

*placement* of the information about the narrator's face is *proof* that in such a world much of the race problem, at least, has dissolved. The book as text--as object in the hand and under the eye--became, for a moment, the symbol of that world. (*Jaw* 94-95).

The mirror reflection of Juan Rico, Hispanic protagonist of Heinlein's novel, is important because of the expectations and presuppositions of a specific group of readers, with its autonomous codes, along reader-response lines. US SF, precisely thanks to the action of fandom, has constituted itself into an interpretive community which applies to the SF text distinct "reading protocols." Even in Heinlein's novel, one of the most rabidly chauvinistic and xenophobic products of the Cold War era, the reading protocols of SF allow the emergence of the genre's liberating or utopian potential. Delany's theory (his own claims notwithstanding) is compatible and complementary to Suvin's (cf. the argument by Spencer); his focus is on historicizing the rhetoric and *écriture* of US SF.

Thus, we have an interesting homology, also sketched in the autobiography's parallel between the SF subculture and the Black and gay cultures. In both of the latter, the poststructuralist influence has generated models such as, respectively, Signifying (cf. Gates) and Camp (cf. Ross, *No Respect* 135-70): theories of subaltern cultures that ground a way to affirm their standpoint on an esthetics and a rhetoric of recycling, of the re-use of pre-existent stories, metaphors, and types in order to assert their visibility as collective subjects, marginalized by the hegemonic narratives within which they act. The writing and theorizing of SF--a subaltern field within the literary canon, which is trying to find a voice of its own--becomes a terrain in which analogous tensions are performed.

The analogy becomes explicit in a 1987 essay which moves from Derrida's "law of genre": we cannot speak of a text's exclusive "belonging" to a genre, but there cannot be a non-generic text. Delany rewrites this in racial terms: to discuss an exclusive text-genre relation is like postulating the "purity of the race": in literature, indeed, "miscegenation" is the norm. Yet, to deny *in toto* SF's specificity, in the name of an "unmarked" textuality or literariness, erases its historicity and difference, and proposes again an appeal to absolute and abstract standards of "innocence and transparency" ("Gestation").

With his "Black middle-class" background, and his later experience in the 1960s bohemian milieu, Delany finds himself updating and refining the stances of the early insiders--also members of a largely disempowered middle class. US SF connoisseurs have been building, with growing sophistication, a rhetorical competence specific to the genre's task of presenting otherness:

In SF, the world is not given, but rather a construct that changes from story to story. To read a SF text. . . . [w]ith each sentence we have to ask what in the world of the tale would have to be different from our world in order for such a sentence to be uttered--and thus . . . we build up a world in specific dialogue with our world. . . . In SF, we must retain the margin for reading every expression away from a given norm as informing us not about the fictive character so much as it informs us about the organization of the fictive world. ("Protocols" 178-79)

The rhetorical specificity of the genre is to be found in "the little hints, suggestions, throwaways by which the most skilled SF writers weave the tapestry of their world into coherence" (179). The main tool is the literalized metaphor, which creates the

defamiliarizing polyphonic conflict between the two worlds, and brings to the fore the partiality, contingency, and historicity of the readers' perspective, precisely because of their necessary participation, in the continual search for those data indispensable to the estranging, cognitive deconstruction of the "real" world and to the construction of the possible one.

What matters is the partial (however "omniscient") standpoint of the speaker from within the estranged discourse. This partiality means also the absolute centrality of the constituting factors for the fictive "subjects"; in SF there is no background that can be taken for granted, as peripheral to the foregrounding of the context-free self. The convergence with the postmodern critique of the traditional subject becomes a result, and not a rejection, of the conventions which have relegated SF into the ghetto.<sup>10</sup> As in *Black Signifying*, SF moves from the collective recognition of subaltern codes, denied by the traditional criticism "in which the literary priority of the subject obliterates the paraliterary priority of the object" (*Wine* 189) and the genre's autonomy. Delany's semiotics is first of all a pragmatics, hence a politics:

The discourse of SF gives us a way to construct worlds in clear and consistent dialogue with the world that is, alas, the case. . . . And in a world where an "alas" must be inserted into such a description of it, the dialectical freedom of SF has to be privileged. (100)

For this reason, the literary historian of SF should take into account that, with all its similarities with general "literary" history, SF history has periodizations and trajectories of its own: thus, the critic should not accept models simply derived from the history of the hegemonic middle class, too easily oscillating between (or, for a period, moving from) integrated technophilia to apocalyptic technophobia (*Wine* 224-

44): "This 'SF' simply grows, changes, reflects the world about it--but never responds critically in any way to it" (*Interviews* 156).

For Delany, thus, the agnition of race in front of the mirror is rendered central by the fact that SF is read by cultural subalterns who know that SF functions *because* of the mechanisms that have kept it in subalternity. In other words, Juan Rico's self-reflection is also the reader's self-reflection into a subaltern code which asserts itself by sending back the utopian, polyphonic image of the conflict-dialogue between actually existing and desirable worlds.

## NOTES

<sup>1</sup> The role of anti-theory or belatedly New Critical approaches, which angrily opposes Marxism and other methodologies that emerged in the post-1968 years but which for example accepts Jung, becomes quantitatively overwhelming in the single-author or single-work studies promoted by the journal *Extrapolation*, by the annual Eaton and "Fantastic in the Arts" conferences, and by publishers such as Ungar, Starmont House, and Borgo Press. These studies seem to assume, with Frye's *Anatomy of Criticism*, that we can "define popular literature," as we for him should do in the case of "primitive" cultures, "as literature which affords an unobstructed view of archetypes" (168). To map this scholarly production would go beyond the scope of this dissertation; still, its existence and bulk raises a number of questions on the actual state of the criticism and teaching of literature in North American universities.

<sup>2</sup> For one of the very few exceptions among American Studies specialists. cf. Jehlen's inclusion of Asimov in her study of the rhetoric of American expansion.

<sup>3</sup> On the hard/soft debate, cf. the collections ed. by Slusser and Rabkin, and by Samuelson. On Scholes's pro-soft bias, and its implications, cf. Remington. On the opposition between SF's "genericity" and esthetic quality, cf. also Luckhurst "Deaths."

<sup>4</sup> For my discussion of SF's generic boundaries, I am much indebted to Suvin "State" and Luckhurst "Border."

<sup>5</sup> A complete discussion of the insiders' work would mean to fill text and bibliography with a number of lists that would have added little to my argument. Among the autobiographies, the best is Pohl's *The Way the Future Was*. An exception to the "accountant" rule is Delany's *Motion*.

<sup>6</sup> Cf. Asimov *Asimov*, Bretnor *Modern*, Campbell, Davenport *Novel*. Eshbach *Worlds*. As the best possible exemplification of the limits of this stance. later, relevant epigone in the 1970s are associated with overt right-wing politics: cf. Bova, and Bretnor *Today*.

<sup>7</sup> We should point out that at times the use of the SF story as a means to discuss directly political themes such as the racial tensions, the atomic scare, etc., was promoted and urged by magazine SF editors starting as early as the 1930s (cf. Carter). In particular, the US political climate of the late 1930s leaves a grotesquely nasty aftereffect in Moskowitz's *Immortal Storm* (1954), which is a MacCarthyist pamphlet reconstructing how, around 1940, some clubs of the New York fandom attempted "to communize" (sic; 193) the subculture. Moskowitz's blacklist includes Asimov, Knight, Pohl, and Wollheim. For different views of the story, cf. Knight *Futurians* and Ross *Weather* 101 ff.

<sup>8</sup> Interestingly, according to Bainbridge, the average perception of the middle-class fans (their common sense) seems to construct "SF" as a spectrum ranging between the two poles of hard SF and fantasy, analogously to Aldiss's views, but without his shamefaced rationalizations. On the fandom, see also Suvin "Sociology."

<sup>9</sup> On Gernsback, cf. Carter 3-28 and Westfahl "Gernsback"; on Campbell, cf. Berger "Magic" and Westfahl "Campbell."

<sup>10</sup> In recent years, Delany has also had an academic career; other insiders with an analogous double role include Stableford and Russ. In all of these cases, their SF criticism cannot be considered without reference to their commitment and allegiance to the SF "inside." Significantly, the first major appreciation of Delany's criticism came from a feminist insider (Russ "Subjunctivity"). For recent, longer overviews, cf.

Samuelson "Constraints" and the rather hagiographic Broderick (ch. 5). We must at least mention here that there is, outside the Anglophone tradition, another SF writer forcefully present in both the "inside" and the "outside" debate: the Polish author Stanislaw Lem, so that Suvin's dialogue with his theory must not be left unnoticed.

<sup>11</sup> For a rare example of connection between postmodernism and SF insider criticism, cf. Puschmann-Nalenz.

### Chapter 3

## NORTH AMERICAN CYBORGS AND THE BODY INSTRUMENTAL

### 1. A Methodologico-Ideological Premise

Notions and images leading to the cyborg and to virtual space have been articulated in North American (chiefly US, but also Canadian) social discourse throughout this century. The history of these metaphors is a continuing dialogue between SF and various kinds of nonfictional texts--a history that places contemporary "cyberculture" in a coherent, if neglected, tradition.

In this history, a cluster of texts emerges as a subgenre of visionary speculation, which includes scientific, sociological, and popular nonfiction writings. In the following parallel analyses, this study does not wish to argue for a blurring of the distinction between fiction and nonfiction. Such a blurring has become a frequent move in much postmodernist SF criticism, that assumes that "SF has become a mode of discourse [that] regularly employs drastic new scientific concepts of material and social relations" (Csicsery-Ronay, "SF" 388). As a specific feature of postmodernity, SF cuts across genres, and places theorists such as Baudrillard on a par with literary authors, on the ground of a shared privileging of technological culture. For Csicsery-Ronay, "SF names the gap between, on the one hand, belief in the immanent possibility (and perhaps inexorable necessity) of (techno-scientific) transformations, and, on the other, reflection about their . . . embeddedness in a web of social-historical relations" (387).

This study argues that the irreducible specificity of SF as literature lies precisely in the centrality of the socio-historical pole. SF's potential cannot be

separated by its embedding the novum into the socio-historical web of the possible chronotope; it will be in the SF published within the bounds of the subculture, moreover, that this potential will find better and richer actualizations. On the other hand, the immanent risk and the all too frequent shortcoming of technological nonfictions can be identified with its abstracting the hypothetical concept from its (possible) history, together with its explicit or implicit "claiming ontological factuality for the SF image-clusters," which can only be "obscurantist and reactionary at the deepest level" (Suvin. *Positions* 71). With the only significant exception of Haraway, in this subgenre--to use Csicsery-Ronay's terms--possibility is systematically transformed into necessity, deterministically excising any utopian or dialogic openings from the SF metaphors.

Thus, while acknowledging the reciprocal debts of fictional and nonfictional discourses, I propose here to avoid all attempts at conflating them into one realm. Also, I propose that there is no apparent solid reason for limiting the analysis of this dialogue to the "postmodern" era, assuming a prior existence of a fictional and theoretical discourse adamically unaffected by science and technology. In the case of the cyborg and of virtual space, the history of literature and technological discourse provides fairly clear empirical time limits for my analysis.

My study will endeavor to reconstruct a conceptual lineage by reading these texts as refigurations of the relationship between individual bodies and body politic which use the vocabulary of the new interface technologies. The nonfiction will emerge as a consistent trace of one among the dominant ideologies within twentieth-century North America, that strives to assert itself as hegemonic consensus. We could call this ideology a technocratic one, whose internal subsets may range from populist to

unabashedly para-fascist variants, and that in most of the US output could be properly termed technocratic-nationalist.

This nonfiction about cyberspace and cyborgs may be written by members of the professional-managerial elite (scientists, propagandists, etc.), or it may emerge from the North American fortunes of various kinds of theoretizing intellectuals (including European ones), but in all cases--with very few exceptions to be analyzed in Chapter 5--it amounts to a technocratic philosophy and politics. Still, as the Ehrenreichs write in their Marxist analysis, the "professional-managerial class," albeit institutionally concerned with "the reproduction of capitalist culture and capitalist class relations" (12), is not internally homogeneous. If the nonfictional production discussed here suggest the existence of a core-group of uncritical techocratic ideologues, the SF production also reminds us of differences in the social positions of writers and readers; these differences become evident in more recent years, in which "de-skilling" has rendered "ambiguous the [lower] border" between the elite and the "working class" of mental labor (13). As a result, the dissemination of this ideology becomes more and more critically problematic as it reaches the non-elite subculture of SF writers and readers, with their different stakes in the technocratic and nationalist efforts.

One of the keys to the cultural impact of all that we have come to lump together under the rubric of "cyberculture" lies precisely in its role of an attempt to update the mythology and the rhetoric of "American" democracy. In this rhetoric, science and technology have often played an important role in shaping and coding the ideological construction of North American collectivities, "constantly reinvent[ing] possible worlds] in the contest for very real, present worlds" (Haraway, *Visions* 5). In

1888, the New England poet-politician James Russell Lowell lamented that the US Constitution, which he had hoped would have been "a machine that would go of itself," was not capable of preventing social crises in the name of the Revolutionary spirit (cf. Kammen). In today's mainstream interpretation, the computer, advancing from one revolution to the next, seems to replace the juridical with the technological machine, and to offer for renewal without conflict, a "revolution" as deterministic, constant updating of present socioeconomic relationships rather than a radical break with them. Many writers are contending that at the horizon of the electronic age lies utopia: Michael Benedikt, for example, writes that "we are contemplating the arising shape of a new world" ("Introduction" 23). It might be time to decide how much of this new ideological world is really utopian and desirable, and how much of it is really new.

## **2. Birth of the Cyborg**

An initial synthesis can be found in the paper that first formulated the term and the image of the cyborg, presented by the physicians Nathan S. Kline and Manfred Clynes at a symposium on "Psychophysiological Aspects of Space Flight," held in May 1960 at the School of Aviation Medicine, Brooks Air Force Base, near San Antonio, Texas.

The cyborg, Kline and Clynes write in their "Drugs, Space, and Cybernetics: Evolution to Cyborgs," prefigures the advent and triumph of the "participant evolution" (345); humans will no longer need to rely on the principle of random mutation in their progress toward the alleged *telos* of nature. The way is now open for artificial, controlled evolution, which will allow "man" to plan and design infinite variants of *homo sapiens*, able to live long and prosper in the worlds of space

exploration. This new entity "deliberately incorporates exogenous components extending the self-regulatory control function of the organism in order to adapt it to new environments" (347-48). Body processes and the attendant "robot-like problems are taken care of automatically and unconsciously, thus freeing man to explore, to create, to think, and to feel" (348).

In nonfiction as well as in fiction, cyborgs begin as--and up to a point remain--metaphors. It is therefore imperative that we consider the writings about them as rhetoric and discourse, and identify the rhetorical and discursive tensions that lie within and alongside the "scientific" expository tone.

In Kline and Clynes's approach cyborg integration strives to find a space for radical individualism by updating the vocabulary of evolutionary positivism. The first sentence of the article is: "Man must first conceive what he would create" (345). But throughout the paper the two authors treat the cyborg as fact: therefore, this first sentence must be read as "that which is conceived can, should, and will be created": the act of imagining an achievement renders inevitable its actualization. In their Cartesian privileging of mental conception over technological materiality, Kline and Clynes delineate an epic narrative of mastery over the universe in which they themselves, as scientists and conceivers, are the implied heroes. Their strategy, while ostensibly foregrounding a pluralism of embodiments, posits not only a mechanistic view of the body, but also a faith and hope in its irrelevance and coming supersession. If for Descartes "[t]he body is always a hindrance to the mind in its thinking" (Bordo, *Flight* 89), for the editor of the proceedings of the USAF symposium, "[i]n the man-machine system essential to space flight, man's limitations are the baseline which determine the degree of efficiency of the total system" (Flaherty 1). As I hope to show,

the absolute overcoming of "limitations" in the pursuit of expansive "flights" will become one of the crucial poles in the rhetorical tension underlying the hegemonic cyborg discourse.

In other words, this chapter deals with a tradition of texts predicated on an inherent contradiction in the use of the cyborg conceit: that is, on the deliberate transformation of seeming multiplicity into pure instrumentality. As an instrumental body, the cyborg serves as incarnation of a doctrine of self-legitimizing determinism and Manifest Destiny.

All of this can be read in the rhetorical context in which the cyborg figuration emerges in the US. On the surface, Kline and Clynes's cyborg body is an incarnation of the liberal utopia of the melting pot. In its harmonizing of heterogeneous constituents, potentially divisive boundaries are "homeostatically" cancelled in the mutual exchange of chemicals ensured by an equalizing system of communicating vessels (whose description takes up most of the paper). Homeostatic equilibrium appears indeed to provide contemporary scientific discourse with an analogue to the nineteenth-century "egalitarian" metaphors of communicating vessels (cf. Hayles "Disputes"; Portelli "Element"). But Kline and Clynes's protagonists are devised as agents of space exploration, and this leaves a mark. Thus, rather than the integration and smoothing away of difference, we have the instrumentalization of both the mechanical and the organic component. The cyborg, whose self-regulation neutralizes completely all boundary conflicts, is less an empowered body than an armored mind. The body mechanic is the body obsolete, and total control is erasure. All that is left is a pure thinking apparatus, free (to paraphrase one obvious antecedent, J. D. Bernal) from the devilish materiality of world and flesh. This infinite mobile singularity, in

"adapting his body to whatever milieu he chooses" (Kline and Clynes 345), can supersede the legacy and contrasts of (to use the terminology of Sollors's *Beyond Ethnicity*) its historical "descent" to find a home in the cosmic "consent" of what Kline and Clynes call, with capital initials, the "New Frontier" (347).

The journalist David Halacy wrote in his 1965 *Cyborg: Evolution of the Superman* that the cyborg seems to literalize the metaphor of the self-made-man, as humanity's top achievement and manifest destiny. Or, as Alvin Toffler argued in *Future Shock* (1970), the "pre-designed body" of the cyborg seems to herald an age in which biology and bioengineering replace politics, neutralizing all social conflicts and allegiances in the pluralistic name of the personalized design of identity (197 ff.). As scientific fiction and burgeoning reality of that North American "faster pace" (38) which has established "adaptivity" as a way of life, the cyborg is both synecdoche and microcosmic metaphor for a hopeful homogenizing reintegration into a holistic, monadically "self-sufficient" social body: "In this totally enclosed fully regenerative world, the human being becomes an integral part of an on-going micro-ecological process whirling through the vastnesses of space" (212).

The conflation of cybernetics with evolutionary biology, and the body as microcosmic incarnation of a self-enclosed social habitat, will accompany much of the literature on cyborgs, including many ostensible reactions to the technocratic stance.

### **3. On Technocratic Darwinism: A Lineage**

We could start with two texts from the 1920s as the initiators of the subgenre of visionary-futuristic speculation based on biological and technological achievements--a Darwinist pseudo-utopianism which poses evolution as liberation from body and

environment, and eugenics as main scientific tool for progress. Both texts were by British scientists, but their impact was enormous throughout the Anglophone world. In Haldane's *Daedalus* (1923) the biologist--the "romantic hero" of the times (77)--leads the way to the "colonization of the body." Even more pertinently in our context, in Bernal's *The World, the Flesh, and the Devil* (1929), the "colonization of space and the mechanization of the body are obviously complementary" (73): cosmic policing and prosthetic technology will free the human mind from all material fetters and will ensure its undying control over a mechanist and instrumental universe. Bernal's is a pseudo-utopia of "man's control over environment" (37) which is to be fully actualized "when we extend the foreign body into the actual structure of living matter" (39). But rather than "extending" it, the "teleological biochemistry" (41) of cyborgization will erase all traces of "foreignness" and opacity from the body, while processes similar to what we would now call "terraforming" will tame all uncontrollable otherness from the outer space of human expansion:

Finally, [man] would emerge as a completely effective, mentally-directed mechanism, and set about the tasks appropriate to his new capacities. . . . Instead of the present body structure we should have the whole framework of some very rigid material. (46-47)

Bernal's encased brain, "built up like that of a crustacean" (49), is not only an individual body but also, and above all, a social body, which in its manifold possibility for differentiation still extends its "rigidity" into a "hierarchy of minds":

Division of labour will soon set in: to some minds might be delegated the task of ensuring the proper functioning of the others, some might specialize in sense reception and so on. . . . The new life would be

more plastic, more directly controllable and at the same time more variable and more permanent than that produced by the triumphant opportunism of nature. (54, 57)

The overriding stance here presents the scientist as visionary futurologist, steeped in positivistic knowledge, who can extrapolate the shape of the world to come without fear of unpredicted novelties (e.g., economico-political upheavals).

In the North American (and specifically in the US) context, this has important resonances. It is imperative at this point to state again that my references to "rhetorics" are to be intended, following Bercovitch's *The American Jeremiad*, as shorthand for the construction and dissemination of hegemonic commonsense or consensus. A thorough discussion of the social groups involved in this process, beyond my reflections on the social position of the nonfiction-writers, would fall beyond the scope of this study--although I shall try to extend to specific SF texts and authors the hypotheses formulated in the previous chapters. I shall also refer to well-known scholarship in American Studies. In the US, no less than in any other country, the dominant discourse has established an accepted consensus through a rhetorical constellation, turning the US into an "imagined community" (Anderson)--bringing about the ideological abstraction of "America." Notions of unfettered individualism and of an available territorial *tabula rasa* legitimating an expansiveness into an "inexhaustible" realm of "boundlessness" (cf. Martin; Portelli "Sky") will be especially pertinent to my case. Moreover, as Leo Marx has argued in his classic *The Machine in the Garden*, the hegemonic self-representation of "America" can be often identified with a "rhetoric of the technological sublime." Confronting the "machine" of technology, the nationalistic liberal ideal perpetuates itself by endlessly redefining the

"pastoral garden" of Americanness. In other words, the importance of the bodily and spatial metaphors of interface technology lies *at the same time* in its bifurcated articulation into the two discourses of technological extrapolation and of SF *and* in its proximity to the mainstream of consensus.

Precisely in the first decades of the twentieth century Marx's technological sublime takes the shape of the cult of scientific and technological achievements. The engineer becomes a mythic figure, while science and technology become a pervasive presence also in High Modernism--if not in the authors canonized by the like of Eliot and Trilling (cf. Tichi, Seltzer, Steinman). It is in the discourse on the body that the ideological nature of technological liberalism come to the fore: as Seltzer argues, the onset of assembly-line production coincides with a general cultural anxiety "about the 'discovery' that bodies and persons are things that can be made." The blurring of the boundary "between the natural and the unnatural" (3) becomes a concern for a mass audience, after 1910, with the body-building craze, redefining the notions of determination and agency in terms of a scientifically manageable national and personal body. One of Seltzer's examples is Henry Ford's vision (in his autobiography) of the Model T production line as an integrated circuit of mechanical and human engineering, wherein, Ford says, more than half of the operation could be "filled" by "legless," "one-legged," "armless," "one-armed," and "blind" workers" (108-09). As Seltzer writes, "such a fantasy projects a violent dismemberment of the natural body and an emptying out of human agency," and at the same time "it projects a transcendence of the natural body and the extension of human agency through the forms of technology" (157). Even such an all-controlling ideal can only assert itself by bodying forth a promise of empowerment--if an illusory one.

But as it is transmitted to less obviously interested parties than Ford and his intellectual allies, this ambivalence--a fantasy with an incestuous mutual overlap between a practice of reified, exploitative alienation and a wish-dream of transcendent empowerment--changes in part its shape.

Thus, in analyzing the technocratic ideal in the pre-World War Two era, I propose a further distinction. If Ford and the Modernist and Naturalist intelligentsia root their technological sublime directly in the corporate system, SF and the nascent mass culture try to reconcile the ideal of "human engineering" (cf. Noble) with a hopeful notion of individual control over technology. Even the Technocracy Movement of the 1930s is contradictorily predicated on an ostensible populist ideal of grassroots reappropriation of the means of production, mediated by a caste of technicians (cf. Akin; Elsner; Ross, *Weather* 101-35). The founder of the SF pulps Hugo Gernsback was responding, in the stories he was publishing in the 1920s and 1930s, to the same cultural climate as the Technocrats and the British biologists (cf. Armytage 129 ff.), but his own populist take was the cult of the inventor. The lone creativity of the Edison-like hot-rodder or radio buff, building spaceships or rayguns out of scratch in warehouses and basements, implied also a naive democratic ideal of access to technology. Even the plain style of Gernsback's SF embodied a promise of democratic understandability and transparency on behalf of a new generation of readers hitherto excluded from scientific education; and the explosion of the fandom-raised generation of writers in the late 1930s produced (in magazines such as John W. Campbell, Jr.'s *Astounding Stories*) the emergence of a SF that, with all its sensationalism, assumed first of all that no streamlining of society, no pragmatic-technocratic solution would be victorious without devastating conflicts.

#### 4. Technological Transparency and Its Discontents

From Ford and Fordism, there emerges a tension between transcendence and alienation; in theoretical writing, the most powerful statement of the ambivalence in the hegemonic dialectic of cyborg selfhood in the 1920s is Freud's *Civilization and Its Discontents*. In this classic of the Modernist dispensation, the response to communication technology and Taylorism takes the form of a humanistic rejection of the triumphalistic version of a teleology *à la* Bernal. True, thanks to "all his auxiliary organs" the human is now, according to Freud, "a kind of prosthetic God," and we are about to witness technology "increase man's likeness to God still more"; prosthetization, evident in modernity, is actually the essence of human civilization. Yet, albeit inevitable, this process will not be a smooth one: "present-day man does not feel happy in his Godlike character" (38-39). Couched in the vocabulary of humanism and idealism ("beauty" vs. "the exploitation of earth"; 39), Freud's outlook introduces an uneasy distinction between destiny and ethics: it is still an issue of inherent human nature, but not all can be solved through acceptance and an enthusiastic embrace, and references to the difference in "level of civilization" among "countries" at least hint at unbalances in the rate of "progress" (39).

A similar tension between an acceptance of teleology and an axiological skepticism--and often reversal--is shared in the "cyborg" stories of the early SF pulps. In describing this era, Delany talks about "a critique of the philosophy of science, carried on under the program of theoretical plurality" (*Interviews* 153). If this assessment might appear overly flattering, still his (and Ross's) critique of the traditional notion of all pulp SF as simple techno-optimism is cogent and can be

applied to early cyborg stories, with a few qualifications. The philosophy of science, which is taken to be synonymous with that of history, is in them still fatalistic; but an implicit critique emerges embryonically in the treatment of individual characters: science and history have a predestined trajectory, but heroes and villains confront this *telos* from a plurality of positions. In other words, the technologizing of the body and the centralization of society will bring about countless astounding scientific novelties, but will not necessarily result into a desirable state for all: dystopia and hopelessness are in fact the rule.

Let us start the analysis of SF texts by quoting from Lloyd Arthur Eshbach's "The Time Tyrant" (1932): "It was a long, rectangular, silver tank upon which rested a large, hollow, crystal globe. . . . He fixed his eyes on the crystal globe filled with a pale green liquid in which was suspended a human brain" (11, 24). The brain in the box is the earliest standard version of the cyborg metaphor. In countless illustrations, its pervasive image is that of the exposed brain contained in a transparent container; ancillary details show its immersion in some sort of fluid, or tubes and wires connecting it to a mechanical apparatus (cf. Ash 185; Caronia, *Cyborg* 31).

Eshbach's story is a tale of revenge and will to power; first, the invention-stealing opportunist violently forces the scientific genius--whose talent he has exploited for his career--into serving as guinea-pig for his contraption; then, the victim finds in the disembodied condition the occasion for developing mental abilities that ensure his immortality and domination as world-ruler (as "The Brain"). The Brain's message is one of absolute individual self-reliance, which entails both transcendence of the body and of human history, as well as mastery upon other humans: "The past history of Man, from the dawn of time to what you will call the present, and the future

of Man, the Earth, the Sun--all these I see--and they are occurring simultaneously, taking place in the endless, eternal *now!*" (28). The Brain, as seer, immobilizes history and grants his former tormentor the sight of the immutable destiny contained in humanity:

Vision blurred--and a second time Leo Kozara seemed to be leaving his body, his ego-spirit drawn from his fleshly home by the power of the Brain. . . . Before him unrolled the picture of a world of super-men; and before him--rather, within him-- was enacted the tale of a life--*his* life in that future world. (30)

The picaresque narrative continues with focussing on the image of the disembodied "ego-spirit," whose domination transforms the future into a series of ruthless dictatorial regimes.

The rhetoric of transparency, disembodiment, transcendence, and individual power have a long history in US culture, which goes back at least as far as Emerson. Here, I will touch on Emerson's example, not just to find the recurrence of a pattern--which will find self-aware followers in Heinlein and Sterling, and a skeptical revision in Gibson--but also in order to rethink some assumptions about classic US liberalism. Emerson writes in his canonical "Nature":

Standing on the bare ground--my head bathed by the blithe air, and uplifted into infinite space,--all mean egotism vanishes, I become a transparent eye-ball. I am nothing. I see all. The currents of the Universal Being circulate through me. . . . I am the lover of uncontained and immortal beauty. (10)

Emerson sings of an "American" self that is both democratic (transparent) and expansive. The first aspect has been traditionally emphasized by American Studies; the second one, with its implications of invasion and self-annihilation (but see at least Martin 186-87, and Portelli, "Element" 237-39), becomes the focus of Eshbach and many of his colleagues. Emerson had decapitated his seer, paradoxically to project and extend its egotism into large-scale expansion and "universal" mastery (cf. Porter 105-07; Horwitz 171 ff.). Eshbach's Brain, as well, is a head floating naked, bathed in a thin support system, who becomes one with the fluidity of the infinite (metaphors of water abound: "flood-gates" open, "torrents" and "streams" cross him at the moment of his illumination: 26). A most predatory individualism had been the philosophy of the story's evil antagonist, and had been literalized in his lifestyle *à la* Daniel Boone ("There wasn't a sign of any other habitation within the circle of the horizon": 18). The Brain reinstates this individualism at a higher level, which reduces his "I" to a "ball" or globe, but releases him from the constraints of finitude while sentencing his future subjects to slavery. The eyeball's and the globe's transparency might be a metaphor for democratic openness and *glasnost*, but they are also the mark of a panopticon, a form of vulnerability for those who can find no way out of the all-seer's reach. In a universe revolving around bodiless self-reliance and instrumentalized bodies, absolute powerlessness is the unerasable flipside of absolute power.

In the same years, the physician Alexis Carrel--Nobel-prize winning pioneer of transplant technology with his "perfusion pump" for out-of-body maintenance of explanted organs, and an admirer of Haldane and eugenics--wrote in his popular *Man, the Unknown* (1935) about skin and body surfaces as "the almost perfect fortified frontier of a closed world" (65). For the canonic/hegemonic discourses in literature

and science, transparency without accountability and vulnerability, and unconstrained individualism without openness to otherness may be fused together and become the nation's destiny. Yet SF writers raise some major doubts as to the desirability of all this.

In the years of radio, movies, New Deal, and Fascism, when the machines of social and political consensus-making discover the powers of technology, the disembodied and boxed brain becomes both an image for all-winning, fortified individual and collective bodies, and an image for the threat of forcible loss of humanity and selfhood.

Thus, when Curt Siodmak's *Donovan's Brain* (1944) concludes with the invocation that "Nature has set limits which we cannot pass" (188), this is not simply a nostalgic attack on technological hubris, but also a reaction against the Emersonian version of Cartesian all-expansive individualism. For Siodmak, a Jewish emigré from Nazi Germany, his new homeland may provide avenues of its own to despotism and oppression. Here, the "brain in the glass" (28) of a ruthless corporate tycoon, who mentally takes over the body of the scientist in order to continue his financial activity, literalizes and stands for the economic process that, in the legal immortality of the corporation, is turning the US and its culture into a part of its own "glassy," invisible hand and body.

Pure optimism is relatively rare. For example, Neil Jones's space exploration stories of the 1930s (partly collected in *The Planet of the Double Sun*) feature a hibernated scientist revived by cyborg aliens who grant his brain the possession of a metal body. However "alienized," lonely, and under continual threat (in almost every story, his body needs to be "repaired"), Jones' protagonist shares with the alien

rescuers the exhilaration of a wholly rational existence. In the years around 1940, in the "Captain Future" novels by Edmond Hamilton and others (some of which are SF's contribution to World War Two propaganda), the cyborg brain becomes the morality-play analogue of a micro-society of superheroes who in turn epitomize a society which is both triumphantly expansive and bound to a rigid hierarchy, only emphasized by Capt. Future's own role as charismatic media star. As described in *Captain Future and the Space Emperor* (1939), the brain, "insulated" and immortal in a "transparent metal box" with its "perfusion pump" and "purifier" (12-13) overtly allegorizes rationality and "science" in a trio which includes "strength" (a robot) and "swiftness" (an android); all of them are subordinate to the eponymous superhero, who continually purifies Earth from the danger of devolution (*Emperor*), loss of individuality (cf. the mind-fusing "electric webwork" of *Captain Future's Challenge*--an obvious red-scare metaphor) or evil dictators (cf. the "extra-system" villain of *Calling Captain Future* and his control over a "dark star," with no less obvious racial overtones).

Usually, there is little reassurance in the mechanical empowerment of the individual brain. Mind might rule over matter and turn someone into a "demigod," but if so then mind must reign absolutely: no passion, doubt or irrationality must be allowed at all, or else the dream of omnipotence might turn into the nightmare of genocide, as in Raymond Gallun's "Mind over Matter" (1935). Mechanization of the body might be a logical and inevitable outcome, which finds a ready listener in the protagonist of Francis Flagg's "The Machine Man of Ardathia" (1927), who wants to think of a way out of Marx's socio-economic theories. In Flagg's story--the meeting between a present-day writer and a cyborg time-traveller from a future--little reassurance is to be found in the visitor's contempt and evil forebodings; -the

protagonist's eventual psychiatric internment only stresses the denial of agency and hope in these narratives of fatalistic determinism.

When the societal level is addressed directly, the result is the dystopia of complete manipulation, as in Lawrence Manning's future society of the spectacle in the "city of the living dead" episode of his 1933 *The Man Who Awoke* (79 ff.); in David Keller's technocratic dictatorship in his 1929 "The Eternal Professors," a humanistic, nostalgic attack on the myth of "bodiless perfection" (421); in the Mexican immigrant Lester Del Rey's tale of racism against the cyborg "Frankies" (i.e., Frankensteins) in "Reincarnate" (1940).<sup>1</sup>

### **5. Cyborgizing the Classics: Heinlein and Bester**

Throughout the tales discussed in the previous section, the age-old trope of the body politic--the corporeal incarnation of the sovereign collectivity--presents authority and power as simple, one-directional coercive thrust. The cyborg imagery literalizes the classic US rhetoric of the self-made man in the morality-play of a hero who seemingly manages to assert his power without establishing a consensus of any sort around it. Of course, as Gramsci says, it takes consensus and not just sheer force in order to make a collectivity function or (to use a formula repeatedly used by Bercovitch) to turn the mere descriptive force of "the United States" into the accepted mythology of "America." After the establishment of the SF subculture, this is the concern of two major works published respectively at the beginning of World War Two and in the middle of the Cold War: Robert Heinlein's "Waldo" (1940) and Alfred Bester's *The Stars My Destination* (1956).

The Emersonian model of nationalist individualism is still pertinent. Indeed, the generation of writers that produced the canonical American Renaissance had established itself, in one of the climactic periods in US expansion, through works predicated on the link between the metaphorical vehicle of the personal body and the tenor of the national social body.<sup>2</sup> In a no less traumatic period, Heinlein and Bester configure their cyborgs in direct dialogue with this canon, endeavoring to ground on the body--and on its integration with the inorganic--a reconstruction of society and a legitimation of the latter's errand of unbounded conquest.

Heinlein's "Waldo" posits an alternative between absolute determination and absolute indeterminacy, and chronicles the temporary crisis and final triumph of the former. The story's trajectory from finitude to infinity aims at simultaneously reinstating *both* the primacy of the monadic individual's self-reliance *and* a principle of social cohesion.

At the beginning of the tale, the protagonist Waldo F. Jones is in fact a perfect incarnation of Ralph *Waldo* Emerson's anarchic individualist: both are meant to exemplify the nation's will to mastery. There is little doubt about the allegorical status of a character who was born "declar[ing hi]s independence" (13), and who appears to have followed what his namesake had dictated in "Nature": "Build . . . your own world" (Emerson 48). The nationalization of individualism in the notion of the self in Emerson's writings had been predicated on a twofold operation. First, we have the transcendence and dematerialization of the individualist agent: "the mind is the only reality" (195), whose "expansions, or extensions," can imaginatively yet fully overcome, "in every direction," the "horizon" of material experience (656). At the same time, the rhetoric of dematerialization serves to deprive other individuals of

agency: the "social state and history" must become a "material" to be turned into "possessions," "instruments," and "accessories" (1033); thus, other people become mere "reflectors" (195) of the empowered self. Like Emerson's, Heinlein's American Everyman has taken on a demiurgic rôle, building not only his own world but a world in his own image. Living in a space station called "Freehold." Waldo is indeed "floating in thin air . . . free in space" ("Waldo" 21). Confronted with a congenital, incurable muscular disease, Waldo's solution is cyborgization of both self and world; turning "personal convenience" into "commercial exploitation." Waldo has turned his own self-made self into a one-man corporation. His invention of the "Synchronous Reduplicating Pantograph" (22), the artificial limb universally nicknamed "waldo" that can expand his almost nonexistent strength into superhuman performance, has itself been expanded into becoming the functioning principle and purpose of the whole environment.

In this story, absolute voluntarism meets absolute mechanicism. To begin with, Heinlein posits a parallel between the nation's best engineer and its top physicist: "To Rambeau the universe was an inexorably ordered cosmos, ruled by invariable law. To Waldo the universe was the enemy, which he strove to force to submit to his will" (50). Inexorable order allows forceful will to assert itself in full, both literally, on Freehold, and metaphorically, in Waldo's attitude toward others, as individual and as entrepreneur: he "came to regard the entire human race as his servants, his *hands*, present or potential" (15).

Waldo's rule does meet with dissent and resistance: most people call his orbital cocoon "Wheelchair," he still needs supplies, and there is the economic competition of the powerful "North American Power-Air." In fact, while order rules in a continent

(the US of North America) that employs "radiant power" as energy source. humans--whom Waldo considers an inferior race--are inexorably and mysteriously getting physically weaker. stricken with "[e]pidemic myasthenia" (42), sharing something of his condition. Waldo becomes even more like an unwilling true representative of humanity when the power "receptors" begin to fail on a global scale. the Freehold solution appears to be impossible to apply to all humanity. Still, he is summoned to find a way out. As Bruce Franklin has well argued at book length (*Heinlein*), Heinlein's entire work is concerned with devising science-fictional solutions for the perpetuation of the national idea of "America." In "Waldo," he constructs a parable on the declension and restoration of the individual and the social body, organized around a paradigm of conflicts which pits independence vs. dependence and individual vs. corporate state (Wolfe, "Adaptations" 71), or, better, vs. the corporation which has taken over most of the state's role. Heinlein has, fittingly, Waldo come down to earth and team up with a country "hex-doctor," a figure of mistrust in technology and mechanistic order.

In the ending, chaos appears to have the upper hand, and Waldo frees himself from the inorganic, but only in order to extend his narcissistic cyborgization at a higher level. Confronted with disorder and indeterminacy, the physicist Rambeau is maddeningly unable to react: "Nothing is certain. Nothing, *nothing*, NOTHING is certain" (55). To the contrary, Waldo finds in it yet another chance for the triumph of his will. For him "Chaos was insupportable--it could not be lived with" (91), but is also a *tabula rasa* of infinite malleability:

Orderly Cosmos, created out of Chaos--by Mind! . . . The world varied according to the way one looked at it. In that case, thought Waldo, he

knew how he wanted to look at it. He cast his vote for order and predictability!

He would *set* the style. He would impress his *own* concept of the Other World on the cosmos! (91-92)

As the Panshins write, "offered infinite possibility, the possibility that Waldo opts for is to have things continue much as they have been" (*World* 443).

The movement in "Waldo" is worth recapitulating. First, we see a weak protagonist who overcomes his limits through mechanization, and a weakening world confronted with the failure of mechanistic science; Waldo fares better, but remains isolated by the human "hands" he manipulates commercially just as he manipulates physically his "waldoes." Eventually, we see him rejecting the chance to overcome *all* limitations, rejecting absolute freedom of choice, taking instead the road back to the previous notion of normalcy. Paradoxically, this movement allows Heinlein to reconcile individual domination and social organization.

The hex-doctor suggests that the way out of chaos can be found in the resources of an unknown space he calls "the Other World": for Waldo, this prospect can only be imagined as a confirmation of his superiority: "To its inhabitants, if any, it might seem to be hundreds of millions of light years around; to him it was an ostrich egg, turgid to bursting with power" (93). The Other World is for him pure raw matter to be conquered and exploited at will, inexhaustible energy source, which removes all limits to Earth's development. This discovery is the result of an alliance with a conceptual opposite, but we find that the allegedly backward quack shares Waldo's homesteading frontiersman attitude: "The power of the Other World is his who would claim it" (107-08). Thus, we have a literally self-made man, who fancies himself a

new Benjamin Franklin (81) colonizing a new Third World (he compares the Other World to the "deep jungles of Africa"; 92), or better, making it *ex nihilo* all by himself (thinking it into being): "Was he merely speculating--or creating a universe?" (93). The only thing that is never in question is the sovereignty of Waldo's mind over external matter: "'The Other World . . . is here and it is there and it is everywhere. But it is especially *here*.' He touched his forehead. The mind sits in it and sends its messages through it to the body'" (67). Waldo's self-sufficient self continues to consider world and others as vessels for his own will: now, though, there is no longer a discrepancy between literal instrumentalization of the body and metaphorical instrumentalization of the world; that is, between cyborgization and commercial exploitation. In Heinlein's parable, a coalition between levels of technology translates into a Popular Front of sorts the liberal hope of a class compromise, and establishes the cyborg as both manifestation of Calvinist predestination (as emphasized by Slusser, *Years* 35-39) and rhetorical agent of democracy and equal opportunity.

The alliance between Waldo and the hex-doctor, that is, between non-technological and hyper-technological power allows the remaking of a continuity linking body and society as one Cartesian/Emersonian "extension." With the same act of the will Waldo restores health to his and the other bodies, provides Earth with a new hope in infinite expansion, and personally takes the place--as winner in the commercial competition--of the impersonal NAPA corporation, by tapping on the Other World and "selling free and unlimited power . . . more cheaply" than ever before (86). With his act of demiurgic omnipotence, Waldo asserts definitively his superiority over ordinary mortals and pushes the story to the verge of supernatural fantasy--a template which will recur in many tales to be analyzed in this chapter.

Where once there were ruptures, conflicts and contingencies, hegemonic order has now been universalized. The cyborg, as metaphor of the unconstrained will, builds its universal and business triumph by willing itself out of existence, or at least out of sight.

Sixteen years later, Bester's *The Stars My Destination* rewrites the same story on reconciling total self-reliant mastery with liberal social ties. The novel, which is customarily taken by critics to be an anticipation or early manifestation of postmodern esthetics, is a parodic pastiche which builds on a wide array of "sources," from Joyce to Blake and Dumas (cf. McCarthy). Most important, the concern of *Stars* is the reintroduction of individualist self-sufficiency into a world in which the markedly neo-feudal sovereignty of corporations and multinationals ("clans") has replaced nation-states. Whether or not Bester's *Stars* (cf. Bier) as well as Heinlein's "Waldo" (cf. Franklin, *Heinlein* 54-55) are dominated by an ideological aspect of complicit consolation, as wish-fulfillment fantasies for adolescents, I argue for the existence of a more complex allegorical level, which shapes both texts as meditations on the survival of the populist side of the Americanist democracy.

Bester's book is better read as a morality play, whose protagonist is presented as "the stereotype Common Man" (12). The possible world in which the protagonist Gully Foyle is made to act revolves around the two novums of mentally triggered instantaneous travel ("jaunting") and of neo-feudal capitalism. Both novums signify mobility and collapse of physical boundaries; yet both bring about new forms of constraint, which--as often in Bester's SF--take the form of imprisonment and congealment (cf. Kelleghan). One metaphorical version of congealment is that of the

salesmen who undergo "surgery and psycho-conditioning" (41) in order to be reshaped as brand-name identities, designed to induce consumer satisfaction. Among the literal imprisonments, one conjoins the two novums: "In the homes of the wealthy, the rooms of the female members were blind, without windows or doors, open only to the jaunting of intimate members of the family. Thus was morality maintained and chastity defended" (39). In an analogy to the onset of contemporary consumerism, mobility and social control are inextricably interwoven in a system that engages both the private and the public sphere in an attempt to recreate the notion of a collective purpose. This purpose is presented in classical nationalistic terms at the very beginning of the novel: "Where are the new frontiers?" (3)

In this light, I would stress one passage, in which Foyle, who has just had an operation to remove a tattoo from his face, discovers for the first time that erasing the signs of the past is not an easy job. The tattoo has left unerasable scars on him: "He saw the old tattoo marks flaming blood-red under the skin, turning his face into a *scarlet* and white tiger mask" (106; my emphasis). The plot had started with him, abandoned in space, rescued by a religious sect (reminiscent of Swift's Laputa scientists), and branded with a tiger face and the word "Nomad." Both the writing and the drawing brand him as representative for human mobility. Not only does this specific nomad or social climber and Darwinian predator compare himself to a tiger, albeit with some eventual unease (205); the scope of this metaphor is also collective: the technique of jaunting, we are told, puts to use the "Tigroid Substance in nerve cells" (6). However slim the reference to a "scarlet" sign in one of the climactic scenes of *Stars*, and regardless of any direct "influence," I would argue that the overall

strategy underlying *Stars* shows many affinities to Hawthorne's classic *The Scarlet Letter* and may be taken as an updating of the same concerns.

As in Hawthorne, this is a story about injustice, the imposition of visible stigmata, and an attempt to redress the wrongs inflicted upon an individual by social institutions. As in Hawthorne, Bester presents a narrative of enforced self-assertion, with an obsessive insistence on self-scrutiny and self-control: "You'll have to learn control now, Gully. You'll never be able to give way to emotion... any emotion. . . . You'll have to hold yourself with an iron grip" (105-06). Social--namely, economic--self-determination of the wronged individual follows; Foyle creates a potentate outside the established families while pursuing his revenge. As in Hawthorne, this is a story that warns against the threat of absolute manipulation and absolute submission. As Bercovitch writes of Hawthorne, this "is a story of socialization in which the point of socialization is not to conform, but to consent. Anyone can submit: the socialized believe . . . and this involves the total self" (*Office* xiii). Foyle's *Bildung* will be--a fairly rare case in this period of US SF history--an understanding of the consequences of his sexual aggressiveness; even more crucially, his process of self-determination will indeed be a reshaping of his total self, literalized in the form of cyborgization:

It looked as though someone had carved an outline of the nervous system into Foyle's flesh. The silver seams were the scars of an operation that had not yet faded. . . . Every nerve plexus had been rewired. microscopic transistors and transformers had been buried in muscle and bone, a minute platinum outlet showed at the base of the spine. (121)

Cyborgization no longer means simply turning the body into a vessel hosting the support system for the sovereign brain; with the "wiring" of the central nervous system, the whole of the physical self is placed under the control of the individual will. And if the tenor is will to power and revenge, the vehicle is will to mobility: the most sensational result of the operation is Foyle's ability to "accelerate." that is, to move at such a high speed as to become invisible. Velocity and acceleration stress the struggle for control, and what is being controlled is a process, and more precisely a *telos*.

The beginning had been a retrospective connection between the need for "new frontiers" and the discovery of jaunting, presenting freedom of movement as synonymous with collective purpose, as also alluded to in the title. The convergence of bodily as well as economic mobility and self-making signify, on the one hand, "the infinite power of the liberated spirit as it triumphs over all obstacles, refusing to accept its mortality" (McCarthy 59). But to be victorious over all obstacles means to give up Everyman's role for Superman's, as the narrator had stated at the beginning, commenting on the first spark of Foyle's retribution quest: "The Key turned in the lock of his soul and the door was opened. What emerged expunged the Common Man forever" (18). In the last chapter, Foyle listens appreciatively to a robot reminding him that "[a] man is a member of society first, and an individual second. You must go along with society, whether it chooses destruction or not" (244). This is a highly ambivalent statement, and the novel ends with Foyle enacting it.

As Everyman/Superman, he assumes the role of social leader, and uses the rhetoric of democracy, transparency, and free access:

"No," Foyle roared. "Let them hear this: Let them hear everything."

"You are insane, man. You've handed a loaded gun to children."

"Stop treating them like children and they'll stop behaving like children. . . . Explain the loaded gun to them. Bring it all out in the open." (247-48)

But with all his populist rhetoric, he actually inaugurates an era of potentially genocidal balance of terror. He distributes to everyone a small dose of "PyrE," a mentally induced explosive ("Only Will and Idea are necessary"), which is no less than "the equivalent of the primordial protomatter which exploded into the Universe" (210): pure will without constraints has a downside of truly explosive expansiveness. When we see it exploding, the result is a hallucinatory experience of synesthesia (221 ff.): yet another oxymoronic experience, like the semi-artificial cyborg, like Foyle's one-man corporation, and like the various scars inscribed on his body, first passively endured (the scarlet letters) and then actively sought for (the operation marks).

With Foyle's newly discovered ability (apparently available to all) to "jaunte" freely in time and outer space, apparently also comes the free possibility to "spread our freak show from galaxy to galaxy through all the universe" (244). In fact, it seems as if absolute individualism were now at everyone's disposal: "They can all become uncommon if they're kicked awake like I was" (248).

Society, though, has to come before the individual also in another sense. In the end, after an unspecified period of space travelling, Foyle retreats from the world, back to the anchoritic colony that had imposed on him the scarlet stigmata. Given utterly free choice, Foyle chooses voluntary imprisonment, "prepared to await the awakening" (252). That same awakening that had made him into an "uncommon"

liberator is now translated into a future goal, and made into metaphysical collective history (the "new frontiers") by the retrospective omniscient narrator of the prologue.

Like the protagonist of *The Scarlet Letter*, Foyle willingly returns to the place of his branding and exile. Absolutely free will is the rejection of future change, or better, the translation of the openings stemming from physical expansion into a form of reassuring closure: implicitly, we (the addressees of the novel) are all being awakened. The sociopolitical system is not affected and is in fact relegitimated. As in "Waldo" and in *The Scarlet Letter*, hopeful openendedness turns into self-perpetuating endlessness (cf. Bercovitch, *Office* xi). The cyborg body, pursued as tool and instrument, is discarded as signifier and harbinger of new meanings.

## **6. The Mass Cyborg**

### **6.1. Nonfiction.**

Let us resume our discussion of theory with a quote from an unlikely source, Margaret Mead:

We all know that we ought to study the organism, and not the computers, if we wish to understand the organism. . . . [Yet] the computing robot provides us with analogues that are helpful as far as they seem to hold, and no less helpful whenever they break down. To find out in what ways a nervous system (or a social group) differs from our man-made analogues requires experiment. These experiments

would not have been considered if the analogues had not been proposed. (qtd. in Hayles, "Disputes" 23)

The history of cybernetics and of its origins falls beyond the scope of this study. Still, in rereading Mead's comments (coauthored with the mathematicians Heinz von Foerster and Hans Teuber) on a series of interdisciplinary conferences that around 1950 contributed to formalize the new science of cybernetics (cf. Heims), one thing appears impossible to dismiss: computer theory is not only a "pure" science but also--perhaps mainly--a *rhetorical* operation. The reciprocal construction of living organism and machine in terms of each other is the undisputable *assumption*, rather than the testable hypothesis, on which the newborn science of cybernetics is predicated. The intention to extend cybernetic models to human organisms and collectivities is explicit: the subtitle<sup>28</sup> of Norbert Wiener's founding book *Cybernetics* (1948) is "Control and Communication in the Animal and the Machine," and the 1946-53 New York Josiah Macy Foundation conferences--also promoted and attended by psychologists and sociologists--bear the title of "Circular Causal and Feedback Mechanisms in Biological and Social Systems." Mutual construction becomes soon a notion of *continuity* between computer and human operator, argued in the terms, formalized by Bell Labs mathematician Claude Shannon, of a theory of communication which sees "information" as pure, quantifiable syntactics at the expense of pragmatics and emphatically of semantics. With the dismissal of "meaning," what follows is the construction of a continuum or integrated human-machine system.

As Haraway insists in both of her books, cybernetics is grounded, since its beginnings, on an ergonomic model based on the conjunction of discontinuous

components through communication channels.<sup>3</sup> Ergonomics, or human factors research, came eventually to define itself, in terms drawn from cybernetics, as the study of the "man-machine interface" or "system" (Pheasant 2) aimed at maximizing the efficiency in performance of such a joint construct. This is a quantitative syntactics of physical mechanisms regardless of the semantics of use and the pragmatics of context, whether the latter is "productivity, health, or safety" (ibid.), or--we should at least here name its real starting point--a weapons system. Along these lines, the human element is often spoken of as an accessory to the machine or an "intermittent correction servo" (Craik 121), in a vocabulary of mastery/slavery. To be such, it is essential that people be subdivided into a series of components, parts of an overall chain, on a par with the machine's subsets. The question then becomes the detection of restrictions in the communication flow: "What are the important properties of man's input (sensory end organs) and output (motor end organs) which determine the design of the machine input (control) for optimum information transmission?" (Karlin and Alexander 1124).

The following logical step is the conceptualization of the ideal interface apparatus, in which stress points preventing this "optimum" are reduced to zero. This concept is the cyborg.

Already in 1945, for Vannevar Bush--pioneer in human factors research, presidential scientific adviser during the Roosevelt and Truman eras, and one of Wiener's mentors--it is only a matter of reaching the logical "bounds" of present research before "the path" linking the input-output apparatuses of brain and machine "may be established more directly," in order to "proceed from one electrical phenomenon to another" (108). In 1960, the psychologist J. C. R. Licklider--writing

one of the manifestoes for the line of research which would eventually lead to Internet--entitles his paper, "Man-Computer Symbiosis."

What must be stressed is that this metaphor is not simply a new version of the classical clockwork organism. Rather, cybernetics moves towards something which appears like a cross between the self-made-man *à la* Benjamin Franklin and the autotelic, self-enclosed well-wrought urn of the New Critics. As Hayles ("Disputes") argues, the notion of the pursuit of homeostasis, according to which a computer functions insofar as it maintains its inner stability, is gradually transformed into a notion of equilibrium that widens its scope from the machine itself to the overall machine-operator (or machine-programmer) pair. When the cyberneticians of the 1960s and 1970s discuss "self-reflexivity," they have less in mind the notion of a dynamic interplay between operator and computer than an emphasis on "the world as a set of formally closed systems . . . determined by their internal self-organization. Hence the[se systems] are not only self-organizing, they are also autopoietic, or self-making" (Hayles, "Disputes" 12). Underneath a radical constructivist epistemology (the observer influencing and interacting with the phenomenon) lies a profoundly monistic and functionalist attitude. When extended to human collectivities, this attitude can only envision society as a monolithic whole. The integrated components give rise to a continuous flow, and the internal complexities may be self-reflexively resolved in pure autonomy. If "homeostasis" creates cybernetics within a post-War "return to normalcy" mood (Hayles, "Disputes" 16), autopoiesis and cyborg self-sufficiency raise it in a Cold War self-protection atmosphere.

The figure of the cyborg, as proposed by Kline and Clynes, literalizes concepts already dominant in the field of cybernetics, that were already--routine disclaimers to

the contrary--asserting themselves in other fields, in both "hard" (cf. Haraway on biology and zoology) and "human" sciences. One main thrust among these scientists and technicians appears to be the effort to reinterpret no less than the whole of human history in terms of the human-machine interface. For Licklider, his "symbiosis" concept extrapolates to its logical conclusion modernity's achievement of the "mechanically extended man." For R. M. Page, human engineering specialist in the US Navy labs, "machine-to-man coupling" provides an almost metaphysical template: modern technology is, a few years before McLuhan, a history of the "extensions of man," and a full coupling "must" and "will" become reality in fifty years.

The cyborg model is here euphorically assumed as actualizable soon and on a mass scale, not merely as a feature of extraordinary individuals or brain-trusts. The unanimous rhetorical assumption is that feasibility guarantees inevitability and acceptance. The editorial blurb for Bush's article compares him to Emerson: the scientist is presented as prophet. The only debate is about the desirability of this model; throughout, the undertone of fatalism is unmistakable.

In the 1960s, a sizable number of popularizations examines the implications of the cyborg. Again, the conflict is between the apocalyptic and the integrated, between high culture (political theorists, university intellectuals) and professionals of the written medium.<sup>4</sup>

Chief among the former is the liberal macro-historical narrative of Riesman's *The Lonely Crowd*. Riesman reconstructs the human trajectory from "traditional" societies to inner- and outer-directedness in the metaphorical internalization first of a gyroscope (in Protestant self-scrutiny and capitalist self-reliance) and then of a radar (in contemporary affluent and consumer society). His macro-history of declension

from safety to precariousness appears both monolithic--without internal conflicts *during* each phase--and deterministic. Among the "radicals." Theodore Roszak, theorist of 1960s counter-culture, sees in his *Where the Wasteland Ends* (1973) the cyborg as yet another manifestation of technocratic and oppressive rationality (244-51), that only a rejection of technology itself, with a return to the purity of interiority, nature, and "transcendence," might avert. Analogously, Mary Daly's *Gyn/Ecology* (1973), one of the manifestoes of "radical feminism," discusses the cyborg as a hi-tech version of rape and phallocratic domination, based on a continual "boundary violation" of body, woman, and nature, and on the expropriation of their creative powers on behalf of male supremacy (69-72).

In all of these writers, modern technology seems to be *per se*, as opposed to relations of production, the site of what Lukács had called reification. Along the same lines, Marcuse's *One-Dimensional Man* had rightly denounced in 1964 the end of the private sphere of interiority, invaded and taken over by technocracy, commodification, and consumer society; the citizen of such a society can no longer, and by definition, become an antagonistic subject. For Marcuse, alienation has now become a meaningless concept, in the absence of a whole and rounded oppositional standpoint such as that provided by the independence of the inner world. Among significant "continental" European texts translated in English, only Ellul's *The Technological Society* discusses the "complex man-machine" (395) in reference to labor and production, and discusses the uses of technology in terms of desirable "limits" to its growth (397-98). But--against Lukács--in Ellul, too, the key point is the hope or illusion to anchor antagonistic agency into the absence of the bodily marks of commodification and relations of productions.

Daly, Ellul, and Roszak are not totally wrong in their mistrust in the cyborg imagery. The most dystopian, chilling side to the politics of human engineering comes to the fore with the release, starting in the 1950s, of a series of medical studies whose impact on the mass imagination contributes to the birth of contemporary bioethics as reaction to it (cf. "New Biology"). For Delgado, the foremost advocate of "Electronic Stimulation of the Brain" ("ESB") the issue is precisely the reconstruction of a controllable self-enclosure by placing under check the dangers of embodiment: the "individual mind is not self-sufficient" because of its "dependance on sensory input" (59); thus, "ESB could possibly become a master control of human behavior by means of man-made plans and instruments" (179). The resulting "psycho-civilized society" (279 ff.) would be the crowning, and not the demise, of human agency. This behaviorist nightmare conjoins Bernal's ideal and the cybernetic/ergonomic model, and obtains the attention of many popularizers (cf. London, Pines, Valenstein) who are all very ambivalent about this scenario. For the first time, the texts by Delgado and his commentators feature what cyberpunk SF will choose as one of its central images: the cranial jack which plugs the brain implant into an electric circuit. As I am going to discuss in Chapter 5, alongside the pervasive dream of virtual ecstasy there lingers in the best of cyberpunk the nightmare of a civilization wholly manipulatable into enforced consensus, embedding panoptic surveillance into the body itself.

But where the apocalyptic see invasion, reification, and dispossession of the subjects they choose as inherent bearers of freedom and alternative values (the individual and culture in Roszak, women's naturalness in Daly), the integrated, specularly, see the inarrestable, exhilarating armoring of the power and freedom of the individual (always male, almost always white and Anglo). In both cases, there is no

possibility of a critical redefinition of the subject in its dealings with the inorganic-- beyond classical individualism.

In the eschatology of the popularizers (often more aware of belonging to a complex tradition), the tones are emphatic and spectacular. Their visions are of invulnerable, immortal supermen launched towards the colonization of earth and outer space. These visions do not exclude disturbing wishful Social-Darwinist fantasies about the rise of cyber-biological castes or even about "the obsolescence of man" and the dominance of a superior race (cf. Arthur Clarke's 1963 *Profiles of the Future*: 213-27). The standard strategy presents celebration in terms of inevitability: "Evolution never stands still," as Cole writes in his 1964 illustrated *Beyond Tomorrow* (120). The cyborg, in other words, allows for the naturalization and apparent depoliticization of technology. In Cole, the emphasis is on the removal of "unhealthy" parts and on the promotion of "cleanliness" (112-15) as necessary step toward space imperialism and colonization.

In the most sustained study, Halacy's *Cyborg: Evolution of the Superman* (1965), there is to be found a full-fledged history, from organ transplants to the nascent biotechnology, with references to SF as well as to nonfiction, and with an official prefatory nod by Manfred Clynes. Here, the cyborg is a vehicle for both individual and collective concerns. On the one hand, "[o]vernight the 'self-made man' has become more than a figure of speech" (45). On the other, the feats of "augmentation" and "biopower" are about to start a "cyborg revolution." The US national ideal of *e pluribus unum*, also present in Halacy, in Ettinger finds its way toward eternity (*The Prospect of Immortality*; 1964), with the body remade into a forever revivable "crazy quilt of patchwork" (129), and asserts its privileged claims to

self-defense (*Man into Superman*; 1972). In the latter book, the imagery is that of "body armor" (62-63), and the medical aspect tends toward a condition in which "a cyborg might embody a closed cycle of nutrients and waste, with no material entering or leaving the body," comparable to that of the "space capsule" (75). Even bleaker prospects are opened in Rorvik's books, which--after a mandatory quote from Emerson (*Man* xiii)--refer to what we would now call "telepresence" (the use of remote-controlled robot bodies) as a "master-slave system," which will allow "us" to become "cybernauts," forever ensuring the sovereignty of mind over body.

The most accomplished positioning of the cyborg metaphors, as I have already suggested in Section 2, is in Toffler's *Future Shock*. Here the hypertechnological society wipes out all conceivable social ties, privileges individual "adaptation," "nomadism," "modularity," and absolute self-sufficiency, and bestows on infinite mobility the role of mandatory principle of experience. Toffler's vision can accept nothing less than complete consent, and stigmatizes any critical subject position as "future-shocked" throwback. Identity as infinite choice and cyborgized or biotechnological constructibility brings about an elision of the problematics of identity as concrete experience. For example, in Toffler's only hint about the "race problem," his examples are not Blacks or immigrants, but a folkloristic, stereotypical, and racist image: blue-skinned (*sic*) Appalachian "hillbillies" (200-01).

Only in Norbert Wiener's last book, the tormented *God & Golem, Inc.* (1968), mentions directly (albeit in passing) the necessity to redefine the "analogy of the body politic to the body of the individual" (94). In his most popular book (*Use*) Wiener himself had not gone beyond the oxymoronic notion of a "human use of human

beings". His voice in *God* remains isolated: strict mind-body dualism and hierarchical or deterministic societies remain the norm.

## 6.2. Supermen

In SF, straight uncritical acceptance of the paradigm of the instrumental body is, in these years, almost only to be found in books published outside the "insider," specialized or "genre" market, under the general best-seller label. These novels have a traditional "realist" form: instead of an "absent paradigm" leading to the creation of a sustained possible world, we have a thriller, grounded in present times and revolving around "action" scenes, whose only "SF" elements are presented in the form of long expository sections (lectures, explanations, occasional interior monologues). Aimed at an audience more familiar with the nonfiction than with SF, these works are in fact feebly fictionalized essays. Nevertheless, they are the direct ancestors of the militaristic superheroes of the 1980s, and their presence must be acknowledged.

In its purest form, the supercyborg is the theme of Martin Caidin's *Cyborg* (1972). Here, cyborgization is an explicit eugenic project, the creation of "a new breed" (63), and the novel recounts the *Bildung* of a mutilated soldier who is "transform[ed from a] one-limbed torso stump . . . into some kind of superbeing. To be utilized for their own rather unique requirement" (64). In the end the protagonist is willing to accept his position, as both superior being and willing tool in the hand of others: "I'm the first of a new breed, Marv. They're rebuilding me. It's called bionics. I'm half man and half machine, old buddy" (172). In the name of male bonding, his masculinity, threatened by impotence (93-95), is restored, and eventually the novel takes shape as the portrait of Superman as a contented slave. His cyborgization

recapitulates at the bodily level his role in the US defense and espionage: "a buffer, a shield, for your vital organs" (103), and it will appear again for millions of viewers in the TV series *The Six Million Dollar Man* and *The Bionic Woman*.<sup>6</sup> Other works extend the same paradigm into the space exploration theme. Joseph Green's *The Mind Behind the Eye* (1971) presents the computer connecting a human explorer and an alien brainless giant body, in which he is safely "housed." Lee Cronin's fictionalization of a *Star Trek* episode, "Spock's Brain" (1972), portrays the protagonist giving direction for the replacement of his own explanted brain back into his body. It takes a full-fledged specialist for the logical final step, and in the much more ambitious *Mayflies*, by Kevin O'Donnell (1979), the human brain commanding a whole starship becomes an image of narcissistic self-centeredness for whom megalomaniac omnipotence is not a risk to be governed but the prerequisite for acceptance of the explorer's role:<sup>7</sup> "I have learned--or come to accept--that I am neither human nor non-human. I am, in fact, unique: myself, and nothing else. That realization disintegrates the last bone tying me to Earth" (262).

Among best-sellers, a bleaker view is given in Michael Crichton's *The Terminal Man* (1972). Here, although the cyborg experiment fails and the guinea-pig turns into a psychopatic killer, the operation's assumption are never questioned.<sup>8</sup> The fantasy is very explicit, and provided with a long final bibliography on medical cyborgs, including Wiener and Delgado (283-89): "This makes the patient completely self-sufficient. . . . That's the complete feedback loop--brain, to electrodes, to computer, to power pack, back to brain. A total loop without any externalized portion" (25). Self-sufficiency may turn the human into a powerless tool--Crichton's metaphor is powerful:

the patient's biological brain, and indeed his whole body, has become a terminal for the new computer. We have created a man who is one single, large, complex computer terminal. The patient is a read-out device for the new computer, and he is as helpless to control the read-out as a TV screen is helpless to control the information presented on it. (89)

The real danger, though, appears to come when the "patient" himself tries to take some gratification from his dispossession: this is the image of the "electrical addict" (97-99), for whom "one jolt of electricity was like a dozen orgasms" (96)--a classic example of confusion of roles between the technophilic integrated attitude and the victim-blaming apocalyptic one. This confusion is to be found also, among others, in the "wireheads" of Larry Niven's *The Long Arm of Gil Hamilton* (1976) and Spider Robinson's *Mindkiller* (1982).<sup>9</sup>

### **6.3. Dystopias**

As a rule, pre-cyberpunk SF employs the cyborg imagery as a dystopian novum. In the post-1945 years, the dystopian genre is one of the main arenas for SF's socio-historical and political awareness (cf. Amis). Dystopia, no less than utopia, can have different degrees of complexity, and I shall discuss some of the more sophisticated texts (e.g., by Dick) in Chapter 5. Even among more simplistic tales some interesting patterns emerge; dystopian cyborgs, in my reading, establish an intertextual novum that is at the same time critical of and acquiescent with the notion of the instrumental body. On the one hand, the political implications of the scientific template of Kline and Clynies and of the cyberneticians is directly attacked, anticipating and then interacting with

countercultural suggestions after 1960. On the other hand, these texts find in the image of the cyborg, and of the mechanized community, a pretext for staging the dichotomic paradigm of a direct and unbridgeable conflict between individual and society, between an individual who identifies freedom--and the fulfillment of masculinity--with the severing of all social ties, and society as a necessarily oppressive consensus machine. This cluster is a nostalgic one, predicated on traditional humanistic ideologies,<sup>10</sup> and only occasionally focuses on specific areas such as race, class, or war. As a rule, underneath mechanization lies a vague notion of "society" as monolithic system that can only be thwarted through individual action.

Thus, one of the main dystopian clusters chooses and absolutizes the idea of interpersonal relations. In the best examples of this strand, all authored by figures tangential to the SF market, the cyborg is the representative subject of a world which has wholly done away with the very idea of significant human relations. In William Hjortsberg's *Gray Matters* (1971), the brain in the box becomes a signifier for mass culture itself, as dictatorship of the majority. The novel presents the society of "cerebromorphs," in which all humanity has voluntarily undergone a process of "cerebrectomy," building a community of immortal, disembodied brains. The narrative centers on two former mass idols, a Hollywood actress and a male teenage astronaut, as well as on an ex-sculptor of Nigerian origin. In this nightmare world of hierarchical conformism, the disincorporate entities are fed an indoctrination program of anti-individualism. The program is based on an ideal of "insect" society (10-11), and its aim is the achievement of higher degrees of "Elevation" and status, that culminates in the reimplanting ("Liberation") of the passion-free brain into a new, safe body.

The three figures delineate a continuum of responses to the general "grayness." On the one hand, the woman stands for full acquiescence: her fantasies of a "celluloid dreamland" (20), which the novel presents with satiric vitriol, make her deeply rooted inner futility a perfect ally of the dystopian system. On the other hand, the two males are accorded a more dignified treatment: the eternal adolescent, with his dream of becoming a "cowboy" (10), is a dissenting but wholly powerless rebel--whose masculinity is fulfilled in the "memory-merges" with the actress: finally, the African artist conjoins an act of rebellion (the stealing of a body) with the fulfillment of masculinity. In decyborgizing himself, his emergence to the physical world inaugurates a possible "new." non-mechanized hierarchy in terms of gender. His meeting with a woman who has somehow avoided becoming a cerebromorph is not to be taken as ironic: "The woman is on her knees in front of him, pulling tubers from the moist earth and placing them in her basket" (137). In the novel, a deterministic society has apparently pacified itself out of natural Social-Darwinist conflictuality and does not "have to fight for survival in the earth's final frontier" (92); this society has literalized massification (for a cerebromorph, we are told, "how important are those slight difference of sex or class?"; 107) and surveillance ("Even your unconscious is on file": 156). Against such a background, the sexual meeting of the renaturalized man and the Ur-natural woman is an act of cosmic proportions: "His passion is the threshold of an all-consuming universe, ever expanding into particles of light, the very atoms of her being disintegrate, electrons collide. She is lost in the electric fire of creation" (138).

"[E]rect" (ibid.) beside her disintegrating self, he is the sole agent of the world's new start, which grounds in nature an expansive reopening for the societal

frontiers. The Black artist will be reabsorbed by the "Control Center," but the woman and the newly-conceived baby will survive, presumably giving rise to an alternative society. In giving his chapters the titles of entomological growth stages (Hive, Pupa, Imago, Drone, Larva) Hjortsberg reinscribes the dystopia's determinism into his ostensibly transgressive counternarrative. The dystopia of cyborgization is countered by a dubious utopia of bodily release *à la* D. H. Lawrence, with womanhood and Blackness as sites of unspoiled authenticity.

Like Fiedler and the other "apocalyptic," Hjortsberg opposes conformity (the grayness of affluence and, arguably, socialism) and hierarchy, and opts for the latter. In other words, he accepts the cybernetic paradigm of a social machinery of self-reflexive, self-making will to power. Here, consent is equated with annihilation of personal agency: any direct contact or involvement, any minimal confusion of boundaries between organic and inorganic, between mastering self and instrumental object, is lethal and must be overcome.<sup>11</sup>

As a result, cyborg dystopias are predicated on the impossibility to reconcile embodiment and collectivity. This is also evident in David Bunch's *Moderan* (1971), the comic tale--articulated in a series of stories and sketches--of a world which has chosen mass mechanization in the name of efficiency and possible immortality, going through a phase in which the retaining of flesh parts is a visible mark of social inferiority, as an atavistic sign of emotionalism and weakness. As allegory of technological modernity, the *Moderan* (= "Modern Run") society revolves around this principle of passionless hardness and smooth functioning. This society has fortified itself--cf. also the ritual litanies on "Fortress-Man"--into an archipelago of "Bubble-Dome Homes" and "Strongholds," whose technodeterminism finds "The Purpose" in

war-making and results in a self-destructing "Grand Wump." Yet, Bunch's implied utopia is again teleological, as the story is narrated by a further society of "beam-men" or "essence men" who have managed to do away altogether with the body. Societal cyborgization is a nightmare not because of its attempt to actualize a dream of the social machine as a friction-free flow. The problem here is that the machine, however efficient, is *not smooth enough*: cyborg bodies are material, have a resistance, needs and limits (see also Michael Coney's 1973 *Friends Come in Boxes*). Finally, Hjortsberg's vitalist exoticism and Bunch's disembodiment, no less than Bester and Heinlein's new Americas, explicate a dream of unconstrained omnipotence in which the cyborg is a necessary--whether a positive or a negative--phase.

An uneasy reconciliation of expansive determinism and embodied agency is the forfeiting of agency to another version of mechanical intelligence, a solution to be found in Frederik Pohl's *Man Plus* (1976). In this novel, by one of the more politically engaged among SF professionals, the cyborg explorer's enhanced body recapitulates the siege mentality of the future "America" or "Free World," which furthers the colonization of Mars as the launching pad for a reopening of the frontier's appropriative expansion. In "the President's" words: "We see another Earth. . . . And it can be ours. That's where the future of freedom is" (25).

The reconstruction or rebirth of the pioneer as human-machine interface, though, is also presented--in graphic details overtly informed by the nonfiction discussed in the previous sections--as a surrender of humanity. This surrender is exemplified in sexual potency: the Martian cyborg is, after all, a "self contained eunuch" (127). However empowered with new organs and capability, the cyborg can only, for most of the novel, submit to one "instalment of pain" after another (35).

Fitted and "reshape[d]," he does "survive on Mars" (30-31) and manages to become the founder of a community in a world which appears to him like an Eden. As new Adam, he finds a non-cyborg Eve who accepts a sharply subordinate role: "Isn't that what they used to say women were for? Helpmates" (152). Her "[m]other-henning" (194) attitude will culminate, we are told, in her acting as vessel, through artificial insemination, for the first Martian child. However horrific on earth, the instrumental cyborg body is "a triumph of design" (58) on Mars, relegitimizing Darwinist expansion. Official authorities are, in fact, not wrong but inefficient in their strivings. Cyborgization triumphs, we are told in the ending, thanks to the tutelage of a "net" of artificial intelligences, a collective entity and omniscient narrator who has designed and plotted all, driven only by the will to survive and not by the will to power. This ruling, invisible, self-contained social unit may enlarge its range of action without giving up its ostensible facade of neutrality; in other words, the computer is for Pohl a last hope for the dream of "American" transparency, benevolently supervising the social machinery, ensuring the acceptance of "natural" asymmetries and thrusts.

In effect, we could locate the main symptom of the limits of the instrumental body--connected as it is to the abstract "systems approach" and to a view of cyborgs and computers as metaphors for society as monolithic whole--in the fact that only a handful among dystopian writers uses it to address specific, concrete sites of conflict.

Even this has critical limits. Thus, the issue of race is treated in simplistic, jocular fantasies of power reversal featuring cyborgs as slave caste (in Thomas Disch's 1965 "The Sightseers" and Robert Clarke's 1986 *Less Than Human*) or, obversely, in frightened exorcisms of the menace of miscegenation (in Dean Koontz's 1973 novelization, *The Demon Seed*).

Class, if generally ignored, provokes two powerful visions, in which the emphasis is on who is instrumentalized and who does the instrumentalizing. In Pohl and Kombluth's *Wolfbane* (1959), the depiction of the aftermath of an alien takeover--foregrounding the transformation of enforced scarcity into a puritanical ideology of bodily control (fasting, mandatory slenderness, etc.)--reaches a spectacular peak in a scene of assembly line labor as integrated "circuit" (56 ff.). In a human-factor researchers' ideal proto-Postfordist scenario, the protagonist is connected through brain implants to an overall machinery as a "Component" among many (either organic or mechanical) governed solely by "Input" and "Output," ready to undergo "reprogramming" or rehumanization according to the variations in the needs of the production system. On the other hand, Robert Silverberg's *The Time Hoppers* (1967) presents an overpopulated urban society ruled by a hierarchical bureaucracy headed by a cyborg:

Peter Kloofman lay sprawled out in a huge tub of nutrient fluid while the technician changed his left lung. His chest panel was wide open on its hinges, exactly as though Kloofman were some sort of robot undergoing repair. He was no robot, he was mere mortal flesh and blood, but not very mortal. . . . Kloofman was willing to submit to such things gladly, for the sake of preserving his existence, which is to say his infinite power. (62)

Outstanding among the enhancements is the chance to be bodily inserted into the world information system. For him this is also an integration into an immaterial cycle of power which places him in full charge of command, control, and communication:

One of the many surgical reconstructs that had been performed on him over the years allowed a direct neural cut-in: Kloofman could and did enter directly into the data stream, becoming a relay facet of the computer web itself. Then, only then, did a kind of ecstasy overwhelm him.

He nodded, and the flow of data began. (69)

This image of a figure for whom corporeal manipulation and fragmentation ("cut") is a way of literally placing himself outside and above humanity, and will return in many of the best cyberpunk texts (e.g., Gibson's *Count Zero*). In the world of immaterial power (information), Silverberg is one of the first to argue, the posthuman condition is a luxury that privileges those who are in charge, who confront Pohl and Kornbluth's ever-recyclable mindless bodies in the shape of diffuse, bodiless minds.

The most accomplished and sophisticated among cyborg dystopias deals with war: Bernard Wolfe's *Limbo* (1952). The cyborg as personifying the notion of war as dehumanizing was relatively standard fare in post-World War Two SF. For example, A. E. Van Vogt's *The World of Null-A* (1948) features a character allusively named X, who "is the most overt war-monger of the novel" (Seed 272), and who is presented as less than human:

He was a patched monstrosity. He had a plastic arm and a plastic leg, and his back was in a plastic cage. His head looked as if it were made of opaque glass; . . . his resemblance to anything normal depended partly upon the mental concession of the observer. (38)

Also, the whole plot of Algis Budrys's *Who?* (1959) is an unfulfilled quest for identity by a soldier returned as cyborg from Soviet internment, with identity and personal

integration in society defined as clear-cut allegiance to one of the Cold War camps. In Knight's "Ask Me Anything" (1951) the shock effect of cyborg horrors is exorcized and justified by the appeal to inherent flaws in human nature: *homo faber*, as such, has never been and can never be truly human.

Wolfe takes all of this to an extreme, in a highly self-conscious narrative<sup>12</sup> filled with literary and scientific references, which has been the topic for a number of important discussions.<sup>13</sup> First and foremost, this is a fiction which explores the limits of the literalized metaphor itself, a parody of SF and an indictment of the confusions--the undue overlap or extensions--between fiction (or speculative nonfiction) and the reader's world. It is a work that self-consciously emphasizes both its own fictionality and its nescapable connections with "reality."

The whole universe of *Limbo* is an attempt to literalize an ironic pun and the metaphoric cluster deriving from it: after a nuclear war, a scientist's notebook suggests a society that might turn the notion of disarmament into a generalized practice of "voluntary amputation." The diary's readers take everything seriously and give rise to the "Immob" world of "vol-amps," which follows slogans and commandments such as "He Who Has Arms Is Armed," "Make Disarmament Last," "Arms or the Man" (115). As slogans, these statements mark Immob as a disturbing new version of the pre-war "mass culture," in which people had been "welded together" into a whole by "mass media" controlled by the "managerial society" (135); Immob, we are told, stands for "International Mass for the Manumission of the Benign," with an obvious pun of mass as mob, religious ritual, and atomic (critical?) mass. As commandments, they mark this collectivity, with its secular rituals, as a rebuilt USA: the motto "No Demobilization Without Immobilization" echoes the foundational "No taxation

without representation." The chain of puns and black humor could be pursued endlessly; still, the issue of the taxing, painful nature of representation is the basis for *Limbo's* underlying link between the amputated and prostheticized body and the devastated and reconstructed society. As Seed writes, in this novel the physical body acts "as synecdoche, metaphor [and] systems analogy" for the body politic (283). As in the official rhetoric about US institutions, the "pros" (prostheticized people's) bodies display their "transparent extensions" (24) as signs of their ostensibly utopian status. Yet, around them new rigid hierarchies have developed (a "quadro-amp" has much more prestige than a "mono-amp") and racial conflict has not vanished (there is still need for NAACP, which here means "National Association for the Amputation of Colored People": 116). Most crucially, in a world punningly predicated on hand-replacement as emancipatory manipulation of natural anatomy--"manumission" is one of the many puns--gender and gender roles are called into question (cf. Hayles, "Life" 160-62). The "problem is purely semantic," says Wolfe's narrator (217); embodiment is no longer a self-evident truth: for the upset narrator, the solution is a recuperation of predatory aggression, that is, rape.

In *Limbo*, as in the puns on "hands" in Heinlein's "Waldo," fragmentation is yet another symptom of omnipotence. The dystopia behind the utopia is not only revealed on external, moral grounds but above all because it fails in its own terms, bound as it is to repeat those values and attitudes it pretends to have superseded. Behind self-diminishment lies the illusion of full manipulative control over the social machine: Immob hopes--in its own slogans--to "dodge the steamroller," to replace the "It" with the "I." The contradictory aim of Immob's prosthetization is the establishment of "the first real humanism in the history of human thought" (73-74).

The ostensible doubleness of prosthetic embodiment is, in actuality, a rigid monism, predicated on the absolute primacy of mind over body and matter:

Well, in the old animalistic days they, everybody, used to be slaves of the clenched fist--a real hand always wants to make a fist and slug somebody, and it can't be stopped. But the pro, it's detachable, see? The minute it starts to make a fist, zip, one yank and it's off. The brain's in charge, not the hand--that's the whole idea of humanism.

(119)

As a sovereign torso surrounded solely by interchangeable parts, America's reconstructed body--immobilized and perpetuated into universal, "humanist" guise--is free once more to pursue its expansive mission of "boundless heroism," and to "recaptur[e] the exhilarating sense of the oceanic," in what is no less than "a strategy to restore human megalomania" (129) and a response to an imperative of self-making: "Cyberneticist, redesign thyself!" (143).

The physical body and the body politic are linked consistently (if often punningly) by the rhetoric of expansion and map-designing (Seed 274-76). On the one hand, the narrator Dr. Martine rules an uncharted Pacific island by enforcing peace as body-rebuilding through mass lobotomy of the natives. On the other hand, a world reduced by war to a few inhabitable "strips" is about to start a new war in the name of generalized surgical reduction--whose goal is to prevent the technological steamrollers from "flattening" humans onto abstract blueprints--and is seeking to take over the island's ore reserves. In all its options, the body of Wolfe's new America is recreating earlier self-destructive dynamics of instrumentalization: power systems of subservience to corporate machinery ("More legs . . . [t]o genuflect before the

machines that make legs": 333), and mass culture defining itself as the public spectacle of warlike rhetoric, as in the Los Alamos Olympic Games: "*Plus ça change, plus c'est la maim chose. Plus ça change, plus c'est les mêmes shows*" (118).

To hold all of this together is "the textual body" (Hayles: "Life 159-62): *Limbo* is in fact the spectacular rendition of a graphically sensationalist world in the form of a fragmented assemblage of diaries, narratives, drawings, and scrawlings. Moreover, *Immob* itself uses discourse as template for its self-presentation: "Poles are apart only in the old vocabulary. *Immob* supplies the Hyphen" (122). In a both literal and metafictional sense (e.g., the many jokes about truncation, ambivalence, and hyphenation), discourse supplies the means to bestow authority and godlike status upon Freud's discontented prosthetic humans:

The bridging of the gap between the mechanical and the human--the discovery of the Hyphen between machine and man--thus enabling man finally to triumph over the machine because it's *man* who has the Hyphen and not the machine" (142)

Yet here, for Wolfe, lies the ultimate stress-point which even the cybernetic flow of information cannot fully supersede. Discourse carries an inner integrity which cannot be reshaped at will ("Words aren't amputated as easily as arms or legs"; 117) and renders accountability inescapable: "I can't entirely dodge the responsibility. After all, I did make the jokes" (291). Paradoxically, this is a holistic world, which needs to recover a notion of internal heterogeneity and conflictuality: "Everybody has his own built-in steamroller. . . . That way, maybe, lies a new kind of identity. . . . To this hyphenated *Wunderkind* I can say yes" (386).

Wolfe, thus, stages the triumph of the metaphorical at the expense of the literal, and the novel is a metafictional rejection of SF's potential to envision alternatives. In *Limbo*, just as there is no way out of the body instrumental, there is no possibility of a nondystopian use of the literalized metaphor. The restoring of ambivalence is not the proposal of a non-instrumental, non-expansive way of life for the Voi-amps. There is no turning back for them. Instead, only the nonmechanical bodies of the islanders are given a chance: the narrator decides to teach them humor and emotions. The restoring of laughing and weeping--as "unfunctional" activities (341)--is the solution: a pastoral new start for the natives, which rejects the functionalist steamroller and the internal conflicts of the hyphen, and keeps the white leader firmly in charge.

#### **7. Magnalia Americanorum Galactica: Military SF and the Armored Body**

There are, though, true believers in the advancement of the steamroller: in the current ideological and commercial conjuncture the problem of "military" SF looms large, even if almost completely unnoticed by criticism. Mushrooming quantities and vanishing reprints are major practical obstacle to thorough critical mapping; still, if we are to take literary history seriously, we need to start probing the textual spate of militaristic SF, and in general of war SF. Also, to contest the widespread assumption of mass genres as *inherently* obscurantist and coopted means also to acknowledge the existence of disturbing obscurantism as *conscious*, didactic political effort.

The road linking Lucas's to Reagan's Star Wars is not a straightforward path, and yet it can be traced at least as far back as the early 1960s, or even to the post-Hiroshima years, with many visions by scientists and military men about the goodness

of the Bomb (cf. Boyer). It is in the aftermath of the Vietnam war, however, that SF is mobilized in full as purveyor of space war and techno-war simulation fantasies. The inevitability and necessity of war and of military-centered social organizations are unreservedly praised in a number of books that constitute a large share of the market. The New Right ideological slant is often explicit, and some of the top figures in the subgenre (Ben Bova, G. Harry Stine) have parallel careers as propagandists and pamphleteers for the industrial-military complex. Tracts and fictions champion technophilic dreams of space stations (cf. Stine's 1975 *The Third Industrial Revolution*), pinko-consuming holocausts, and cyborg superheroics, while phrases such as "assured survival" are recycled from Hoover Institution advocates for a nuclear first-strike (cf. Possony and Pournelle's 1970 *The Strategy of Technology*) to SDI propaganda (cf. Bova's 1984 *Assured Survival*). The aim is a regeneration of the US (of "Americanness") and of the universe into an anti-welfare, survivalist, "libertarian" millennium (cf. Disch "Road": Franklin Stars; J. W. Gibson *War: Gray "War"*). The Montana Militiamen and Milton Friedman or Newt Gingrich enthusiasts, whatever else they may be, are veterans of SF's space wars.

Thus, this section will discuss some SF tales revolving around the body of the single individual, dismembered, mutilated, reconstructed, or in any way technologically modified in connection with war between sovereign territories (and occasionally with civil wars). This cluster has not only a quantitative and a historical but also a theoretical relevance. The morality-play, allegorical or parabolical quality of SF, stressed in the criticism of Suvin and Jameson, acquires important resonances in the US context. As Bercovitch (*Jeremiad*) has shown, from Cotton Mather's *Magnalia Christi Americana* onwards, the allegorical coupling and conflation of representative

selfhood with the actual or hoped-for body politic has pervasively been the basis for a national(ist) "genetics of salvation." Thus, SF's estranged, allegorical cognition could be a key to the genre's US fortunes, not only in its best but also in its worst examples; if the metaphor of the instrumental body is a direct affirmation of the Americanist ideology, the tales of the lone cyber-warrior present this ideology in an unsightly simplified fashion. We are, in other words, analyzing parables of selfhood (or, as a rule, of malehood) in-the-breaking as refigurations of national crises, with the attendant need for reintegration. After 1960, the military-begotten eugenic metaphor of the cyborg marries the collective tenor of the body politic with another classic image, the US state as self-running machine (cf. Kammen). The technologized body of the warrior becomes representative for the new order, and--with politics defused into technoscientific determinism--for its assured survival and domination throughout space and time.

For an ideologically indispensable example, I would start with Heinlein's *The Moon Is a Harsh Mistress* (1966). This interplanetary tale of (to use Slotkin's formula) "regeneration through violence" chronicles the Moon's revolution and independence war, organized by a militia led by a sentient computer and its technician. As motto to the movement, Heinlein first coined the injunction, "There Ain't No Such Thing As A Free Lunch" (often abbreviated as "TANSTAAFL"). This new New World, born as a prison colony, is indeed a *laissez faire* paradise: "No bars, no guards, no rules--and no need for them" (17). Proud of its rough beginnings in an ideal Social Darwinist setting in which only the fittest have survived (cf. Fitting, "Eating" 177-80), the Moon is striving to become fully "self-sufficient" (26), and perceives itself as successor to the New Worlds of English overseas colonization (11).

As always, the text's ideological limits are best revealed by its contradictions. Thus, contrary to their own bombast, the Lunar revolutionaries do get a free lunch; despite deadly military confrontations with Earth (including a tellingly low-tech attack with catapults), in the final flash-forward it appears that good relations are quickly reestablished; moreover, given the Moon's control over wheat supplies, the only meals under threat of curtailing or of overpricing were Earth's. Analogously, the narrator/protagonist's loss of an arm (before the events in the plot) does not appear to bring about any suffering; rather, we merely witness the workings of a very efficient multi-role cyborg limb.

The "seam joining prosthetic to meat arm" (19) is not a real stress-point, just as the historical seams leading from prison to colony, and from colony to nation are not full historical ruptures, predicated as they are on an ideology of monadic self-reliance: "I am free, no matter what rules surround me" (63). The painless refashioning as tool of the hero's microcosmic body recapitulates the painless injection of a universal authoritarian order. The only price paid by protagonist Manuel is the "death" of the computer "Mike," his buddy of many male-bonding scenes, who had best spelled out his metaphysical role in this morality play on self-making or remaking of American masculine independence: Mike, in fact, used to nickname him "Man."

But the Moon Revolution of 2076 also pretends to be a re-enactment of the American Revolution of 1776, as a non-traumatic new beginning for the new individualist community. Thus, the re-founding process and the opening of future origins have as their flip side the elision of the conflictual, traumatic suffering of breaks and reintegrations. The problem of the "missing revolution" in US literature has been explored at length by Portelli (*Text*). In the tales discussed here a similar

exorcism is obtained, thanks to the SF protocols of the literalized metaphor, through a fantasy of conflictless discontinuities, repeated in countless versions, always under threat of eventual bodily and national dismantling.<sup>14</sup>

In this light, I would touch on two masterpieces of military SF. Heinlein's own *Starship Troopers* (1959) and Joe Haldeman's *The Forever War* (1974). In both, the crucial metaphor is the enhancing integration of the organic body with an artificial, all-powerful armor. The shell-like "suit" cocoons and marks the world's elite warriors, guarantors of the new universal order.

In its mix of *conte philosophique* (Clayton, "Hard" 68) and adventure SF, *Troopers* is an overt agitprop Bildungsroman; in the ending, the defeat of the "communal entities" (197) xenophobically renamed "Bugs" is not much closer, but the protagonist's initiation into the elite caste is complete.

The "powered suit" is here a metaphor of armed reconciliation between individual and a system that restricts voting rights to veterans (142), i.e., to those who have placed "the safety of the body politic" before their own (24). Yet the suit, as easy to handle as "skin" (81), helps to re-"make war as personal as a punch in the nose" (80). As in the catapult attack in *Moon*, the suit allows the recovery of the personal dimension within the complex corporate organization with a large (galactic) scope. The fortification of personal bodily boundaries is the starting point for expansive agency. The many expository sections point back to the utopian genre: the utopia of *Troopers* is a world in which it is "mathematically demonstrable" that "a human being has *no natural rights of any nature*" (95-96). Here, a metaphysics of scientific determinism rules a universe of "hard" SF, based on technology and technocracy (cf. Clayton's essays). This determinism is based on Cold War rhetoric (the Bugs are "the

ultimate dictatorship of the hive" and "a total communism": 107 and 121), and holds together, for both Left (Franklin, *Heinlein* 110-20) and Right (Stover 46-52) critics, a nationalist ideal, a Calvinist ethics of predestination, and antidemocratic attitudes that go back to the Federalist era -(Stover 51). In Heinlein's narrative machine, the technologically protected bodies of the Mobile Infantry are a metaphysical necessity that guarantees the self-perpetuation of political and economic predatory appropriation. Heinlein's own keyword is "expansion," which fuses together the rhetorics of Social Darwinist "survival of the fittest" and of commercial enterprise, with more than a touch of xenophobic chauvinism:

Morals . . . derive from the instinct to survive. . . . Either we spread and wipe out the Bugs, or they spread and wipe us out--because both races are tough and smart and want the same real estate. . . . [I]t's compound interest expansion. . . .

The universe will let us know--later--whether or not Man has any "right" to expand through it.

In the meantime the M[arine] I[nfantry] will be in there, on the bounce and swinging, on the side of our own race. (147)

The technological rebuilding of conquering masculinity is the new manifestation of a destiny which has become hegemonic on this world, beyond race and ethnicity (the protagonist Juan Rico is Filipino), and is now on its way toward universalization.

*The Forever War*, an ostensibly anti-war novel by a pacifist Vietnam veteran, features nevertheless a protagonist who becomes a war hero and universal icon. In this mix of hard-boiled ironic cynicism and spectacular depiction of boot-camp and combat horrors, no one is really blamed for the atrocities we witness. *Pace* J. Gordon

(25-35) and Franklin ("Vietnam" 350-51), the oppositional quality of this text leaves much to be desired. The army structure appears sloppy rather than wrong, the soldiers had been hypnotically hate-conditioned, and although Earth starts the war with the alien Taurans with acts of pure "butchery" (57-64), in the end we are told that it was just a communication problem, an unhappy misunderstanding (214). Earth's only shortcoming is its evolution, through an age of homosexuality with a eugenically selective welfare state, to a dystopia of androgynous clones. Space colonization is under way, though, and the hero can light out for the territories of a planet almost inevitably called "Middle Finger." The armor allows the reconstruction of his maimed body and preserves for a thousand years his role as the last American male, still the best fit for unending frontier life.

Both Heinlein and his alleged liberal parody can be taken as templates for the militaristic subgenre of the 1980s. In the age of SDI, as opposed to the Moon exploration years (cf. Smith), the military-industrial complex, through its propagandists and PR-men, steps in directly to sell the US public a didactic dream of militarism. The technologized hardness of bodily surface is a longstanding trope, which critics have analyzed--in relation to Nazi rhetoric--as the mark of superior masculinity victorious over the feminized fluidity imposed upon inferior Otherness (cf. Theweleit; Herf), and it has a long history in US war literature (cf. Jones). This metaphor resonates with the mythology of triumphant self-sufficiency which is the mark of contemporary Right-wing economics (cf. the Levitas anthology), predicated as it is on a theory of individualism which denies any role to notions of "citizenship." For this "Libertarian" theory, neither Descartes's nor Rousseau's selves are self-enclosed enough: only Leibnitz's monadic subject will do (cf. Laurent, ch. 2). In their

turn, personal bodies are the sites of fantasies and practices of modification in the name of warlike efficiency (cf. Gabriel: Gray "Cyborg": Levidow and Robins), as well as of a revived mythology of salvific masculinity in the shape of reappearing primeval vitalism, culminating in the so-called Men's Movement (cf. Bordo "Male": Kimmel and Kaufman: Leverenz: Ross, *Chicago* 202 ff.).

Thus, the iconography of US power around the Reagan era, first of all in mass media such as film, "nationalized bodies by equating individual action with national actions" (Jeffords 14). The nationalized hero was thus able to defuse its own aggressive agency, to quote Scarry's book on torture, into a "spectacle of power" (27 ff.), and to deny the embodied materiality of the enemy Other (cf. also J. W. Gibson, *War*; Virilio, *Esthétique and War*). Military SF turned all of this into overtly affirmative works.<sup>15</sup> The enhanced body becomes a standard formula, with shiny, purified and purifying cyber-armors that reassuringly enforce the dictates of TANSTAAFL in one direction only. In this *Magnalia Christi Americana* of the future, the self-contained monad of the redeeming warrior/saint embodies in the here-and-now the shape of millennial things to come, figuring forth a very clear kind of hierarchical order for the collectivity. As S. M. Stirling and David Drake's aptly titled *The Chosen* shows, the struggle is between claims to the title of Elect and savior of the collectivity; the stake is the legitimation of a militaristic and oligarchic universal order, and the defeat the potentially disruptive threat of what turns out to be nothing but a *local* militaristic oligarchy. Exorcistically staging the absence of significant alternatives to competing authoritarianisms, Bova, Pournelle, Stine, Drake, and others rewrite the Vietnam war making sure that "we" (to quote Stallone in *Rambo 2*) get to win this time. Yet this exorcism needs to be reperformed over and over; after the Gulf

War as well, the need was quickly felt for a best-seller (David Alexander's 1993 *Nomad: Desert Fire*) which enlisted a future cyborg in the fight against Saddam Hussein.

In the crudest version, these works include novels based on toys, animated cartoons, video- and role-playing games about armored warriors of the *Transformers* type, all of which--as J. W. Gibson says of best-selling "techno-thrillers"--are constructed around a "male-dominated process of transforming boys into men through warfare" ("Redeeming" 200). Kubasik's *Battletech*, McKinney's *Robotech*, O'Neill and Mohan's *Cyborg Commando* novels, all feature the elite corps fighting as border police of the solar system against invading hordes of apparently non-individualized, insect- or blob-like aliens. The national agenda becomes evident in Stine's *Warbots* series, in which the patrolling occurs around the US Southern border, in an endless fight against invading and "Leftist" threats from a migrant Latin America.

Beside defending a threatened integrity, cyborgs are also used as tools of expansion. While only Stirling and Drake's *The General* series explicitly refers to the tradition of British colonialism, the stock formula sees cyborgs as always worthy of admiration for their professional achievements, whether fighting on "our" or "their" side (cf. Benford and Martin: *Dalmas: Gear: Pournelle*).

Against such a stance of professional neutrality, Orson Scott Card's *Ender's Game* (1985) stresses individual and collective responsibility. Although the novel is a conventionally written adventure novel about military training, obviously addressing the same audience, *Game* ends with the revelation (in Jameson's term, a discontinuity; cf. "Genre") that the simulated war-game the protagonist believed to be playing was instead an actual war against the insect-like alien "buggers." In this conscious

rewriting of Heinlein's *Starship Troopers*. the protagonist. who has wiped sentient life off a whole planet. accepts the stigma of his actions: in a self-imposed atonement he takes on, in the sequel *Speaker for the Dead* (1986). the ritual role of story-teller reporting on the banality of evil on behalf of the victims of the "Xenocide." eventually avoiding the same fate for the peaceful "piggies."

As an *avant la lettre* ideological culmination as well as a tortured critique of the limits of the militaristic stance, I would conclude this section by addressing the works of Paul Linebarger. who was at first counter-insurgency adviser to East Asian governments and later professor of Asian politics at Johns Hopkins. This behind-the-curtain foreign-policy maker produced also. under the pen-name of Cordwainer Smith, one of the most peculiar opuses in US SF. His tragic melodramas of beset manhood. filled with references to literary and visual artists of the grotesque. feature a dazzling array of neologisms and surreal imagery, from oyster-walled starships to genetically altered animals and interstellar sailboats. Many "radical" SF writers such as Le Guin mention him as a main influence. Smith's view, from the highest level of US authority, is remarkably complex.

Linebarger's rhetoric. like Heinlein's, is one of a sacrifice ethic. But while proudly asserting that a universal system ruled by an oligarchy of warlords--the "Instrumentality," founded by the descendants of a Nazi doctor--is an acceptable cost for galactic stability, his history of the future--sketched in a loose web of some thirty interconnected tales recounted as a series of orally transmitted future folktales--consistently shows situations wherein too high a price is paid for restoring order in the world.

His work has been analyzed as exemplary morality-plays on the survival of the Americanist dream (Suvin. *Positions* 205-12; Wolfe and Williams). Around cyborgization, associated with the rise of militarized professional guilds, his stories develop as narratives of fatalism, problematic memories, and morbid portrayals of bodily abuse. In "The Burning of the Brain" (1955), the protagonist and eventual victim is a new Christopher Columbus, Go-Captain Magno Taliano, transporting the simulacrum of "an ancient, prehistoric estate named Mount Vernon" in his "planoforming ship, "encased in its own rigid and self-renewing field of force" (87). Helen America, protagonist of "The Lady Who Sailed *The Soul*" (written with his wife Genevieve, 1960), endures a horribly painful intubation in order to pilot a group of pilgrim settlers to their new frontier colony in space; when malfunction occurs, a vision of her beloved, apparently unaging Mr. Grey-No-More helps her to safety, although she ages forty years in the process. In the final deathbed scene, he (America as timeless vision) invokes her both as individual and as allegorical figure (America as concrete, bodily experience): "my bravest of ladies, my boldest of people," but finds no answer (66). Linebarger/Smith's protagonists find the nation's field of force incapable of forming and sustaining plans for self-renewal. His only apparently upbeat story, "Scanners Live in Vain" (1950), is about the end of cyborgization. As space pilots, "scanners" must undergo permanent surgical removal of sensory organs in order to endure, via thorough self-scrutiny of bodily functions, "the great pain of space." As cyborgs, they "cranch"--that is, go "under the wire" of an electronic implant--during their parentheses of normal life. After a murder mystery plot is solved, a technology is discovered for less dangerous space travel and for reverse surgery, and they appear to have become obsolete. But the protagonist is reassured: "

You don't think the Instrumentality would waste the Scanners do you?" (37). The acceptance of instrumentalization is, ambivalently, both a sign of victory and a somewhat sentimental realization of the limits of self-perpetuating authority.

### **8. Hardwired Cowboys: The Walled Body of Cyberpunk**

The themes of armoring and disembodiment become a dominant presence in the instrumental bodies of cyberpunk.

Among literary critics, starting with Suvin ("Gibson"), the "cyberpunk" label has been cogently criticized as a viable tool for esthetic grouping: almost anything has been included under this rubric, ranging from a SF "school" to postmodernity's *Zeitgeist* (often in the same study, e.g., Sterling "Preface" and McHale *Constructing*). I argue that the category of cyberpunk SF is a highly heterogeneous one, covering very different and often mutually antagonistic cultural attitudes that emerged during the 1980s and 1990s, largely held together only by marketing strategies. Outside SF, though, cyberpunk has come to signify a complex array of celebratory, "integrated" responses to computer technology (cf. the detailed descriptions of Ross *Weather* and Dery). Thus, in this and the next chapter I shall refer to those strands of cyberpunk and "cyberculture" sustained by an ideology and a teleology of enthusiastic acceptance, which has bestowed the status of public bards on those SF writers--the best known of whom is Bruce Sterling--who have revitalized the notion of the instrumental body and (as I am going to discuss in the next chapter) that of the ever-expanding frontier.

Hardness and impenetrability are the dominant note in the editorial manifesto by Sterling which opens the 1986 anthology *Mirrorshades*. Sterling's cyberpunk is a literature and a world-view devoted to the celebration of hi-tech modernity and

defined by an "allegiance to Eighties culture" ("Preface" ix). The whole essay is filled with adjectives such as "hard," "edgy," "soaring," "steely," and by such standard icons of triumphant masculinity as "the biker, the rocker, the policeman, and similar outlaws" (xi), whose symbolic epitome can be found in the mirrored sunglasses of the collection's title. The glasses, writes Sterling, are an image of empowered dissent: "By hiding the eyes, mirrorshades prevent the forces of normalcy from realizing that one is crazed and possibly dangerous" (xi). In this opposition between abstractions (the "one" vs. the "forces"), mirrorshades give new strength and a new legitimation for the hi-tech era to classic figures of male aggressiveness. The point is the unidirectionality of the shades-wearer's gaze. As Delany comments, Sterling's glasses "both mask the gaze and distort the gaze." They "protect" and "mask the gaze's source" (*Interviews* 171): as a result, they provide a safe ground or Archimedean point from which, isolated from responsive counter-gazes, the empowered male may freely grasp the world. In these figures, notions of consent and dissent are unified and rendered meaningless in what Sterling calls "an unholy alliance of the technical world and the world of organized dissent" ("Preface" xii). For Sterling, in fact, only praise can be given to "the technical revolution" which is "reshaping our society . . . not in hierarchy but in decentralizaion, not in rigidity but in fluidity" (*ibid.*). As new individualist heroes, "[t]he hacker and the rocker" embody "a powerful source of hope" (xiii). For Sterling the technology of prosthetics and interface, of "body [and] mind invasion" can be identified *per se* with a subversive role: innovation as such, "radically redefining the nature of humanity, the nature of the self" is equated with a "frighteningly radical potential" (*ibid.*). The new subject is a hybrid, in other words, but one whose potential agency lies in the technological creation of a fortified individual: its fictional worlds will be "the literary

equivalent of the hard-rock 'wall of sound'" (xv) and will be sustained--Sterling will add in a later essay--by "an attitude of peculiar aggression against 'reality'" ("Slipstream" 76).

The figure of the fortified self has important parallels in contemporary scientific discourse. One exemplary case is that of biology: in a twentieth-century history dominated by models drawn from computer science (cf. Fox Keller), one of the most extreme yet popularized versions views the "code" (the genome, the DNA) as sole site of the vital principle, surrounded by a purely servicing instrumental body--yet another version of the dualistic cyborg. Thus, Richard Dawkins's pervasive image in his *The Selfish Gene* (1976) is that of the genetic code as a sort of homunculus wrapped up by faithfully supportive "robots" or "survival machines," that is, by the body. In Dawkins's and E. O. Wilson's "sociobiology" the genome codes and memorizes both the biological and the social destiny; by charting it, the scientist makes it manifest. In both Dawkins and Wilson, the disturbing agenda is the attempt to provide a "natural" ground for free-market political economy (cf. Ross *Chicago* 237 ff.). For Dawkins, the "selfishness" of the gene ensures an "unbounded" self-"replicating" action (cf. Haraway *Simians* 216-17). For Wilson, the quest for a biological subsumption of the social dimension renews traditional dreams of eugenics and racial improvement (cf. Kevles 272-85), so that his *On Human Nature* (1978) finds at the heart of human heredity the manifest prospect to "change its own nature" (147). Both views are predicated on a genetic notion of identity without embodiment.

In this period, scientific popularization produces one strand which is directly reactionary. Thus, in Stine's *The Silicon Gods* (1984) the conjunction of computer and medical biology generates the vision of direct human-machine link as "intelligence

amplification." The integration of cybernetic hardware and software with the brain's "jellyware" will bring about the advent of godlike humans; their "multi-purpose" and "self-programming ability" and "flexibility" (65), together with the establishment of "networked intelligence amplifiers" (technologically induced telepathy) will render pointless the existence of a material network of centralized governments and collective institutions bringing about a Libertarian paradise of sovereign individuals.<sup>16</sup>

In cultural writing, though, the main strand appears to be linked to the rhetoric of 1960s counterculture. As Dery writes, the stake in much "cyberculture" is the neutralization of the antagonistic potential of the Sixties' social and political movements--a neutralization obtained by emphasizing the rhetoric of visionary innovation and removing the politics (21 ff.). Already in 1970, Timothy Leary's *The Politics of Ecstasy* had detected in contemporary technology the promise not of social change but of an "evolutionary mutation" which was about to make the young generation into an improved, "different species from their progenitors" (194). Within this register, which finds its most pervasive manifestation in the discourse and the esthetics of virtual space (see next chapter), the instrumental body finds new bards. Dery focuses on a cluster of genres (which include avantgarde theater and rock music) predicated on a rhetoric which he (taking a cue from Haraway) dubs "escape velocity," that is, on cybernetic transcendence of material (bodily and social) ties and limits, on updated dreams of individual omnipotence and expansion.

In Dery's overview, the most disturbing vision is proposed by the performers of "body art" (153 ff.), and finds its most outspoken exponent in the Greek-Australian artist Stelarc.<sup>17</sup> Stelarc too dreams of a superior species to come. His essay on "Prosthetics, Robotics, and Remote Existence" (reworked in numerous versions since

the early 1980s) maps the "evolutionary strategies" of the new bodies, invaded by cyborg technologies, turned into sculptures or architectures, into an infinitely and freely modifiable "receptacle," an "empty container" for the artificial components, fortified into optimized malleability thanks to an impenetrable outer surface or skin (233). As in Bernal, Carrel, as well as Kline and Clynes, the purpose of Stelarc's self-contained cyborg bodies is to place evolution under control: "Evolution ends when technology invades the body" (230). Total control and manipulation entails doing away with any notion of collective legacy, starting with the biological level: "Once technology provides each person with the potential to progress individually in its development, the cohesiveness of the species is no longer important" (ibid.). Rather than Hjortsberg's nightmare of levelling "grayness," cyborgization provides Stelarc with a dream of infinite "choice" and "freedom of form"; in the prospect of "DNA" self-determination (228), radical individualism reaches its absolute extreme.

At the same time, the Post-Fordist dream of total flexibility (cf. Harvey) meets Henry Ford's vision of bodily adaptation and mutilation at the service of the machine (satirically exposed in Pohl and Kornbluth's *Wolfbane*), and appropriates the dream of prosthetic omnipotence of Bernard Wolfe's *Immob* society. Furthermore, we have in Stelarc, as in the sociobiologists, the notion of identity as "information" (228); endowed with an essence, albeit an immaterial one, such an entity reifies its own docile and malleable corporeality beyond the concept of "human": "patched-up people are post-evolutionary experiments" (ibid.). Those who experience the "body not as a subject but an object--not an object of desire but an object for designing" (229) are no less than a new and superior species, for whom, as Stelarc repeats obsessively throughout his work, "the body is obsolete" and is to be streamlined, purified, and

finally discarded towards an explosive release. This release--on the tracks of McLuhan (cf. Dery 164) and Emerson--is at once self-asserting (self-making) and self-denying; a narcissistic and expansive disavowal of limits and mortality is obtained through the nullification of bodily and material constraints: "the body must burst forth from its biological, cultural, and planetary containment" (228). In one of its strands, postmodernism revives chilling ideas of racial betterment.

In computer discourse, the same dream is shared by Hans Moravec's *Mind Children* (1988). Here, a prestigious Artificial Intelligence expert talks about the "downloading" of human intellects in the form of recordable information, to be stored in data banks or in artificial bodies, in order to give life to a new species, superior, immortal, and transcendent, while assigning to atavistic bodily humans the role of curiosity to be preserved in future zoos. As in Moravec, in the pseudo-visionaries surveyed in Fjermedal's *The Tomorrow Makers* (1986), the new notion of "nanotechnology," is a welcomed tool for controlling and manipulating the informational "essence." For Eric Drexler, its most famous popularizer, the molecule-sized machines of nanotechnology provide a fantasy of cyborg enhancements of bodily functions; Drexler's rhetoric is both one of demiurgic omnipotence (in his 1986 *Engines of Creation*) and of limitless expansion (in his 1991 *Unbounding the Future*).

As Dublin writes (84-85), all of these cases are predicated on an overwhelming "disdain for the body," for which he finds a paradoxical parallel in the rhetoric of body-building (85-86), based as well on a concept of self-mechanization as self-improvement (cf. also Seltzer). In the same vein, the feminist philosopher Susan Bordo talks about "plasticity as postmodern paradigm" (*Weight* 245 ff.), and about the "imagination of human freedom from bodily determination" (245) as the exemplary

template for social control in the age of spectacle and flexible labor (cf. also Ewen). With more than a little enthusiasm, on the other hand, the Canadian postmodernists Arthur and Marilouise Kroker discuss "the aestheticization of the body and its dissolution into a semiurgy (*sic*) of floating body parts" (21), with the birth of "computer enhanced individualism" (31-2) as a chance for the development of "a new body fit for the age of ultra-technologies" (32). The body is "disappearing," but the new and playful "intelligence"--at once reified and disembodied--"is the emancipated sign of knowledge in the hyper-modern condition" (30). Underneath the rhetoric of "ludic postmodernism," as Morton writes, lies an "updated form of idealism" (369) which valorizes "desire," while denying in principle, by means of technological euphoria, the materiality of "need" (class, gender, etc.). This postmodern idealism is attempting to ground identity and personhood without an "orient[ation] in moral space" (Taylor 28).

Parallel to this nonfiction, there lies in cyberpunk SF (in the variants most forcefully saluted in the media) the notion of freedom as absolute freedom. If, as Suvin writes, "cyberpunk SF is representative of . . . some fractions of the youth culture in the affluent North of our globe . . . correlative to the technicians and artists associated with the new communication media, and to the young who aspire to such status" ("Gibson" 49), then we should speculate whether such a group has emerged strongly marked by internal fractures. If the two exemplary figures are, as Suvin suggests, Sterling and Gibson, then we should note that Sterling--the son of an engineering professional in hi-tech Austin--and Gibson--the son of a small businessman in the Southern Appalachians--approach technology from two very

different social positions, and not surprisingly produce very different effects. Whereas Sterling's parables are about self-sufficiency, omnipotence, and transcendence, Gibson's are about interpersonal relations and survival in a "thick" world of interconnectedness. The same can be said for women's cyberpunk, whose most accomplished exponent is Pat Cadigan. Their readerships, as well, are likely to be as much differentiated, and sharing a wide spectrum of enthusiasm and/or disaffection for the present state of affairs.

And since an undisputed critical common sense (culminating with Jameson, *Postmodernism* 419) links postmodernity and cyberpunk, it might be time to assess the heterogeneity and the contradictoriness of all that is conflated under the postmodern/cyberpunk rubric. In fact, a sizable portion of the cyberpunk scene (e.g., writers such as Rucker, Shirley, and Sterling) suggests a cultural attitude and a philosophy of history which go in the opposite direction from notions such as fragmentation, contingency, and hybridity, and which is instead shaped by monism and teleology. Among critics, Bukatman's *Terminal Identity* discusses "the virtual subject in postmodern SF" as a result of a collapse of discontinuities. His own philosophy of history is deterministic and teleological. Following Bruce Mazlish's essays in *The Fourth Discontinuity*, for Bukatman contemporary technology is bringing about a revision of subjectivity as the logical consequence of a process of elimination of "discontinuities," initiated by Copernicus, Darwin, and Freud, that is finally reconnecting the natural and the artificial. An ostensible rhetoric of "ego-smashing" decentering recreates the subject as a part of cosmic integration.<sup>18</sup>

In a number of the literary texts most highly prized by Bukatman, this pattern is overtly addressed as a metaphysics, and one which is hardly an anti-individualist

one. Cyborgization is in fact a mark of absolute individualism in many of the earlier cyberpunk novelists, all with an Emersonian holism as immanent *telos*.

In Rudy Rucker's *Software* (1982) and in its sequels *Wetware* (1988) and *Freeware* (1997), three comic novels by a leading Artificial Intelligence designer, the catalogue of human-machine continuities range from the epic of the robot "boppers" after the building of an independent utopia on the Moon, to the "zombie-box" and the "robot rat" that can turn humans into puppets ("meaties"). But most important here a human society, after the doctrine of supply-side economics, has abolished old age pensions and secluded elderly baby-boomers in Florida, granting them the bliss of lawlessness and "monthly food drops" (*Software* 10). The protagonist, happy in this pseudo-idyll, is also happy when confronted with immortality as computer-stored personality:

A robot, or a person, has two parts: hardware and software. The hardware is the actual physical material involved, and the software is the pattern in which the material is arranged. Your *brain* is the hardware, but the *information* in the brain is the software. The mind... memories, habits, opinions, skills... is all software. (112)

He sees this as "a natural next evolutionary step. Imagine people that carry mega-byte computer systems in their head, people that communicate directly brain-to-brain, people who live for centuries and change bodies like suits of clothes!" (138).

According to the boppers, humans have a "delusionary" belief in "uniqueness" as a factor in what constitutes "I" or "self" (*Wetware* 213). Both, though, seem to share a modicum of macho swagger, and the belief in self-made people. For the boppers, the horizon is robot-made cyborgs, with an artificially grown line of "wetware" in order to

download themselves into organic flesh ("meatboppers"). Again, they appeal to a return to the *telos* of nature: "One could legitimately regard the sequence *human-bopper-meatbop* as a curious but inevitable zigzag in evolution's mighty stream" (247).

The individualist tones come to the fore in John Shirley's trilogy, marketed as *A Song Called Youth*. Like Rucker, Shirley wants to reinject into the culture of technology the anticonformism of the 1960s, in "a reexamination of the meaning of rock'n'roll and the values of sixties counterculture in the MTV eighties" (Dery 101). In *Eclipse* the hero is the representative of an old-fashioned culture--hard rock music--which is being replaced by the new style of "minimono," that bears at the same time the marks of effeminacy and Nazi mechanization:

A wire act. He was anorexic and surgically sexless: radical minimono. . . . How did the guy piss? Rickenharp wondered. Maybe it was out of that faint crease out of his crotch. A dancing mannequin. His sexuality was clipped in the back of his head: a single chrome electrode that activated the pleasure center of the brain during the weekly legally controlled catharsis. (68)

On the one hand, minimono is a style of demasculinized, conformist emotions, and a performance of "geometrical dance configurations"; on the other hand, the guitarist's solo "freestyle" (ibid.) is based on aggressive annihilating sexuality: "Rickenharp liked it when the girl played pretend-to-rape-me. *Force it into their ears, man*" (88). The effeminate cyborg subculture parallels the rising global regime of an "Alliance" of European Neofascists and US and Islamic fundamentalists, in the interest of worldwide media and informatic corporations. In this chronicle of the underground

resistance, the force which opposes despotism is individualist masculinity: the cyberconformists are "Grid-nippers" (208). In the climactic scene, the hero plays his guitar on the top of the Arc de Triomphe in Paris: "a solo fast as he could play it, keening and ascendant," a resistant erection which even after the enemy's "burst of gunfire" survives as "a great pillar of dust" (305), a phallic triumph over the forces of evil. Shirley's own jeremiads continue in the tradition of military SF, as survivalistic tales of armed and cybernetic combat, whose main hero is allegorically named Hard-Eyes. Yet, in *Eclipse Corona*, the hardening of perceptual interfaces is made to find its winning card in a dream (*à la* Stine) dream of "worldwide electronic telepathy" (31), an immaterial dimension which gives the resisters the strength of a "pack [of] wolves" (33).

Some postmodern critics have included these works as part of their canon, invoking the liberating potential of "terminal flesh" (Bukatman, *Identity* 244) and of Deleuze and Guattari's "becomings" (Stivale). Here, though, what we see is more akin to classic Cartesianism: the natural body may only become a tool and finally disposed of.<sup>19</sup>

The most accomplished case is Sterling. With his veritable *contes philosophiques* (a fairly traditionally written mix of adventure tales and expository asides) SF reaches a deterministic peak that can only be compared to turn-of-the-century Darwinists such as Wells (who is alluded to in *Schismatrix*). Like the nonfictional cyborgs, Sterling's fictional creatures provide the exemplars of and the steps towards a full-fledged evolutionary teleology, and an attempt to root human relationships and conflict in natural laws; ultimately, his worlds, in which ethics

follows physics, and relies on it as "a systematic framework" (Suvin, *Metamorphoses* 11), appear to border on the supernatural.

In his early *The Artificial Kid* (1980), Sterling gives us the narrative of an individualist loner, who finds a way to reassert his initial aggressive solitude within a pantheistic (or Emersonian) metaphysics of omnipotence. A token of technological hipness (allegorized in the two meanings of his name, Arti), the protagonist is a "combat artist" who plays the part of town bully for round-the-clock media coverage. A technologically augmented clone, Arti emphasizes his performance as predatory isolato through his physical appearance; his skin is covered by "a thin, shiny film of green skin oil"; he "wears a thick armored leather surcoat" with "a pair of gleaming metallic scale trousers" and "shiny black combat slippers"; even his hair is armored, "each strand . . . separately laminated in plastic, forming a jackstraw array of stiff, black, pointed quills" (2). As cultural hero, Arti embodies the values of the "Decriminalized Zone, an area freed of legal and social restraint" (6). Arti emerges from the "libertarian" lawlessness as he who can impose his own restraints on others; in the novel's urban landscape his home is compared to "forts" and to a "castle," with "ramparts," independent power and water sources, and "tight against even a gas attack" (54). An armored human in an armored house, Arti is at the same time a figure of active dissent against the corporate elite of his world, and his world's purest product. Body and world find an overt linkage in the speech the Kid receives from a corporate tycoon with the allusive name of Richer Money Manies. For Manies "the human body," no less than "the Body Politic," is "an ecosystem with its own flora and fauna"; if both are closed systems, then "the history of the human body is the history of its organic macromolecules, . . . the history of many small groups and coteries"

(25). Deterministically, the metaphor of the biological life cycle can describe fully the person's history. For a world which prizes the cyborg warrior with armor and castle, the horizon of collective action is reduced to an undemocratic theory of almost Medieval clans. Manies's name, which defines him as a morality-play persona, also stands for money as the texture connecting together a possible world (a planet called Reverie): the planet's basic conflict pits an official corporate "Board of Directors" (20) against the "invisible plutocracy" of the "Cabal" (15). Reverie's national hero Moses Moses, as well, comes from a career of social climbing and economic triumphs, which he justifies in terms of an obsessive self-reliance (97 ff.).

Everything on Reverie aims at dehistoricizing the socioeconomic sphere; the Kid, too, has a life which apparently escapes history and time: born as an adult clone, he follows treatments of growth-hormone suppressants in order to remain arrested in a preadolescent state. But the most important dehistoricizing force is the natural equivalent of the urban Zone, a wilderness area called the "Mass": here, the narcissistic mirroring of powerful individuals among themselves (stressed in their names) and on the world finds its apotheosis. In the Mass, the biologist Crossbow Moses finds the inchoate incarnation of his ideology, and his own image: he christens "the Crossbow Body" (156) a white blob-like entity which appears to be able to absorb genetically any life form:

It seems to be immortal, . . . a world-spanning gestalt that transcends intelligence as completely as intelligence itself transcends instinct. It is a teleology! It has a purpose that transcends determinism! It has slipped free of the iron chains of evolution! And it is evolution that demands death! (156-57)

Determinism, of course, is definitely not ruled out: for Crossbow the all-transcendent Body is

like a gene bank. And it's a permanent guarantee against extinction. It's the ultimate advance in the evolutionary battle against death. . . . It evades death because, because its genetic constituents are preserved. The genes are the heart of life. The tissue is just an expression of the genes. (199)

As "human *telos*," the Body promotes "investment in a gene bank that never offers dividends to depositors" (Easterbrook 388). Along sociobiological lines, its formless, colorless, undifferentiated "naturalness" replicates unboundedly the gene pool and renders obsolete the survival machines of embodiment and sentience.<sup>20</sup> If Arti is among the victorious opponents of the Cabal led by Manies, in the end Manies himself appears to have triumphed anyhow. In a final speech he compares the Cabal's role with that of the Body: both share the same commitment to unconstrained freedom, and to "the deepest forces inherent in life itself" (229). For Manies, speaking from society's top, absolute agency and cosmic quietism are synonyms:

*We must not be allowed to plot our own destiny.* The Crossbow Body does that for us [and will bring us] salvation by a mighty force that transcends intelligence. If people began making plans to govern themselves--to resist the will of the Body--there might be another social upheaval. . . . We will allow every man and woman and neuter to go their own ways in peace, to express themselves freely, beholden to no man. (229)

In such a world. Arti can retire and grow adult, with "a happy ending between young and old oiled by prosperity" (Suvin, "Gibson" 47).

Individual wealth and prosperity are the basis of all significant human relations in *Schismatrix* (1985) and in the short stories, set in the same universe, collected in *Crystal Express*. In this cycle, the cyborg model of sociobiology and its disturbing politics are elaborated into a fully literalized novum which interprets technology as metaphysical manifest destiny. In "Swarm" (1982), the first short story of the cycle, an insect-like alien makes the point quite clearly: "The human form is becoming obsolete" (25). For the alien Swarm, the issue is not a failure in human nature; on the contrary, the body obsolete is *the result* of humanity's fulfillment of its genetic legacy: "This urge to expand, to explore, to develop, is just what will make you extinct." Humanity believes that this urge can propel it "indefinitely," but Swarm is not talking about limits to growth; rather, it is the ineluctable limitlessness of human growth that calls for a biological paradigm shift: "Knowledge is power!." Swarm proclaims. The humans' "fragile little form" cannot "contain all that power," which has even "altered" our "genes." Swarm's promise is about beings that "transcend" both "understanding" and "*being*" itself (ibid.), while on the other hand presenting itself, as halfway entity, as "a tool, an adaptation" (24).

The whole cycle will insist on the instrumental body as step toward transcendence. Starting with "Cicada Queen" (1983), plots revolve around the story of two rival groups of "posthumans": the genetically engineered Shapers, "constructed of genes patented by Reshaped genetics firms," and the cyborg Mechanists, who "are slowly abandoning human flesh in favor of cybernetic modes of existence" (49). Their universe has, again, Emersonian overtones of an ever-renewing cosmology

rhetorically based on chaos theory (the "fits and starts" of "Prigoginic Levels of Complexity": 50), and of demiurgic individualism:

It's time we learned to stop looking for solid ground to stand on. Let's place *ourselves* at the center of things. If we need something to stand on, We'll have it orbit us. . . . Posthumanism offers fluidity and freedom, and a metaphysic daring enough to think a whole new world into life. (49)

The distinctive mark of the narrator, the ideal hero in such a world, is his "black armor" (84); and the Mechanist creatures he meets, called Lobsters, are a full embodiment of the posthuman principles, extremizing the visions of Toffler's *Future Shock* and of the Freehold station of Heinlein's "Waldo". Self-enclosed and self-sufficient monads, they float free in a cosmic fluidity which fulfills desire and releases them from need:

They never ate. They never drank. Sex involved a clever cyberstimulation through cranial plugs. . . . They knew no fear. . . . They were self-contained and anarchical. Their greatest pleasure was to . . . open their amplified senses to the depths of space, watching stars past the limits of ultraviolet and infrared. (76)

In *Schismatrix*, both Shapers and Mechanists embody a cyborg dream of omnipotence and immortality. Cyborgization here, rather than fragmentation, stands for metaphysical holism in a "seamless" world of "purity" and "faultlessness" (48), that eventually develops a "demortalization clinic" (155). As a Shaper woman says, "I'm wired to the ass and the spine and the throat, and it's better than being God" (43); hence, she "accepted her feverish world with a predator's thoughtlessness" (48). In her

identification with her world, her feeling of power becomes a self-fulfilling thrust, even beyond high-intensity sensuality:

"Do you remember, Abelard... Once I told you that ecstasy was better than being God."

"I remember."

"I was wrong, darling. Being God is better." (256)

Confronted with the "frailty" of the space "habitats" in which most human live, the defense of their enclosure becomes a mystique: "Walls held life itself" (79-80).

In a world ruled by "corporate republics" and "people's zaibatsus," which seemingly mix late capitalism with Medieval city-states (Suvin, "Gibson" 47) and even Southern US plantations (cf. Moore), expansion and self-protection find a legitimation as cosmic principles in the encounter with the aliens called Investors, who are quite simply described as "businesslike" (123). Genes and capital are both immaterial all-connecting forces; as a Mechanist "wirehead" puts it: "Our life is information--even money is information. Our money and our life are one and the same" (179). Universal capitalism has its objective correlative in the determinism of multiplex, "libertarian" evolutionary manipulation:

The Shapers, the Mechanists--those aren't philosophies, they're technologies made into politics. The technologies are at the core of it. Science tore the human race to bits. . . . Community isn't enough when a thousand new ways of life beckon from every circuit and test tube. (185)

A human may be "still a tenant of the flesh" (191), but is now facing a "future" which "belongs to life," beyond cultural or bodily heritage, a "universe of potential," with

"[n]o rule, no limits" (208), in which one can only risk to become "paralyzed by the mind-blasting vistas of absolute possibility" (238). If identity resides in pure and abstract "life," the demiurgic act of "world-building" and of narcissistic "terraforming" becomes the next step for posthuman agency (230-31): for the posthumans, "[k]nowledge [i]s power. And in seizing knowledge, humanity had gripped a power as bright and angry as a live wire" (237).

At this point, even the Lobsters become too bound to the genetic group and community ties: in the protagonist's pun, this is no longer an age of "solidarity": only "fluidarity" can express the flexibility needed by the new empowered agents (264). The full-fledged representative of high posthumanism is the "Wallmother," a woman genetically and cybernetically molded into an orbiting habitat. And again, the liberating manipulation is that of a bodily equivalent of the free market principle--free, but with an emphasis on outer boundaries: "The cavernous duty-free area was paved, walled, and ceilinged in flesh" (248).

The crucial point had been made by a character named Wells: in the breakup of biological humanity into distinct "clades," none of these "faction[s]" may "claim the one true destiny for mankind" (183). As in all of the tradition of the instrumental body, the point is made in bad faith: one true destiny does exist, and is disembodied transcendence, at least for the protagonist, an incredibly wealthy aristocrat (the whole plot of *Schismatrix* seems to feature only people from the top ranks of society, without any subaltern intrusion).<sup>21</sup> This protagonist, Abelard Lindsay, has before the end a final attempt at demiurgy, with the creation of the aquatic species of immortal "Angels" (279 ff.).<sup>22</sup> In the end, he is absorbed by "The Presence" into the next "Level of Complexity" and abandons his body for a melting into "the Absolute" (287).

A number of critics, from Maddox to Porush ("Prigogine") and Bukatman, have praised this novel as quintessentially postmodern, as a "world of infinite possibilities" (Bukatman, "Postcards" 355); at the very least, we should add--following what Bercovitch says of Hawthorne (*Office*)--that these are, rather, infinite avenues toward the one true *telos*. And as Thompson writes, with the ending we have even left the genre of SF for the realm of "pure fantasy" (207): but this dream of immortality and transcendence is the mark of the whole tradition here surveyed.

On the other hand, a number of SF works of have given a dystopian slant to the cyberpunk version of the instrumental body. These works can be surveyed very quickly, since in most cases the actual novum is the future urban setting, in which cyborgization plays a marginal plot role. Thus, we have the emphasis on manipulable identity in the commercial trade of "moddies" or "personality modules" in Effinger's trilogy, set in a world in which the real evil appears to stem from Arab financial and cultural domination. The North American inner city devolved into mutually and self-consuming walled communities is the multicultural setting of Kadrey's aptly titled *Metrophage* (1988) and of Spinrad's *Little Heroes* (1987). Spinrad's *Heroes* is also noteworthy for its attempt to present an alliance between a surviving radical counterculture, the hacker's world, and members of the interracial urban underclass. In Spinrad as well as in Shatner's probably ghost-written novels (Ketterer, *Canadian* 136) cyborgization is a future avatar of today's drug abuse.<sup>23</sup>

In the most important work in this cluster, David Skal's *Antibodies* (1988), the conflict is between a subculture pursuing "an ascetic, anorectic lifestyle" (152) through replacement of organic body parts, and an equally violent and dehumanizing

medical corrective practice. As Foster writes, the novel's limit stems from taking this as a double bind with no way out: Skal "conflates the experience of cybernetic embodiment and the experience of cultural commodification" ("Meat" 20). For the anti-body movement--made mostly of women--self-assertion results from a willing internalization of this commodification: but the search for "the control and disposal of our bodies" (120) can only bring about a self-inflicted, and ultimately self-destructive, form of instrumentalization. Thus, a character fancies herself as a stripper "who wouldn't stop at the clothes. She continued with the old, useless flesh . . . revealing the gleaming second skin beneath" (178). The pseudo-voluntaristic rhetoric of immersion into conformity entails the construction of an impenetrable outer fortification for the endangered self.

*Antibodies* can be taken as an ironic comment on the walled self of cyberpunk: when applied to fictional beings who are not already in a hegemonic position within their society, this rhetoric cannot be sustained. For example, Skal's cyborgization appears to be also an attempt to counter traditional gender roles; the official world reacts by trying to re-educate them into these roles with "therapies" such as rape. In this bleakest novel of the cyberpunk era, there is no alternative between, on the one hand, the pursuit of social integration and of self-willed immortality ("the only lasting reality"; 177), and, on the other hand, an embodied--hence limited--subjectivity that can only perceive itself in terms of self-loathing, as in the protagonist's stream of consciousness:

*--mindbody meatbody deathbody stinking sagging shitting fetus  
bursting organs hanging buried alive in a coffin of blood oh god not  
me don't let it be me got to get out of this bucket of tripe it's sucking me*

*down throwing me up take it away this pulsing writhing spurting  
spinning body-go-round. BODY-- (25)*

Quite directly, K. W. Jeter's *Dr. Adder* (1984) poses the conflict in terms of omnipotence vs. limitation. On the one hand, we have a cyborgized ruler with an artificial arm (a "flashglove" which kills at a distance), who has built his wealth on the notion of "retooling and redesigning" humans in order to fit them into the social machinery of both industry and prostitution. Like Skal's antibodies, Dr. Adder fetishizes his cyborg body and pictures himself as the incarnation of an "archetype": "The metal hand, the incorporation of some lethal inanimate object into one's own being, . . . the desire to make them part of oneself" (74). On the other hand, we have a character with the allegorical name of E. Allen Limmit. And yet, the character who incarnates the concept of limit can only hope to survive the final showdown and withdraw to work in a horrific biotechnologized farm. The price for survival is, in other words, a giving up of agency.

Disembodiment and the mechanized body have been, in many critics, an occasion of celebration of postmodernity's openings: one only needs to think of Schwab's essay on "postmodern phantasms" and of Bukatman's discussion of Deleuze and Guattari's "desiring machines" (*Identity* 325-28). A passage from their *A Thousand Plateaus*, quoted approvingly by Bukatman (326) acquires particular relevance in the light of the above described texts. Deleuze and Guattari write: "The question posed by desire is not 'What does it mean?' but rather 'How does it work?'" (109). In acknowledging, with Bukatman, that this attitude provides a salutary decentering and destabilizing of classic theories of the subject, the intertext or

megatext of SF cyborgs invites us also to be wary about the undercurrent of reductionist manipulation in such a theory.

## NOTES

<sup>1</sup> A handful of other stories, which I have been unable to locate, are listed in Ash (185 ff.) and Carter (162 ff.). According to all reference sources, the first cyborg novel is a British "scientific romance," E. V. Odle's *The Clockwork Man* (1923), although Roemer (112-17) lists a 1894 US dystopia, Will N. Harben's *The Land of the Changing Sun*, which could at least marginally be taken as another ancestor: here, cyborgization appears as a form of torture.

<sup>2</sup> For studies on the body in the American Renaissance, cf. Aspiz (on Whitman) and Cameron (on Hawthorne and Melville). Running the risk of stating the obvious, I would stress here that literary critics have canonized these works on the basis of strong nationalist agendas (cf. Reising): compared to many of these efforts, the SF efforts I analyze are not unsophisticated.

In this sense, from now on I shall use adjectives such as "American" and "Americanist" in order to signal the ideological connotations, in terms of national exceptionalism, associated with the public rhetoric and the hegemonic self-image of the US.

<sup>3</sup> Wiener formulates his theory of cybernetics, we should remember, as a result of a "human factors" project, prompted by Vannevar Bush's office during World War Two, on the ways to compute and optimize the human performance in anti-aircraft gunnery systems.

<sup>4</sup> For a classic analysis of the body-technology opposition in modern literature--with many analogies to Eco's apocalypics vs. integrated--cf. Benthall.

<sup>5</sup> Somewhat more sober accounts of contemporary technobody triumphs in transplant and space medicine can be found in Schmeck and Henry.

<sup>6</sup> Cf. the novelizations by Jahn and Willis. Not surprisingly, given Caidin's emphasis on armored masculinity, only in *Bionic Woman* do we have major threats to the integrity of the cyborg body: in the first of the novelizations (Willis's *Double Identity*), she risks being dismantled and sold piecemeal to foreign buyers. As additional emphasis on these writers' slant on gender roles, her first accomplishment as cyborg had been an extraordinarily fast housecleaning performance (44). On the TV series as somewhat more thoughtful fiction. cf. Higashi.

<sup>7</sup> Other nods toward metaphysical solutions include the faith-healing of the cyborg ship in Niven's "Becalmed in Hell" (1965) and literal omnipotence in A. C. Ellis's *Worldmaker* (1985).

<sup>8</sup> Truly horrific variants can be found in the even more depoliticized form of the medical thriller: cf. Robin Cook's *Brain* (1981) and David Osborn *Heads* (1985).

<sup>9</sup> For the one Left liberal version of the cyborg superhero, cf. Fritz Leiber's cyborg from the Moon come to liberate North America from a "Texan" dictatorship in his anti-Lyndon Johnson satire, *A Specter Is Haunting Texas* (1969). Comic works in this period include Ron Goulart's lampoons.

<sup>10</sup> Starting with Amis, dystopia is initially the subgenre privileged in SF criticism by outsiders and non-US insiders.

<sup>11</sup> Along the same lines, cf. the less extreme cases of Raymond F. Jones's *The Cybernetic Brains* (1964), Frank Herbert's *The Eyes of Heisenberg* (1966), and Margaret Armen's *Star Trek* story, "The Gamesters of Triskelion" (1977), as well as most stories in the Scortia-Zebrowski anthology, all more optimistic about the salvific anti-dystopian power of rugged individualist heroes. In a slightly attenuated variant of the dichotomy, T. J. Bass's *The Godwhale* (1975) pits the dystopian "Hive," a future

computer-controlled world, against the protagonist loner; revived from hibernation, the protagonist undergoes "hemicorporectomy" (9), retaining some organic parts: thanks to this, he is the only one who can appreciate earth as "still hospitable toward man" (306) The conflict finds perhaps its crudest version in the *Star Trek: The Next Generation* tales on the war with the "Borg" (e.g., the novels by Carey, David, Dillard), where the alternative between massified "assimilation" into the alien cyborgs' "collective" and individualist integrity is translated into inter-species clash.

Hjortsberg's pattern is reversed but not contested in Lawrence Watt-Evans's *The Cyborg and the Sorcerers* (1982) and William Wu's *Cyborg* (1987), where the cyborg in the employ of a dystopian scheme finds in his own rugged individualism the path toward integration in "authentic" societies or groups.

<sup>12</sup> Among works discussed in this chapter, a very high degree of formal sophistication is also present in Bester, Bunch, and Hjortsberg.

<sup>13</sup> Cf. Barter, *Way* 164-66; Bukatman, *Identity* 243-44, 293-94; Geduld 37-74; Hayles, "Life" 156-62; Samuelson "*Limbo*"; Seed; G. Wolfe, "Instrumentalities" 218-20.

<sup>14</sup> Portelli's examples include many texts at least marginally SF (from Irving to London), many of which prominently feature damaged bodies. The dismantling of a semi-artificial body as metaphorical vehicle for the threat of national collapse was already present in what, in retrospect, could be called the Ur-cyborg story: Poe's "The Man That Was Used Up."

<sup>15</sup> Right-wing Libertarianism has also produced a corpus of utopian fascist writings: cf. Orth.

<sup>16</sup> In a broader international perspective, we should keep in mind that, in the same years, other business-promoted scenarios on the rise of the information society did not share the same *laissez faire* view, both in France (cf. Nora and Minc) and in Japan (cf. JCUDI). In particular, the Nora-Minc report on *télématique* at least posed some problematic questions about new conflicts and the redefinition of sovereignty.

<sup>17</sup> Among cyberpunk writers. Rucker, Shirley, and Sterling explicitly refer to Stelarc.

<sup>18</sup> In a very different critical stance (one influenced, for example, by Jung), Mazlish's theories had been invoked by Warrick's (204-05).

<sup>19</sup> At this point, it not surprising that Bukatman accepts uncritically into his canon films such as *Robocop* and *Terminator* because of their emphasis on "the armored body" (301-11), which he also links to Theweleit's analysis of early Nazi culture. For more skeptic views of these films, cf. the essays by Fuchs and Springer.

Along these lines, though, the cyberpunk boom has produced a number of survivalist SF thrillers based on the same motif of cybernetically enhanced bodies fighting distant and dictatorial corporate regimes. An almost Fascist example is Niven and Barnes's *Achilles' Choice*, with its corps of cyborg athletes (which includes both women and Black heroes). In my bibliography, cf. the near-future urban settings of Barnes (a Black superhero by a Black writer), Berlyn, Littell, Odom, Russo, and the *Robocop 2* novelization by Naha, as well as the space adventures by Dietz.

<sup>20</sup> The Crossbow Body is here the successor of a number of classic literary icons of US expansionism from the all-absorbing whiteness of *Moby-Dick* to the promise to come in the wilderness at the end of *Huck Finn* (like Huck, Crossbow as well can say "I've been there before; 155).

<sup>21</sup> In Sterling's novels another downplayed category is that of women. The overall tone is overtly masculinist, as has been noted by Pfeil (89). Ross (*Weather* 152), and Suvin ("Gibson"). In *The Artificial Kid* one fairly crude pun is present in the last name of the man from which Arti is cloned: Tanglin. In *Schismatrix*, the different transcendence offered to the Wallmother (as overblown body) and to Lindsay (as disincarnate spirit) bespeaks a not so subversive notion of gender roles (cf. Easterbrook 386).

<sup>22</sup> As Thompson suggests, the Angels call to mind the image of the "ocean without boundaries that seems to unite the individual with nature" in Melville's *Moby-Dick* (208).

<sup>23</sup> The dystopian cyberpunk cluster also includes an array of "minor" thrillers, which is represented in my bibliography by Bova (*Death*), Dunn, Harrison and Minsky, Q. Thomas, and T. Thomas. Among marginal occurrences of cyborgs, we should at least mention their passing mention, in Spinrad's *A World Between* (1979), as part of a Nazi-like, male-supremacist subculture.

## Chapter 4

### LIGHTING OUT FOR THE VIRTUAL FRONTIER

#### 1. Virtual Frontiers and Informatic Jeremiads

"I seem to have a body which stretches into endlessness." says Mr. Spock in Lee Cronin's *Star Trek* story, "Spock's Brain" (20). Spock is describing his condition after the removal of his brain from his body, followed by insertion in a computer-controlled planetary support system. A new space seems to open for him, stemming from his new cyborg status, a space whose main connotations are individual expansion and absence of limits. In a narrative saga whose main slogan is "the final frontier," there emerges a technologized self which presupposes a technologically induced space without limits to the extending or the "stretching" of the individual will, which renders irrelevant his violently imposed condition.

Like Spock, the prosthetic god of Freud's *Civilization and Its Discontents* had met with "a sensation of 'eternity', a feeling as of something limitless, unbounded--as it were, 'oceanic'" (11). For Freud the oceanic feeling is the manifestation of a self-denying craving for mystical transcendence and "oneness with the universe" which is actually based on "the restoration of limitless narcissism" and on the individual's "wishes for omnipotence" (19-20). This chapter will discuss the hegemonic rhetoric of virtuality as transcendent space of narcissist action, without following in Freud's slighting of the necessary stress on the politics of extension and boundlessness.

The *Star Trek* story is still within the paradigm Emerson had delineated in "Nature" (as discussed in the fourth section of Chapter 3): a minimal male body (a brain instead of an eyeball) finds its way to infinity in a space which offers no

resistance. This chapter will discuss the image of virtual space, or (after William Gibson's coinage in *Neuromancer*) cyberspace, as a consistent attempt to update classic rhetorics of expansiveness. In much so-called "cyberculture," the computer plays the rôle of a provider or catalyst for a space of endlessness whose own conditions of possibility can be safely ignored, and whose implicit and explicit template is the rhetoric of the frontier.

The most ambitious of the cybercultural writers is Bruce Sterling, with his 1992 nonfiction book *The Hacker Crackdown: Law and Disorder on the Electronic Frontier*, which argues that the virtual frontier of cyberspace was first opened with the establishment of the national telephone network in the US. One date that he gives-- 1893, when the network reaches Chicago--functions, in his argument, as the launching pad for the westward and continental expansion, after the experimental phase in New England: "[T]he telephone network spread like crabgrass. by 1890, it was all over New England. By 1893, out to Chicago. By 1897, into Minnesota, Nebraska, Texas. By 1904, it was all over the continent" (8).

In such a rapid sweep, Sterling's inclusion of this detail is especially noteworthy. Chicago 1893, one must bear in mind, is the exact time and place in which Frederick Jackson Turner delivers, at a meeting of the American Historical Association, his famous paper on "The Significance of the Frontier in American History." No better shorthand exists for the hegemonic rhetoric of Americanness than the image of the frontier. If no other text is as specific as Sterling's, most cybercultural theory reads indeed like a sequel to Turner's writings.

There are two aspect in Turner's works which are important in this context.<sup>1</sup> First, we have what Turner calls a "germ theory of politics" (2): a revised Haeckelian

biological model that sees the larger national phylogeny ("evolution") of increasingly differentiated classes and social institutions as grounded on, and endlessly recapitulating, the local ontogeny of the growth processes of the frontier community. The "fluidity" and "perennial rebirth" of "American" liberalism (ibid.) would harmoniously proceed from the representative rugged individualism of the frontier self-made-man. Such an individual is placed on the "edge of free land" and "of the wave" (3) of the Brownian motion of "a mobile mass of freely circulating atoms, each seeking its own place or finding play or its own powers and for its own original initiative" (306)--to an ordered social organism, always in movement and yet always self-identical.

The second aspect is Turner's insistence, in his writings of the 1910s, on the role of science as a hoped-for immaterial version of the frontier. In a democracy, he writes, without "an unlimited quantity of untouched resources . . . [t]he test tube and the microscope are needed . . . in this new ideal of conquest" (284). After the closing of the frontier, in the rising age of limits, and with the arrival of immigrants whom the dynamics of frontier liberalism seems to repel, national individualism is under threat of extinction. However, he speculates, "[i]n the place of the old frontiers of wilderness there are new frontiers of unwon fields of science" (300). These are, for him, the last hopes for the US.

Frontiers, self-made-men, and other signposts of US liberalism recur throughout the nonfiction on cyborgs and virtual space. This tradition, in my opinion, should be read, beyond its--usually very dubious--value as scientific, sociological, or theoretical research, as a sustained attempt to literalize the metaphorical cluster found in Turner. In this series of increasingly constrictive and exclusionary ideological

narratives, the stakes are the recreation and legitimation of *utopia americana* and of its chosen people, in the name of a conflictless teleology of command and control through communication technology.

As we have seen in Chapter 3, for Bernal the mechanized body was to be simultaneous with the colonization of (outer) space, while Kline and Clynes imagined their cyborg as ideal inhabitant of the New Frontier of space. In the US, the technologizing of territorial space is a rhetoric that also can be traced as far back as the age of Emerson. A first metaphoric cyborgization of America's body politic occurred in 1838 with Samuel Morse's claims about the telegraph's connective force as the central nervous system of the nation (cf. Czitrom 177). It is, though, cybernetic science that brings about full-fledged formulations. In 1945 the pioneer Vannevar Bush writes for *Atlantic Monthly*, with the title "As We May Think," one of the manifestoes that will eventually lead to computer networks and hypertexts. With his image of the "memex," Bush talks about the computer's memory as available space in which the operator moves by freely opening endless "trails" of connection (106-08). The ideal "trail blazer" and "path" finder in this open field would be, if EEG research were to reach its "bounds," a "cerebral mechanism" directly connected to the machine. In Bush's ergonomic approach, memex wilderness and "the human frame" become compatible modules within one system. that "proceed[s] from one electrical phenomenon to the next"; the hardwired operator becomes the necessary complement to actualize this "hope" (108). In the public statements he makes in his official capacity, the Turnerian idea of science as frontier becomes Bush's central point: two of his books are titled *Science: The Endless Frontier* and *Endless Horizons: the open*

territory of cybernetics becomes in other words a hoped-for real-world counterpart for his ideological strivings (cf. Martin 203-05).

It is, in fact, the rhetoric of ergonomics that formalizes topologically the concept of the operator-computer cooperation: as Singleton wrote in an official 1974 World Health Organization report, the "man-machine interface is an imaginary plane" (86). In 1950, the founder of cybernetics Norbert Wiener talks in *The Human Use of Human Beings* about computer and operator as "steersmen" in the fluid "stream" of information. In spatializing the notion of information, for him as well the frontier becomes pertinent (43), along with traditional US icons of unconstrained movement, such as the train and the steamboat (45). Moreover, Wiener's stream can dematerialize the self confronting it: "the individuality of the body is that of the flame rather than that of a stone, of a form rather than of a bit of substance" (102). In his last book, *God & Golem, Inc.* (1964), Wiener continued to stress (in religious terms) the need to redefine the relation between personal body and body politic in the light of the new technologies.

In the spatialization of cybernetic imagery, the key role is played by the tradition of communications theory that culminates in McLuhan: technology reshapes the social organism as a superindividual cyborg, and reformulates in its image the coordinates of the space in which the latter moves and acts. If the medium is the message, society is a cyberspace. The precursor here is Charles Horton Cooley, one of the founders of US sociology, with his *Social Organization* (1909). At the beginning of the century too, communications technology appeared co-responsible for the rise of an age of immateriality and crisis of the social bond. Cooley, though, rejects the dominant nostalgia for small-town democracy, acknowledges a renewal (and not the

exhaustion) of the organicist horizon, and talks about contemporary society as a "larger mind"--born thanks to the telegraph and the new printing devices--with a strong liberating potential (cf. Peters).

In the 1960s, Marshall McLuhan will follow Cooley along similar optimistic lines (cf. Czitrom), with strong religious overtones (cf. Ferkiss). Against the liberal apocalypticism, the mass reification of the human is not one of the disturbing and suffocating costs of modernity, but the prefiguration of a millennium. In his works, and above all in *The Gutenberg Galaxy* (1962) and *Understanding Media: The Extensions of Man* (1964), the space of the global village rises as "a global network" (*Media* 302) of human "sensory systems," which technology has "extended" and rendered interdependent (19 ff.). As the extension is also an "amputation" (51-56), the new condition is not only better but also incompatible with the old one: the latter is obsolete and will be wiped out. Similar to Turner, McLuhan's approach is that of an evolutionary anthropology which, around the computer, produces the figuration of a planetary "nervous system," a global "consciousness" which renders obsolete the limits of language, territory, physicality, social roles and partial perspectives. An Emersonian oversoul is being born, a cyborg and newly "nomadic" (67) collective identity which coincides with the space of the global village. This "unified field of all-at-onceness" (*Galaxy* 81), in its "embrace" (*Media* 55) with artificiality, reconstitutes the tribal condition of a Conradian "Africa within" (*Galaxy* 59; *Media* 144). The global village is less a sociological than a metaphysical metaphor: as a collectivity, it will not generate a public space, but rather an Arcadian melting of individuals and the disappearance of otherness. Again, the language is that of empowering

dematerialization, and places an author deeply rooted in English-Canadian religious and nationalist culture (cf. Czitrom and Fekete) in a close dialogue with US rhetoric:

The computer . . . promises . . . a Pentecostal condition of universal understanding and unity. The next logical step would seem to be . . . to bypass language in favor of a general cosmic consciousness. . . . The condition of "weightlessness," that biologists say promises a physical immortality, may be paralleled by the condition of speechlessness that could confer a perpetuity of collective harmony and peace. (*Media* 84)

In such a space, concepts such as power and production are irrelevant: politics as well as social and individual agency do not matter, and have never mattered: deterministically, the human has always been a "servomechanism" of the technological extension (55). Intellectuals and critics may only play the role of "surfers" or "wave-riders" (*Galaxy* 176, 295) in technology's evolutionary flux.

Later mappers of virtual Americanness will follow the rhetorical direction provided by McLuhan's technological determinism and emphasis on evolutionary imagery. This is the heroic role of computer scientists and informatic pirates, as is delineated starting with the 1980s in a plethora of mass and cult texts which accompany the rise of the personal computer and of its attendant new consumer figures with their own subcultures. From these subcultures and from the attempts to co-opt them, a mythology develops in which emancipating tensions and will to social control form an inextricable whole. This strand is well represented by magazines such as *Omni*, *Wired*, and above all *Mondo 2000*, formerly titled *High Frontiers*.

This last title, an allusion to the 1970s' space-station hype, deserves a pause for reflection. Space stations had been, in conservative futurology, an important

attempt to recreate the public discourse of the frontier myth. In fact, they were presented as a new "high frontier" (O'Neill), a "third industrial revolution" (Stine *Revolution*, which was prefaced by an introductory endorsement by Barry Goldwater), as the promise of an economic growth without limits or ecological concerns and of a public morality prizing rugged individualism above all else. The prosaic nature of Reagan's Star Wars and of the *Challenger* disaster deprived these efforts of their rhetorical efficacy.

The same rhetoric sustains a key text such as Toffler's *The Third Wave*, wherein the title itself establishes a connection with the "wave" of Turner's frontier. Toffler's text, which will later become an ideological gospel for Newt Gingrich's "Libertarian" Right, builds on the earlier *Future Shock* with its praise for precariousness and Social-Darwinist "adaptivity" as conditions of the contemporary *Zeitgeist*. *The Third Wave* follows McLuhan in recounting human history *sub specie technologiae*, with a linear, progressive sequence of "waves" and "revolutions"--agricultural, industrial, informatic--which succeed and cancel each other as monolithic wholes, never interactively or conflictually: oppositional and subaltern groups are mere byproducts of the respective "waves," and may be ignored. Now the race is open for the first and steadiest rides on the computer's wave, in which information is both use and exchange value (the *only* value), and in which the extreme individualism of the "self-help ethic" is the one ineluctable commandment. Toffler's key words are now well known: "transnational," "world web," collapse of nation-states, "telecommuting," and include paeans for child labor and against compulsory education (first, *épater les gauchistes*). Politically, *The Third Wave* is ambiguously predicated on the promise of a "direct democracy" for the chosen wave-riders, at the cutting edge of computer

literacy, ready to cash on the "evolutionary necessity" for a "planetary consciousness" of the "psychosphere" (335-36; 375 ff.). Here, the computer is tool, metaphysical evolutionary *telos*, and procedural basis for social organization. Reinterpreted by Toffler through a somewhat vulgarized version of Prigogine's chaos theory, the cybernetic feedback principle will lead us "towards increasingly complex and diversified biological and social organism, through the emergence of new, higher-order dissipative structures" (Toffler *Wave* 319).<sup>2</sup> However, the future need not run the risk of unexpected or uncontrollable newness; in the stress on the biotechnological "designing" of evolution as crucial aspect in the world's long-term socioeconomic development (302-04), chaos is transformed into a reassuring theory of ultimate, if nonlinear, predictability. Toffler, in fact, shares in full with the computer scientists and the mathematicians surveyed in Woolley's *Virtual Worlds* an unshakeable faith in the essential "computability" of the universe, and makes of this faith a philosophy of history. For Toffler, feedback will regulate the world of (by any other name) Friedmanian trickle-down deregulation as an analogue of the invisible hand of free market, stretched from hi-tech America to reshape the planet. *The Third Wave's* chaotic "open universe" (320) leaves (the wealthy few among) us on the outer edge of an ever-fluid, perennially renewed and renewing frontier, "like America's founding parents two centuries ago" (425).

In all of Toffler's epigones, who monopolize current computer bombast, the shape of future America is at stake. For Nicholas Negroponte (*Being Digital*) the rhetorical link is straightforward: the "amoral" computer is "a way of life," important because it is "as scalable as the Constitution" (43). In both, "upgrading" can be obtained incrementally, with no need for major replacement of core parts; in both, as

in the frontier. a principle of expansion guarantees nontraumatic self-perpetuation. For the tycoon Bill Gates (*The Road Ahead*) we are facing, thanks to the computer, an all-too-well-known open road of "friction-free capitalism"; the expansion of computer customers into the immaterial will not be encumbered by the material resistance of alterities unfit to the frontier setting. In this view, cyberspace and the information superhighway fulfill the wish for a body politic free from the frictions, the marks, and the burdens of the body and of politics. Finally, Kevin Kelly, editor of *Wired* magazine and author of *Out of Control*, abandons all claims to liberalism and democracy, and the "prairie" pluralism of deregulation will lead to a global "hive-mind": in taking the term used in Gibson's *Neuromancer* to describe the artificial intelligence Wintermute, Kelly has it both ways: boundlessness of space but no plurality of subjects (literally, *e pluribus unum*).

The magazines' ostensible goal, on the other hand, is a recuperation of the Sixties' counterculture as precursor to the computer consumers' subcultures. Yet the dominant register is the populist exaltation of hi-tech America as "apotheosis of commercial culture" (Rucker et al. 16). In the form of spectacularized ethnography of the postmodern world *à la Mondo Cane* (which the title of *Mondo 2000* may wink at), the central image is the Turnerian one of America as "new edge." If Turner's territory was a field of openness for White men only, the virtual edge is much more exclusionary: "Commerce is the ocean that information swims in" (Rucker et al. 16). The fluidity of the new frontier society grants its promise of infinite possibilities only to the male, well-to-do consumer as new and liberated subject (cf. Sobchack). This time, the frontier is personified in the body; thus, the "new edge" of netsurfing, smart drugs, cybersex, biochips, etc., announces not just a cultural paradigm shift but an

evolutionary leap. This Lamarckian--rather than Darwinian, yet also Social-Darwinist--mutation will transform a class of upscale consumers into a fully liberated, superior, dominant race to come (cf. Dery 31-41; Balsamo ch. 5-6), whose "rampant hypervoluntarism" (Terranova's term) salutes with exhilaration the Post-Fordist obsolescence of ecology, social bonds, as well as of (other people's) labor, skills, and "meat."

However, things are more complex than pure ideological bad faith. Instead, in Sterling and others we have a textbook reformulation of what Sacvan Bercovitch calls the rhetoric of the American jeremiad, the lament or critique on the existing state of affairs, fashioned as a dissenting minority opinion, that reaffirms and reshapes consensus Americanness in the name of carefully (re)constructed ordinary values. Turner's thesis was a classic example, that celebrated the frontier as the nation's fable of identity while denouncing its disappearance from the US territorial and ideal horizons (*Jeremiad*). The virtual frontier becomes a crucial rhetorical tool precisely because of its association with "opposition" figures such as the hackers. With the hackers, the space of immaterial expansion envisioned by Bush & Co. finds its agents, its contemporary (pseudo-)critical bards, and its vanished legendary heroes. Hackers have indeed become, in the Anglophone collective imagination, the mythical champions of a state-of-the-art, usually underpaid, Post-Fordist labor-force who, as Andrew Ross writes, "can interrupt, upset, and redirect the smooth flow of structured communication [with]in the social networks of exchange" (*Weather* 95).<sup>3</sup>

In the popular nonfiction on computer and Internet history (e.g., beside Sterling, Brand, Hafner and Markoff, Kidder, S. Levy, and the two books by Rheingold), the definition of "hacker" is usually extended to scientists but not to

ordinary technicians or computerized-office workers. Hackers are presented as uneasy syntheses of opposed ideological outlooks. On the one hand, they are anarchists imbued with the cultures and the catchwords of the New Left, tricksters who reappropriate a knowledge monopolized by the State apparatuses and by the corporations. Both Hafner and Markoff's *Cyberpunk* and Sterling talk about the electronic "frontier," while Steven Levy mentions an ongoing "revolution." The heroes of Levy's *Hackers* are new "hot-rodders," compared to the whiz-kids of pulp SF (50), restlessly hostile to any form of control and discipline toward research and creativity, champions of an ethics of free access to information as universal right. On the other hand, they are the "priesthood" of a closed community (5) that, in the name of a rigid meritocracy, bitterly looks down upon ordinary "losers" outside the inner circle of the chosen "winners" (105). The antinomian, Emersonian ideal of the individual disconnected from social ties is now incarnated in these post-1960 generations of awkward teenage nerds with a wealthy background who find in the hacking activity, as means and end, a liberation from the disturbances of the body and of women. Levy's crucial move is the extension of the definition of "hacker" to anyone who voices an allegiance to the "ethics of free access," hence also to professionals and entrepreneurs. In the name of existential dissent, the "heroes of the computer revolution" and their hagiographer avoid any admission of co-responsibility with the military complex which funds their work, and renew the classic liberal overlap between euphoria of freedom and search for profit.<sup>4</sup> According to all the popularizers they--both pirates and scientists--appear as persecuted dissenters, usually described in religious terms: prophets, messiahs, charismatic preachers, etc.: we are told about predications, illuminations, and contacts with the "soul" of the "new machine"

(Kidder), in the typological prefiguration of an interfaced "transcendence." At the same time, hackers are shown as law-abiding "homesteaders" (*Rheingold Community*) intent--as the Electronic Frontier Foundation put it in its 1991 on-line "Mission Statement"--on "civilizing the frontier." Also, as pursuers of a Weberian *Beruf* in the exclusive, ascetic dedication to the secular ideals of hacking and computer science, they are praised as founders of an order built on their unruly practices.

Similarly, Ted Nelson, inventor of hypertexts, canonizes himself as the hero who expropriates the computer from the hand of the multinational IBM. His *Computer Lib* (published by the competition: Microsoft Press) recounts the success story of a hippie who made it and sees his old ideals of self-management actualized in full in the rise of the small-size computer industry.

The hackers' role as potential *saboteurs* and *bricoleurs* of what Haraway calls the "informatics of domination" (*Simians* 161 ff.) is not sufficient to justify the entrance of console cowboys of all kinds into the mainstream of US social discourse. Sterling's overemphatic claims might be a guide to understanding how, and at what and whose cost, hacker rhetoric has made the frontier usable again in the virtual reconstruction of the Americanist ideal. In *Crackdown*, the "territory [of] the electronic frontier is about 130 years old" (vi). The proto-hacker, the heroic trickster who for the first time concretizes victoriously the democratic thrust of hacking is the "visionary" AT&T executive Theodore Vail, who around 1910 convinces the Morgan bank to finance the monopolistic project of Bell's national telephone network.<sup>5</sup> Thanks to him, the electronic frontier and its ethic come to life as "a quintessentially American" corporate triumph:

Bell's policy, and the policy of Theodore Vail, was a profoundly democratic one of *universal access*. Vail's famous corporate slogan, "One Policy. One System. Universal Service." was a political slogan, with a very American ring to it. (11)

Thus, Sterling can interpret the whole of twentieth-century US history as the history of a very Bellamyian "American industrial socialism" (ibid.). The frontier allows, in the cracks of corporate power, the rise and victory of the emancipatory ideal. With the appeal to the frontier, though, all differences are cancelled between the social-climbing individualism of the corporate executive and the anarchistic individualism of the "dissident" in flight from authority. Self-reliant dissidents, especially when brilliantly hip and endowed with Sterling's macho swagger, have in the US traditionally been ideal material for nationalization:

Hackers of all kind are absolutely soaked with heroic antibureaucratic sentiment. . . . There is sometimes malice and vandalism in this attitude, but it is a deep and cherished part of the American national character. The outlaw, the rebel, the rugged individual, the pioneer, the sturdy Jeffersonian yeoman, the private citizen resisting interference in his pursuit of happiness--these are figures that all Americans recognize and that many will strongly applaud and defend. (54-55)

The hackers proper were for Sterling individualists of this anarchist kind, yet not only perceived themselves but *were* true successors to the great rugged individuals of American consent, from Franklin to Jefferson, Alexander Graham Bell, and Steve Jobs (60). Now, thanks to the current "permanent technological revolution" (193) the condition of the pioneer on the frontier has become general. When a 1990 police

crackdown does away with the romantic hackers of the past. their legends become the legends of the representative men of the present. In cyberspace, the frontier gains back its role as living metaphor for the whole of "America," presented once again as a boundless yet totalizing uniformity without a way out or internal tensions. Only dropouts and the dead. Sterling cheerfully says, will be allowed to opt out (193). As to giving a name to those bodies and groups who don't get to ride in the wilderness, who vanish into powerlessness and neglect and not into immaterial virtuality, this is definitely beyond the smoothness of his narrative.

Only Timothy Leary calls his heroes by name. In his *Chaos and Cyberculture* for the first time a social group is rising which is endowed with both the conceptual tools (a philosophy based on decentralization and quest for pleasure) and the technical knowledge (the PC) to affirm the countercultural dream of psychedelia, so that it may become a "new breed" in human evolution: the yuppies (Ch. 3). As in Nelson's, S. Levy's, and *Mondo 2000*'s hip male winners, Leary's yuppies offer a clear indication about whose structure of feeling is being addressed: computer society should not be taken as a monolithic or monologic deterministic whole. Different positions in society are being created or recreated, with different interests and agendas: behind hipness, there lurks the materiality of class, gender (cf. Sobchack), and race (cf. Delany "Black").<sup>6</sup> In glamorizing their position, these dominant subjects are searching for hegemonic legitimation. Leary's hackers have much in common with Sterling's, as a self-appointed new form of the national democratic individualism. Their "Promethean" ancestors are Columbus, Twain's pilots, the Beats, and the Confederate South. Hackers, computer programmers and users are already acting as pioneers in the alleged *tabula rasa* of the virgin land, as "navigators" in the formless "chaos" of

postmodernity (ch. 3). The first settler of cyberspace is the postmodern jeremiad of dissensus affirmed, as often before, in the name of the dominant values.

## **2. US Identity in the Age of Cybernetic Simulation**

Similarly, the theorists of Virtual Reality esthetics, such as Myron Krueger, Brenda Laurel, and the contributors to the books edited by Benedikt, Helsen and Roth, and Laurel, talk about limitless worlds, absolutely fluid yet absolutely explorable in their artificiality and thus the utmost triumph of human nature-taming sovereignty. They talk about territories produced by the timeless archetypes of "our" collective myths (we never get to know who exactly is and is not part of this collectivity), and that will guarantee the perennial rebirth of these myths.<sup>7</sup> The most accomplished formulations are in the Benedikt anthology. For the editor, at stake is the triumph of Western democracy as space of transparency, as immaterial transcendence over material fetters:

Like Shangri-la, like mathematics, like every story ever told or sung, a mental geography of sorts has existed in the living mind of every culture, a collective memory or hallucination, an agreed-upon territory of mythical figures, symbols, roles, and truths, owned and traversable by all who learned its ways, yet free of the bounds of physical space and time. What is so galvanizing today is that technologically advanced cultures . . . stand at the threshold of making that ancient space both uniquely visible and the object of interactive democracy.

("Introduction" 3)

Cyberspace actualizes the idea of an a-historical esthetic sphere, "an extension, some might say an inevitable extension, of our age-old capacity and need to dwell in fiction,

dwell empowered or enlightened, on other, mythic planes." The subject who dwells in cyberspace finds an empowerment in virtuality's "inherent immateriality and malleability" (6), in the availability of a "liquid" and "limitless" space (2. 1). The "realm of pure information" (3) is the "realm of pure feelings" (Stenger 53), which draws the self into a solipsistic dream of estheticizing universal mastery:

Cyberspace is a habitat of the imagination, a habitat for the imagination. Cyberspace is the place where conscious dreaming meets subconscious dreaming, . . . the locus and triumph of poetry over poverty, of "it-can-be-so" over "it-should-be-so." (Novak 226)

In the same vein, Douglas Rushkoff's *Cyberia*, with its New Age rhetoric, finds in cyberspace a chance not only to "explore unmapped realms of consciousness," but above all "to rechoose reality consciously and purposefully" (7). In cyberspace, "any individual being . . . has the ability to redesign reality at large"(23).

Such a space is a direct filiation of Turner's frontier. For Turner the myth of the Western "free land" was predicated on the double bind between the "advance of American settlement" and the land's inevitable "continuous recession" (1), e.g., its geographical bounds. Benedikt's cyberspace as well has "horizons" which "recede in every direction" ("Introduction" 2); now, though, material bounds are no longer in the picture.

For Laurel, cyberspace, as the perfect "mimetic" dramaturgic art, is a locus of endless possible worlds that will not cause estrangement but rather a "Dionysian" edification. A totally transparent medium, it is, in Howard Rheingold's words, a "microscope for the mind" of the operator (*Reality* 11 ff.), in a narcissistic self-scrutiny that will reveal no surprising otherness within the inner space.

As most contributors to the Markley anthology argue, cyberspace esthetics transforms what would seem a matter of constructionist epistemology into a case for essentialist ontology.<sup>8</sup> In the case of hypertexts, the electronic medium is presented deterministically, as the bearer of inherent properties which are *absolutely* beyond the control of the operator; for Landow, hypertexts, while ostensibly offering an actualization of "readerly" and poststructuralist "decenteredness," are immaterial spaces which provide an arena for absolutely unconstrained agents who "will choose individualized paths" (7) in the text; the text, in other words, is a territory which can be crossed solely on the basis of the individual reader's will. Some critics are even more extreme: virtual reality emerges no longer as a technology but as a state of being. For Heim, it is a full-fledged "metaphysics" inhabited by Leibnitzian "monads" who handle "Platonic" ideas and not concrete artifacts; these monads are also Emersonian eyeballs who are self-enclosed, all-powerful and all-knowing, and at the same time "nonphysical, psychical substances" (97), that abandon the prison of the flesh for a realm of "digital sensation" (89; cf. also Perniola). Not surprisingly, in order to describe these ectoplasmic agents, both North American (E. Davis) and French critics (P. Lévy) evoke angelology, while, in Italy, Zolla's virtual "shamanism" (*Uscite* 23-24) and Caronia's McLuhanian "tribalism" (*Corpo* 171-79) converge, from opposite political backgrounds, toward a nostalgic surrender of all collective horizons of agency and change.

All these texts rewrite the computer frontier as pastoral, as the nostalgic dream of an innocent, pre-social Arcadia (cf. Kester)--often taken as the ideal setting for a Social Darwinist struggle-- in a native-free Virgin Land, "restor[ing w]hat had failed in the Old New World through the New New World" (Biddick 53). Both Arcadia and

Social Darwinism are thin disguises for what postmodern Americanist Rob Wilson calls the "techno-euphoria" of an America "sublimating" and expanding itself to coincide with the world.

The rhetoric and the politics of the US frontier has been, as Terence Martin writes, a rhetoric and a "politics of inexhaustibility" (193 ff.), predicated on a continual effort to imagine *tabulae rasae*, ready for new beginnings of the national self. I wish to conclude this section with some notes on the fortunes, among cybercultural writings, of some aspects of European postmodern philosophy. From popular magazines such as *Mondo 2000* to academic works such as Bukatman's *Terminal Identity*, theorists such as Deleuze, Baudrillard, and Virilio have been appealed to as especially in tune with the virtual world-view. I would submit that the dialogue among North American discourse about virtuality and European postmodernism might be interpreted as one of rhetorical convergence; the key point is precisely the nostalgic recoil to inexhaustible frontiers.

We could start with Martin's own example (210-11), Deleuze and Guattari. Their own metaphor of the "desiring machine" is a cyborg of sorts; most importantly, the "flow" of desire which both in *Anti-Oedipus* and in *A Thousand Plateaus* is the counterforce to capitalist repression is presented as an analogue to the US frontier myth. As they find it in Whitman, the West is "rhizomatic" (*Plateaus*, Ch. 1), and the continual crossing of "limits and frontiers" (189) is in general what makes the US an ideal setting for the circulation of the liberating flows. And in the US readings of Deleuze and Guattari, familiar patterns emerge: for Bukatman, the key image is the Body without Organs, which as the territorial and virtual frontiers is a clean slate which allows for endless new beginnings, an entity "defined by the *malleability* of its

organs and not just by their absence" (*Identity* 325). Bukatman's *Body without Organs* is strikingly similar to the Emersonian eyeball, reduced to nothingness yet all-extensible: "by dismantling the self, the body fuses with the world" (326). For Bukatman "Deleuze and Guattari are cyberpunks, too," and propose the "transcendence" of "a disembodied subject and a trajectory through a space defined and anchored by the machine" (*ibid.*): an act of self-denial which allows self-perpetuation.

A similar dream of an a-historical, non-social space can be found in Baudrillard. On the one hand, communication technology is catalyzing the disappearance of "public space: the theater of the social and the theater of politics are both reduced more and more to a large soft body with many heads" ("Ecstasy" 129); on the other, there is an "ecstasy" that results from the victory of the realm of "simulation" in the "desert of the real" (*Simulations* 2). Although later reprises of the same themes appear quite despairing in tone, apocalyptic rather than integrated (e. g., *Transparency and Crime*), this optimistic appraisal of the disappearance of history, economics, and politics into "the mode of information" (cf. Poster) finds for Baudrillard a perfect territorial incarnation in US culture. His *America* is precisely a praise for an ever-fluid, transcendent space, connoted by pure absolute bliss and technological sublimity and allowing for no critical distance: "Astral America. The lyrical nature of pure circulation. . . . The direct star-blast from vectors and signals, from the vertical and the spatial. As against the fevered distance of the critical gaze" (27). Postmodern America leads Baudrillard to a nostalgic vitalism, to an "insistently gendered . . . primitivism" (Docker 106), whose central icon is the image of the desert. For Baudrillard, *l'Amérique sidérale* reveals an essence behind superficial or local

differences. With its "growing abstractness" and "primary, visceral, unbounded vitality" (7), it is a place of "emptiness," "transparency," and "total availability," in which, as in Emerson, the best one can be is an observing gaze (Baudrillard talks about America as museum) in a "vacuum." (*America* 3-11). In this sense, the desert is no less than the world's only "actually existing utopia." His vocabulary and "conceits" may be strongly indebted to SF (Csicsery-Ronay "SF"). Nevertheless, his (and Deleuze and Guattari's) work can be read as the ironic refiguration of the US (science-fictional high technology included) as object of desire; in this sense, and beyond irony, it also reads as a "postmodern" Tocqueville (cf. Docker 106-07), an update of the myth of the open territory as sublime vacancy ready to be pursued, seduced, and mastered by the visiting gaze.

Virilio's paradigms are analogous, albeit with opposite axiological connotations. We are in a world of endless mobility (*Speed*), the uniformity and the transparency are those of the panoptic surveillance of modern weapons systems (*Machine; War*), which grants the subject a "weightlessness" (*War* 84) which only confirms its powerlessness and can only lead to a "virtual," dystopian "disappearance" (*Esthétique*, esp. Ch. 3).

All of these writings are predicated on the same approach to public space. In a paradoxical recoil to liberal conceptions, public space is not the space of interaction between concrete, embodied, "situated" selves (Benhabib); rather, virtual as well as postmodern theorists imagine it as an absolute uniformity to be recuperated. As in Whitman's *Leaves of Grass*, as interpreted by Fisher from a frankly Right anti-liberal position, this open space of mobility must be imagined as internally homogeneous, without leaving room for the critical detachment of situated and differentiated

standpoints (76). In such a space the subject can either expand or be cancelled ("eat" or "be eaten," as M. Morse writes); and yet here "reality"--no longer a historical or social construction--can become a solipsistic construction of the all-winning self.

Confronting this impasse, the only way to political agency is small-group voluntarism. For Kroker and Weinstein, this results in the complacent lament for the rise of a "virtual class" which bases its power on the violent aspects of the dematerialization of bodies, productions, and territorial boundaries. For "Hakim Bey" (pseudonym of Peter L. Wilson) the way out is an update of traditional New Left and Situationist praise for the potential of the small interstitial community as eversive "islands" in the "Network" of domination; his "temporary autonomous zone" never appears inhabited by anyone who is not a purely existential dissenter, never by concrete socio-historical subjects.

On the other hand, the North American virtual theorists and their reappropriations of French postmoderns appear motivated by what we could call, with Carolyn Porter (3 ff.), "American ahistoricism." More precisely, virtual theory continues the New Critical tradition of estheticizing dematerialization that, among canonic critics, culminates in Charles Feidelson's *Symbolism and American Literature* and Richard Poirier's *A World Elsewhere*. For Feidelson, there is a "symbolist" aesthetic sphere that best expresses the inherent quality of US culture: ineffability, untranslatability, and a-sociality give rise to a dialogue between a disembodied spirit and a metaphysical world (cf. Reising 173-87). For both Feidelson and Poirier, Emerson's eyeball is central. In Poirier, US exceptionalism is reflected in a distinctive aesthetic, which sees the artwork as "an extension and an expansion of the self, an act by which the self possesses an environment" (18). Thus, Poirier's work is predicated

on the assumption that "through language, it is possible to create environments radically different from those supported by economic, political, and social systems" (16), as well as by "social dialogue" with others (151). In his opposition between an "environment of nakedness" and "society and its fabrication" (30), history is wholly rejected (Reising 187-99) and freedom is predicated on the privatization of space.

For both of them, at issue is a formulation of Americanness in terms coherent with Modernist tenets. In McCaffery's article (in Elliott's *Columbia Literary History of the United States*) SF is praised as the literature which expresses "the feel of life today" ("Fictions" 1162). Having belittled the generic quality of SF, McCaffery's goal is to reconstruct the nation's literary consensus. Postmodern SF and cyberpunk, thus, become "our best contemporary writers," thanks to their recuperation of a poetics of "self-referentiality" and prove that in the US "those who want to practice their imaginative and linguistic powers can still create the text of their own realities" (1177), recreating in cyberspace the solipsist ideal of the Emersonian tradition.

The most thoughtful version among the narratives of cyberspace as inexhaustible frontier is the liberal attempt of Rheingold's *The Virtual Community*. For him, on-line "homesteading" stages a last resort for the hopes of American democracy. The space of freedom does exist, in the small Bulletin Boards which seem to have revitalized the eighteenth-century ideal of the public sphere. This new public space must fight the continual threats of a privatized Internet, of telematic social control, and of a constituency of educated users which is far from unlimited. Rheingold, though, does not argue how strongly hopes and threats are both tributaries to the same hegemonic structure. Internet frontier is both challenged and reasserted in its role as

metaphor for American destiny. Habermas's dream and Foucault's nightmare (Rheingold's references) are held together by the national myth.

### 3. Enclosures

In order to be recuperated and reclaimed, the unbounded field of the frontier must first have been lost and betrayed. I propose that the first important intertext on virtual space in SF can be interpreted precisely in terms of betrayal. Starting from the 1950s, the sea, the urban setting, and the wilderness become the metaphor of a world which, through mass society and technology, seems to have forgotten its legacy of expansion. In these apocalyptic parables of technological entrapment, SF works as a conscious countering of the mainstream images of mass society triumphant, and produces jeremiads reasserting the lost values of an ever-hegemonic Americanness.

In Ray Bradbury's "The Veldt" (1950), the embrace with the technological space manages to crush into a trap with no way out both the haven of the natural wilderness and that of family values. A synecdoche and an analogue model of a massified, heartless world, the novum of the story is the artificial nursery, a programmable environment which produces geographical and fictional playgrounds, and which turns into a deadly snare. The political agenda of the story is clear from the onset:

They walked down the hall of their soundproofed, Happylife Home, which had cost them thirty thousand dollars installed, this house which clothed and fed and rocked them to sleep and played and sang and was good to them. Their approach sensitized a switch somewhere and the nursery light flicked on when they came within ten feet of it. Similarly,

behind them. lights went on and off as they left them behind. with a soft automaticity. (4)

The nursery as microcosm for the house, the house as microcosm for modernity--the unifying pattern, for Bradbury, is a forfeiting of independence to technological "automaticity" and padded, "soft" affluence. The automated house has metaphorically "left them behind," and they have given up their authoritative role as parents. The mother says:

The house is wife and mother now and nursemaid. Can I compete with an African veldt? Can I give a bath and scrub the children as efficiently or quickly as the automatic scrub can? And it isn't just me. It's you. . . .

You're beginning to feel unnecessary too. (7)

A crisis of authority is occurring: "Who was it that said, 'Children are carpets, they should be stepped on occasionally'? We've never lifted a hand. . . . They're spoiled and we're spoiled" (12). Spoiling and being spoiled are two sides of the same levelling coin; this is both a cautionary tale about the dangers of technological conformism and a reactionary parable about the dangers of mass democracy. The environment is described in terms of transparency: it works thanks to a "mental tape film behind *glass* screens" (6), projected on "walls" which, when switched on, "recede into *crystalline* distance" (4; my emphases). But in this wilderness, the "receding" is not the way toward the frontier's liberal and liberating openness, but rather toward capturing "Africa in your parlor" (6). In such a society, limits are ineffectual and freedom is a perversion: "'We thought we were free to play as we wished.' 'You are, within reasonable bounds'" (13). On the one hand, authoritative reason, spoiled by "comforts" (16), can no longer impose bounds, and believes it can safely do so with

African naturalness (we never know anything specific about this unpeopled setting), in a hubris of sorts. As in a Dantesque *contrappasso*, when threatened with disactivation of the nursery, the children manage somehow to turn the habitat into something "real" (14), and trap the parents into the virtual veldt, as food for the wild animals.

From an opposite ideological position, Pohl's "The Tunnel Under the World" (1954) revolves around the same rhetorical strategy. In this apologue on the hidden persuasion of advertising, we find again the presence of limits as absolute blockage of agency. The story of the man stored into computer memory and made to live an endless life as a preview test for advertising campaigns is a Swiftian parable about the capitalist takeover of individual space and time. Not only is the protagonist's consciousness trapped in the technological habitat, but he also has to relive over and over again the same day, and the initial sentence of the story can be repeated numerous times: "On the morning of June 15th, Guy Burkhardt woke up screaming out of a dream" (8, 13, 35). In this story, the discovery of limits is the discovery of powerlessness, and the protagonist's discontent leads him into a topography of closures. When Burkhardt starts his inquiry, he escapes the time loop by hiding "in a cramped position huddled under the hull of the boat in his basement" (18); later, his pursuit of freedom leads him to "a tunnel, metal-walled, dimly lit" (22). On the other hand, the sinister automated "plant" in which he believes to be working is described in its "endless, ceaseless busyness." In this hellish setting, "the presence of the dead" dominates: "what were the automatons . . . if not corpses?" Here, "thousand copies" of any person can be made, with "no human limitations at all" (25). Eventually, he reaches the end of his "ersatz city":

He was standing on a ledge of smooth, finished metal. Not a dozen yards from his feet, the ledge dropped sharply away; he hardly dared approach the brink, but even from where he stood he could see no bottom to the chasm before him. And the gulf extended out of sight into the glare on either side of him. (34)

This final, unsurpassable limit is for him the ultimate limit of annihilation. as he is grasped by a Melvillian or Poesque "whiteness, five-fingered whiteness." to realize he is "living in a town built on a table top," and he is sent back to relive "one June 15th after another" (35).

Thus, virtual space emerges in SF as the artificial world of absolute denial of self-determination. Raymond Jones's *The Cybernetic Brains* is the most direct attack on the cybernetic plug-in system for disembodied brains as metaphor for "the Welfare State" (102), as "a kind of centralized nannyism in which citizens are infantilized into a dependence on the state" (Seed 271); the same can be said for Hjorstberg's *Gray Matters*; in both, though, there is an exception who reasserts the primacy of the male independent individual.

With more sophistication, Daniel Galouye's *Simulacron-3* (1964) builds a three-tier system of virtual fictional worlds. Here, the protagonist is at the same time the inventor of and a puppet in a "total environment simulator" which electronically reconstructs his whole world. Faced with inexplicable events, his detection attempts leave him with a distressing alternative:

There were only two possible explanations that would cover all the incongruous circumstances. One: Some vast, malevolent agency of a capacity both fierce and unguessable was pursuing an unfathomable

course. Two: nothing at all of an extraordinary nature had occurred--  
except in my mind. (43)

When he eventually realizes his situation, this is not simply a liberation from a false consciousness imposed from the outside, "the revelation of the illusion" (Eizykman 197) that discloses the reality behind the veil of ideological simulation. Rather, the novel borders on the *Borgesian* (Puschmann-Nalenz 85-87) in that it metafictionally reconciles the oppressive and the solipsistic alternative. In Galouye the "real reality" of "the material world" (74) is at the same time the result of a malevolent agency *and* a fiction of the protagonist's imagination. The "Operator" who maneuvers the plot is in fact the real-life double of the "analog" who is the first-person narrator of the novel: the agnition is the sight of his "reflection. Feature for feature, it was I--as I had always been" (151). The protagonist eventually manages to raise himself one step up by his own bootstraps and trades places with his double.<sup>9</sup> The limit of the open world can be crossed only when it is formulated in terms of the self. After the personality-exchange, though, the actual status of a "real" world in which such an exchange is possible remains shaken: above all, this solution allows Galouye to stage a world in which the relation between the self and reality becomes *at the same time* one of absolute self-determination and of absolute over-determination. No third solution appears possible.

In a logical continuation of this intertext, Roger Zelazny's *The Dream Master* (1966), the male protagonist is forced to give up his dream of virtual omnipotence when challenged with the will of another--a woman. In fact, the first important role for a woman in these novels is a lethal one. Here, a psychologist or "Shaper," operates through a computerized simulator called a "ro-womb," which allows him to enact and interact with his patient's fantasies. These fantasies might be "little worlds all their

own." with the Shaper playing "God" (82). In the virtual womb, there can only be absolute control, one way or the other: the Shaper is trapped in one of the fantasies he had tried to manipulate, that of a colleague of his who places him in the powerless armor of a Tristan pursuing an unattainable Isolde. In the final scene (180-82), his own reaching of the border of madness is stressed in the fantasy of the couple in a ship approaching the port, turning their backs to the open sea, and the opening of what for him would have been a human relationship (one he could wholly control and "shape").

If these are the works more clearly connected with the mood of nostalgic humanism, the simulated-trap intertext continues into the 1970s and after. The turning point is the Disney film production, *Tron*; with reference to Brian Daley's novelization (1982), some points can be made here. If the film has received a high praise for the visual presentation of the simulated space (Bukatman, *Identity* 215-27), this praise has been nonetheless articulated along lines that don't match the novelty of the technology: *Tron*, writes Bukatman, "involves a further penetration of the terminal frontier" (216).<sup>10</sup> In the novel, the liberal ideal of the frontier is reconstructed in the virtual space, and the role of the self-reliant individual is restored, even within the corporate structure. The opening sentence stresses relativity, and the superiority of this-worldly ontology: "That Other World is vast too; to its inhabitants, their System is limitless" (7). In fact, limitlessness is an illusion for the people in cyberspace too, as we see them acting in videogames in a "Game Grid" that, with the "soaring walls that enclosed it," appears to be like a prison (8); and the next scene is set precisely in a prison "cell" with a "transparent" ceiling and in which the "shapes and planes of the walls saw to it that a prisoner would always be aware of his imprisonment" (13). In the plot, the unruly hacker with "an irresistible confidence in himself" (18) fights

victoriously the evil scheming of the corporate executive in charge of the "Master Control Program"--significantly named Dillinger--reaching eventually the top of the corporate ladder, "concluding a major multinational agreement" for the company. In the ending, with the "material" individualist triumphantly portrayed coming "down from the blue sky" in a helicopter, the openness of cyberspace is a fact no longer in dispute:

High over the System soared the Solar Sailer, cruising above the glittering beauty of the radiant Domains and the phosphorescent tides of the Game Sea.

Tron stood on the bridge with the arm around Yori . . . as the Bit shot past them, . . . zipping along next to the graceful Sailer, over a System ablaze, a free System. (173)

The notion of cyberspace as visual creation has its literary counterpart at first in terms of linguistic experimentation. Here, verbal inventiveness itself is the main building block for the evocation of the separate space in which the laws of the empirical world and of society are apparently suspended. This "paraspaces" (Delany, *Interviews* 168 ff.; Bukatman, *Identity* 157 ff.) was in SF occasionally evoked in the outer space of many fabulous explorations, and that of hallucination (as in the synaesthetic experience of Bester's *The Stars My Destination*). But with virtuality SF adopts it as a crucial conceit, with a central concern on its separateness. An important precursor in this direction is John Sladek's *The Muller-Fokker Effect* (1970), where the story of the writer accidentally killed, whose memory is experimentally stored in a data bank, becomes the story of an artist trying to assert his voice in a literal void. Here, the computer space stands for a military-scientific complex moved by profit and

by a hatred for democracy and humanism--satirically emphasized by lists of "serious" books such as "*Daisy James* by Henry Miller" and "*Austen Park* by Jayne Mansfield" (149). In the virtual trap, the only possible movement must come from the individual mind, and the formal objective correlative is the stream of consciousness:

So buried alone alive there it is that's life that's life . . . one of life's little  
jokes laff along. . . well now tell me mr bones I never seed such a john  
buryman routine at dusk or was it dawn I must look it up look up  
I must be stuck here stuck here or something stuck (43-44)

This "cartesian process" is fraught with self-ironic doubts: "'Surrealism?' he whimpered. 'I have given up my whole life for this cheap surrealism?'" (72). Thus, the story of the disembodied mind striving to write itself into being reasserts once again the role of individual sovereignty, while at the same time denouncing the latter's fragility. The Cartesian *cogito* is but a wish ("I think, therefore I ought to be"; 87), and Hamlet's doubts pose no alternatives: "TO BE OR TO BE, THAT IS THE QUEST"; 210. The eventual regaining of a physical body--the chance for the actual construction of a narrative plot--shifts the stress from sovereign independence toward the interdependent fragility of relations, and will be a major disappointment.

A similar suspicion of textual materiality dominates a tale of computer entrapment in Skal's *Scavengers* (1980). Here, too, experiments on chemical and electronic brain-link aimed at "shaking the fence," at "transcend[ing] the identity barrier," leave the individual mind "sublimated," that is, trapped, in an uncontrollable fantasy world (30). From the individual point of view (again expressed through streams of consciousness) this is full dispossession of the self (*Give me back me*: 78), repeatedly articulated in terms of a vision of collapsed authority: "*The image of a*

*headless body*" (54: 192).<sup>11</sup> The conflict in the story thus is articulated in a sharp debate between interpretations about the legitimate kind of barrier-breaking: on the one hand, mind-link ("brainstorming") as transcendence ("Vehicle to a higher plane. Electronic apotheosis": 82); on the other, collective art as predatory will to power of the dominant individual:

*"Church of the Extended Mind, is that what it's called? It's such a powerful metaphor. It's--"*

*"Metaphor? It's murder!"*

*"... I need my work and I need my audience. A public audience. As wide and open as possible. No barriers. That's why I'm into video now: it's the only form that makes sense of the world. What comes after video I don't know. Brainstorming. Cannibalism--" (99-100)*

The metaphorical constellation of immateriality, transparency, and boundlessness seems to have perverted its function. Mutual visibility is mutual panopticism ("We are all voyeurs under the skin"), immateriality provides only ever-frustrating precariousness which also involves the space of human relations: "We live on air. The invisible element. We require those things we cannot see. I must think of Tracy as a window, something invisible or transparent [with a m]ysterious, tidal influence. . . . In the sea of humanity she is a whirlpool" (104).

Again, solipsism is the compulsory outcome of virtual space: "Sartre was right. Hell is other people" (144); specularly, the only remaining relation with embodiment is a Cartesian, proprietarian one: "*trapped in a fleshy cesspool* [while someone is] *wearing my clothes wearing my mind* (145). Here, the only possible opening can lie in imagining a space unmarked by discourse--whether that of others or

of the self: "I begin at the point where my editorial markings end. Virgin territory" (150).

Even more explicitly, virtual space as the trap of narration is the crux in John Crowley's *Engine Summer* (1979), and in James P. Kelly and John Kessel's *Freedom Beach* (1985). Both novels are self-conscious critiques of the notion of story-telling as timeless, unhistorical activity disengaged from social agency, and deny the possibility of an alternative to the futility of the self-contained, self-reflexive world elsewhere. In Crowley, we have the traditional modality of SF's self-awareness, which Jameson has called a strategy of "generic discontinuity" ("Genre"): the initial narrative of the storyteller recounting his biography as a seeming future Native American called "Rush that Speaks," living in a post-global-disaster world, becomes the story of a simulacrum used by a superior agency in order to experience vicariously the vicissitudes of his life. Thus, the quest for self-discovery of Rush, who belongs to the circle of the "truthful Speakers of Little Belaire," enacts the betrayal of both naturalness and immateriality. The pun of the title reveals the "engine" behind the "Indian" setting of the virtual wilderness. The immateriality of the powerful "Angels" (with their cities floating in the air), of unattainable "Sainthood," and of the truthfulness of the oral narrative voice is revealed as the dispossessing action of a distant agency who can record and store people into memory devices. Rush's search for a narrative "path" to truthful knowledge (137) brings about no liberation. Experience can only exist in an arrested time loop and in a space of powerlessness: as Christie writes (193-95), the appropriate genre for this "postmodern" metanarrative is tragedy, as one of Crowley's characters suggests to Rush: "Tragedy, it's an ancient word; it meant a description of a terrible thing that had happened to someone . . . It was like truthful speaking, because

it showed we share the same nature. a nature we can't change and so cease to suffer" (105).

Similarly, Kelly and Kessel's self-appointed "humanist" approach to virtuality presents the simulacral space of a dream therapy by amnesiac artists who seem to be atoning for unknown faults. In a world in which the protagonist meets Aristophanes, Groucho Marx, the Bronte sisters, and Raymond Chandler, the redemptive promise of the titular "Freedom Beach" environment emerges as a space of frustration in which no counter-agency is possible, with the possible exception of the autobiographical book we are reading. But even this effort can only hope to be an addition to the number of the "organic Bound Books," the artificial intelligences that store the world's masterpieces. In Kelly and Kessel, as well as in all of this intertext, the freedom of the sea of knowledge, however immaterial, must have bounds--must be bound--hence it loses any hope of effectiveness.<sup>12</sup> In the same vein, James Morrow's 1984 satire in the culture industry is entitled *The Continent of Lies*: the commodification and degradation of discourse in the virtual "dreambeans" is also a betrayal and *containment* of a promise of boundlessness.

In the world of self-maintaining simulation, the plot of literal travel in the boundlessness of outer space paradoxically becomes an encumbrance. Almost no novel of any interest presents virtual environments in space exploration stories. What these tales seem to argue is the impossibility of human relations in a world which is doubly connoted in terms of immateriality and boundlessness. In Pohl's *Beyond the Blue Event Horizon* (1980), on the verge of the unending "collapse" of a black hole we encounter the computerized constructs who live without awareness of the external world. In Greg-Bear's *Eon* (1985) the apparently enormous simulated environments in

the heart of an alien-built artificial asteroid turns out to be a gigantic encyclopedia: memory at its most static. In David Gerrold's *The Space Skimmer* (1973), the point is that the utopian interconnection of a motley crew of people with different territorial, class, and gender backgrounds can be sustained only briefly, and at the cost of the life of the catalizing "empath."<sup>13</sup>

Finally, in Spinrad's *The Void Captain's Tale* (1983) the simulated space appears to be no more than a survival strategy in the face of the physical and psychological horror of the interstellar "void." In "an unreal universe of . . . eye-killing transvisibility" (30), spaceships must be "designed to concentrate consciousness on the world inside, and to avoid excessive true awareness of the absolute reality without" (33). The conflict is not between narrative agents but between the universal absolutes of space and the bounded needs of persons, solved only with the reconfiguration of the latter in terms of the former: all is fiction, in other words. AT issue is the "quite literally immeasurable," "both timeless and eternal . . . moment" as well as the "ineffableness" of space "Jumps" (9-10). Against frightening openness, the various role-play simulations can only provide a precarious shelter, always at risk of collapse in moments of crisis:

Now the full metallic brilliance and icy black emptiness of the naked void itself howled in upon this ersatz garden, upon we poor ostriches hiding our heads in the sands of illusion from the full and terrible perception of that infinite night through which the shadow world of the ship presumed to pass. (50)

The only other response is also a form of retreat, the psychological one of the Pilots. "[t]ypically anorexic to begin with" (10), who "are as divorced from the sphere of

human desire as it is possible for a member of our species to become" (8). The narrator, as any Captain, has therefore "the illusion of total command," but in this case the Pilot does not seem bent on self-denial:

once my Pilot had acquired a name in my consciousness, a name with tales attached to it--in short, humanity and a personality--I could no longer entirely blind myself to the fact that I too was in a sense a protoplasmic module in a complex of automatic machineries, a subjectivity cyborged to the objective mechanism of the ship. (32)

In a novel whose overall formal device is the narrator's interior monologue, and in which the ostensibly polyphonic future language is in fact standard English with a few words in other languages, the pilot's opposition to the role available to her are in fact couched in the novel's standard terms of detachment, fluidity, and absolute freedom: "We swim in deep waters, liebchen. . . . Con su permiso, we go deeper still. . . . Set me free, liebe Genro, set me free!" (180-81). Specularly, in preparing for the final act of dissidence against authority and custom, her beloved Captain assumes the position of Melville's epitome of monologic authority: "That I was irrevocably in command had become axiomatic. Like Ahab, I had made myself an object of fearful mystery whose very darkness enhanced his charisma, a figment of inevitable destiny" (205).

*The Void Captain's Tale* is a novel about the attempt to find a way to individual mastery over the "untimebound" nature of physical (interstellar navigation), mental (the Jump), and simulated space. With a nod both to Emerson and to the SF of Bester's *The Stars My Destination* and *Star Trek*, it is the mythology about those "Who Have Gone Before," that is, who have Jumped without a set destination, that provides this possibility. Again, the point is abandonment of material ties:

We ourselves have *always* had the means for all to Go Before. . . . We but hid this from ourselves with our guidance machinery, anchoring ourselves to maya by act of twisted will. All of us can Jump freely into the Great and Only--it but requires the courage of the spirit to be willing to Jump Blind! (226)

The paradigm is Emersonian: self-assertion and all-empowering immersion into a pantheistic universe through self-denial:

So . . . my consciousness did not translate into another timebound matrix at some remove measurable in space and time: rather did I abruptly gain awareness of "myself" as a mutating, unfolding standing wave pattern of spirit moving through the mutating, unfolding mass-energy matrix in which it arose. Which is to say my consciousness diffused down my lifeline via the annihilation of the illusion of sequential time, and I not only "experienced" but became the total spacetime pattern "perceiving itself" from outside. (242)

As in the story of Ahab, this is an act of hubris, though, and comes with a price: the Blind Jump is successful, but the Pilot woman dies. If solipsistic radical individualism is the only answer, then no "other" needs apply: "We were that which existed, the One and the All, Great because we were everything, and Lonely because there is no other" (244). He remains in his unchallenged position of command, facing the Sisyphean task to bring the ship to an inhabited area, with the only hope that a quick end might "leav[e] none to complete what has been no moral tale" (250). The whole enterprise is a failure: the science-fictional Ahab is condemned to tell his own tale, a tale of

expansive boundlessness destined to be crystallized into a message in the bottle or its virtual equivalent: a "word crystal" (2).

As Bukatman writes, this is also an "allegory of reading" SF (*Identity* 179), as ultimately pointless and powerless activity. This is true, at least in the sense that Spinrad's novel, the story of a character called "Genro" in a microcosm that has among its least conspicuous subordinates a man called "Hiro," is a meditation on notions of narrativity such as "genre" and "hero." Thus, Spinrad's tale is the ironically self-defeating critique of one of SF's grand narratives, and of the "apocalyptic" generations' inability to imagine any alternatives to heroics for the genre.

#### **4. The Re-opened Frontier of Cyberpunk**

With cyberpunk, the frontier becomes both feasible and fashionable. I shall start with a few preliminary reflections on the virtual space of cyberpunk. The crucial point is that in the SF tales which most enthusiastically and uncritically celebrate it, cyberspace is not so much defined, described or experienced as it is lyrically evoked as necessary, desirable or missing. The dominant mood is nostalgia for the expansive thrust of the frontier: however dissenting the cyberspace operator might be, he/she is striving to recover this thrust within hypertechnological modernity, and the rhetoric of Americanist nationalism is overwhelming. If cyberspace frontier is as a rule absent or downplayed as sustained metaphor, what these tales actually celebrate is the world that makes it possible. The aim of the virtual frontier--as that of the territorial one--is a rhetorical legitimation of the expansive thrust of *laissez-faire* "freedom." The euphoric tones address directly, in terms of technological determinism, a hardly science-

fictional political economy of free market. In reducing the role of the SF novum, these works reveal both their formal limitations as SF and their ideological agendas.

For example, in Shirley's *Eclipse Corona*--as we have seen in the eighth section of Chapter 3, a traditional thriller about cyborg macho "resistance"--only a few glimpses are given about the cybernetic connection which allows the "pack" of protagonists to act together:

another realm through a break in the psychic clouds: the Plateau, the whispering plane of brain chips linked to forbidden frequencies, an electronic haven for doing deals unseen by cops . . . a place roamed by the wolves of wetware. (33)

Against panopticism, only the predatory Social-Darwinism of wild wolves appears to be applicable.

The most important among the fictional hagiographers of the virtual frontier are Bruce Sterling and Neal Stephenson. Sterling's description of the "Net" in his *Islands in the Net* (1988) fuses together Samuel Morse, Toffler, and the frontier in what--pace his own complacent references to a multinational called "Rhizome"--is a monolithic whole, in which all memories of actual agents of production have vanished:

Every year of her life, Laura thought, the Net had been growing more expansive and seamless. Computers did it. Computers melted other machines, fusing them together. Television--telephone--telex. Tape recorder--VCR--laser disk. Broadcast tower linked to microwave dish linked to satellite. Phone lines, cable TV, fiber-optic cords hissing out

words and pictures in torrents of pure light. All netted together in a web over the world, a global nervous system, an octopus of data. (3)

In Stephenson's *Snow Crash* (1992) the cyberspace of the "Metaverse" is visualized as an available vacant space--as a locus of unbounded physical freedom, and of an unbounded free market:

The sky and the ground are black, like a computer screen that hasn't had anything drawn into it yet; it is always nighttime in the Metaverse, and the Street is always garish and brilliant, like Las Vegas freed from constraints of physics and finance [and] everything seems to be a mile high. (26)

For the protagonist and hero, a hacker bearing the allegorical (and ironically crude) name of Hiro Protagonist, this is both an idyllic space of empowerment and a retreat where social and economic pressures (including those which have brought into being the Metaverse) can be left behind--an idyll under tutelage: "when you live in a shithole, there is always the Metaverse, and in the Metaverse, Hiro Protagonist is a warrior prince" (63).

Both novels stage this place of fulfillment in the context of a world which, on the other hand, appears in a state of stagnation. In Sterling's *Islands*, the protagonist mother says: "The world you grew up in--every year it's more smooth and controlled. Like you have thrown a net over the Fates" (32). And the problem, another character informs us, results from a collapse in the expansive ideology, which only can sustain the "freedom" of those who matter:

No more frontier in your America. . . . Today is all lawyers and bureaucrats and "social impact statements." . . . Huge prison walls of

paperwork to crush the life and hopes from modern pioneers. . . .  
Scientists and engineers, and architects . . . who do the world's true  
work--where is our freedom? Where, eh? (108)

In Stephenson's *Crash* this is even more clearly articulated in nationalist terms:  
the Metaverse matters because "America" is losing its economic primacy: where once  
was the reassurance of international hierarchy and division of labor, now there is  
global levelling:

This is America. People do whatever the fuck they feel like doing. you  
got a problem with that? And because they have guns and nobody can  
fucking stop them. As a result, this country has one of the worst  
economies in the world. When it gets down to it--talking trade balances  
here--once we've brain-drained all our technology into other countries,  
once things have evened out . . . once the Invisible Hand has taken all  
those historical inequities and smeared them out into a broad global  
layer of what a Pakistani brickmaker would consider to be prosperity--  
y'know what? There's only four things we do better than anyone else.

music

movies

microcode (software)

high-speed pizza delivery (2)

Self-imposed levelling is, in fact, the destiny of a country that has forfeited the  
ruggedness of frontier life for the comfort and the free lunches of suburbia:

They have fled from the true America, the America of atomic bombs,  
scalpings, hiphop, chaos theory, cement overshoes, drive-bys, cruise

missiles, Sherman's March, gridlock, motorcycle gangs, and bungee jumping. They have parallel-parked their bimbo boxes in identical computer-designed Burbclave street patterns and secreted themselves in symmetrical sheetrock shitholes . . . vast house farms in the loglo wilderness, a culture medium for a medium culture.

The only ones left in the city are street people. . . . immigrants, . . . [y]oung smart people like DaSid and Hiro, who take the risk of living in the city because they like stimulation and they know how to handle it. (191-92)

In the disadvantaged and the hip lie the nation's Social-Darwinist hopes. In fact, the Metaverse is liberating because it is a territory of no resistance, a void to be shaped or traversed according only to free will. This is precisely how America should be--and, for some, is: "America is wonderful because you can get everything on a drive-through basis" (226). This is also the basis of cyberspace: here, first of all, hierarchy is clear, and there is no mistaking an "avatar" (36), that is the virtual persona of a computer user, for a "daemon" (55), that is, a software without worldly equivalent, a servant in the virtual environment. Most importantly, in the Metaverse, no matter how overpopulated it might appear to some old-timers, freedom of movement is absolute: "There's no physics to worry about, no constraints on acceleration, no air resistance" (353).

In both novels, the rhetoric of the virtual frontier is predicated on an exaltation of liberal expansiveness *without* a role for democratic action. In Sterling's *Islands*, the basis is a philosophy of history and progress grounded on a deterministic preemption of politics:

This isn't politics. This is technology. It's not their power that threatens us, it's their imagination. Creativity comes from small groups. Small groups gave us the electric light, the automobile, the personal computer. Bureaucracies gave us the nuclear power plant, traffic jams, and network television. The last three have changed everything. The last three are memories. (47)

In the name of cynical reason, Sterling's world is predicated on an unabashed elitism: "There's all kind of bullshit--oh, sorry, I mean *democratic input*--pilin' up for us in Atlanta" (78). In the world of the Net, the individual can triumph *because* of humanity's inherent conformism and acceptance of coercive authority:

The weird, sick thing was that people *liked* it. . . . On some deep unconscious level people liked the political upheaval, the insecurity, the perverse tang of nuclear terror. The fear was an aphrodisiac, a chance to chuck the longterm view and live for the moment. Once it had *always* been like that. Now that she was living it, hearing people talk it, she knew. (379)

In this world, the ostensible ideology of the multinational corporations who have taken over the sovereignty powers of nation-states is that of "economic democra[cy]" (180) in the name of the rhetoric of free circulation: "We remove unnecessary barriers in the flow of the global Net. Barriers that happen to be governments" (179). For one of their propagandists, "profit" and alienation have come to an end, "replac[ing] 'labour,' the humiliating specter of 'forced production,' with a series of varied, playlike pastimes" (195). And yet, if democracy is ruled out, capitalism remains as the sole, unresisted and irresistible force; nothing is more revealing than the rigidity of the international

division of labour. The hacker protagonist--a woman who, throughout the plot, appears to be always "in need of rescue" (Nixon 223)--fights her way out of a conspiracy involving a nuclear weapons' threat based in Net-less Africa; from Africa no opposition is made to emerge in *Islands*, unless one counts a fairly racist Pan-Africanist rant (325). In fact, it is *on behalf* of the ruling corporations that she enters and helps to win the struggle against the Mali plot. For her, the locus of their alleged opposition, the titular "islands in the Net" from which hackers operate freely, are nothing but what we would call fiscal havens (261). The epitome of contemporary financial capitalism, in this updated jeremiad, becomes the standing ground for the dissenting individualist--whose own iconic symbols are the self-insulating mirrorshades (80, 113). As Suvin comments, the "hoariest cliches of US liberalism . . . celebrate their rebirth" in this novel ("Gibson" 48).

Stephenson's *Crash* features an enemy force, too, but here the strategy of self-perpetuation of the dominant system stages both forces as mutually confirming analogues. The titular "snow crash" is a computer virus that causes both system crash in the machine and brain death in the plugged-in operator. Snow crash results on the computer screen into "a gyrating blizzard" (42), another image of moving void. Its operating strategy, moreover, is again that of expansive self-replication, like the corporate "franchises" who have taken over US sovereignty--like capitalism itself, the text suggests: "The franchise and the virus work on the same principle: what thrives in one place will thrive in another. You just have to find a sufficiently virulent business plan" (190-91). In this postmodern world, fragmentation and plurality are both the threat to and the strength of the corporate space. The virus first manifests itself as a readout that says "Babel--Infocalypse" (69); for Stephenson's characters, it

immediately seems to stand for both a force of disruption and one of authority: "This Snow Crash thing--is it a virus, a drug, or a religion?" . . . "What's the difference?" (200). Throughout the novel, a paradigm is advanced unifying the virus, religions, cyberspace, and linguistic codes:

*A speech with magical force.* Nowadays, people don't believe in these kinds of things. Except in the Metaverse, where magic is possible. The Metaverse is a fictional structure made out of code. And code is just a form of speech--the form that computers understand. (211)

Religion, as an "organized, self-propagating entity" (229) used to provide, in antiquity, the "operating system of society" (257). In a Pynchonian vein, the characters set out for the quest of the history of this metaphysics and trace the blueprint of this virus in a Sumerian myth concerning a Chomskyan "deep structure" called "me" (395 ff.). Deep inside human nature the "me," a Cartesian *moi* of expansive individualism, used to sustain civilization in ancient times, and now may become again the procedural metaphor for the functioning of humanity. In the fluidity of the Metaverse, this metasystem finds its privileged setting, "the Raft," and in the fluidity of corporate finance it finds its ideal backup in the "watery fortress" of a franchise tycoon and fundamentalist preacher (316). Within this fictional universe, the protagonists compare themselves to one of the classic US images of the ideal agent in capitalist fluidity, *Moby-Dick's* "Harpooners" (345). Hiro's future will be, inevitably, that of private cop in the Metaverse--once again, the place of domination which has turned itself into a hegemony thanks to the catch-words of dissidence (457).<sup>15</sup>

Both Sterling and Stephenson's subsequent work continue along the same lines. Sterling's *Heavy Weather* (1994) and *Holy Fire* (1996) feature virtual operators

as wealthy existential dissidents who find their way to success: in *Fire* "virtuality" itself has become *the* symbol of nostalgia for a rugged past. In Stephenson's *The Diamond Age* (1995), the setting is a displaced Victorian world that, in the conjunction with today's high technology, seems to reactualize the colonialist ideal. Access to and control of virtual world-building technology has brought into being a new leisure class, hermetically separated from the rest of the world, nostalgically fancying itself as a new aristocracy in Walter Jon Williams's *Elegy for Angels and Dogs* (1990) and *Aristoi* (1992)--another explicit clue about the structure of feeling addressed in this SF. This self-confident oligarchy has literally managed to turn resistant materiality into manipulable and inexhaustible virtuality, "the real place becoming, through its illusory/electronic deeps and towers, an ever-flexible, ever-unfolding megadimensional dream" (*Aristoi* 9). A similar conjunction of nostalgia and expansiveness pervades a number of minor works within and around the cyberpunk label, from the frankly right-wing take of Alexander Beshler's *Rim* (1994) and Bruce Bethke's *Head Crash* (1995) to the ironic election to sainthood of a pope's virtual double in Norman Spinrad's *Deus X* (1992), and to the use of women protagonists as learners of the ways of the virtual world in Joseph Delaney and Marc Stiegler's *Valentina: Soul in Sapphire* (1984) and Loren McGregor's *The Net* (1987).<sup>16</sup>

The strength of this strategy is also evident in the dystopian works by Walter Jon Williams and Marc Laidlaw. The protagonists of Williams's trilogy, whether opposing mega-corporate structures or distant alien agencies, are still classic self-reliant individualists, riding their macho way in the fluid endlessness of cyberspace, highways, and outer space, and enjoying the prospect of omnipotence; as the hero of *Voice of the Whirlwind* (1987) says: "Being God is good. . . . I want it" (268). In

*Angel Station* (1989), not by chance, the task of Bossrider Ubu is to negotiate with and win to the "good" side a female-dominant alien species. While the protagonist of *Hardwired* (1986) is immediately defined, together with his associates, as the "last free Americans, on the last high road" (10): this is, as Nixon writes, the myth of "Reaganite cowboyism" (224), but his manifestation is that of the resistant warrior. Laidlaw's works, instead, focus on a nightmare of suburban conformism. In the satirical *Dad's Nuke* (1985), the teenage hero has the superior ability to step fully out of ideology, to draw with absolute clarity the line between virtual and empirical world. As Laidlaw himself comments, he alone knows that virtuality is a purely instrumental technology, "which one can take on and put off" ("Surreality" 651): his own power position is assured. In *Kalifornia* (1993) the crisis of the classic frontier land is center stage: the conformism of "Polynerves," the doubling of the human nervous system with a net of virtual "wires," appears to have turned the Californian dream into a dystopian nightmare. Here as well, the hero, with his eyes fixed on the mythical past of the 1990s, can step out of the system at will.

Finally, I wish to mention one author who has made of virtual space an overall concern in the only full actualization of the *liberal* US myth of the frontier, that is, who has managed to retain a notion of virtuality as public space: K. W. Jeter. In *The Glass Hammer* (1985) and in *Madlands* (1991) public space is central in the denunciation of its collapse.

In *Hammer* the story of the protagonist of the TV real-time narration of his own life becomes a nightmare of erased identity. If, as Hollinger writes, this is a novel in which "being is *defined* by its own simulation," in which the chain of visual representation denies the very idea of an autonomous "originary" self

("Deconstructions" 36-37), we should add that *Hammer* has a very definite stance of horrified recoil vis-a-vis this simulation. In the opening lines, the protagonist looks at himself in an endless *mise-en-abyme*: "Video within video. He watched the monitor screen, seeing himself there, watching. . . . He watched the screen, waiting for the images to form. Everything would be in the tapes, if we watched long enough" (7). Both in the metaphorical virtuality of the TV image and in the "sprinters" race in the desert (which the text presents as mirror version of the visual emptiness), we and the protagonist never lose track of the underlying agency of manipulation. The title's "glass hammer" is the knife a religious sect intends to use for the protagonist's ritual assassination; the image also stands for the oxymoronic force that is unifying the democratic myths of transparency (a concept the novel repeatedly insists on) and information with a practice of imposed violence.

In *Madlands* the explosion of a "reality bomb" has brought about the disease of "*n*-formation." As Cappio writes, the disease entails "the progressive loss, both psychological and somatic, of pattern discrimination" (10); on the one hand, it is a devastating form of cancer, on the other, it has resulted in the apparent emergence of a parallel world (the "Madlands") of Hollywood movies come to life. The protagonist, thus, must defeat both the malleability of bodies and that of ontologies in order to save his life and to thwart the exploitive scheme of those who are trying to employ the disease in order to make a profit out of sick "bodyshiffters." Yet this is not a reactionary/"apocalyptic" novel: a very narrow space of dialogue between the material and the virtual California is made possible. First, we have the strong mournful regret with which the novel, at least, treats the role of the "Joadoid" world--that is, of a group of virtual people molded on the Joad family of Steinbeck's and Ford's *The Grapes of*

*Wrath*: after actively collaborating in the demise of the villain, they have to die away with the Madlands: in virtual reality, there are still class asymmetries which remain as troubling presences in the hero's triumph (if only as sentimental elegy). Second, we have a hint to a nascent love story between the protagonist and a virtual character who manages to survive the collapse of the Madlands: no longer pure malleability or pure instrumentality and sex toy, she might become a full agent in this world.

Jeter's most affirmative work is *Farewell Horizontal* (1988). In the Beckettian world of "Cylinder," a construct of gigantic proportions and unknown origins, people live either "on the horizontal" (on the inside surface, in a modern technological society, with sharp class distinctions) or "on the vertical" (on the outer shell, in which only motorcycle gangs, riding on suspended cables, and loners live a precarious, freewheeling life). In this totally unnatural urbanized (cf. Sponsler "Ruins") environment, a complicated plot occurs, involving power struggles for world-wide domination, not without satirical elements (cf. Cappio). The protagonist, a free-lancing "graffex" artist who implants holographic "biofoil" on gang members, sees his life on the vertical not simply in terms of stimulation or hipness, but as a way out of class subordination on the horizontal:

In the expanded seconds just before the Mass warriors had pulled the table back over, he'd had a vision. A peek down the line into the future. *His* future. . . . In that dismal future line, once he was put back together--mostly--the tribe would've sold him off on a long-term, open-ended--meaning endless--labor contract to some horizontal production plant, way deep inside Cylinder's metal skin. (133)

His role is that of a hero who both accepts to be an agent in the public world of the horizontal--epitomized by his direct jacking into Cylinder's profit-mongering information net, "Ask & Receive"--and insists on his life of solitary exploration: "I'm going to hike all the way across some unknown wallscape--without even a rig to carry me--and encounter God knows what--there could be fuckin' everything out there. man--then cross over . . . all that just to make it home" (167).

The anarchist cyborg in the world of capitalist cyberspace, and in a physical world which is analogous to the fullness of modern capitalism, is made to take responsibility and disclose his discovery in the net. In this most optimistic of Jeter's novels, this causes a major disruption in the public opinion and in Cylinder's state of affairs. Still, for the loner who only had managed to communicate with the "angels"--gas-propelled creatures who float above the vertical, alien creatures in more than one sense, since at least one of them greets the hero in Spanish (80)--fulfillment can only have its site outside, in the unknown territory: "He stood on the wall. the old fear and nausea gone. He stood and gazed down, over the curved empty territory of the vertical world. . . . A long time to get there, but now he was home" (253).

Jeter's attempt to reconcile social action and individual freedom is ultimately solved in favor of the latter; as Huck Finn. Ny Axxter acts responsibly--"with no other choice" (180)--and then lights out for the territory of the frontier, ready to plug into the virtual net once more.

## NOTES

<sup>1</sup> I quote from the following essays: "The Significance of the Frontier in American History" (1893; 1-38); "Pioneer Ideals and the State University" (1910; 269-89); "The West and American Ideals" (290-310). For recent, important reassessment of Turner's work, cf. Bonazzi, Martin (198 ff.), and Portelli "Sky."

<sup>2</sup> Toffler has been substantial in Prigogine's popularization in the U.S. On Prigogine's theory, cf. Hayles *Chaos* (ch. 4 and passim).

<sup>3</sup> This myth has some European variants. At least quantitatively, a very important case is Italy: cf. Terranova, and the Scelsi anthology, which translates also essays from other European countries.

<sup>4</sup> Interestingly, the only sustained discussion of cybernetics as a continuation and a culmination of military science comes from De Landa, a non-WASP (Mexican-born) writer.

<sup>5</sup> Vail is also credited by Toffler as precursor to the information-based "third wave," for devising the logistics of standardized routing in postal delivery (*Wave 60*).

<sup>6</sup> The story can be told in more problematic and nuanced terms of class and gender, as at least some sociologists of labor and psychologists argue: cf. Garson, Hayes, Turkle, and Zuboff.

<sup>7</sup> Judging from Ben-Tov's book, "mythico-archetypal" readings (based on Jung, Lovelock, and Bly) might be on their way to a sad comeback in the literary criticism on cyberpunk.

<sup>8</sup> For more nuanced readings, cf. J. Connor, S. Jones, Kelley, and--from the non-Anglophone world--the work by visual arts theorists Maldonado and Quéau.

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<sup>9</sup> The narcissistic solution is avoided in the 1973 German TV-movie version by R. W. Fassbinder, *Welt am Draht*, in which the woman co-protagonist operates the switching of the personalities.

<sup>10</sup> Bukatman's enthusiasm for the achievement of the technological novelty is very much an uncritical enthusiasm for the rhetoric of business and production, stressing the irrelevance and obsolescence for the still existent human labor component: "The procedures remain powerfully labor-intensive, but computer power and time is the issue, not the man-hours (*sic*) of traditional animation processes" (*Identity* 216).

<sup>11</sup> On the image of the headless body as icon for challenged authority in US literature--starting with Washington Irving--cf. Portelli's *Text* (passim).

<sup>12</sup> As a variant to the metafictional tale, the stories in Robert Silverberg's shared-world series *Time Gate* (1989) feature virtual avatars of historical characters, caught in unlikely conversations for the amusement of fictional spectators and of readers. Characters include Pizarro, Socrates, Bakunin, Voltaire, and Queen Victoria. With all their wit, they are presented as incapable of agency within the virtual world: the only active force is Bakunin, who can detach himself from his personal background: "I float free in limitless space. . . . I am pure volition, bodiless will. I see ahead of me what look like gauze tapestries. . . . O believe they are a thousand pathways leading to unimaginable destinies" (100-01).

<sup>13</sup> Such a utopia is also briefly hinted at in Phyllis Gotlieb's Canadian SF juvenile *A Judgment of Dragons* (1980) and in Thomas N. Scortia's "Sea Change" (1956). Scortia's story ends with the promise of "a brotherhood of metal across the endless spaces. . . . Reaching for the stars" (18).

<sup>14</sup> To this group we could add Bova's *The Dueling Machine* (1978) and Simon Hawke's *Psychodrome* (1987), two reactionary SF thrillers about virtual space as gladiatorial arena: the superhuman qualities of the warrior-protagonists allow them to escape the trap of imposed fiction, and to achieve an ulterior heroic reputation for their triumph.

<sup>15</sup> Significantly, both Sterling and Stephenson feature important female (co)protagonists. The ideology of predatory masculinity needs to be relegitimated in terms of internalization of its rules by women. For a more rigid argument, cf. Stockton. An interesting precursor to this strategy is Lisa Tuttle and George Martin's *Windhaven* (1981), in which the woman cyborg "flyer" becomes the protagonist of an act of dissidence that reinforces the ruling hierarchy; the fluid setting--the real novum of the novel--is the atmosphere of the alien planet in which the ruling caste asserts itself by "flying."

<sup>16</sup> See also the novels by Maddox, Sawyer, and Vernor Vinge.

## Chapter 5

# CYBORGS, VIRTUAL SPACE, AND NORTH AMERICAN SCIENCE FICTION

### 1. Rewriting the Master Story

So far I have been telling the same story twice, from two slightly different angles. The instrumental cyborg and the virtual frontier are two facets of the same hegemonic attempt at reshaping the politics of the body and of space. This hegemonic politics, emerging from the professional-managerial elite of North American society, finds a culmination in the new socio-political economics of Post-Fordism--in which the computer and interface technologies have come to play a pivotal role in society and culture. This last chapter will retell the narrative from a third angle, focussing on the affirmative and critical potential of the SF genre, and of mass culture in general.

In the fictional texts discussed in the previous chapters, their strong derivativeness from the nonfiction coincides with the monologic manifest-destiny teleology. This teleology goes against the secular philosophy of history that informs SF (which I have tried to delineate in my theoretical section) and shapes much--quantitatively most--of the genre as an ideologically co-opted endeavor.

Thus, I wish to conclude with a chapter on works that try to counter this hegemonic pressure. The texts to be discussed here are as a rule both the most esthetically accomplished fictions and the most challenging attempts at criticism of the hegemonic narrative. In these works, the ideological intertext discussed so far is still an active presence--one which at this point will be discussed relatively briefly--but not as *the only* solution. From C. L. Moore's cyborg woman onwards, we are not dealing

with a thoroughly oppositional intertext--one could argue, following both Gramsci and Jameson, that such a thing is an idealistic impossibility--but rather with a series of articulate responses to, and rewritings of, the standard narrative. In fact, only with Haraway's "Cyborg Manifesto" do we have a theoretical framework for the alternative uses of cyborgs and virtual space. Instead, it is the subaltern public sphere of the SF subculture which comes first, with tales of cyborgization without pseudo-transcendence and of virtuality without colonizable emptiness. These stories move from the simplicity of morality-play to the complexity of parable, with a multiplicity of alternatives dialogically and conflictually interacting with each other. Both as critiques to monologic teleology and as esthetically significant examples of SF, they point towards "the possibility of something truly different coming about" (Suvin, *Positions* 70).

## **2. Sentimental Cyborgs in Women's Science Fiction**

The first intertext I wish to consider here emerges in the context of women's SF. Starting with Catherine Lucille Moore's 1944 short story, "No Woman Born," in a cluster of texts Anne McCaffrey, Alice Sheldon/James Tiptree, Jr., Joan Vinge, and Vonda McIntyre rework the image of the cyborg in direct antithesis to the mainstream interpretation of male scientists and male pulp writers, with a clear reference to the US tradition of sentimental fiction. Sentimentalism has been for a long time a negatively loaded term in critical practice; still, an alternative stance has recently engaged in a revisionary effort. As Dobson writes, the sentimental tradition in US women's writing, which has a semicanonical culmination in the mid-nineteenth century--but whose beginnings, I would add, can be traced back to the early republican era--is predicated

on a "self-in-relation," as opposed to the canonized tradition which views "the ultimate threat to individual existence" in the "contamination of the self by social bonds" (267). Literary sentimentalism manages to counter the limitations of its frequent political acquiescence with an "ethos of human connection and separation personally and politically powerful and sufficiently rich to complicate, and even rival, the long-acknowledged individualist trope of the American isolato" (279).

As we have seen, the discourse of popular science establishes the cyborg as a reinforcement and a literal fortification of the icon of the self-reliant isolato. Moore's "No Woman Born" is, first of all, an allegorical clash between the individualist and the sentimental approach, which opts for the latter as true basis for a mature, empowering self-reliance. Immateriality is here the initial metaphorical state of the protagonist, as "image" objectified in "television" stardom: "She had been the loveliest creature whose image ever moved along the airways" (63). Deirdre, dancer and actress almost killed in a fire, is remade into a "[p]erfect" cyborg thanks to "the secret collaboration of artists, sculptors, designers, scientists" (66). Thus, the story stages a dialogue between two approaches to the problem of the constructedness of identity: on the one hand, cyborgization as pure manipulation (whether positive or negative), and on the other, the possibility of autonomy beyond pure self-sufficiency. As the focal character of Deirdre's lover sees her new shape for the first time, she appears to oscillate between these essences. At first he hears "the voice of an automaton," with a "metallic . . . inflection": after a few moments, though, her laugh conveys an "old, familiar huskiness" (68). In other words, for the male characters (see also 69-70, 80-81) she can be either totally mechanized or endowed with an inner human quality beyond appearance.

Her most disturbing aspect is for them the "mask" which has replaced her face: in particular, her eyes are now "something translucent, like cloudy crystal" (70). For the male observer, she is no longer transparent; in fact, she is now too "enigmatic; you did not know if her gaze was on you searchingly, or wholly withdrawn" (71). As Gubar argues (22), Moore presents her metallic body as a metaphor of empowerment, an attempt to baffle male assumptions of penetrability: the text repeatedly insists on her cyborg body as an "armor" with a "a helmet with a visor of glass" (72: cf. also 74, 92, 96, 99-100, 104).

Initially Deirdre herself seems to accept the Cartesian/ergonomic model of domination of mind over matter ("this body . . . works entirely through the brain. Electromagnetic currents flowing along"; 75). From her viewpoint, though, identity needs not be fixed in one version of embodiment; it can change, and yet retain a degree of permanence: "So this is myself. . . . Metal--but me. And it grows more and more myself the longer I live in it" (78). Her empowerment does not reside in transcending the need for relations; on the contrary, the role of affect counterbalances the seeming absence of physical limitation.

It was the condition of mortality, in spite of her immortal body. She was not cut off from the rest of her race in the essence of her humanity, for though she wore a body of steel and they perishable flesh, yet she must perish too, and the same fears and faiths still united her to mortals and humans, though she wore the body of Oberon's inhuman knight.  
(79)

The opposite position, Deirdre realizes, is that of the scientist Meltzer, who directed the cyborgizing operations, and does feel omnipotent, "[r]ather like God." She goes

further, though: such a position for a human is not only untenable, but impossible: "lack[ing] a god's detached viewpoint," she says, he is getting "close to a breaking point" (82). For Meltzer, who has "designed" her body as "a prison for its mind" (99), cyborgization has robbed Deirdre both of an affective sphere and of personhood itself: "She's an abstraction now . . . withdrawn from all physical contacts" (87-89). Confronted with her successful return to dancing ("They--*did* like me": 100), he can only think of her as "too fragile" (98) to cope with the "mass hysteria" (96) of a Social-Darwinist world in which the only alternative to the armored isolato is utter powerlessness: "I've made you vulnerable, and given you no weapons to fight your enemies with. And the human race is your enemy. . . . They're going to hate you . . . because you're different--and helpless" (105).

In the final confrontation between Meltzer and Deirdre, he is on the verge of suicide. There is a conflict between two incompatible attitudes to the same predicament incarnated in her cyborg body. The scientist can only see things in dualistic and individualistic terms. The initial integrated triumph of his mind over manipulable female matter has turned for him into an apocalyptic entrapment of human will within inorganic form: "You've lost the senses of perception that kept you in touch with humanity" (107).

She, on the other hand, denies the validity of both options:

I'm not--well, subhuman. . . . I'm not a Frankenstein monster made out of dead flesh. I'm myself--alive. You didn't create my life, you only preserved it. I'm not a robot, with compulsions built into me that I have to obey. I'm free-willed and independent, and, Meltzer, I'm human. (109)

But her view of personal independence does not entail a dismissal of connections. First, she always refers to her power over and emotional bond with her "audiences" (81, 109); second, and most importantly, she gives a first full demonstration of the capabilities of her body by preventing, with superhuman speed, his suicide attempt: "Deirdre was neither normal nor human" (112). She uses her power to the full only when she must act in order to save someone else's life.

In her terms, the predicament of a conflict between inorganic power and organic limitation does exist, but it cannot be solved. On the one hand, "I *am* unhappy. . . . Humanity and I are far apart, and drawing farther. The gap will be hard to bridge. . . . I've found no limit yet to the strength I can put forth if I try" (114-15). On the other hand, she repeatedly says she is "not afraid of humanity" as the ultimate proof of the strength of her will: "I haven't lost contact with the human race. I never will, unless I want to. It's too easy... too easy" (116). But her predicament derives from the fact that disconnection of ties, separation from humanity, is in the story inevitable. Moore's stressing of the feminist side of Shelley's *Frankenstein* (Gubar 21) is also a stressing of its tragic aspect, namely, the creature's destiny of solitude. Meltzer's creation is "flawless," but he won't be able to "duplicate this body":

I think I was an accident. A sort of mutation halfway between flesh and metal. . . . From what I know now, I don't think a... a baroque like me could happen again. . . . What you did was kindle the fire for the Phoenix, in a way. And the Phoenix rises perfect from its own ashes. Do you remember why it had to reproduce itself that way? . . . It was because there was only one Phoenix. Only one in the whole world.

(117)

Cyborgization armors her will as will to connection ("That's why I am going back on the stage--to keep in touch with them while I can": 117-18), and at the same time provides Moore with a vehicle, rooted in the rhetoric of sentimentalism, for criticizing the dominant narrative, as voiced in the scientist, of individualist and gendered power: "I wish there could be other like me. I'm... I'm lonely. Meltzer" (118). Meltzer's narrative is empirically dominant after all, and Moore's character cannot escape its limits: "Then I am Frankenstein, after all.' 'Perhaps you are.' Deirdre said very softly. 'I don't know. Perhaps you are'." In this story, Moore refuses to give a final answer; if the official cyborgs of Bernal & Co. were incarnations of a teleology, Moore's Deirdre can criticize them at best only by leaving space for unforeseeable developments to come, and in the final paragraphs she can only repeat, "I wonder" (118). Her doubt recreates openendedness against the closures of the dominant teleologies.

As Dobson writes, literary sentimentalism has found a deaf ear in the liberal critical mainstream, which either leaves unacknowledged, or overtly attacks, the character's quests for affective connectedness. In Lefanu's feminist study, this leads to a curious double standard. On the one hand, Lefanu praises Moore's Deirdre for her feminist self-confidence, appreciatively insisting on her empowering detachment from heterosexual relations (which means, here, from all relations): "Deirdre no longer needs men."<sup>1</sup> On the other hand, she denounces with dismay the limits of the cyborg protagonist of McCaffrey's *The Ship Who Sang* (1969), "almost pathetically dependent on a man for a sense of her existence *per se*" (Lefanu 17). And yet these two tales about women and their transition from challenged organic bodies to powerful inorganic ones are remarkably similar.

"She was born a thing." McCaffrey's tale begins (1). And Helva, a handicapped child, becomes the "encapsulated 'brain'" of a spaceship, partnered with a male pilot or "brawn" (1-2). However limited the partnership is, with largely traditional gender roles, her vicissitudes as a "shell-person" are a critique of the male narrative of radical individualism. McCaffrey's story builds on sentimentalism (Brizzi 19-32) and creates a "cybernetic romance" in which "there is essentially no difference between a cyborg and a woman," and with her romantic, largely platonic, love affairs with the male brawns gives, at least to a degree, "the reassurance that human bonding will triumph" in the end (Hayles, "Cycle" 105-06). Still, her progress from organic thing to cybernetically feeling being is also a progress towards connection with others. On the one hand, this progress is not a smooth one, so that the major climax is the loss of her beloved first pilot: connection and isolation are not inscribed once and for all in the cyborg form, and must be negotiated in each episode. Furthermore, Helva's love affairs do retain a notion of embodiment: McCaffrey has her choose her first brawn precisely because of his willingness to acknowledge her existence *as a bodily entity*-- an attitude shared by her new lover at the end of the book, which is emphasized by a highly sexualized form of mental communion:

He directed his bow toward the central control pillar where Helva was.  
. . . Jennan, alone of the men, had addressed his remarks directly at her physical presence, regardless of the fact that he knew she could pick up his image wherever he was in the ship and regardless of the fact that her body was behind massive metal walls. (11)

McCaffrey's cyborg, moving from organic, helpless "thingness" to skilled interdependence, remains an important counter-narrative to the absolute individualism of the instrumental cyborg.<sup>2</sup>

The same applies to Joan Vinge's "The Tin Soldier" (1974). Here, cyborgization offers the protagonist a chance for connection in the face of obsolescence. In this story, cyborgs and "spacers" share the lot of "semiimmortality" (A. H. Jones 204), but Vinge's astronauts add to this a touch of racism: for spacers, cyborgs are "the next thing up from a corpse" (221). Spacers are a skilled, active labor-force, while cyborgs are, as a rule, damaged, worn-out laborers. This tale, too, takes on a tragic note: the romance between the spacer and the cyborg can take shape only when the woman, injured in an accident, becomes a cyborg as well. The romance among obsolete patchwork bodies entails the incompatibility between production and affect--this is the limit of Vinge's story. Nevertheless in "The Tin Soldier" cyborgization is not a fantasy of omnipotent transcendence but the vehicle for the need for connection in the face of worldbound constraints (with an explicit nod to Moore's story), with no foreordained future, whether for good or bad:

"And I *am* a whole woman, but they forbid me to into space again! . . . I didn't know what to do, I didn't know--If I should come. If you'd want a... ballerina who'd been in a fire. . . . Oh, my Maris, my wise love--love me, tie me to the earth."

He took her prosthetic hand, kissed the soft palm and fingers. *And make it well...* And knowing that it would never be easy, reached to dim the light. (278)

This intertext continues among writers more directly associated with a feminist perspective. McIntyre's *Superluminal* (1983) presents a cyborg woman as metaphor for connectedness--for both its necessity and its impossibility within the tale's state of socio-political affairs. The issue is foregrounded in the literal and metaphorical meaning of the opening sentence of the novel: "She gave up her heart quite willingly" (1). In McIntyre's world, biotechnology and romance determine each other: the protagonist has to undergo major transplants in order to withstand space travel, and chooses an unlikely love affair against all odds. In a world of infinite biological possibilities, where a woman can become a cyborg, and her lover, as a result of a virus, has developed psychic abilities that make him eligible for the biotechnological alterations that would turn him into a "diver," living in deep sea and communicating with cetaceans. Yet, the tale is at the same time a "tragic romance" (Wolfe, "Instrumentalities" 216-17) and a feminist "celebration of difference" (Wollmark 67-70). Around an apparently tolerant "Administration," benevolently intent on space colonization, McIntyre constructs a parable on the limits and the promises of absolute multiplicity. As in many of her other novels the complexity of romantic and soap-opera plots allows her to redefine the centrality of kinship and interpersonal ties (cf. Jameson "Genre"; Wollmark 56 ff.; D. Wood). *Superluminal*, as Wollmark writes, presents a complicated interplay of characters free from rigid gender roles; at the same time, the two protagonists' capabilities *does* keep them separate from each other and from the rest of humanity, against their will. In order to avoid a mutually life-threatening sexuality, their affair must eventually come to an end. For the woman, this ending can only be a defeat: "When the shuttle came she boarded it, to return to her own city and her own people, the pilots, to live apart with them and never tell their

secrets" (77). In the world of multiplicity, the problem of connection *across* difference, beyond mutually sealed-off micro-communities, remains open.<sup>3</sup>

A rather more cynical view is in Tiptree's "The Girl Who Was Plugged In" (1974). The cynicism of the tone, though, is both a critique of the sentimental intertext and a highlighting of the necessity of relation upon which the intertext is predicated. And in its metafictional side, the cynicism is both a critique of SF's future worlds and an emphasis on the necessity of a future in which not all is already teleologically pre-written. The story of the ugly girl conned by media executives into accepting to become the wired brain for an artificial beauty to be used in video events and advertising is, on one level, the impossible love story between her and an executive who is only attracted by her artificial self, with mutually self-destructive results. More important, the story is about the need for narratives involving people outside the circle of individualist heroics:

Listen, zombie. Believe me. What I could tell you--you with your silly hands leaking sweat on your growth-stock portfolio . . . you doubleknit dummy, how I'd love to show you something.

Look, dead daddy, I'd say. See for instance that rotten girl?

In the crowd over there, that one gaping at her gods. One rotten girl in the city of the future. (That's what I said.) Watch. (52)

The address to the reader foregrounds and challenges genre expectations:

But you're curious about the city? So ordinary, after all, in the  
FUTURE?

. . . But pass up the sci-fi stuff for now, like for instance the holovision technology that's put TV and radio in the museums. Or the worldwide

carrier bouncing down from satellites controlling communication and transport systems all over the globe. That was a spin-off from steroid mining. pass it by. We're watching that girl. (53)

Yet, the story is not about the survival of pure humanity against (or notwithstanding) technology. For Tiptree, the human and the technological are mutually constitutive, and the site of this convergence is precisely the body: "Now let's get one thing clear. P. Burke does not *feel* her brain is in the next room. she feels it's in that sweet little body" (57).

The addresses to the reader emphasize sight and observation (cf. Vallorani) both as ironic notations on the limits of SF's conventions ("You could write the script yourself now"; 62) and as instruments of domination in Tiptree's fictional world. If this is a world in which the boundaries between organic beings and technology are getting fuzzy, visual media technology--bordering on what we would now call virtual reality--is the tool of enforced normalcy and a metaphor of social stability: "Holocam total-environment shells are very expensive and electronically super-stable" (68). It is, nevertheless, in this world that P. Burke, raped as a child (63), regains a degree of awareness and control over her sexuality, qualities whose existence the Powers-That-Be are not even willing to acknowledge: "You see, Remotes don't love. They don't have real sex, the circuits designed that out from the start" (75).

Her vicarious empowerment through the "remote" body has a downside of vulnerability in her organic body, stored in a Heinleinesque "waldo cabinet room" (62), which no longer connotes absolute self-sufficiency: "P. Burke has so to speak her nervous system hanging out. Imagine somebody jerking a handful of your medulla--" (82). For Tiptree there are two forms of sentimentalism. One is open, and lies in P.

Burke's desire for affective fulfillment, for which she is willing to risk her safety and her identity; the other is self-reassuring, and lies in the executive's elegy for "the greatest cybersystem he has ever known and he never forgets" (84). In "Girl," this latter sentimentalism is eventually victorious, and the legitimacy of her strivings for affect is never in question.

The end of this section is also a fitting place for a few remarks on Kathy Acker's feminist-postmodernist SF novel *Empire of the Senseless* (1988). On the one hand, Acker's preoccupation is a critique of realist modes of representation, which she equates with death (cf. McGann 493-95). Set in a desolate, violent, and AIDS-ridden Paris, the collapse of the social bond finds its correlative in a multicultural world which has turned into multilinguistic cacophony: "Lack of meaning appeared as linguistic degradation" (17). In the words of characters that share the cynical attitude of Tiptree's narrator, the esthetic sphere is for Acker no longer a living force: "As a form of memory, beauty is a representation of what's past, over with, dead" (49). The most evident symptom of this is her overt homage and recycling of Gibson's *Neuromancer*, in which all science-fictional claims to constructing a coherent possible world are discarded, as critics such as McHale (*Constructing* 314 ff.) and de Zwaan have noted. Thus, Acker includes sentences sustained by no "absent paradigm" (Angenot), which render impossible a literal reading, such as "A pulsing red and black cursor crept through the outline of the doorway" (34), included as part of a description of an urban landscape. Still, the novel has a *pars construens* beside its *pars destruens*, and it lies in the love story of Abhor, "part robot, part Black" (3). Abhor, also a victim of child rape as Tiptree's P. Burke, is in fact trying to restore some innocence in her

trips abroad (which include an Algeria ravaged by civil war).<sup>4</sup> In other words, Acker is trying to reinject some sentimentalism into the cynicism of postmodernity. And as in Moore and the other women's cyborgs, Acker's *Abhor* constructs her sentimental sphere as an absent necessity. Paradoxically *Empire* ends on a slightly more hopeful note than all the other works in this section--a note that even restores a role for the sphere of esthetics and narrativity:

I stood there, there in the sunlight, and thought that I didn't as yet know what I wanted. I now fully knew what I didn't want and what and whom I hated. That was something.

And then I thought that, one day, maybe, there'd be a human society in a world which is beautiful, a society which wasn't just disgust. (227)

### 3. Philip Dick's Polyphonic Interfaces

If the specific concern of the women writers' cyborgs is the private sphere of interpersonal affective relations, I would argue that this concern, rooted in a similar dissatisfaction with absolutist teleologies, also moves the novels of Philip K. Dick, the main male figure among the SF writers who in the 1960s addressed the metaphors of the cyborg and virtual space.

In *Dr. Bloodmoney* (1965), during the climactic nuclear war scene, one character exclaims: "The impersonal has attacked us" (67). The rest of the novel describes the reconstruction of a post-bomb small-community life in California, with a focus precisely on personal relations. In my interpretation, Dick's use of the metaphors of bodily and topological interface is twofold. On the one hand, the cyborg and the simulated space are foregrounded as discourse of metaphysical transcendence, of a

philosophy of history and of domination grounded in notions of supra-historical essence. On the other, they are the signs of a world in which ethics and agency must be formulated from within the horizons drawn by the forces of domination. In the interplay among characters confronting these metaphors, the five novels by Dick that address them (*The Three Stigmata of Palmer Eldritch*, *Dr. Bloodmoney*, *Do Androids Dream of Electric Sheep?*, *Ubik*, and *A Maze of Death*) create, in Bakhtinian terms, a chronotope around which a polyphony of voices revolves. The complexity of Dick's writing has received a whole bookshelf of comments, and here will be discussed only with reference to the metaphors of cyborgs and virtual space. However, it is clear that, superseding unidirectional teleology, a multiplicity of attitudes and positions emerges *vis-à-vis* these metaphors, with different stances for different characters. In Dick the cyborg and virtual space are dialogized, not in a purely relativistic terms, but in such a way to reformulate ethical options.

If Dick's position is rightly that of one of the "great figures" in SF history, with a slowly growing reputation as significant figure outside the field, this position needs to be argued with critical care. In many of Dick's novels, the polyphony (the complexity and "thickness" of the possible world) is marred by a "loss of narrative control" (Suvin, *Positions* 130), most obviously apparent in the accumulation of plot complications. The loss of control starts with *Stigmata* and reaches a peak in the confused and incoherent world of *Maze*. Usually articulated, in a highly ironic tone, within a system of diegetic Chinese boxes, this accumulative procedure has been targeted for praise by postmodernist critics (cf. the survey in Csicsery-Ronay "Pilgrims"), who have in recent years tended to slight the element of political allegory present throughout his works. Furthermore, Dick's overall dystopian stance is at its

strongest in the articulation of the axiologically negative forces, while he is ultimately weak in the recourse to an irreducible and “authentic core” grounding the positive character’s “inner resistance” to alienation. This core is in fact “halfway between Rousseau and Marx” (Suvin, *Positions* 128), in that it oscillates, throughout Dick’s own opus and as a rule within each of his works, between historically determinable social positioning and an ineffable root of human nature. Dick’s limits (the horizons which determine his strengths and weaknesses) are those of the 1960s counterculture in the US, which he often criticizes from the inside and pushes to an extreme, in an unsolved predicament between the double rejection of the teleology of domination and the metaphysics of pre-social individualist authenticity, yet without the full-fledged presence of an alternative of affirmation. In this sense, the internal duplicity of the interface metaphors will allow a reading mostly focussed on the strengths, as an at least implicit foreshadowing of such an alternative.

The prosthetic being and the simulated environment in *The Three Stigmata of Palmer Eldritch* (1964) are metaphors for capitalism, analogues for a world in which the cycle of commodification and consumption has reached the point of full saturation, leaving no outside vantage point for judgment or action. On the one hand, Dick’s world of commodification constructs the Martian frontier as simulated community: the Barbie-like doll world of the Perky Pat Layouts in which, in conjunction with the hallucinogenic drug Can-D, Martian colonists can experience a vicariously satisfactory suburban life, denied in the “frontier” settlements. Indeed, there is no life on the frontier except for the one supplied by the Layouts: the settlers are neglecting the actual work in their “hovels” and only devote themselves to the simulated

environments (Ch. 3). In other words, this Martian frontier life is *literally* an ideological simulation, shaped and constructed by history and political economy. Yet some of the colonists believe that Layout life is "the miracle of translation--the near-sacred moment in which the artifacts of the layout no longer merely represented Earth but *became* Earth" (36). Can-D offers a promise of transcendence: when "we chew Can-D and leave our bodies, we die. And by dying we lose the weight of . . . sin. [Thus] we've left our corruptible bodies [and] put on immortality. . . . We ought to take advantage of the opportunity" (40, 42). Still, some dissatisfaction is growing: the concrete, phenomenal reality of history can be chosen over the false consciousness literalized in the doll-world of captive consumption. If the naturalness of the space frontier is questioned, life on a polluted Earth seems as well unable to sustain a deterministic teleology of technological salvation: "the great procession of nature clanked on, and towards what?" (11).

On the other hand, the villain of the novel is Palmer Eldritch, who embodies *at the same time* a self-sustaining financial capitalism which has no need for concrete consumption of its products (he sells "consumer goods" to uninhabited colonies) and of classic individualism ("too wild and dazzling a solo pro"). He wishes to go beyond all limits, so far not necessarily encountering success: "as always he had gone too far, schemed too much" (16). Yet, upon his return from a space trip, he seems to be able to carry out both his own ambitions and those of the worldwide system which is trying to sell his workings as ontological constructs: "God . . . promises eternal life. I can do better: *I can deliver it*" (79). His tool is an interplanetary drug called "Chew-Z." The drug, in fact, can create a simulated life without need for the material support of the layouts; moreover, what is simulated turns out to be Palmer Eldritch himself. The

"solipsistic quality" (85) of Chew-Z turns, ironically and tellingly, the user or "chooser" into a replica of Eldritch himself. Not only "Eldritch somehow controls each of the hallucinatory worlds," but "[t]he fantasy worlds that Chew-Z induces . . . are in Palmer Eldritch's head" (164). And this is a "one-way gate" with no way out (165). The most terrifying characteristic of the Chew-Z world is the transformation of the user into a double of Eldritch, a prosthetic being, with artificial right arm, teeth, and eyes. As in Emerson's expansionist self, Eldritch has made his body and his world into "extensions" (164) of himself, and is now narcissistically doing the same with everyone else's bodies and worlds. Eldritch can now "see (understand), grab (manipulate), and rend (ingest, consume) his victims better" (Suvin, *Positions* 122). Thus, in the world of *Stigmata* now, a character says, "Eldritch is everywhere. . . . It's an illusory world in which Eldritch holds the key position as god" (157).

Unlike the Can-D world, where there was, in principle, an escape from representation, now "[c]ause and effect work in only one direction, and change is real" (155). Rather than a metaphysical world, Chew-Z offers ultimately a world predicated on laws similar to the physical one of the empirical world. But in this parable--somewhat confusing the literal or "vehicle" level--the boundary between "reality" and simulation is permeable if not erased (cf. Suvin, *Positions* 122-25): people turn into the prosthetic being even when the effect of the drug is gone. Moreover, this world is felt by (some of) its users as "absolute reality. The essence beyond the mere appearance" (Dick, *Stigmata* 193). As Wingrove writes, Dick's characters must confront a "basic" noumenal world of "a formless void of perfect silence, perfect whiteness, awaiting divine intrusion" (27-28). In *Stigmata*, this is a hallucinatory "empty white expanse, a focused glare. . . . The light . . . that underlies the play of

phenomena which we call 'reality'" (96-97). One cannot drop out of such a world: "Part of you has become Palmer Eldritch, and part of him became you" (187). Here, the divine intrusion, the narrative of "*De Imitatione Christi*" (126) turned into an experience of violence, is that of the capitalist, *corporate* self whose expansive force stems from his "insubstantial" (144) pervasiveness. Against this force, other individuals are utterly vulnerable and powerless:

We have no mediating sacraments through which to protect ourselves; we can't compel it . . . to confine itself to specific elements such as bread and water or bread and wine. It is out in the open, ranging in every direction. It looks into our eyes; and it looks *out* from our eyes.  
(194)

As Kilgour says of Melville's Ahab, here--as in the case of *Ubik*'s villain Jory--a cannibalizing insatiability aimed at transcendent omnipotence fuses together Prometheus and Narcissus, in a "self who desires a total identification with others, achieved by swallowing them and reducing them to itself" (215). However, contrary to the classic dystopian stance, in *Stigmata* Palmer Eldritch's victims as well have room left for action and ethics; their destiny is not manifest. In this world, in the words of a character in one subplot dealing with an echoing attempt at transcendence through artificial evolution: "Always, in the middle level of the human, a man risked the sinking. And yet the possibility of ascent lay before him; any aspect or sequence of reality *could become either*, at any instant" (65).

In the opposition between a monologic or despotic force and an alternative of plural choices, *Stigmata* is a polyphonic novel (as some other of Dick's best novels).<sup>5</sup> Against the ostensible vocabulary of ontology, this is a non-teleological, hence a

secular and materialist, possible world. And the victims' very status as doubles and subordinates of the arch-capitalist is the precondition for their ability to oppose him, at least through endurance or escape.

The contact with Eldritch has permanently alienated the characters from any illusion of essential integrity or naturalness. Toward the end one of his former victims, a would-be space-frontier settler is attacked by a telepathic and deadly Martian "jackal":

"*Unclean*. . . . You're an unclean thing," it informed him dismally. . . .

"Look at--ugh!--your right arm, your hand. There's something intolerably wrong with you. How can you live with yourself? Can't you cleanse yourself some way?" (196)

Within the world of alienation, the only chance of an opening lies in discarding the illusion of an uncontaminated "absolute" or "natural" state. In this sense, this novel is the most constructively hopeful allegory among those discussed so far in this chapter. Against "the evil, negative trinity of alienation, blurred reality, and despair" which threatens to dominate the world (*Stigmata* 202), Dick's novels, as Fitting argues, point toward the need for a "*practical* solution . . . where the problem of reality is resolved pragmatically . . . through action" ("Reality" 223). This is both the strength and the limit of Dick's solution: Eldritch's principal antagonist is his principal corporate competitor, the official monopolist of the Layouts and an unofficial participant in the Can-D monopoly, who apparently wins without having to change his role in the economic system. Involvement in the alienation machine is necessary, but Dick seems unable to provide a solution which differentiates between "upper level" and "lower level" involvement (cf. Suvin, *Positions* 123), that is.

between complicit participation and social subordination in the socio-economic system. Among Eldritch's two main opponents, the little guy Meyerson can only come up with a personal, private solution, similar to Voltaire's *Candide*: "I'll live here. As a colonist. I'll work on my garden up top and whatever else they do. Build irrigation systems and like that" (186). Only the tycoon Leo Bulero is allowed a public role, exemplified in the "interoffice memo" released after the events and placed as epigraph to the novel:

I mean, after all: you have to consider we're only made out of dust. That's admittedly not much to go on and we shouldn't forget that. But even considering, I mean it's a sort of a bad beginning, we're not doing too bad. So I personally have faith that even in this lousy situation we're faced with we can make it. You get me? (5)

*Dr. Bloodmoney* as well is predicated on an allegorical shift from a word of production and destruction, of civilization and barbarism, based on material goods to an equally ambivalent one based on immaterial messages, from "the realm of things" to "the realm of language . . . with which we are all too familiar in this consumer and service era" (Jameson, "Armageddon" 41). As both Jameson and Suvin (*Positions* 117-18) argue, in *Bloodmoney* the conflict is articulated in a complex interplay of characters and narrative focal points. Under the rubric of the blurring of the boundaries between organic body and inorganic prostheses, both the old and the new system provide alternative forces of destruction and (re)construction.

The destructive forces are incarnated in the mad scientist Bluthgeld, who apparently has mentally triggered the nuclear explosions, and the phocomelic Hoppy

who has built his own prosthetic "phocomobile" and who wants to win everything and everyone over to himself. The constructive forces are incarnated in the orbiting DJ, the astronaut Dangerfield stranded in space, who wants to hold the world together from afar with his music tapes and book readings, and Bill, the child/homunculus who lives inside his twin sister's body. And Bill's victory over Hoppy is a takeover of the villain's prosthetic body, not a return to an unmaimed state. Hoppy, with his psychic abilities, had received a glimpse of Bluthgeld's impersonal world, the world of death, and gained a feeling of omnipotence:

Beyond the grave. The afterlife. . . . Nothing alive. . . . I'm--floating. . . . I'm weightless, I don't have a body any more so I'm high up, as high as I want to be. I can hang here, if I want; I don't have to go back down. . . . I'm drifting . . . among the grayness. . . . A new life. I have a different body; I can do all kinds of things. . . . A step up. I'm . . . better than anybody else. I can do anything they can do and a lot more. I can go wherever I want and they can't. They can't move. (36)

Bill, too, has the ability to switch places with the perceptual systems of other beings, and has had the experience of death and immateriality. However, in spite of the constraints of his own weak, almost non-existent body, he has not come up with the same solution. With his minimal body, he is immaterial and corporeal at the same time, and acts as the reconstructive mediator who will put Hoppy's prosthetics to a collective and not an individualistically predatory use. The final emergence of a fairly happy, almost pastoral community among the ruins of a world devastated by the H-bomb is an incoherence which is the basic weakness of the novel. Nevertheless I would argue that *Bloodmoney* is not, or not primarily, about the construction of a

pastoral world. but about the refusal to create a unidirectional philosophy of history, whether in on entropically dystopian or on a linear (individualistic) utopian axis. Rather, it is about the reconstruction of alternatives even in a devastated possible world. explicitly posited as an analogue to the reader's own:

We're very close, all the time, to death.

But then was it much better before? Cancer-producing insecticides. smog that poisoned whole cities. freeways and airline crashes. . . . It hadn't been so safe then: it hadn't been aby easy life. One had to hop aside both then and now. (48)

Dick's *Do Androids Dream of Electric Sheep?* (1968) posits the virtual as a space which repeats metaphorically the vicissitudes of the real, and the central image is Sisyphus. Here, the virtual world is exposed as simulation or scam. but its metaphorical aspect is recuperated as signifier for connectedness and interpersonal relations.

In *Androids*, the boundaries between humans, machines, and animals are blurred: humans prove their humanity by showing "empathy" with artificial animals, and androids prove their inhumanity by torturing live animals. Thus, one main strand involves the definition of humanity in the face of a simulated experience, the "empathy box" through which people experience vicariously the vain efforts of Wilbur Mercer to climb a mountain, always ending with a fall back into a "tomb world." The simulated tomb world has its correlative in the empirical world with its overwhelming advance of entropy and trash, of the all-pervading "kipple," the "dust and the ruin [which] is spreading out everywhere-- . . . the final disorder of all forms, the absence

which would win out" (160). But if the material world is moving toward universal death, the tomb world is a *mundus inversus* which can offer the possibility of an alternative: "*The bones . . . have reversed themselves*" and a dead spider comes back to life (162). The artificial simulation can transform the dream of individualist "extension" into a collective experience: "an empathy box . . . is . . . an extension of your body; it's the way you touch other humans, it's the way you stop being alone" (54). Thus, the validity of this shared experience is not finally questioned. In other words, in a novel which focuses on emotional empathy as tool of salvation, the "*historicity* of feelings" (Freedman, "Theory" 186)--even their determination within the political economy of the culture and entertainment business--does not deprive them of validity as utopian connective force. Mercer--the simulated Messiah of *Androids*--while admitting to be "a fraud," appeals to the "sincer[ity]" of the motivations of his audience, personified in the protagonist Rick Deckard, in order to claim a social role: "nothing has changed. Because you're still here and I'm still here. . . I lifted you from the tomb world just now and I will continue to lift you until you lose interest and want to quit" (162).

But this, Mercer adds, is not likely to happen: "you're a highly moral person" (ibid.). The "bounty-hunter" protagonist's morality and that of Mercerism, predicated on empathy for "inconspicuous life" (178), are the only ones that can work in a universe that has no room for illusions of self-sufficient integrity:

You will be required to do wrong no matter where you go. It is the basic condition of life, to be required to violate your own identity. At some time, every creature which lives must do so. It is the ultimate

shadow, the defeat of creation: this is the curse at work, the curse that feeds on all life. Everywhere in the universe. (135)

Dick's positive characters are as a rule craftsmen, handymen, that is, workers who recuperate, even in a world of high technology a sense of direct, personal relation with the world of objects: their limited self-reliance is never incompatible with a struggle for connection with others and society. In a historical context (that of the 1960s' counterculture) that is recuperating Emersonian notions of the asocial, unconstrained self, the protagonist of *Androids*, who is both a married man and a laborer (a cop) is, however clumsy a choice, one of the closest things to a resistant worker figure in this period of US SF. The bounty hunter Deckard, thus, is a very confused allegory for an attempt to present a space for moral action in the context of a condition of inevitable, partial complicity with the dominant system. Deckard's personal-cum-political program can only be based on an acknowledgment of his condition of alienation, such as the one based on a simulated morality: "For Mercer everything is easy, he thought, because Mercer accepts everything. Nothing is alien to him. But what I've done, he thought; that's become alien to me. In fact everything about me has become unnatural: I've become an unnatural self" (172).

Unnatural selves, ontological preoccupations, virtual worlds of commodification with no way out, and entropic decay recur in *Ubik* (1969). In *Ubik*, of course, even metaphysics is commodified:

*I am Ubik. Before the universe was, I am. I made the suns, I made the worlds, I created the lives and the places they inhabit; I move them here, I put them there. They go as I say, they do as I tell them. I am the*

*word and my name is never spoken. The name which no one knows. I am called Ubik, but that is not my name. I am, I shall always be. (190)*

In the case of this novel, the critical bibliography is already impressive, but not unanimous. All critics have focused on the relation between the ontological and the commodified, arguing for the narrative primacy of the former (Bukatman *Identity*, Suvin *Positions*) or of the latter (Fitting "Ubik," Freedman "Towards," Lem). I would argue that, in a work which indeed stretches the codes of SF to an extreme (Robinson 94-97), the two components are inextricably enmeshed, but that the novel's ultimate vision is a secular, materialist one. Not only can some sort of coherent narrative be eventually drawn (Lem), but the main preoccupation of the novel is, as in the previous ones, the possibility of action within the world of simulated reality. Here, the simulated reality gradually acquires the quality not of ontological instability but that of the hermetically closed system. The possible world of the novel is, as Freedman argues building on Freud, organized by its Powers-That-Be as a self-perpetuating and all-accommodating paranoid system, which tries to bring to its ultimate conclusion their own narcissistic strivings ("Towards"). The virtual or simulated world of "half-life" in the "cold-pac" suspension--which realizes a life-in-death condition, with the brain activity of usually wealthy dead characters kept in function artificially--recuperates the idea of the disembodied and self-sufficient mind capable of asserting itself in an absolutely malleable space.

As in *Stigmata*, I would argue that in *Ubik* the space of half-life simulation is an analogue for the spacetime of the empirical world of the fictional characters. Even Ubik, the "reality support" which towards the end of the novel saves or at least prolongs the protagonist's life, and which appears in epigraph as a godlike entity, is

"[t]he Absolute canned as an aerosol" (Lem 134): the world of commodification and the world of simulation are not alternative, with the latter making the former meaningless in the name of an infinite regression; rather, they sustain each other, in a relation of mutual and dialogical estrangement. *Ubik* is set in a world in which commodification has completely saturated everyday experience. This saturation is exemplified in the groups of people with psychic abilities who have become competing guild-like corporations: the mind has become a commodity among all others, in an absolutely manipulable universe. The ideal of mutual transparency implied in mind-reading and the ethics of responsibility implied in precognitive assessment of alternate futures are co-opted into a Social-Darwinist struggle among various kinds of "Psis," and among Psis, "anti-psis," and "Norms." Dick's model, as voiced by the protagonist Joe Chip, is that of cybernetic homeostasis:

The anti-psi factor is a natural restoration of ecological balance. One insect learns to fly, so another learns to build a web to trap him. Is that the same as no flight? . . . In a sense, you're a life form preying on the Psis, and the Psis are life forms that prey on the Norms. That makes you a friend of the Norm class. Balance, the full circle, predator and prey. It appears to be an eternal system; and, frankly, I can't see how it could be improved. (27)

But even in such a world there are dim alternatives, embodied in the protagonist, with his allegorical name: Joe Chip is an ordinary Joe, a little guy and a cog or chip trying to keep going in a heartless world. Within the experience of forced fragmentation, one needs not be a predator. Joe, a character usually presented in the shape of ridiculed prey--that is, of underpaid laborer--has a few resources that leave

him some space of dissent. One is endurance ("I guess I can live through it": 25). Another is, in effect, a strategy of restoring politico-economical critique in the face of utter powerlessness:

One of these days, . . . [p]eople like me will rise up and overthrow you, and the end of tyranny by the homeostatic machine will have arrived. The day of human values and compassion and simple warmth will return, and when that happens someone like myself who has gone through an ordeal and who genuinely needs hot coffee to pick him up and keep him functioning when he has to function will get the hot coffee whether he happens to have a poscred [money unit] available or not. (75)

On the other hand, the simulated space, predicated at the same time on wealth as prerequisite and on an egalitarian rhetoric, "a mutual osmosis, a suffusion between the mentalities of half-lifers" (19), turns out to be a world of predatoriness. with the stronger minds literally acting as Emersonian selves imposing their own world on others. Thus, Joe's main antagonist is the malignant mind of Jory, described as a force of narcissistic world-building ("Dr. Taylor is a product of my mind, . . . [l]ike every other fixture in this pseudo world") and of cannibalizing dominance:

It's hard to explain, but I've been doing it a long time to lots of half-life people. I eat their life, what remains of it. There's very little in each person, so I need a lot of them. I used to wait until they had been in half-life awhile, but now I have to have them immediately. If I'm going to be able to live myself. If you come close to me and listen . . . you can hear their voices. (174)

And metaphorically, these other voices cannot be cancelled. Jory is under the strain of a "world this diverse for so many people at once, all interwired" (178). He presents himself as predator in alliance with the overall condition of entropy, which in the half-life world manifests itself as regression of objects to earlier decades, from the novel's future setting in 1992 to the Depression era, and ultimately, at the moment of final death, as space of formlessness, as the vision of "a smoky red light" (182). And yet, the "oceanic pull" of entropy (154) can be slowed down and countered; Narcissus's antagonist is Sisyphus, and the book describes for five pages a weakened Joe painfully climbing up a flight of stairs (154-59). Against the progress of entropy, form can be regained:

Darkness hummed about him, clinging to him like coagulated, damp, warm wool. The terror he had felt as intimation fused with the darkness became whole and real. . . . He could see a little now: the darkness had grown horizontal lines of gray, as if it had begun to decompose. (152).

If Jory has "invaded" the other half-lifers with his own ubiquitous "[e]mptiness" (139) and "insubstantiality" (146), there are other tendencies at work, which leave a chance "to take charge" (183) to the chipped-down subaltern:

We are served by organic ghosts, he thought, who, speaking and writing, pass through this our new environment. Watching, wise, physical ghosts from the full-life world, elements of which have become for us invading but agreeable splinters of a substance that pulsates like a former heart. . . . The writers of instructions, labels and notes. Valuable notes. (189)

Valuable notes (money) provide the final surprise, which does not cancel Joe's strivings. In fact, the final discovery only suggests that the plot had developed among characters *on the same ontological level*: that is, everyone is dead (in half-life) in the final two thirds of *Ubik*. A secular approach is ultimately restored: against evil, capital, and entropy, the universe remains an open one and the "battle goes on" (183). In fact, as the final words say, "This was just the beginning" (191).

Only with the later and much weaker *A Maze of Death* (1970) do we find a full turn towards the ontological. In this most "desperate" (Robinson 104) among Dick's novels, the cyborg signals a direct irruption of the metaphysical into the real:

His job, as always, bored him. So he had during the previous week gone to the ship's transmitter and attached conduits to the permanent electrodes extending from his pineal gland. The conduits carried his prayer to the transmitter, and from there the prayer had gone into the nearest relay network; his prayer, during these days, had bounced throughout the galaxy, winding up--he hoped--at one of the god-worlds. (9)

The story develops along two "generic discontinuities" (Jameson "Genre") which disrupt the reader's interpretations about the diegetic elements. At first, *Maze* appears to work as a tragic version of the metaphysical fable *à la* C. S. Lewis, with the twelve characters dying one by one in the context of a struggle between a benevolent "Intercessor" and a malignantly entropic "Form-Destroyer." In the penultimate chapter, though, a different, secular reading is retrospectively constructed: the characters are connected together into "polyencephalic fusion," trying to alleviate the

passing of time while on a starship stranded in space. The arrested movement of space expansion and virtual imprisonment echo each other: "[E]verything, especially the infinitude of the voyage, had become an endless nightmare for them. . . . [T]he accident had come and now they circled, forever, a dead star" (183). In a final twist, the metaphysical plot reappears, with the Intercessor coming to bestow a deathlike state on a character. Yet, the text leaves open another possibility: the character was, after all, hoping for death as *simulated* condition, in "a world . . . in which we lie good and dead, buried in our coffin" (187). Thus, perhaps *Maze* can be read as a narratively failed metafictional reflection on the limits of the metaphysical (and apolitical) solution, a critique to the nascent narrative of virtuality as infinite chain of simulations. Such a chain, by definition, leaves no room for agency; its only possible end is, literally, non-existence.

#### **4. On Gender, Alienation, and Utopia: Between the Sixties and Cyberpunk**

Gender, while largely ignored in these novels of Dick's, had given rise to a slim tradition among male writers since the 1930s, becoming (outside of the cyborg/cyberspace intertext) a central concern in writers such as Heinlein, Philip J. Farmer, and Theodore Sturgeon. In Henry J. Kostkos's "The Emperor's Heart" (1934) the transplant of an artificial heart into the protagonist is made somehow to have as unlikely side-effects both rejuvenation and sex-change. In 1950, Fritz Leiber's "Coming Attraction" had provided an influential glimpse of prosthetization (a woman with metal claws instead of fingernails) in a plot which "imagines new sexual relations and emotional values" (Huntington 106). In foregrounding the cultural specificity of sexual mores (codes of public decency require covering the face; the claws connote a

masochistic and not an aggressive attitude). Leiber uses difference as an estranging device exposing the cultural basis of gender roles.

A similar stance underlies the racial/ethnic subtext of Isaac Asimov's cyborg stories. In "Segregationist" (1967) a burgeoning subculture seeks cyborgization as a way out of "segregationist talk," disrupting an enforced separation among human and robotic intelligence in a highly conflictual social context, which sees the cyborg as a tragic "hybrid," as "something that is not both, but neither" (132). In "The Bicentennial Man" (1976; expanded into a 1992 novel by Asimov and Silverberg) a robot's fight for civil rights parallels "its" quest for gradual implants of *human* organs up to final "humanization. Here, the liberal narrative of assimilation is at the same time an inversion--by a writer who in his whole career stressed his own ethnic-immigrant background--of the mainstream narrative of human-to-cyborg mechanization as omnipotence and neutralization of difference. Asimov's melting pot is a different one, one which takes the human as no less a construction than the artificial, and which salutes with enthusiasm the recuperation of limitation and mortality.

The polyphonic conflict among discourses on gender is central to the feminist utopias of Marge Piercy and Joanna Russ. These works have been described as "critical" (Moylan) or "open-ended" (Somay; Suvin "Locus") utopias, and as initiators of a postmodern feminist turn in SF (cf. Pfaelzer). Specifically, the utopian writings emerged from US feminism starting with the late 1960s give an overtly political twist to the generic textual dialogue between empirical and fictional world, creating an "open-ended text [which] portrays a utopian locus as a mere phase in the infinite

unfolding of the utopian horizon" (Somay 26). Rather than the doctrinaire overview of perfection, we have a conflictual process (cf. Jameson "Islands": Suvin "Locus") with a polyphonic tension among ever-perfectible alternatives, in which the present time is one, clearly foregrounded, element of the open dialogue. In both Russ's *The Female Man* (1975) and Piercy's *Woman on the Edge of Time* (1976), the cyborg embodies one of the alternatives. Russ's novel presents the encounter of four "versions" of the same woman, coming from four parallel universes which are explored under the rubric of gender, from the separatist utopia of the planet Whileaway (developed after a disease has killed all men) to fairly dystopian worlds, including our own. The cyborg Jael, with her metal teeth and claws (an explicit homage to Leiber), is the representative of a world in which an open war between men and women is in progress:

[Y]ou have guessed that I do not have Cancer on my fingers but Claws, talons like a cat's but bigger, a little more dull than wood brads but good for tearing. And my teeth are a sham over metal. Why are men so afraid of the awful intimacies of hate? . . . You have to build up the fingers surgically so they'll take the strain. A certain squeamishness prevents me from using my teeth in front of witnesses--the best way to silence an enemy is to bite out his larynx. (181-82)

Jael's world, with two segregated groups using "changed" people and robots as sex toys, at the same time parodies (cf. Ayres) and reproduces present oppressions. Yet, in a metafictional challenge to the closures of the utopian genre itself (open texts included), a final twist suggests that this questionable world might also be a past stage of the utopian one, and reinforces the role of choice and agency (cf. Fitting, "Roles"

160), as well as that of conflict in the rise of utopia. By doing so, Russ reassert utopia as, first of all, deixis and call to action:

Disapprove all you like. Pedant! Let me give you something to carry away with you, friend: . . . Whileaway's plague is a big lie. Your ancestors lied about it. It is I who gave you your "plague," my dear, about which you can now pietize and moralize to your heart's content; I, I, I, I am the plague. Janet Evason. I and the war I fought built your world for you, I and those like me, we gave you a thousand years of peace and love and the Whileawayan flowers nourish themselves on the bones of the men we have slain. (211)

In Piercy's *Woman*, the cyborg is the image of a dystopian alternative, which the protagonist visits in the midst of a series of other visits to a utopian world. In this bad future, the utter subservience of women and the class dictatorship of world-wide "multis" are each other's correlative. If surgical alteration bestows saleable desirability on the luckiest women, who thus manage to avoid becoming "walking organ banks" (171), cyborgization can make perfect tools of the men outside of the elite of "richies":

He's been through mind control. He turns off fear and pain and fatigue and sleep, like he's got a switch. He's like a Cybo, almost! He can control the fibers in his spinal cords, control his body temperature. He's a fighting machine, like they say. I mean not really like a Cybo, but as good as you can get without genetic engineering or organ replacement. He's still a woolie--that's what the richies and the Cybos call us, who are still animal tissue. But he's real improved. (298)

The utopian opposite of the instrumentalization of the body, though, is not a pastoral society; for example, reproductive technology and computer networks are presented as compatible with traditional farming and allied with a revision of gender-roles in an egalitarian direction (e.g., infants can be breast-fed by both men and women). The "apocalyptic" option is not even considered.

Furthermore, this dystopia is the result of the present, as exemplified in the experience of the protagonist, an abused Chicana interned into a psychiatric hospital. In our own world, dystopia is being prepared in mental institutions such as the fictional "Rockover" hospital--reminiscent of the Rockland State Hospital, NY, in which Manfred Clynes, inventor of the word "cyborg," had been a leading researcher. In *Woman*, a new form of electronic stimulation of the brain (the work of Jose' Delgado is explicitly mentioned; 204) is being tested on interned women. Piercy has the women present this research as an intensification of the rigidity of gender roles, with women literally "stuck" in their position by male research ("Needles in the brain": 193). The scientists' aim is absolute mastery over the feared non-rational sphere:

You see, we can electrically trigger almost every mood and emotion--the fight-or-flight reaction, euphoria, calm, pleasure, pain, terror! We can monitor and induce reactions through the microminiaturized radio under the skull. We believe through this procedure we can control Alice's violent attacks and maintain her in a balanced mental state. The radio will be feeding information and telemetry straight into the computer once we're in the institute, and Alice will be able to walk around the ward freely. (204)

Yet the conflict between panoptical and liberating discourses and societies is not decided in advance. Consuelo Ramos's own action--the killing of one of the psychiatrists--will, in fact, allow the rise of utopia. In this emphasis on agency at the expense of teleology, Piercy's novel "manages to make the reader feel that the utopian future is already under way, and that the reader shares responsibility for its coming into being" (Somay 32).

The concerns of women's utopias are also shared by Delany. In the early *Babel-17* (1966), the parody of (or, to use a term from the theorist of African-American literature H. L. Gates, the "signifying" on) SF has two main targets. First, we have a parody on Cold War adventure stories; but here the villain is not a racial or ideological Other, but the inability to communicate with otherness, literalized in the mysterious semi-telepathic language "Babel-17," which ostensibly literalizes the model of Whorfian linguistic based on a reduction of the world to mental processes. The true enemy is the use of discourse as instrument of power, so that the problem of isolation and social atomization lies also *within* "our" society. At the same time, the parody strikes also at the "progressive" or liberal myth of telepathy as pastoral space of universal understanding, as prelinguistic, presocial, ahistorical immediacy. On the one hand, the leading figure in the struggle against Babel-17, a woman poet of Asian origin, assembles a spaceship crew which appears to reproduce the organicist ideal, from a "pilot [whose] nervous system is connected directly to the control." to an "Eye," "Ear," "Nose," and "Brain" to navigate in the "hyperstasis currents" (34). However, the incompleteness of cyborgs and "discorporates" becomes the prerequisite for personal and collective salvation. In the climactic scene, the protagonist joins into

"mind-link" with an amnesiac transformed by Babel-17 indoctrination into a killer. Babel-17, the novel says, is a language without first and second person, capable of depriving its speaker of the ethical discriminations associated to the distinction between "I" and "Other" (cf. Malmgren "Languages"). Nevertheless, in the simulated space of the encounter, the meeting is not between a *tabula rasa* and an accomplished, self-sufficient individuality:

What you perceive you must change. Butcher. But you must perceive it.

I must--the light; central in you I see mirror and motion fused, and the pictures are meshed, and everything is choice. . . .

Mirrored in him, she saw growing in the light of her, a darkness without words, only noise--growing; and cried out at its name and shape. (132-34)

The image of mutual mirroring constructs identity as dialogical perception of otherness. The former killer does not discover a univocal solidity, but a multiplicity in endless motion; in her turn, in this long scene of mental, sensual, and sexual union the poetess sees herself change, in a process of "choice" which can only promise to continue.

The stress on identity is also central in *Nova* (1968), the novel that arguably rendered fully visible among academic critics the cyborg intertext in SF (cf. A. Gordon; Zebrowski and Warrick). In this self-conscious rewriting of *Moby-Dick* (Slusser, *Delany* 54 ff.), the conflict is between a discourse of omnipotence and one of limitations, in a fictional universe in which everyone is a cyborg on board of the

spaceship launched in a quest for interstellar fuel. For the crew, including the viewpoint characters, cyborgization is no less than the end of alienation:

Now a man went to a factory, plugged himself in, and he could push the raw materials into the factory with his left foot, shape thousands on thousands of precise parts with one hand, assemble them with the other, and shove out a line of finished products with his right foot, having inspected them all with his own eyes. And he was a much more satisfied worker. Because of its nature, most work could be converted into plug-in jobs and done much more efficiently than it had been before. . . . Ashton Clark, it has been said, was the philosopher who returned humanity to the working man. Under this system, much of the epidemic mental illness caused by feelings of alienation left society. . . . Ashton Clark became the workers' prophet. (205-06)

But if for everyone liberated labor also entails an end to any "sense of alienation in the universe" (Barbour 68), and *Nova* talks about a space travel in which every "limit vanishes" (41), for Captain Lorq Von Ray limitlessness goes beyond everyday concerns. In this world, this somewhat naive and pastoral dream of non-alienation remains largely an illusion; however, it must be stressed that Delany poses his scenario of technological interface as a contested terrain. Cyborg virtuality need not be assumed as intrinsically liberating or reifying; different narratives and interpretations from those of power are possible. For the Captain the rhetoric of the frontier remains valid. In previous voyages he had gone "as near to the edge of dying as he could" (9), and now he intends to reach "the night's rim" (23), in a Promethean quest that admits of no obstacles to his will:

We have to go to the flaming edge of that imploding sun. The whole continuum in the area of a nova is space that has been twisted away. We have to go to the rim of chaos and bring back a handful of fire, with as few stops as possible on the way. Where we're going all law has broken down. (27)

In other words, even in such a semi-utopian world, the problem of power remains, and must be renegotiated each time. Both Von Ray, with a scar on his face, and his financial competitor, with his missing hand, bear the marks of their will to mastery; yet, they still carry the illusion of being able to tap, as Dick's equally scarred Palmer Eldritch, into a transcendent core of unconstrained power. *Nova's* captain talks about "a furnace where the very worlds of empire are smelted," ready to be appropriated by those who "could stand at the edge of some star gone nova" (94). At the other end of the frontier's hierarchy, though, the narrator talks about the need for "cultural solidity" in the face of "too much movement" (79); instead of inchoate void, he sees a crowded universe of interconnectedness:

Imagine, a great web that spreads across the galaxy. . . . That's the matrix in which history happens today. . . . Each individual is a junction in that net, and the strands between are the cultural, the economic, and the psychological threads that hold individual to individual. (163)

Thus, in a text replete with allusions to sexuality (the crew is made of "cyborg studs") and race/ethnicity (cf. Fox 93-125, and Littlefield), the solution is an esthetic one. Delany's stance, grown also out of 1960s bohemianism, translates and problematizes social strivings in terms of artistic *jouissance*.<sup>6</sup> Katin, the character who

plans to start an anachronistic career as novelist, has to discard the New Critical artistic equivalent of the Captain's monologism, in which--à la Feidelson and Poirier-- "the artist concerned with self-expression and a projection of his inner world should, above all, be apolitical" (31). Instead, Katin chooses to include alienation, fragmentation, and interconnectedness into his narration by talking about his own life within the biography of his "mate": a novel about his difficulty in finding *one* subject, a novel (that is, we discover in the last page, *Nova* itself) which can only remain unfinished.

Cyborgization and virtual spaces return in Delany's latest SF novel, *Stars in My Pockets like Grains of Sand* (1984). In this most experimental of his works, the central issue is the impossibility to contain in one text an epic polyphony. Story and world have so great a scope that the reader does not learn much about them, as even the protagonist grapples without much success with its complexity (cf. Barter "Reader"). Mostly told from one viewpoint, the plurality of cultures and social norms exposes the reader to a semantic bombardment that one text cannot and does not mean to comprehend--even one which tries to recapitulate all of SF's subgenres (space travel, alien contact, classic utopia, virtual reality).

There is, though, one partial exception, one strand that can be followed, perhaps against the novel's main strategy. The "Prologue," entitled "A World Apart," summarizes ironically the US Black literary tradition. "Rat" (an insulting term) Korga, deceived into slavery as in many slave narratives (e.g., in Olaudah Equiano, also used as epigraph to Delany's autobiographical *Motion*), manages--as Frederick Douglass had done with writing--to start a climb to self-awareness by learning to use cyberspace. But here Delany is "Signifying" on what would in the 1980s only be an

edifying narration about African Americans reaching emancipation and self-determination and living happily ever after: there is no happy ending. Korga is captured by less "friendly" owners, and at the end of the prologue a mysterious catastrophe destroys his world. In the lengthy section entitled "Monologues: Visible and Invisible Persons Distributed in Space," we find him reawakened and chosen by the narrator as object of desire. In the ostensibly pluralist world of the diplomat Marq Dyeth ("death"), his story is that of a person reduced to collective fetish: the new world is divided politically, but unified in the endless impulse to have its superiority confirmed. When Marq goes to receive the news of Korga's finding, he is a self-confident cosmopolite, in a building made of mirrors which surround him with "a forest" of reassuring duplicates of his own image (146). He first sees Korga on the operating table, after an artificial-eye transplant; a physician tells him:

Under dim light, Marq, the new eyes look like black-eyed globes of clear glass. In ordinary light, they are your usual, faintly veined white with irises of a green substantially more vivid than the true irises originally were. In bright light they turn a disquieting silver. (156)

The shifting transparency and the silver color echoes the mirrorshade implants of the cyberpunk tradition. In Sterling, this is an armoring of the subject that allows a postmodern renewal of classic individualism and Americanism. In Gibson, as we will see, this is a reappropriative *bricolage* of the hegemonic discourse of technology. In *Stars*, the issue is Korga's continuing dispossession, if this time "for his own good." From slave to fetish, his destiny is an updated version of Ralph Ellison's "invisibility." In the world and the novel of information overload, in a civilization called "Sygn," Korga is attracted by a theater which seems momentarily to provide relief from the

signs of repressive tolerance and pluralist oppression: in the "polarized chamber" which hides him from sight, he manages to find refuge (209). Turned and fetishized into a spectacle, his virtual space is an oppositional invisibility. Indeed, Korga appears to have been left outside the dazzling spectacularity of Marq's world. Through him, we realize that the oft-mentioned "limen-plates" are, rather than travel devices, simulated environments he cannot, for some reason, access (339-41). As Broderick suggests (145-46), he might be the only one able--and not by choice--to see the metal cube underneath the playful, awesome displays. In *Stars*, the socio-cultural multiplicity which has done away with our gender constraints (78) leaves little space for a microphysics of resistance in the face of surviving oppression (in which still seems to believe a White author such as John Varley, in the 1980s stories of the collection *Blue Champagne* and in the 1992 novel *Steel Beach*). Thus, Delany's *Stars* becomes a metafictional reflection on the limits of postmodern dialogism. This affluent universe cannot cope with the grains of sand which spoil the signification of its star games, and monologically separates, in the spectacular variety of its semantic spaces, the visible persons from the invisible ones.

There are many similarities between Delany's concerns and those of the best among the SF novels written in the 1970s by a non-specialized writer. Joseph McElroy's *Plus* (1976). *Plus* is customarily read as non-SF (cf. Hadas) and as an example of "world elsewhere" created by an empowered self (cf. Brooke-Rose: Leclair 144-46: Miller), with cybernetics providing a template for self-sustaining esthetic autonomy (cf. Porush, *Fiction*). Rather, I would read *Plus*, the interior monologue of the brain of a dying scientist implanted into an orbiting satellite, as a metafictional,

intertextual critique of the rhetoric of absolute, empowering openness, and of transcendence through disembodiment.

As the novel starts, the brain is indeed a *tabula rasa* imagining himself into a void: "He found it all around. It opened and was close. He felt it was itself, but felt it was more" (3). But as "Imp Plus" begins to gain some self-awareness, the awareness of a distinction between self and world brings about a degree of closure: as in frontier discourse, the advance of the settlement can only be the cause of a receding of the open territory: "Everywhere he went there was a part just missing. A particle of difference. And in its place an inclination, a sharp drop" (6). At the end of the second chapter, already "the more that was all around was getting closer and closer to Imp Plus" (22). In this condition, the cybernetic feedback of a character bootstrapping himself into selfhood can only appear as loss or suffering: "He had nothing to stand on; the bulge he was on was himself" (98). As he starts remembering his past existence, body and human connections become a pervasive "absence" (136), "emptiness" (195), "vacancy" (196), which must be compared with the present situation: "Words remembering other words, but new words for what he had become" (142). At the threshold between past embodiment and present disembodiment, Imp Plus imagines himself as a personified "fence" (151, 159).

As Imp Plus's memory progresses together with his contacts with Ground Control, past connections appear more and more vivid and more and more distant, in "an emptiness of reciprocal failure to be remembered between them in which they began to share if not know what was escaping each other's thought" (212). The final question from Ground, as he is about to enter the Earth atmosphere towards self-destruction, has obvious allegorical undertones: "DO YOU HAVE POWER?" (215).

His self may have been developing, but rather than the "Nietzschean mastery . . . of the re-creative intellect" (Miller 177), McElroy and his cyborg seem preoccupied with the uncertainty of an alienated interiority, and Imp Plus's answer is "YES AND NO. . . . *No desire to carom into space, no desire for re-entry*" (215-16). In concomitantly refusing to act as pure instrument, and to accept the myth of spatial expansiveness, McElroy's cyborg satellite restores a role to embodiment. As Tabbi writes, "[t]he body he desires, like any sublime object, is made all the more painfully real to Imp Plus by virtue of its unattainability" (143). Imp Plus's appears to be a heroic sacrifice in the quest of a fulfilling form of literally limited, yet non-alienated self.

### **5. The Electronic Resistance of Haraway's Feminism**

The prefiguration of a non-alienated but fluidly reconstructed self in a world of limits is the goal of Donna Haraway's "cyborg" feminism. In her work, and above all in the "Cyborg Manifesto," originally published in 1985 in San Francisco's *Socialist Review*--now included in *Simians* (149-81)--the genre is the classic "essay," very much *à la* Emerson, rather than the systematic philosophical tract; in a dense, allusive and ironic style that engages a dialogue with both feminism (within and without the academic Left) and SF. Her work is an attempt to conjoin postmodern elaboration with a reassertion of the need for political action. In Haraway's cyborg the postindustrial depersonalization of production and subjectivity are made to recuperate a politically necessary and unerasable notion of materiality; the prospect is a reformulation of the concepts of non-authoritarian selfhood, democracy, social action, and mass culture.

We, the citizens of the Post-Fordist world, are the cyborgs, at the same time results of "social reality" and ideological "fiction" investing both the public and the

private sphere beyond idealistic oppositions (148). The cyborg is a metaphor of internal plurality which the "informatics of domination" (161) has presented as a prefiguration of the end of history, thanks to the biotechnological control over a "coded" body. The biogenetic and cybernetic rhetoric of codes has blurred the conceptual boundaries between the organic and the inorganic. The kinds and degrees of the blurring become precisely the site of political action in both socialism and feminism. Thus, the "ironic" (147) tone of the manifesto is a call *both* for "pleasure in the confusion of boundaries and for *responsibility* in their construction" (148). The Post-Fordist condition renders imperative a revision of the Left conceptions of the oppositional standpoint, starting with bodies, women, and subaltern groups. The rhetoric of salvific separateness appears to have been irreversibly challenged. The "natural body" has become a "strategic assemblage of heterogeneous biotic components held together in a reproductive politics of genetic investment" (*Visions* 355). Also, the Third World is the world of off-shore production, often based on high technology and women's labor, and not the world of oppositional primitivism which Leo Marx dubbed in 1972 the "New Left pastoral" (*Pilot* 291-314). Only on this basis there will be a chance to put the technological knowledge to antagonistic uses, promoting emancipatory mixings while resisting oppressive invasions, and regrounding in the name of *bricolage* a sort of Gramscian theory of praxis.

From this point of view, Haraway's cyborg is the contemporary incarnation of Gramsci's subaltern, yet another "undigested agglomerate" who finds resistance on readapting heterogeneous materials from the hegemonic culture. These materials are not neutral; thus, neither Gramsci's nor Haraway's oppositional subjects can avoid bearing inside themselves the burdens and the marks of domination: both, however,

strive to direct these marks towards different goals. In the postmodern condition as described by Haraway, multiplicity and fragmentations are both oppressive stigmata and hopeful promises. In confronting her hopeful tone, one should not overlook her dystopian depiction of the current state of affairs: as Ross writes, 'the cyborg is first of all posited as "an imaginative resource or myth for women who are traditionally socialized away from technology and yet who are most often the primary victims of technology in the workplace, the home, and the hospital" (*Weather* 161).

Thus, Haraway's "cyborg world *might* be about lived social and bodily realities in which people are not afraid of permanently partial identities and contradictory standpoints" (*Simians* 154; my emphasis). As a Benjaminian dialectical image, the cyborg is a "figuration" which "might" signify war, alienation, and reification, but also liberation. It cannot avoid bearing within itself the marks of production, and yet it also incarnates fluidity and partiality without univocity and "innocence." In its fragmented postmodern corporeality there lies the promise of a "rainbow" politics *à la* Jesse Jackson, of an alliance between racial, class, and gender differences: "Cyborg unities are monstrous and illegitimate; in our present political circumstances, we could hardly hope for more potent myths for resistance and recoupling" (154). Allied and precursors are Adrienne Rich's "politics of location," Audre Lorde's sisterhood of outsiders, and Gloria Anzaldúa's oppositional multilingualism (174). On the other hand, Haraway directs her polemic towards Freudian and post-Freudian feminism, seen as prisoner of nostalgic visions, or of vain search for perfect subjects, intrinsically bearers of alternative values. Women and subalterns confronting hi-tech have the option of following in the tradition of

reappropriation of writing which has in the US marked the experience of Blacks and immigrants, rejecting

the imagination of a once-upon-a-time wholeness before writing, before language, before Man. Cyborg writing is about the power to survive, not on the basis of original innocence, but on the basis of seizing the tools to mark the world that marked them as other. . . .

Feminist cyborg stories have the task of recoding communication and intelligence to subvert command and control. (175)

In African-American history, one should remember, W. E. B. DuBois's *The Souls of Black Folk* (1903) had described the Black's condition as a condition of "twoness," as a "double consciousness," a split between citizenship and racial identity which only emancipatory and integrationist politics could hope to overcome. In 1991, a popular text such as the Marvel Comics production by Black authors about the Black cyborg Deathlok, McDuffie and Cowan's *The Souls of Cyber-Folk*, rewrote the same tale with a different twist. At the beginning of the story, the Black pacifist trapped in a cyborg machine, recites a part of DuBois's work, stressing his lacerating duplicity, but without mentioning the original hope in eventual (here, literal) reintegration: "One ever feels his twoness... two souls, two unreconciled strivings, two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder" (1:13). As a "human," he used to be "pretty assimilated," and "pretty comfortable in [his] illusion." Now, however, as he prepares to fight, together with other cyborgs, against the distant corporate forces of destruction, he adds: "I don't ever plan to get that comfortable as a cyborg" (ibid.). As Foster comments ("Meat" 17), the cyborg is both a metaphor for and an intensification of the condition of Blackness; in preventing

internal and external assimilation and integration, it also grounds a new figure of opposition.

In feminist writing, Gloria Anzaldúa takes the cybernetic metaphors and presents the “new *mestiza*” as a figure “forced to live in the interface” (37): precisely from the originary imposition of violence the “border” consciousness of the ethnically mixed woman can function as a model for liberating multiplicity. For her, the struggle to overcome enforced boundaries is first of all an “inner war”: because of this “pluralistic” consciousness “[n]ot only does she sustain contradictions, she turns the ambivalence into something else” (78-79). For both Anzaldúa and Haraway, the oppositional subject is--and is forced by historical oppression to be--a trickster figure (whose model is in both the legend of La Malinche). In other words, Anzaldúa’s *frontera* woman and Haraway’s cyborg pose the notion of “an identity that is neither simply chosen nor entirely determined by others” (Foster, “Meat” 14). Both the dream of utter manipulation such as we find in Stelarc and the nightmare of thorough exploitation such as we find, as Harvey writes (309), in the replicants of *Blade Runner* literalize the notion of Post-Fordist flexible labor, either as a “libertarian” triumph of utter self-determination or as a hopeless destiny of neverending exploitation.

In retrospect, Haraway appears to have considered with excessive optimism the rise of computer literacy as key site for the development of an oppositional bloc. In the absence of a political project of an activist network for the dissemination of the antagonistic consciousness, Haraway’s address to politically minded computer users appears to have, at least in part, idealized a fairly limited social group. The *rhetorical* project of Haraway’s cyborg conceit is better prized as an attempt to restore a notion

of heterogeneity and resistance within hitherto monolithic models of the Post-Fordist world.

Thus, one crucial point in Haraway is her attempt to reconcile an awareness of present violence with the assertion of a utopian, optimistic striving, most evident in the “ironic” tone. Haraway’s affirmativeness has been prized as call to action by feminists who advocate the necessity for politics within postmodern culture (cf. Alaimo, Balsamo, Halberstam). In Balsamo’s *Technologies of the Gendered Body*, the cyborg’s internal heterogeneity is indeed postmodern, but of a postmodernism that does not reduce everything to the “discursive” sphere, and instead “reassert[s the] material body” as “lived experience” (33). Both Haraway’s history of “primatology,” *Primate Visions*, and her essays in *Simians, Cyborgs, and Women: The Reinvention of Nature*, insist on the ideological constructions that have surrounded the rhetoric and the practices of science. For Haraway, as for other feminists such as Harding (*Science*) and Jaggar, notions of gender and naturalness have always been historically and socio-politically determined. Still, her insistence on the notion of the “code” in contemporary science has led a number of postmodernist critics to read her as an advocate of the incommensurability of the postmodern world (cf. Crewe, Csicsery-Ronay “SF”). This strategy becomes in Bukatman a clearly depoliticizing move, and her cyborg becomes a figure of “acceptance” (*Identity* 321-25). Obversely, in Hardt and Negri’s *Labor of Dionysus* the cyborg is the new antagonistic subject of Post-Fordism, analogous to earlier romanticizations of the proletariat within “Old” Marxism, intrinsically bearer of subversive values. Haraway’s cyborg is caught between oppression and resistance: in Hardt and Negri, as in Bukatman, this ambivalence is erased.

Most important, some commentators have stressed that Haraway's optimistic tone runs the risk of an excision of the materiality of the body: for Hayles, the postmodern emphasis on naturalness as construction might bring about a dangerous "denaturing of experience" (*Chaos* 265 ff.). In many of these rebuttals, placing specific stresses on race/ethnicity, class, sex/gender, Haraway is usually associated with Judith Butler (e.g., Ebert *Ludic*, Homans, Sahay, Wilkerson). However, a distinction must be made: whereas for Haraway the dominant pressures are unerasable yet endlessly contested, for Butler they are paradoxically both absolutely monolithic and defeated by subversive playfulness. In Butler's *Gender Trouble*, we have an opposition between "a seamless category of women" (4) and "a performatively enacted signification" (33), which, as Morton writes, amounts to staging an idealizing erasure of need to the advantage of pure desire. Butler's endeavor, in Ebert's words, is predicated on an "eclipse of historical materialism in the shift from constructionism to invention" (*Ludic* 209), on a notion of performativity which foregrounds oppositional agency as utterly autonomous choice, as yet another version of the hegemonic rhetoric of flexibility. To extend this judgment to Haraway, as Ebert does (105 ff.), appears ungenerous, however optimistical and "ludic" the tone. In Haraway, to use the concepts of--among others--Hayles's theorizing, the discursive constructedness of natural bodies does not deny the "physical reality [of] bodily practices" ("Materiality" 153); the postmodern condition is a mixture of ephemerality and materiality, of information and embodiment: neither paradigm should be taken as the dominant rendering the other obsolete ("Parataxis" 398). In other words, Haraway's cyborg never ignores the categories of production and need.

Only hinted at by Delany (*Views* 114). Haraway's limits might be the limits of her intended audience or implied social addressee--a middle-class audience of students and Left professionals, before the age of diminishing expectations about upward mobility--and the limits of even the most politically minded of academic theorists in the current historical moment. This addressee is explicitly mentioned at least once:

There are more grounds for hope by focusing on the contradictory effects of politics designed to produce loyal American technocrats, which as well produced large number of dissidents, rather than by focusing on the present defeats. (*Simians* 173)

As Delany writes, Haraway ends up belittling "any sense of the darker, even tragic side of th[e Post-Fordist] situation" (*Views* 90), as well as the actual political "interpretive work" (114) to be carried out by the concrete oppositional subjects, in alliance with the learned activists and professionals whose consciousness she is trying to raise.

Thus, Haraway is paradoxically at her strongest in describing the world which the cyborg is opposing. The alternative to cyborg heterogeneity is oppressive monologism, grounding now in immateriality and absolute fluidity and flexibility both its social reality and its ideological fictions:

Miniaturization has turned out to be about power; small is not so much beautiful as pre-eminently dangerous, as in cruise missiles. . . . Our best machines are made of sunshine; . . . nothing but signals. . . . and these machines are eminently portable, mobile--a matter of immense human pain in Detroit and Singapore. People are nowhere near so fluid. (*Simians* 153)

As a result, and opposed to feminist SF's "insistence on limitations" ("Cyborgs" 17), we have a "Faustian," "transcendentalist," and "monotheist" dream of immortality and omnipotence, which an oppositional politics must counter with

[s]ome deep, inescapable sense of the fragility of the lives that we're living--that we really do die, that we really do wound each other, that the earth really is finite, that there aren't any other planets out there that we know of that we can live on, that escape velocity is a deadly fantasy. (16)

The opposition to the pseudo-rationalism of oppression is for Haraway an epistemological problem, which can only be solved in the direction of "situated knowledge" (*Simians* 183-214). Haraway's theory of the subject postulates an antagonistic standpoint "needy for connection" (151). On the other hand, radical individualism is informing postmodern science, whose exemplary template she locates in the immunological and sociobiological rhetoric of "non-self discrimination" (223). This rhetoric is ultimately updating the Emersonian disembodied all-seer; her example is from television SF: "Max Headroom doesn't have a body; therefore, he alone sees everything in the great communicator's empire of the Global Network" (183). Thus, Haraway calls for a "an account of radical historical contingency for all knowledge claims" which does not renounce an activist "commitment to . . . meanings and bodies that have a chance for a future" (187). The Emersonian disembodied and expansionist vision is a "god-trick of seeing everything from nowhere" (189), aimed at clothing in the discourse of contemporary "techno-euphoria" the classic imperialism of "the American sublime" (cf. Wilson). The foregrounding of the observer's partial perspective stresses the limited range of any perceptual stance, and the illusory nature

of absolute independence (for precursors, cf. Benjamin, Merleau-Ponty, and Vertov), without dismissing the goal of objectivity (cf. Markley "Irrelevance": Harding "Rethinking")--this time an *accountable* one: "Relativism and totalization are both 'god-tricks' promising vision from everywhere and nowhere equally and fully, common myths in rhetorics surrounding Science" (Haraway, *Simians* 191).

As in the role of mass culture in Gramsci, the cyborg is a necessary metaphor if not a sufficient one. It can stand for both a hegemonic "infinite mobility and interchangeability" and for the subject theorized in Anglophone feminism by the "standpoint theory" of Harding and others (an issue already tackled in Lukács's *History and Class Consciousness*). With its "elaborate specificity and difference" the cyborg can for Haraway become a "possible allegory for feminist versions of objectivity" (190-91)--as contradictory as the subaltern identities of the contemporary world, and as contradictory as mass culture.

Precisely in SF, as a mass genre, and not in the separate sphere of High Culture, contemporary conflicts surrounding embodiment may be analyzed in full. As a genre, SF focuses on "the interpenetration of boundaries between problematic selves and unexpected others" ("Promises" 300), and is the work of "story-tellers exploring what it means to be embodied in high-tech worlds" (*Simians* 173). She explicitly mentions a number of SF tales, including some already discussed in this study. The cyborg women protagonists of McCaffrey's *The Ship Who Sang* and McIntyre's *Superluminal* are not superbeings or manipulable "resources": in their unnatural bodies, they assert "the necessity of limitation, partiality, and intimacy even in this world of protean transformation and connection" (179). Russ's *The Female Man*

stages the meeting of “four versions of one genotype” from four parallel worlds, as a dialogue across differences and not a quest for fusion (178).

Haraway’s emblematic figures are Octavia Butler and John Varley. Butler, as an African-American writer, while never directly using the metaphor of the cyborg, talks of “catastrophe, survival, and metamorphoses.” In her 1987 novel *Dawn* the alien creatures who save some humans from a nuclear holocaust “do not rescue humans only to return them unchanged to a restored earth. . . . The[y] are gene traders. . . . Their nature is always to be midwife to themselves as other” (*Simians* 226-27). Here, as in her other novels, identity is not a source of reassurance, and any equivalence between ethics and biological difference; the aliens bring the narrator into a journey to salvation which is at the same time a new “middle passage” to slavery, toward a world of difference which proposes both new forms of power and violence and new horizons of hope and action. Varley’s 1984 novella “Press Enter” presents the parallel and specular tragedies of two characters who strive to survive before an Pynchonesque scheming and all-seeing artificial intelligence. For the male protagonist, the final option is a complete rejection of technology and sociality. Thus, the figure of resistance is the Vietnamese immigrant woman, with a violently variegated ethnic background, computer expert, and literal and metaphorical cyborg. Pressing the Enter key, she meets a horrible death, but rejecting a no less precarious life of paranoia, she only can incarnate a hope in “changing maps in the world [and] building new collectivities” (“Promises” 327). Proposing problems rather than solutions. SF and its multifaceted individualities can presuppose the utopian promise and possibility of a polyphonic sociality, in what is finally the attempt to supersede classic “humanism “ without giving up “humanity” (“Ecce” 87).<sup>7</sup>

## 6. Cyberpunk and Literary Criticism

As a cognate strand of cybercultural theorizing, parallel to Harawayan feminism, I would focus on the discourse of literary criticism about 'Cyberpunk SF, and specifically about William Gibson. Around Gibson, the cyberpunk label has been applied to a most variegated array of topics, which have rendered the label little more than a useful shorthand: a school of authors, a catchwords of the culture market, a literary genre, a subset of SF and/or of postmodern literature, the inevitable endpoint of US literature, a socio-political phenomenon. A coinage of the SF editor Gardner Dozois in a 1984 *Washington Post* article--based on an obscure story by an obscure author, Bruce Bethke--cyberpunk has placed SF on the pages of respectable academic journals, with a luminary such as Fredric Jameson giving it an apparently final *nihil obstat* for admission into the canon. Still, those who have discussed cyberpunk in terms of school have soon reported its folding, and all attempts to formalize an internal canon have produced untenable lists and arbitrary periodizations. Here, I shall refer to cyberpunk as the group of texts which in the years following 1984 (the publication date of Gibson's *Neuromancer*) have used the metaphors of cyborgs and virtual space.

In the editorial manifestoes which accompany its birth, cyberpunk emerges as celebration of the new hypertechnological modernity. For Dozois, it is a generation of "purveyors of bizarre hard-edged high-tech stuff." In the same months Bruce Sterling (writing under the not so ironic pseudonym of "Vincent Omniaveritas") talks about the literature of "the postindustrial society," an avant-garde "art movement" that will supersede the notion itself of genre in the name of technological visionariness.

Sterling's role as promoter culminates in the uncritical enthusiasm of his "Preface" to the *Mirrorshades* anthology (already discussed in the eighth section of Chapter 3). Among the insiders, only Norman Spinrad, one of Gibson's acknowledged precursors, tries to recuperate the "new romantics" of cyberpunk to the radicalism of the 1960s, (*Real* 109 ff.). Soon the debate shifts from the appeal to politics to a canonizing move. Michael Swanwick's "Guide" unifies cyberpunk and its coeval "humanist" school (e.g., Kelly, Kessel and above all Kim Stanley Robinson) as a new branch of postmodernism, and Sterling proclaims the unification of good SF and postmodern fiction into the supergenre of "Slipstream."

Academic criticism accepts the challenge promptly. I shall distinguish three strands: postmodern criticism, Cultural Studies, and SF studies proper.

Sterling's academic equivalent is Larry McCaffery, editor of a cyberpunk issue of *Mississippi Review* (1988) and of *Storming the Reality Studio* (1991), as well as author of a chapter in the *Columbia Literary History of the United States*. Here as well, the postmodern is a euphoria for the present, and the tone is one of exaggerated enthusiasm: "Ready? JACK IN!" ("Introduction" 15). As in Sterling we have the hybrid form which has rendered obsolete all past literature. McCaffery constructs his version of cyberpunk as endpoint of a white male postmodern canon which expresses "the feel of life today" ("Fictions" 1162). Having excluded genological, ethnic, and gender subalternities in his choice for inclusion in *Storming* (at least, Sterling's slipstream includes Toni Morrison), McCaffery can try and reconstruct the literary consensus of the nation.<sup>8</sup> Cyberpunk results, first and foremost, from "the interaction between genre SF and the literary avant-garde" ("Desert" 3), and is concerned with reformulating "artistic rebellion when 'rebellion' is now a commodifiable *image*" (2).

McCaffery's attitude toward history is one of technological determinism, and "tie[s] the evolution of postmodern culture to technological developments" (ibid.). In such a view, the cyberpunk cannot produce a political oppositional stance: instead, it is relevant as "the inevitable result of art responding to the technological milieu that is producing postmodern culture at large" (14).<sup>9</sup> This is the overall strategy in volumes which also contain more critical assessments which link cyberpunk to feminist SF. Thus, for Hollinger cyberpunk's focus on "the interface of the human and the machine radically decenters the human body, the sacred icon of the essential self. [and] conventional humanist notions of an unproblematical 'real'" and shares the "anti-humanist sensibility" of postmodern feminism ("Deconstruction" 207). Quite rightly, Csicsery-Ronay stresses the limits of its audience: the "apotheosis of postmodernism" is at the same time "the vanguard white male art of the age"; only Gibson appears to be aware of the painful side of postmodernity: "the grace of Hip negotiating the splatter of consciousness as it slams against the hard-tech future" ("Cyberpunk" 182-83).

The postmodernist cyberpunk, as a rule, is praised as being the missing link that ensures or confirms the functioning of hitherto problematic models. In the most important among these, Jameson laconically mentions it as "the supreme *literary* expression if not of postmodernism, then of late capitalism itself" (*Postmodernism* 419). For Jameson, "Gibson's representational innovations" are "as much an expression of transnational corporate realities as . . . of global paranoia itself" (38); his implicit homology compares Gibson's metropolitan and virtual spaces and the apparent chaotic immateriality of contemporary forms of domination, and the search

for utopian hopes in the age of their manifest impossibility and in the world of arrested history.

In Brian McHale, the starting assumption is a model not so different from Toffler's "waves": postmodernism (dominated by ontological fabulation) as logical successor of Modernism (dominated by epistemological quests). Both stages appear abstract generalizations, never connected with social and cultural contexts and conflicts. His *Constructing Postmodernism* (1992) gives a new life to the rhetoric of mass culture as naive, transparent expression of the *Zeitgeist*: if even the popular literature of SF talks about fragmented subjects, historical crises, infinite self-referentiality of discursive worlds, this is the final evidence for the validity of "high" theorems. In an analysis that does not go beyond the mere listing of motifs, the result cancels the historical and cultural specificity of SF, by canceling the context and intertext which found its autonomy. The SF intertext is mentioned as a useful "heuristic model . . . of postmodernist literature" (12), not a significant esthetic fact: in discussing, under the rubric of "POSTcyberMODERNpunkISM" (225 ff.), the convergence of SF and high literature, it is not SF which gets capitalized.

The most accomplished operation can be found in Scott Bukatman's *Terminal Identity* (1993). In an analysis that discusses film, video, comics, and writing (both SF and postmodern theory), we find the apotheosis of the end. Identity, body, space, image, are all at a "terminal" stage, at the end of a macro-historical process--a *grand récit* indeed-- which is superseding all logocentric "discontinuities" in the final erasure of the human-machine boundary. Debord's spectacle society, Baudrillard's simulations, Haraway's cyborg, and Deleuze and Guattari's body without organs, all are taken as witnesses to a paradigm shift which cyberpunk SF, among other forms, is

saluting with the enthusiasm of its “techno-surrealism” (295). The paradigm-text is Sterling’s *Schismatrix*, with its epic of the posthuman, the future history of *homo sapiens* in its bioengineered evolution toward the nirvana of disembodiment. In Sterling, underneath the references to chaos theory there emerges the rigidity of Toffler’s determinism. In Bukatman, underneath postmodernism there surfaces the most totalizing among the grand narratives of the US Right: the end of history. Here, one needs not refer to nostalgic anti-theory models (cf., Dalgleish in his exchange with Csicsery-Ronay). The problem is a critical stance (also present in Csicsery-Ronay’s “SF” and Stivale) which identifies the use of technological metaphors with postmodernism *per se*, and does not acknowledge differences and conflictualities between different theories.

Within Cultural Studies, the first sign of attention is in Ross’s *No Respect* (1988), one of the founding texts of the US tradition. Here cyberpunk (together with Haraway’s cyborg) is the harbinger of a new sensibility, no longer nostalgically anti-modern, and potentially antagonistic: a “folklore of technology” (212) which might become--in a Gramscian vein--a strategy of cultural-political action for the subaltern subjects of Post-Fordism, a form of *bricolage* similar to those used in the gay and Black cultures. Implicitly, the state of affairs in Ross’s world is quite glum. Thus, Rosenthal writes extending Ross’s argument, Gibson’s “techies” incarnate the “postindustrial work situation”: their experience “engenders a jumpy kind of cool,” a “nonchalance . . . toward the bad new future that is upon us” (89). Even for those who appear to have some space left as skilled labor, the best hope is defensive resistance in the face of powerlessness.

In just four years, things have gotten even bleaker. Ross's *Strange Weather* includes cyberpunk in a panorama of white subcultures of technological bricolage (New Age, ecology, as well as the early SF fandom), in a chapter entitled "Cyberpunk in Boystown" (137-67). Here Ross takes Sterling and the hacker hagiography as overall template, and describes cyberpunk as Social-Darwinist "urban fantasies of white male folklore," thriving on "the dominant, white middle-class conception of inner-city life" predicated on a ambivalent--both dreaded and wishful--"Hobbesian lawlessness" (145). Cyberpunk's "ecology of corporate space," without any "public or civil space" left (147-8), bestows center stage on hard-boiled "youthful male heroes" (153) and upgrades their mythology. The metaphor of VR as space to "penetrate," the spectacular sensationalism, the fatalism and the related Reaganian rhetoric of survivalism are undoubtedly present; Ross, however, may have become an "apocalyptic" himself (and the same could be said of Pfeil 83-94). Gibson is less one-sided, women's cyberpunk is not taken into account, and nor are their precursors in SF history. Ross is proposing a parallel history of the Eighties, in conflict with the hegemonic cultures legitimated by the New Right, and slights the internal struggles within the cultural marginalities he examines.

The most interesting text in the Cultural Studies cluster, Mark Dery's *Escape Velocity* (1995) emerges from outside the academy. In his survey of "cyberculture," (neo-Sixties press, rock music, SF, performance art), Dery stresses the attempt to neutralize the antagonistic potential associated with the 1960s political and cultural movements, which foregrounds "innovativity" and removes politics; the attempt, in other words, to invent a tradition that legitimates the current ideological quietism by rooting in a depurated version of past dissent. The rhetorical tool is the liberation from

the limits of the physical bodies as image for an unlimited control over the social body (cf. also Giovannini 65 ff.). For Dery, Haraway is the only theorist who tries to counter this effort. In SF, the paradigmatic opposition is between Sterling and Pat Cadigan. between fatalist evolutionary "libertarianism" and a plurality of alternative choices.

In SF studies, the anchor in textual reading prevents some of the grand narratives. The text which sanctions Gibson's *Neuromancer* as a classic is the anthology edited by Slusser and Shippey, *Fiction 2000* (1992). To summarize the overall strategy, *Neuromancer* emerges as a polymorphous text, capable to catalyze different interpretive angles and to give rise, among imitators and successors, to autonomous, non-formulaic SF rewritings (by writers such as Sterling, Shiner, and Benford). In the relation with postmodernism, the tension between the possibility of envisioning a different future (negated, *à la* Jameson, in Gibson, but at least hinted at in women's texts), and the role of memory and of history (which the postmodern mainstream rejects, but which cyberpunk seems willing to acknowledge). The anthology also begins to recognize the debts to earlier presences of technology in literature (from *Frankenstein* to US SF). In this respect, critics have been so far hesitant to treat cyberpunk as part of SF history; the Australian critic Damien Broderick is the only one to discuss Gibson, in his *Reading by Starlight* (1995), in the context of a general argument on SF's linguistic strategies (80-88).

In general, we can distinguish a canonizing and a skeptical strand. On the one hand, we have the attempt to legitimate Gibson by associating him with canonic figures: Romanticism (Glazer; Mead; Schroeder "Determinacy"), the sublime (Voller), mysticism and metaphysics (Schmitt), the avant-gardes (Csicsery-Ronay "Futurist"

and "Antimancer"; Grant; Pagetti 172-78), and of course postmodernism (Davidson: de Zwaan; Hollinger "Deconstructions"; B. Wood). The most interesting case is Csicsery-Ronay, with his analysis of sentimentalism and "futurist" euphoria in Gibson. In *Neuromancer*, all is translated in terms of artistic and pseudo-artistic creation, and every character is artist and/or work of art; this allows both the reconstruction of a place for affectivity in the hi-tech world, and the discussion of the power relations underlying it ("Futurist"). In the following *Count Zero*, the overall pattern is collage, with a narrative fragmentation which simultaneously exalts and separates art and sentiment; the outcome is the impossibility of agency, solved only by recurring to a literal *deus ex machina* ("Antimancer").<sup>10</sup>

On the other hand, we have a Left tendency to one-sided critique. Here, the technological ecstasy is little more than a complacent spectacularization of and fatalistic complicity with the corporate landscape of the Reagan and Post-Fordist era, with an ultimate disappearance of overtly political antagonism (in Whalen), or at least of ethics (in Easterbrook) and of human relations (in Fitting "Lessons").

The most complex interpreters read cyberpunk as conflictual site of disparate tendencies. For Suvin ("Gibson") two forces, identified with Gibson and Sterling, mark cyberpunk's esthetic and ideological horizons. In Gibson, the metaphorical network linking the erotic and affective sphere with power, and class relations brings the attempt to assert the former to turn into a critique of the latter, with the implicit affirmation of a utopian longing. As opposed to the pessimistic--even desperate--Gibson, Sterling is instead a pole of consent to the present state of affairs. Strengths and weakness of cyberpunk, then, are those of the "structure of feeling dominant among some fractions of the youth culture in the affluent North" (49), associated,

materially or ideologically, to the advanced Tertiary sector--a significant group, but neither a homogeneous one nor a majority. Also, Lance Olsen's *William Gibson* (1992)--the first and so far only book-length study of a cyberpunk writer-- reminds us that Gibson--author from the US Southern Appalachians emigrated to Canada--is far from being part of the cultural mainstream. His narrative *bricolage* patches together a much more heterogenous material than the postmodernist standard (cf. also Ketterer, *Canadian* 140-46). For Linton, this narrative heterogeneity renders Gibson similar to the quasi-SF fabulations of the Native writer Gerald Vizenor.

The best criticism goes in this direction, acknowledging the resistance to generalizations of a number of authors and texts. Particularly interesting is Biddick's analysis of the presence of past, memory, and history in Gibson, as a pole in a tension with the rhetoric of cyberspatial immateriality: in his use of the discourse of virtual expansion, Gibson manages to maintain a degree of critical detachment toward free-market neo-imperialism. The point is that, in Gibson, the interface metaphors may--self-consciously and dialogically--be vehicles with multiple and contradictory tenors. As Portelli writes, "[b]y lowering the threshold between 'natural' and 'artificial' intelligence, Gibson creates a world of exhilaratingly expanded and vulnerably formless consciousness, boundless and defenseless," in a sharp yet inescapable "polarity between the ecstasy of possibility and the agony of formlessness and split identity that accompanies, throughout American literature, the expansion of democracy, of technology, of America itself" (*Text* 302).<sup>11</sup> The technological "sublime" of cyberpunk and postmodernist fiction is not an instance of unidirectional teleology (Tabbi 208 ff.), nor (*pace* Tomas "Body") an instance of pure technophilia. A number of postmodern critics is instead forcefully stressing the relation between

body and linguistic codes, in a open tension among texts (and among interpretations) which privileges neither pure indeterminacies nor metaphysical rigidities. questioning both the myth of naturalness and that of absolute simulation (cf. Siimonen).

As emerging element, we must stress the feminist readings of cyberpunk (very sympathetic at least to Gibson even in the most critical cases) and the concomitant criticism on women's cyberpunk.<sup>12</sup> Feminist critics discuss SF's virtual worlds as challenging sites for established gender roles, even in a rhetoric which still tends to presents the relation between the virtual "matrix" and the "cowboy" operator in a traditionally gendered fashion (cf. Case, Cherniavsky, Nixon, Springer "Sex" and "Pleasure"). Still, a novel such as *Neuromancer*, as Foster writes, "depicts a situation in which the characters are neither the masters of their technology nor enslaved by it, even when the technology is part of their selves" ("Meat" 26)--and seek a space for agency in such a situation. The stake in the discussions of gender in cyberpunk is a stress on the limits of the oppositional horizons of cyberpunk, which are ultimately pessimistic and dystopian. In fact, feminist cyberpunk has to address notions of the decentered subject which can be both liberating and oppressive (cf. Balsamo 133 ff., Cadora, Harper). For Christie, both in Gibson and in Piercy's *He, She, and It* the cyborg is "characterized by confinement," either aggressively "complicit with the literal and figural codes of a rampantly successful postmodern capitalism," or bound to a "tragic" plot of self-effacement or self-destruction when trying to act on behalf of a principle of limitation and "conviviality" (195). The strategy of women's cyberpunk appears to be one of skeptical rewriting (Foster "Incurably"), a critique of "the mystique of the interface" (Wollmark 123). At its most affirmative, virtuality can be "a kind of closet or escape valve" for "gay performance" (Foster, "Telepresence" 725),

while only Marge Piercy includes a utopian, technologically literate feminist community in her bleak version of cyberpunk (cf. Booker, Deery, Fitting "Beyond," Kuryllo, Neverow).<sup>13</sup>

### 7. Gibson: Situating Self and Space in Cyberpunk

As representative text of significant cyberpunk by a male writer, I would focus on Gibson's *Neuromancer* (1984) supplementing my reading with references to its "sequels," or novels set in the further future in the same possible world. *Count Zero* (1986) and *Mona Lisa Overdrive* (1988), and to some of the stories in *Burning Chrome*. My reading will follow three intertwined strands: the descriptions of cyberspace, the role of the body, the role of affectivity.

Let us commence with an interesting possible intertextual juxtaposition in *Neuromancer*--a hitherto unnoticed one, taken from music, if not from punk. In 1947, the country-music hit by the Kentucky singer Merle Travis, "Dark as a Dungeon," featured a dead coal-miner warning younger people against the lethal risks of the job, describing the mine as a place where "It's dark as a dungeon/And it's damp as a tomb." In *Neuromancer*--a novel written by another Appalachian-born artist--the Southern voice of another dead worker updates the warning, to the benefit of the young protagonist, for the nascent Post-Fordist era. This is Dixie Flatline, computer operator and hacker, died ("flatlined") on the job because of a lethal version of "ice" ("Intrusion Countermeasures Electronics"), the defence system of cyberspace: "That's king hell ice. Case, black as the grave and slick as glass. Fry your brain soon as look at you" (199). In Travis's song, young workers are cautioned about the dangers of turning labor ethics into an ideology of acquiescence: "It will form as a habit/And will

seep in your soul/Till the stream of your blood runs/As black as the coal." In *Neuromancer*, the story of Case is precisely the story of a man who has turned his job as computer operator/hacker into a drug-like habit, letting the stream of information seep into and invade his body and consciousness, and the story of his strategies for survival in such a condition. As a dialogue across boundaries--life and death, organic and inorganic, materiality and immateriality--the novel is a reflection on the openings offered and on the prices paid in such crossings.

The world itself in *Neuromancer* appears fully engaged in such a boundary-blurring operation, as in the by now semi-canonical opening sentence: "The sky above the port was the color of television, tuned to a dead channel" (9). Nature has become conceptualizable only in terms of artifice, and not viceversa: indeed, in the final oxymoron of the sentence, nature appears only in the form of death. Something has been lost in the artificialization of the world: we could also read Gibson's as an endeavor to envision strategies countering the loss. The text prevents us from positing the simple proportion that we find in the mainstream celebrations of cyborgs and virtual space: nature is to artifice as limit (death) is to limitlessness. In fact, the first scene shows us a character for whom technology is reaching its limits--the bartender with "his teeth a webwork of steel and brown decay," and his "antique arm [that] whined as he reached for another mug" (9). Cyborg technology is less the creation of superhumans than another ordinary aspect of a political economy still based on class; everyone is a cyborg, but some cyborgs are more equal than others: bartenders cross interface boundaries very differently than information tycoons, as we are going to see.<sup>14</sup>

The male protagonist Case too, we immediately learn, has had the experience of going "through a fence" (12). The statement turns out to be metaphorical ("fence" as slang for trafficker in stolen goods); still, for him this is the beginning of the end, a boundary which he should not have trespassed, and an act for which he pays in terms of bodily suffering.

For his beloved Molly, the instability of bodily boundaries has tragic proportions. She once used to be a "meat puppet," that is, a prostitute who would cybernetically "cut out" her awareness during her time with a client, literally turning her body into a passive tool. But her illusion of safe self-instrumentalization is soon shattered by the limits of technology:

You know how I got the money, when I was starting out? Here. Not here, but a place like it, in the Sprawl. Joke, to start with. 'cause once they plant the cut-out chip, it seems like free money. Wake up sore, sometimes, but that's it. Renting the goods, is all. You aren't in, when it's all happening. House has software for whatever a customer wants to pay for. . . . Trouble was, the cut-out and the circuitry weren't compatible. So the worktime started bleeding in, and I could remember it. (177)

One can rent oneself as marketable goods, and be flexible enough to accommodate any software; for the same reason, however, one cannot hope to pretend the worktime as commodified being does not exist, nor hope to fence away what is being commodified: the body--not even by erasing one's memories; and, as Biddick argues, one of the most productively critical aspects of Gibson is the emergence, underneath

the emphasis on virtual limitlessness, of the memories and the realities of economic and imperialist expansiveness (cf. also Brande).<sup>15</sup>

The absence or irrelevance of internal and external separations, boundaries, fences, and barriers is the greatest illusion every character of *Neuromancer* must learn to overcome in order to survive. This is the illusion of cyberspace. In fact, as an *contrario* demonstration, the main two examples of spaces of absolute inner homogeneity are occasioned by literal and metaphorical deathlike experiences. The first is Molly's own description of her time as unconscious "puppet": "It's like cyberspace, but blank. Silver" (177). Later, Case momentarily "flatlines" while plugged into cyberspace: "Nothing. Gray void. No matrix, no grid. No cyberspace" (276). The space of pure absence and nothingness connotes the tragedy in the death of the subject: the death of agency.

Gibson's cyberspace, made of "bright lattices of logic unfolding across the colorless void" (11), is in fact a space which, in its three-dimensional Cartesian grids and lattices, reinscribes the marks of history in the illusion which the mainstream interpretations--described in Chapter 4--had presented as vacant, unmarked, boundless, and lawless. From the AIs (Artificial Intelligences) to the various virtual agencies such as Dixie, the Turing Police, and the ICE, we are dealing with a space clearly presented in terms of a struggle among powers and interests, with which the "enCased" self of the protagonist must come to terms. The image on which Gibson bases his revisionary work is, again, that of the frontier, the available territory for the unfettered expansion of Post-Fordist immateriality:<sup>16</sup>

Cyberspace. A consensual hallucination experienced daily by billions .  
. . . A graphic representation of data abstracted from the banks of every

computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding... (67)

In Frederick Jackson Turner, the frontier had been a "line" or "edge" in the "continual recession" of land (1), which fostered the empowerment of the self-made-man. In Gibson's *Neuromancer*, the receding abstraction of virtuality is apparently another vacancy which empowers the incorporeal agent repeatedly called a "cowboy":

He'd operated on an almost permanent adrenaline high, a byproduct of youth and proficiency, jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix. A thief, he'd worked for other, wealthier thieves, employers who provided the exotic software required to penetrate the bright walls of corporate systems, opening windows into rich fields of data. (11-12)

If the hegemonic ideologeme of the frontier is the presupposition which delimits the cultural symbology and the political horizons of Gibson's fictional worlds, then his work must be prized for taking the mainstream icon and exploring it to its extreme, to the point of critical subversion of its rhetorics. In Gibson, the liberating expanse of brightness is finally contextualized and concretized in the struggle within and often against the "rich" barriers of "corporate" economics.<sup>17</sup>

In *Neuromancer* and elsewhere, the insistence is on shapeless, colorless, and in general unmarked zones as sites of expansive ecstasy--only to reveal underlying asymmetries and conflicts. Thus, cyberspace is ostensibly a "gray disk, the color of Chiba sky," quickly "becoming a sphere of paler gray. Expanding--" and "flow[ing]"

in “the unfolding of his distanceless home, his country, transparent 3D chessboard extending into infinity” (68), while material experience appears to Case as a “waking world he had no interest in visiting or knowing” (247). In *Count Zero*, cyberspace appears first as a “sea” and then as a “plain,” in which “[t]he edge of the world was lost in a low bright mist, and a sound like drowned bells tolled in across the plain” (241). In “Burning Chrome” (1982) the “[b]odiless” experience of virtual space is a catalogue of images of fluidity and freedom: “It feels like we’re surfing the crest of the invading program, hanging ten above the seething glitch systems as they mutate. We’re sentient patches of oil swept along down corridors of shadow” (173). In *Neuromancer*, cyberspace is compared to a sensation of “[f]reefall,” a feeling which manages, like ideology itself, to abstract the world into something both “invisible” and impalpable; within such a stance, the sensation of “falling-rising” is made into one dangerous condition, and “lunar concrete” appears like “perfectly clear water” (201). Later, “the edge of the sea” in which he visualizes the Artificial Intelligence named Neuromancer, is compared to a “plain of black mirror, that tilted,” as if there were moving under it “an invisible maze, fragmenting, flowing together, sliding again” (290).

On the verge of the space of free expansion lies a disorienting maze. And the edge of the horizonless electronic frontier and of the society which has produced it is an “edge of anxiety” (*Neuromancer* 20). The experience of cyberspace is an experience of precariousness and reification, which the narrator of *Mona Lisa Overdrive* compares to prostitution; the disoriented operator can only survive as a “hustler” and “cruiser”:

People jacked in so they could hustle. Put the trodes on and they were out there. all the data in the world stacked up like one big neon city, so you could cruise around and have a kind of grip on it. visually anyway, because if you didn't, it was too complicated. trying to find your way to a particular piece of data you needed. (22)

Even in the visual world of virtuality, the operator cannot function as an omnipotent eyeball ascending into infinite space. The Emersonian allusion becomes explicit in "Burning Chrome"--and it is a direct attack: "Ice walls flick away like supersonic butterflies made of shade. Beyond them, the matrix's *illusion of infinite space*" (177; my emphasis).

The detachment of the eyeball might be total, but cannot remove the presence of the political economy which wishes to manifest itself as transcendent and preternatural agency. As Suvin argues ("Gibson"), Gibson's strategy lies in the presentation of the mutual imbrication of the affective/cultural and the socio-economic sphere. In "Burning Chrome," the final showdown after the characters' surfing on the dazzling brightness of cyberspace--the contact with the corporate agencies--occurs "[a]t the heart of darkness, the still center": an orthodox-Marxist last determining instance of sorts which only can affect the outcome of the social and diegetic narrative (187). Thus, in *Neuromancer* in the "field of data . . . you could throw yourself into a highspeed drift and skid, totally engaged but set apart of it all. and all around you the dance of biz, data made flesh in the mazes of the black market" (26). The interface between material bodies and immaterial information is a two-way traffic: by plugging into cyberspace, the flesh of the console cowboy penetrates the fields of data, but the risk is that the data take over the flesh. Thus, the formlessness of information produces

also “the white sound of invasion” (171). One obvious metaphor is the computer virus: “The Chinese virus was unfolding around them. Polychrome shadow, countless translucent layers shifting and recombining. Protean, enormous, it towered above them, blotting out the void” (200). But the most consistent trope is the oxymoronic image of immaterial walls, best exemplified by the barriers of “ice” which all protagonists must come to terms with, in their exploration of a no longer fully open space: “I couldn’t see it yet, but I already knew those walls were waiting. Walls of shadow, walls of ice” (“Burning Chrome” 169).

Thus, on the one hand the open space of virtuality, always self-identical in its ostensible endless fluidity, may turn into another form of imprisonment: “The air was thick and dead and the light from the greenish glass-tile ceiling-strip made him feel like he was under water. The tunnel was made of some kind of glazed concrete. It felt like jail” (*Mona* 231). A place with no positional specificity is a place where one never moves, and faces the concomitant pressure of oppressive walls and disorienting displacement: if “[t]here’s no there, there” (55), then movement becomes futile rather than exhilarating: “‘This way.’ ‘How come?’ ‘Because it doesn’t matter.’” (233). On the other hand, and in an even more frightening fashion, in the later *Idoru* (1996), cyberspace is a panopticon, seeping into places and bodies thanks to its immateriality, chasing everyone into an all-absorbing brightness:

There’s a place where it’s always light. . . . Bright, everywhere. No place dark. Bright like a mist, like something falling, always, every second. All the colors of it. . . . And no matter how far you worm your way in, no matter how many stairs you climb, how many elevators you ride, no matter how small a room you finally get to, the light still finds

you. It's a light that blows in under the door. Fine. so fine. Blows in under your eyelids, if you find a way to get to sleep. But you don't want to sleep there. . . . No. . . . you *don't*. I know. But they make you.

They make you. At the center of the world. (31-32)

A space of domination which can reach its inhabitants anywhere, which places them at the center of the world no matter how far in the periphery they hide, endlessly self-identical, and always self-identical in its ability to produce walls--this is also Gibson's urban space. In Gibson's cities, dystopian and celebratory visions of the postmodern city converge, and are fused in the rhetoric of formlessness. In this sense, as Bukatman argues (*Identity* 119 ff.), cyberspace and urban space are each other's analogues. In their accumulation of disparate elements, Gibson's cities produce, as Ihab Hassan would put it, an exhilarating effect of "dematerialization" acting "as a frame of choices and possibilities" (96). Still, the juxtaposition of heterogeneous components also suggest Jameson's "crisis in historicity" (*Postmodernism* 25), which is above all a dystopian disorientation, an obstacle to "cognitive mapping" and agency. For Jameson, the postmodern city is a new space of alienation: "the alienated city is above all a space in which people are unable to map (in their minds) either their own position or the urban totality in which they find themselves" (51). For Gibson, choices and possibilities coincide with the dystopian views to be found in books such as Mike Davis's *City of Quartz* and the anthology edited by Michael Sorkin, *Variations on a Theme Park*; first, the city is a panoptical transparency, an architecture of surveillance policing the boundaries among social groups; second, the city--and above all the suburb--is a shopping-mall or amusement-park, a space of absolute malleability and of unconstrained manipulability, which by definition can never produce any sense of

belonging and rootedness (if not *a negativo*: the city as a space one must escape from, only to end up in another city, as disappointing as the first one); the dystopian culmination is the fortress or walled city, the gated community which promotes and enforces internal uniformity.

Both the North American Sprawl (the US Eastern seaboard turned into one big megalopolis, from Boston to Atlanta), and the Japanese Chiba City follow these models. Dematerialized in a stance which appears to privilege the abstract over the concrete, in Gibson's *Neuromancer* the Sprawl is a "solid white" display map of "data exchange" (57). The postmodern urbanization, like the postmodern virtuality, is connoted by absence of shape, from the surrounding "black expanse" of the Tokyo Bay (13), to the "featureless" club area of Chiba during daytime (13), and the threatening crowd of the fighting arena scene (50). Still, Gibson does not allow the concrete to disappear completely; the information society is not only about data but specifically about data *exchange*. Thus, he refers both to ideology and to economics:

Night City was like a deranged experiment in social Darwinism, designed by a bored researcher who kept one thumb permanently on the fast-forward button. Stop hustling and you sank without a trace, but move a little too swiftly and you'd break the fragile surface tension of the black market; either way, you were gone. . . .

Biz here was a constant subliminal hum, and death the accepted punishment for laziness, carelessness lack of grace, the failure to heed the demands of an intricate protocol. (14)

Like the sprawling city, like cyberspace, the economy of globalized Post-Fordist capitalism is a continuum without apparent discrete markers, a fluidity and a

background noise which permeate and sustain the whole wolvish world. In such a world, no illusion is possible of an interstitial "temporary autonomous zone" à la Hakim Bey: "burgeoning technologies require outlaw zones," and the lawless and apparently free area of Night City is "a deliberately unsupervised playground for technology itself" (19). The dance of biz (business) can produce an illusion of infinite *jouissance*, but when experienced long and deep enough it also induces an awareness of the existence of concrete, underlying agencies--against which the protagonist is utterly powerless. Thus, behind the infinite unfolding of his "distanceless home in the continuum of virtuality," Case notes the discrete presence of those who have made cyberspace possible: first perceiving the action of energy and banking authorities, and then "high and very far away . . . the spiral arms of military systems, forever beyond his reach" (68-69).

Around the large scale views of the corporate spaces, Gibson's lyricism presents the small scale sites which recapitulate in a reduced and intensified fashion the most disturbing elements of oppression. These are the walled, separate spaces of the dominant caste, the spaces made according to the rulers' specifications, and indeed in their images. One is the space station of Freeside (125), in which a megacorporate clan has seceded from human society in order to homestead in the high frontier, physically far away from the space of human conflict, but still dominating earthly economic affairs. Here, ideological justifications are no longer necessary; in Gibson's Post-Fordist information society, counter to the standard move by postmodernist theory, ideology has collapsed onto economy and not viceversa: "Freeside suddenly made sense to him. Biz. He could feel it humming in the air. This was it, the local

action. Not the high-gloss facade of the Rue Jules Verne, but the real thing. Commerce. The dance” (174).

This applies even more strongly to Villa Straylight, the earthly residence of the Tessier-Ashpool clan, monomaniacally bent on unbounded self-replication, literally through cloning of its founders, and metaphorically through cryogenic immortality and the devising of Artificial Intelligences. For Wintermute, one of the AIs, both Freeside and Straylight are Emersonian self-made worlds, self-destructive in their sterile self-containment: “Playgrounds hung in space, castles hermetically sealed [inhabited by] dead men sealed in little boxes. . . . You needed this world built for you, this beach, this place. To die” (278). In its turn, Straylight is “a body grown in upon itself,” a labyrinthine “endless series of chambers” analogous to the Tessier-Ashpool family with its inbreeding “convolutions” (206). Still, postmodern capitalism is an endlessness endowed with a center: the “silicon core” which governs the house is shaped as a bodiless head, analogous to the rulers who appear to have secluded themselves from the social body. As a *genius loci* of the corporate enclave, the artificial head itself reveals the narcissistic rationale of the place: “The semiotics of the Villa bespeaks a turning in, a denial of the bright void beyond the hull” of the Freeside station, which is still not separate enough. What the family needed was “an extended body. Thus, “[w]e have sealed ourselves away behind our money, growing inward, generating a seamless universe of self” (207).

On the other hand, cyberspace is also an analogue for the novel’s positive pole: the body. In *Neuromancer*, the affirmative space of boundlessness is the erotic sphere; thus, orgasm is for Case “a timeless space, a vastness like the matrix” (45). From Case’s initial predicament, the body is in Gibson a constant unerasable presence.

Notwithstanding the rhetoric of virtual ecstasy, Gibson constantly goes against his character's own dream of incorporeal rapture and reinscribes the bodily limitations as the only path to agency. At the beginning of *Neuromancer*, Case, poisoned out of access to cyberspace, subscribes completely to the discourse of disembodiment:

For Case, who'd lived for the bodiless exultation of cyberspace, it was the Fall. In the bars he'd frequented as a cowboy hotshot, the elite stance involved a certain relaxed contempt for the flesh. The body was meat. Case fell into the prison of his own flesh. (12)

For Case the body, first of all, is that which forbids him from becoming wholly integrated in the dominant regime of the novel. In a postmodern world where the information society pretends to have flattened upon itself everything and everyone, homologizing all difference onto the dominant discourse, Gibson posits a situation in which the world-city of unconstrained global capital cannot transform into euphoric consent the background and the descent of locally positioned pain. Gibson's rhetoric, thus, opposes a glitzy postmodern Japan to a traditional US South: "The black clinics of Chiba were the cutting edge, whole bodies of technique supplanted monthly, and still they couldn't repair the damage he'd suffered in that Memphis hotel" (10). The reduction of the body to codes and discourse is valid, but only "nearly" so, as an "approximation"; this is the case for a member of the Panther Moderns gang: "His body was nearly invisible, an abstract pattern approximating the scribbled brickwork sliding smoothly across his tight onepiece" (74).

Most important, Molly's life as a cyborg is precisely an attempt at self-recovery after the illusion of self-instrumentalization (as "meat puppet"), which of course was an instrumentalization by others. As a Gramscian folk subaltern or a

Harawayan cyborg, Molly patches together the marks of domination within her own self. In a world of aggression, she takes on an implant of artificial claws (reminiscent of Leiber's "Coming Attraction" and Russ's *Female Man*): in a world of one-directional transparency, she takes on an implant of artificial eyes shaped as mirrorshades. For her, however, this brings about no illusion of omnipotence: in fact, she mocks Case's own illusion (in a sarcastic mocking of a sarcastic song by Bruce Springsteen): "Think you're born to run" (214). In a plot in which human characters are being manipulated (by corporate or artificial beings) from beginning to end, her cyborgization as "razorgirl" who only kills in self-defense, points towards the need for agency in a world which is rendering it impossible. In Gibson's plot, heroism must be asserted in the context of paralyzing limitations which disguise themselves as forms of empowerment. This is the case of the titular hero of "Johnny Mnemonic" (1981), one of Gibson's many hustlers, who rents the cybernetically enhanced memory of his brain as storage space for data espionage and who explicitly denounces his lack of control over the nature of his work--his own nature as utterly alienated labor: "The program. I had no idea what it contained. I still don't. I only sing the song, with zero comprehension" (17). The model for Gibson's fragmented antiheroes is a disenchanting trickster, and the rhetoric of trash; true heirs of Gramsci's subalterns, Gibson's cyborgs recycle existing materials in order, at least, to endure. With a nod to Dick's *Androids*, a character of "The Winter Market" (1986) is described as "a master, a teacher what the Japanese call a *sensei*. What he is a master of, really, is garbage, kipple, refuse, the sea of cast-off goods our century floats on. *Gomi no sensei*. Master of junk" (118).

Postmodernist critics (starting with Hollinger "Deconstruction") have praised Gibson and cyberpunk for having provided literalized metaphors for the decentered subject. With regard to Gibson, this is correct but in need of qualification: fragmentation and the challenge to the unitary subject in the world of cyborgs and virtual space mean different things to different people. They have no inherent quality outside of concrete positioning. A crucial distinction is between fragmentation accepted or imposed by necessity and fragmentation sought as an act of choice: this distinction is also a mark of social status and power. Gibson's most grotesque creation is the cyborg dolphin in "Johnny Mnemonic": "He was more than a dolphin, but from another dolphin's point of view he might have seemed like something less" (10). In *Neuromancer*, Dixie Flatline, who has gone from being a labor-force exploited to death to being literally objectified as taped consciousness, does not consider the cybernetic downloading of his self as a promise of immortality (as in Moravec's essay or Rucker's novels) or as bodiless exultation: "You gonna tell me I got a choice, boy?" (100); throughout the novel, he endlessly repeats: "I wanna be erased" (246). Pure instability is a condition that only a few can afford, or regard as desirable. According to Dixie, it takes a superhuman condition in order to do so:

Well, it *feels* like I am [sentient], kid, but I'm really just a bunch of ROM. It's one of them, ah, philosophical questions, I guess. . . . But I ain't likely to write you no poem, if you follow me. Your AI, it just might. But it ain't no way *human*. (159)

The AI itself, Wintermute, agrees and distinguishes between his own multiplex, manipulative self, and the instability (the multiple personality) of his human, exploited sidekick: "I, insofar as I have an 'I'--things get rather metaphysical, you see--am the

one who arranges things for Armitage. Or Corto, who, by the way, is quite unstable. Stable enough . . . for the next day or so" (145). Artificial Intelligences, on the other hands, still have limits (their programming), admitted by the bodiless head at the core of Straylight:

You might say what I am is basically defined by the fact that I don't know, because I *can't* know. I am that which knoweth not the word. If you knew, man, and told me, I couldn't *know*. It's hardwired in. Someone else has to learn it and bring it here. (207-08)

The only figure who can turn cyborg fragmentation into pure and unconstrained agency is the arch-capitalist Virek in *Count Zero*. The posthuman condition is a luxury for the rich. This is the condition of the corporate tycoon--akin to the world leader of Silverberg's *The Time Hoppers*--whose body is physically lying in a life-support "vat" yet connected to the worldly information network; in a world in which the nation-state has utterly vanished and in which the computer network appears to be the best image for the body politic (Portelli, *Text* 303), he literally incarnates the expansiveness of *laissez faire* economics, "the cells of [his] body having opted for the quixotic pursuit of individual careers" (Gibson, *Count* 29). If the "selfish" and unbounded genetic expansion of the sociobiological model leads to cancerous growth, then cyborgization, for Virek, is a way to put such a growth under check. For him, this is no easy task: he still has to endure some "[r]ebellion in the fiscal extremities" (26). For his employee Marly, however, this is more than enough to render him incommensurable to ordinary experience: "she stared directly into those soft blue eyes and knew . . . that the exceedingly rich were no longer even remotely human" (29). Extended into immateriality, expansive, and manipulative, Virek's body

is the analogue for the postmodern Leviathan of new capitalism, whose limits lie precisely in the separateness of its ruling caste, which for Marly poses limits to the caste's self-awareness:

She was aware of a certain spiritual vertigo, as though she trembled at the edge of some precipice. She wondered how powerful money could actually be, if one had enough of it, really enough. She supposed that only the Vireks of the world could really know, and very likely were functionally incapable of *knowing*; asking Virek would be like interrogating a fish in order to learn more about water. (44)

Narcissistically, Virek must survive by surrounding himself with an endless series of doubles, such as his holographic Latino servant Paco. Paco's obsessively repeated routine, "Señor is wealthy. Señor enjoys any number of means of manifestation" (e.g., 152), precisely celebrates Virek's ability to turn otherness into spectacular sameness.

Then, Gibson's heroes are the ordinary cyborgs who try to squeeze a chance for survival between the pressures of instrumentalization and domination: such a chance can only be offered by the body. In "Johnny Mnemonic," virtual euphoria is saluted with enthusiasm, but only as a temporary state: "one day, I'll have a surgeon dig all the silicon out of my amygdalae and I'll live with my own memories and nobody else's, the way other people do. But not for a while" (22). In *Neuromancer*, even in a world of cyborgs and virtual space, to ignore "the meat" (181) is an untenable stance. Even when bodily agency is unsuccessful, there is no doubt about its primacy, as in the ending, in which two relations are compared. Case's virtual double meets again that of his former girlfriend Linda Lee, while in the material world, Case's affair with Molly comes to an end. For Case, the virtual idyll is something he

perceives from a distance. "at the very edge of one of the vast steps of data." However, the last, Chanderesque word belongs to the earthly story, the sad one: "He never saw Molly again" (317). A clear hierarchy is established: the condition that counts is down here. Only largely disempowered people such as Case and Molly can at least hope to win over the metaphorical chill of the "ice": even if their story is unsuccessful, as Suvín writes, "at least they (and only they.--not the rulers obscenely devoted to money and power) are capable of it" ("Gibson" 45):

There was a strength that ran in her, something he'd known in Night City and held there, been held by it, held for a while away from time and death, from the relentless Street that hunted them all. It was a place he'd known before; not everyone could take him there, and somehow he always managed to forget it. Something he'd found and lost so many times. It belonged, he knew--he remembered--as she pulled him down, to the meat, the flesh the cowboy mocked. It was a vast thing, beyond knowing, a sea of information coded in spiral and pheromone, infinite intricacy that only the body, in its strong blind way, could ever read. (Gibson, *Neuromancer* 284-85)

This leads to the role of affectivity--and indeed of sentimentalism. Gibson provides a system of parallel "love stories" among creatures at various levels of artificiality and social power, from Case/Molly to Case/Linda (and Molly's reminiscences of a past love affair), to the past story which founds the Tessier-Ashpool clan (between the creators of the Artificial Intelligences, Marie-France and Ashpool), and the attempts at love affairs of 3Jane and even of the sadistic Riviera, culminating with the efforts at union between the AIs *Neuromancer* and *Wintermute*.

Pure individualism is just not possible, at any level of concrete or virtual existence: the world of cyborgs is always a relational one of indispensable connections. As crucial climax in Case's awareness, I would take the "simstim" scene in which he sees himself literally from the sensory and physical standpoint of Molly: the other function of cyberspace is a foregrounding of relations, rather than their abolition: "And found himself staring down, through Molly's one good eye. . . . at himself" (301). Not by chance, I would argue that the role of women characters becomes more and more central. In *Count*, Marly is the voice of dissent (against the "inhuman" Virek), while in *Mona* and *Virtual Light* women are the central characters.

In the later novels, this leads to the voodoo entities of *Count Zero*. Neither a limitless nor an empty zone, cyberspace is not a native-free Third World eager to be colonized. In this respect, Gibson explicitly foregrounds the metaphorical element of cyberspace as vehicle for discussing empirical reality. The intertext of *Neuromancer* and *Count* could be taken together as an attack to illusions of unifying metaphysics: it is precisely the union of *Neuromancer* and *Wintermute* that for unknown reasons brings about the emergence of plural entities in cyberspace. In *Count*, the parallel with voodoo is argued as metaphor by one of the characters: voodoo is an effective model precisely because neither its cosmogony nor the cyberspace entities are "concerned with notions of salvation and transcendence." Both worlds are "about getting things done" (111). In both, what matters is their attitude of plurality, of "communal manifestation" (112). Only on this basis, an alternative "doing" can be exercised by concrete dissenters, whether material--such as Marly and the various hackers--or virtual. The boundary that most of all needs to be re-opened is that between the empirical world and the metaphorical means for presenting it in fictional narratives.

Thus, when one of the people who have specialized in the communication with the virtual entities asks the hacker Bobby Newmark, "Bobby, do you know what a metaphor is?", he urges him to "pretend that we are talking two languages at once." Even while using "the language of street tech," we should not forget that "at the same time, with the same words, we are talking about other things"; tech talk and voodoo "loa" are, inevitably, ways of getting at human reality: "'Okay,' Bobby said, getting the hang of it, 'then what's the matrix? If she's a deck, and Danbala's a program, what's cyberspace?' 'The world,' Lucas said" (163).

In the nineties, the spaces of both *Virtual Light* and *Idoru* propose much bleaker worlds, where Dickian little guys are coping with an experience whose main template is the walled suburb, and therefore the virtual world becomes more and more commodified. In *Light*, "the map of distances [is] obliterated by the seamless and instantaneous nature of communication" (93); at the same time, the Western world is an archipelago of gated communities (27, 71) and nation-states are fragmenting on an ethnic basis. As a character reflects, "Modernity is ending." But the result appears less than desirable: "*Everywhere, the signs of closure*" (97). In *Idoru*, "Walled City" (155) is the name of the virtual site itself, in which "libertarian" lawlessness can only be compared--as in Sterling's *Islands*, but with much more sadness--to the enclaves of the imperialist era such as Hong Kong (209, 221), thus bringing back the myth of the virtual frontier back to its historical roots.

### **8. On Cadigan and Women's Cyberpunk**

Gibson can be taken as culmination of cyberpunk as it has developed so far, and we can begin to put his position into perspective. As for an assessment of the most

significant among current SF works about cyborgs and cyberspace, this can best be done by means of a brief consideration of the emerging intertext of women's cyberpunk, a subgenre which is arguably reaching a peak in the present years, with a main focus on Pat Cadigan. In Cadigan we have a fairly unique stress on class, race, gender *at the same time*, with a growing formal sophistication. Her cyberpunk can be read as a direct, sarcastic response to the hegemonic rhetoric of interface technology, with its individualism and complacency with the present state of affairs. As in Gibson, Dick, and in the sentimental tradition, her alternative is not so much politics but personal relations, but her effort to imagine a Post-Fordist world in which a space is given to the voice and position of underprivileged characters must be given the proper praise.

Her first novel, *Mindplayers* (1987), is a direct critique of the individualist rhetoric: the protagonist's job ("pathosfinder") subverts Cooper's frontiersman ("pathfinder") and--in a direct filiation with Moore & Co.--tries to restore a role to relations in a world of enforced solitude and harsh dispossession and exploitation; thus, her protagonist is both a woman and a forced laborer. This is a world in which "mindplay" is far from a private practice free from material constraints; rather, as a market of "psychosis-peddling," it is an activity strictly commodified and policed by corporate and state authorities. The protagonist is forced to become an agent of virtual law enforcement; as in Gibson's *Case*, her name, Deadpan Allie, suggests opacity and self-enclosure, but her trajectory is instead toward a recuperation of the ability to communicate and to enjoy human relations in a universe in which fragmentation can no longer be avoided. Here, subjectivity is just another merchandise on the stalls; as Allie says, "everybody wants to be somebody but nobody wants to be just anybody"

(13). Thus, "personas" can be rented or imposed according to (black) marketing strategies. But, as the thriller plot of the novel shows, this is not a liberal utopia of free choice but a world of harsh conflict in which high personal prices are being paid by the powerless. In the first virtual mind-link with an officer of the Brain Police, cyberspace appears as an "unbounded" green expanse "behind" her: in front, instead, lies "the edge of a broad field bounded by a low, flimsy wire fence." with a warning sign reading "WATCH THIS SPACE" (21): rather than absolute freedom, cyberspace is the space of imposition and of forced contemplation, which makes the need for a grasp on "real reality" (67) all the more painfully urgent. In the ending, she appears to be faced with an option: "Choose: A whole self, or just an accumulation of elements that soon wouldn't be more than the sum of their parts. Madness. Fragmentation" (272). She opts for integrity, rejecting the appeal of her previous life in the mindplay underworld, but as Cadora argues (369) in a universe such as Cadigan's this cannot be a recuperation of the traditional notion of subjectivity, which Allie herself had dismissed as pertaining to "rugged individualist[s]" (236). Rather, she opts for a hope in survival and endurance within the world of fragmentation, as an ethical imperative which only renders human relations possible: "Reality fluctuates, but existence *is*. Or is *not*" (272).<sup>18</sup>

In the following two novels, the sarcastic tone reaches a peak. *Synners* (1991), like the story "Pretty Boy Crossover" (1986), presents a critique of the teleology of disincorporation *à la* Sterling's *Schismatrix*, and present embodiment and disembodiment as different avenues for different characters with different backgrounds, all on the same, materialist, level--and avoiding the trap of absolute relativism. In fact, the option of embodiment over that of downloading into the virtual

world appears clearly the preferable one, the only one which entails collective (personal and political) responsibility. As a character of *Synners* puts it, "Out here, you couldn't just change the program, wipe the old referents, and pick up the story at any point" (388). In other words, we do not need to imagine virtual space as "out," and we do not need to have virtuality as new, self-perpetuating beginning (which, as Terence Martin's *Parables of Possibility* reminds us, is precisely one of the main tools of the hegemonic rhetoric in the US). In *Synners*, the commercial technology of neural sockets for interface with virtual rock videos, marketed by a multinational ironically called "Diversifications," is the catalyst for a confrontation among the attitudes of different characters; thus, the novel engages a dialogic conflict both among discourses and among bodies. As Balsamo has effectively argued (136-46), *Synners* constructs a system of characters (four hackers, two men and two women) defined precisely on the basis of their bodily stance *vis-à-vis* the virtual experience. On the one hand, the identity of the two women are more strongly defined in bodily terms, one as Black, one as laborer (for whom hacking and interfacing is first of all a corporeal experience). On the other hand, the two men hold the promise of a vanishing body, with a character driven by a repression of his sexuality, and another directly dreaming of eventual disengagement from "the meat." As Foster has written, Cadigan's "cyberpunk . . . represents a world in which cultural diversity and the formation of specific cultural identities is an explicit problem" ("Incurably" 2). In the postmodern world, as in any other culture, all options are conflictual and problematic, giving rise to a plurality of alternatives--none of which can claim suprahistorical, deterministic status; but, contrary to relativistic liberalism, all of these options are in *Synners* part of an ethical

and epistemological contested ground, which involves both the private and the public sphere, both affectivity and political economy.

For the video artist allegorically nicknamed Visual Mark, his final condition as disembodied consciousness recalls the Emersonian expansive narcissism:

He lost all awareness of the meat that had been his prison for close to fifty years, and the relief he felt at having laid his burden down was as great as himself. His *self*. And his *self* was getting greater all the time, both ways, greater as in more wonderful and greater as in bigger.

The sense of having so much space to spread out in--a baby emerging from the womb after nine months must have felt the same thing, he thought. Stone-home true enough for himself. After the initial trauma, hey, it's party-time! (232).

For Mark, the socio-economic sphere of production can be wholly excised in the sublimity of cyberspace, whereas the pervasive image of his video had previously been a "lake with a stony shore" (87): now no shore or limitation will hinder his solipsistic immersion in the virtual Oversoul (cf. Dery 254).

On the other hand, one of the women's friends had provided a sobering critique of virtuality precisely based on the impossibility to transcend its economics:

Knowledge is power. But power corrupts. Which means that the Age of Fast Information is an extremely corrupt age in which to live. . . . I think we're approaching a kind of corruption unlike anything we've ever known before. . . .

Beside being rich . . . you have to be extra sharp these days to pick up any real information. You have to know what you're looking for, and

you have to know how it's filed. rowers need not apply. Broke ones, anyway. I miss the newspaper. (53)

For one of the women hackers the dystopian prospect is overwhelming: "Change for the machines. . . . That's all we've ever done is change for the machines. But this is the last time. We've finally changed enough that the machine will be making all the changes from now on" (334). For Gina, a Black woman, the skepticism concerns precisely the alleged novelty of the information age: "*Meet the new world. Same as the old world*" (226). And the stake is the price one must be willing to pay for the virtual eternity of party-time: "Well, you got it, it's totally painless, but they never mentioned it would feel like painlessly driving eight nails through your head going in and painlessly ripping your arms and legs off coming out again" (294). For Mark as well, his apartness from the meat eventually comes to signify utter solitude, with "no reciprocation" of relation (331). The whole plot had been precipitated by an unacceptable breach of a necessary boundary, in which Mark's stroke or "intercranial meltdown" (276)--a professional risk for plugged-in hackers--is transformed into a computer virus which produces a worldwide crash. It is the virus that most of all represents the notion of unbounded expansiveness: "a voracious thing, . . . wanting to devour and to infiltrate, rape, merge" (299),<sup>19</sup> confronting people who, even in cyberspace, remain "still on the other side of a certain threshold, the side called Finite" (330). If the virus is the force of expansion, then in their act of resistance the hackers play the part of the natives fighting back; what for the virus/stroke is freedom, for them is constraint.<sup>20</sup> The virtual "ocean" of fluidity may also be something different, as the "repressed" male Gabe realizes:

What he had sometimes thought of as the arteries and veins of an immense circulatory system was closer to a sewer. Strange clumps of detritus and trash, some inert and harmless, some toxic when in direct contact, and some actively radiating poison, scrambled along with the useful and necessary traffic. The useful and necessary things were mostly protected, though the protection made them larger, to the point where some of them were slower and more unwieldy than they should have been. (324)

Thus, *Synners* becomes not an apocalyptic condemnation of virtuality as such, nor an integrated acceptance of technology, but a fight for what is “useful and necessary.” If technology is the “original sin” (53) of this world, no one can step out of it: everyone is “incurably informed” (388), and must come to terms with it. The final showdown presents all the four hackers (including the virtualized Visual Mark) cooperating while plugged in, while eventually the repressed Gabe rediscovers his body and his sexuality. With this alliance of “self and nonself and semiself” (358), Cadigan presents a feminist alternative within the universe of multinational virtuality.

Finally, *Fools* (1992) conjoins formal sophistication--it is a Faulknerian tale of conflicting memories in which all voices and memories insist on the same body--and socio-political awareness. In a text which again makes use of the rhetoric of disturbing limitlessness (the ubiquitous self-reflexive mirrors) and of paralyzingly dangerous limits (the visions of cliffs and precipices), we have the narrative of a virtual laorer, an “actor” who tries to control her identity in the face of the impossibility to establish a clear hierarchy between her various “personas” with their respective memories and experiences. The plot is among other things the attempt to find the root of her lack of

control over herself: thus, we see the protagonist and other characters theorize about “characterization amnesia” (49, 66), an “aberrant persona” (113), and “multiple personality” (229). The most frightening moment is that in which the relation between character and apparent real self seems to be reversed. For the protagonist, if “Reintegration’s impossible” (229), absolute instability of selfhood is no less unacceptable: “The edge of a cliff, high above some enormous, vague space. I felt a flash of something like agoraphobia, except that wasn’t quite it--this was much more than being afraid of too much open space, this was a fear of nothingness, of nonexistence--” (86). A character in search of an “author” (257) or at least of an editor, she cannot give up the hope in a degree of self-determination, even if this means to reject part of the rhetoric of unconstrained openness: “If that’s closed and done with because the past got changed and I forgot, then that’s how it is, but I got a right to know. I mean, it’s my life, isn’t it? (299). In other words, both Gibson’s and Cadigan’s cyberpunk, as Haraway’s cyborg, are concerned with reconciling critical agency with an acknowledgment of the necessity of limitations. In doing this, they provide a criticism to the rhetoric of boundless expansion which the discourse of Post-Fordist immateriality has updated from the colonialist-imperialist to the computer age.<sup>21</sup>

Labor, gender, and subjectivity are also foregrounded in the lesbian protagonist of Laura Mixon’s *Glass Houses* (1992), self-employed worker as “scavenger,” who uses, via a brain implant and telepresence technology, a robot (“golem”) as both perceptual system and work tool. In the on-the-job coupling, the parallel is established between the protagonist and the golem: her cyborgization

emphasizes her proximity to his tool status, and yet this proximity provides her with a better way to look at her own condition:

Then the linkware pulled me into Golem, and somewhere far away I felt my hand as if I'd dozed off. I-Golem looked down at the woman in my arms. It was Ruby-me, of course, and her-my eyes were closed, fluttering a little. She-I curled with her-my cheek against Golem's chassis.

She-I looked so young and vulnerable from the outside, not ugly and scrawny like me. (60-61)

Vulnerability, breaching the mask of hard-boiled cynicism, is the mark of her social subordination: in fact, more forcefully than in any other cyberpunk work, Ruby is a member of a new and emerging underclass (Harper 413), which appears to have begun to look at itself.

The agency of a subaltern group is the main concern of Marge Piercy's *He, She, and It* (1991), which fuses utopia and dystopia in the story of the "cyborg" (actually, a humanoid robot or android) created for self-defense by the utopian Jewish community of the Tikva freetown. Here, we are dealing with a world, which Piercy admits in a note is reminiscent of Gibson's (431), sharply polarized between the "corporate fortresses" in which the privileged live (and which have taken over the state institutions) and the immense, polluted slum of "the Glop," in which a global underclass lives a very miserable life of poverty and virtual "stimmies." The communities of computer-literate dissenters--always under threat of violent attacks from the corporations--are the last chance for an alternative, in their alliance with some forces within the Glop. If the cyborg is not a real cyborg, everyone else is:

everyone has plug-in technology embedded in their bodies, and one of the characters-- Nili, the woman-warrior from a mixed Palestinian-Jewish community from the former Israel--has an impressive quantity of bodily "augmentations" (cf. Fitting "Beyond"). The center of the plot are the relations among characters, chiefly among women (elaborating on both love and parental ties), whereas the robot Yod, whom engages in a love affair with the protagonist, aims at escaping his in-built programs, fully developing his abilities as expert system, but is bound by programming nevertheless-- which keeps it still in the position of a servant and sex-toy. His final act of self-destruction becomes an almost inevitable tragedy (cf. Christie 187), which the text connects with the story of Frankenstein. In a work which--in the story of Yod and in the story of the Prague Golem which one of the Tikva women tells him--foregrounds both the oppressiveness of imposed separations, and necessity for some of them. Tikva will have another chance for survival. But not before having dispelled its own last myth of purity: Yod may have saved their lives, but its underlying dream of a submissive instrument was wrong all the time. In seeing themselves as "all unnatural now[.] . . . all cyborgs," they had hoped to find in Yod "just a purer form of what we're all tending towards" (150). Still, he remains a thing, used as such, tragically unwilling "to be a conscious weapon" (410) and yet unable to be anything else. As the old scientist Malkah says, "Yod was a mistake. You're the right path, Nili. It's better to make people into partial machines than to create machines that feel and yet are still controlled like cleaning robots. The creation of a conscious being as any kind of tool--supposed to exist only to fill our needs--is a disaster" (4). In this call for selective appropriation of modernity, technology, and artificiality lies the strength of the best of the SF work which have addressed the metaphors of the cyborg and of virtual space.<sup>23</sup>

## NOTES:

<sup>1</sup> On the other hand, the male critic/writer Damon Knight has repeatedly rebuked Moore, in reviews and fiction, dystopically viewing cyborgization as necessarily a form of "sharp, sterile apartness" (cf. Robillard 34; A. H. Jones 207-08).

<sup>2</sup> Unfortunately, the collaborative sequels by McCaffrey have largely reverted to the official narrative of the instrumental cyborg; an exception is McCaffrey and Nye's *The Ship Who Won* (1994). In particular, McCaffrey and Stirling's *The City Who Fought* (1993) is a fairly standard example of militaristic SF. Cyborg maturity, indeed, must be negotiated each time anew, dependent as it is on the maturity of SF writers.

<sup>3</sup> In McIntyre's debut novel *The Exile Waiting* (1975) and in the later *Transition* (1990) plot complications are, if possible, heightened; in the latter the downbeat closing is avoided in the obvious anticipation of a sequel. Still, the central metaphor is, again, one of connection: the interplanetary virtual network is also a link among people, and not an undifferentiated space. In it, as in the material world, interpersonal conflicts, bonds, and asymmetries are present and not transcended.

<sup>4</sup> My allusion here is to Twain's *Innocents Abroad*, a text overtly alluded to in Acker's connection between past esthetic icons and death. *Empire* also includes references to *Huck Finn*.

<sup>5</sup> The best survey of Dick's pre-1975 work is Suvin, *Positions* 112-33; see also the volume by Robinson as well as the anthologies by Olander and Greenberg, and by Mullen et al.

<sup>6</sup> The bohemian attitude informs many of the protagonists in cyberpunk SF, and becomes the overriding stance in Dan Simmons's ironic *Hyperion* (1989), Mary Rosenblum's *Chimera* (1993), and above all Melissa Scott's *Dreamships* (1992).

Scott's novel, like Delany's *Nova*, features an additional stress on class (in the opposition between "yanquis" and "coolies") alongside a concern for gender and ethnicity. An early ironic version had been Fritz Leiber's *The Silver Eggheads* (1958). For a skeptical treatment of this theme, see Greg Bear's *Queen of Angels* (1990).

<sup>7</sup> Among SF critics, negative reactions to Haraway's cyborg are in the form of the "apocalyptic" anathema against the mass genre in the search of a sphere autonomous from hegemonic pressures: cf. S. Smith. On the other hand, the most forceful homage to Haraway reads her and SF's utopianism as a sort of last resort in a bleak cultural climate (Hollinger "Women"). For some excellent "Harawayan" readings of specific SF authors, cf. Genova (on Tiptree), Bonner, and Peppers (both on O. Butler), and Rayner (on Bear and *Star Trek*).

Also, I wish to take notice here that from within the SF subculture, the two British writers/critics Stableford and Langford are the authors the only futurological text which discusses the shape of cyborg and bioengineering technology to come in a non-teleological narrative filled with turns and conflicts. For SF, again, the future is not completely decided.

<sup>8</sup> Beside literary criticism, *Storming* includes an anthology of postmodern and cyberpunk texts. Among the twenty-six literary samples included (from Gibson to De Lillo and W. Burroughs), only three are by women (including one Native), and one by a Black author. There are also a few pages from postmodern theorists: Derrida, Jameson, Lyotard, Kroker.

<sup>9</sup> For another seminal example of techno-determinist criticism, cf. Porush "Cyberonauts." Accordingly, for a number of less relevant postmodernist critics Gibson and cyberpunk voice notions of acceptance and integration (Ben-Tov 178-82; Tomas

"Rituals"). In an explicit Tofflerian vein, cf. Slusser "Machine." and Caronia and Gallo's *Houdini e Faust*.

<sup>10</sup> The canonizing strategy has also been applied to other writers: cf. Laidlaw (on himself), Roberts (on Swanwick), and Thompson (on Sterling).

<sup>11</sup> For this reason, some critics find Gibson not postmodern enough, disappointingly also focusing on fragmentation and decenteredness as violent threats to personal identities (Sponsler "Cyberpunk"; cf. also Schroeder "Neu-Criticizing").

<sup>12</sup> Only Stockton pits an irreducible distinction between a reactionary male tradition and the feminist subversion of women's rewritings.

<sup>13</sup> Cyberpunk has also been praised for its openness regarding issues of sexual orientation (Stevens) as well as of race (Baruth), not without skeptical views about the latter (Delany "Black").

<sup>14</sup> Other cyberpunk tales focussing on class includes the short stories by McIntyre, McHugh, and Steele, as well as, more marginally, Michael Swanwick's *Stations of the Tide* (1992).

<sup>15</sup> The conjunction of troubling memories and technological brain implants is also central in Jeffrey Carver's *From a Changeling Star* (1988), Terry Bisson's *Johnny Mnemonic* (1995; the novelization of the film based on Gibson's story with the same title), and in Robert Charles Wilson's *Memory Wire* (1987).

<sup>16</sup> We should at least take notice here that the rhetoric of ghostliness and dematerialization has not been brought into being in the postmodern era, and that the relative bibliography would indeed be boundless; e.g., see the books by Berman, Lears, and Barcellona.

<sup>17</sup> For another interesting fiction juxtaposing the various discourse on the interfaces, but without Gibson's emphasis on economics, see Gregory Benford's *Great Sky River* (1987). Such an emphasis is at least minimally present in Joan Vinge's juvenile *Catspaw* (1988) and in John Varley's "Overdrawn at the Memory Bank" (1976).

<sup>18</sup> Another story of a woman character (a Black victim of racial and sexual abuse) forcibly trapped in virtual space who moves from pure rage to a search for connection is Starlin and Graziunas's *Lady El* (1992); on the novel, cf. Springer "Sex" (727-32).

<sup>19</sup> Rape is another unacceptable breach of boundaries alluded also in Lisa Mason's *Arachne* (1990), with its socketed woman protagonist fighting against the consequences of forcible collapse of her "perimeter."

<sup>20</sup> The resistance of natives to the expansiveness of dominant forces is also central to the Native woman novelist Misha's, *Red Spider, White Web* (1990), and in the Canadian writer Charles De Lint's *Svaha* (1989), both based on the image of the trickster. A similar subtext is also present in Lewis Shiner's *Frontera* (1984). In a more commercial context, Gene DeWeese's *Star Trek: The Next Generation* novel, *The Peacekeepers* (1988), foregrounds the different perceptive abilities of the Black cyborg Lt. Laforge as indispensable to the salvation of the starship's microcosm.

<sup>21</sup> For another, male-authored, tale on the pain of self-determination in the age of commodified personalities, see Michael Swanwick's *The Vacuum Flowers* (1987).

<sup>22</sup> This is, in a more playful variant, the idea in Rebecca Ore's *The Illegal Rebirth of Billy the Kid* (1991): the right to life and dignity of a self-aware robot built as part of a simulated environment.

<sup>23</sup> Other multicultural communities are central in McHugh's novels.

## A PROVISIONAL CONCLUSION

The intertext dealing with cyborgs and cyberspace is still giving rise to a quantitatively and qualitatively relevant body of fictional and nonfictional works; thus, my conclusion can only be a provisional one.

In writing this study, I have been moved by two goals. One intent has been to counter empirically and theoretically dubious claims about the innovativeness of the postmodern era with regard to its specifically technological concerns, in which the blurring of boundaries between organic and inorganic, literalized in the metaphors of the cyborg and virtual space and saluted with enthusiasm by critics, appears to be a distinctive feature of postmodernity. In this respect, my study has raised a few questions, revolving about both the newness and about the desirability of such blurrings, and about who specifically were their rhetorical beneficiaries.

Also, my goal was a reassessment of the specific weight of SF in contemporary culture. Literary postmodernism is at the same time a form of avantgarde culture which often appears to revel in formal sophistication and a form which poses itself as presenting self-conscious reflections about the state of present affairs which go far beyond the cultural ivory tower of the modernist age. On the other hand, SF has historically emerged in North America as part of twentieth-century mass culture; the question therefore was whether, and to what extent, its own trajectory to this "postmodern" convergence had developed along autonomous lines.

Thus, my first step had to be a preparation of some preliminary tools to be presupposed in an analysis of SF. Such an analysis, if aimed at a discussion of SF as also or first of all *literary discourse* and not as mere sociological document, had to focus on theories of mass culture as well as of SF. The institutional specificity of SF--

the existence of the self-conscious network of the "insiders"--is also the root of its own path to esthetic self-awareness. At the same time, this specificity marginalizes the genre in theories of mass culture usually centering either on wholesale vituperative attacks or on equally wholesale acceptance, denying precisely the possibility of critical--literary and political--discrimination from within the mass market and its audience. In this sense, the appeal of Gramsci's notion of hegemony was in his avoiding both the trap of "opium" theories and that of idealistic pluralism: within hegemony, mass culture and literature could do very little, but that minimum of critical stance is one of the prerequisite for social change, as a sign of critical awareness on the part of subordinate social groups. I have taken this theory as, among other things, a call for privileged attention to metaphors as part of the rhetoric of social discourse at large: if one is to seek for the subaltern reappropriation of hegemonic language, the twofold goal must be that of both analyzing the subaltern discourse, with its relative autonomy, and connecting it to the dominant culture in which it has emerged.

My strategy has therefore been at the same time synchronic--detecting patterns of recurrence--and diachronic--reconstructing the literary history of a metaphoric system. The metaphors of the interface (cyborgs and virtual space) were, in my hypothesis, privileged sites for the discussion of the relation between socially positioned persons and the collectivity in which they historically act, particularly in a genre that makes of the consistent construction of a fictional world its main overriding concern. In other words, this study has read stories about cyborgs and virtual space as allegories on the notions of democracy in North American twentieth-century mass society. Inevitably, this dissertation has been on the boundary between Cultural

Studies--the study of a mass literary genre--and American (and, very marginally, Canadian) Studies--the study of a "cultural symbology" emerged within a specific historical context.

The specific intertextuality of SF has here converged with the necessity for an intertextual exploration of the interface rhetoric. Therefore, even when faced with a textual cluster including some significant writer figures (e.g., Dick and Gibson), I have chosen not to make them the center of my analysis nor to consider the fictional and nonfictional intertext as ancillary to them. Rather, I have chosen to take the intertext *per se* as my target, acknowledging the literary and political value of a number of writers, but avoiding canonizing and dehistoricizing moves.

As the main hegemonic versions of the interface, I have taken the instrumental body and the virtual frontier. In the instrumental body, the blanket dismissals or celebration of the mass world address the issue of domination and authority. Both in fiction and in nonfiction, the instrumental cyborg is predicated on a view of society as monolith, and the instrumentalization of the body becomes an allegory of the manipulability of the collectivity. Here, the nonfiction is an overt emanation of a managerial class seeking technocratic, non-conflictual solutions to social issues. The cyborg appears as the technological supersession of social heterogeneity, either in terms of despotic domination or of a rhetoric of boundless free choice. The cyborg transforms all social heterogeneities into a manageable transparency, in which individualistic sovereignty can assert itself without fear of obstacles, literalizing the Emersonian notion of the expansive self. In this rhetoric, the SF examples appear much more critical, even within the limits of this politically dubious and indeed pernicious metaphor, when emerged from inside the SF insider's circle. Even the pulp

examples appear equally divided between celebratory and dystopian visions: at least two important cases from the formative years of the book market (by Heinlein and Bester) appear as ambitious searches for the establishment of a hegemonic consensus--beyond mere coercive enforcement--around the instrumental cyborg. Significantly, though, they both end up with worlds in which the superior personality assert himself, but the cyborg as such finds no place. Instead, both celebrations (including the militaristic ones) and dystopias coming from the non-SF market appear rigidly derivative from the nonfiction, often with an underlying nostalgic mood (e.g., in Wolfe), while the cyberpunk era proposes a dubious return to Social-Darwinist attitudes reminiscent of the imperialist era.

Imperialist images appear central to the discourse of the virtual frontier, which dominates contemporary rhetoric on cyberspace and the information superhighway. Both US nationalism and technological determinism converge in using the metaphor of virtuality as postmodern updating of classic expansionism. Boundlessness and *tabulae rasae* fostering endless new beginnings are hardly new concepts; nevertheless they receive a new thrust thanks also to the US appropriation of European postmodernist philosophers who appear in their turn moved also by fairly romanticized versions of "American" newness. What sustains both the instrumental cyborg and the virtual frontier is an *unshakeable faith in freedom as absolute freedom*--which in the US is of course a rhetoric with a long literary history--which revitalizes old dreams of material expansion. In fact, and often self-consciously, one implicit template for these hegemonic narratives is Melville's *Moby-Dick*, with virtuality as the equivalent of the ocean (and both as native-free spaces) and Ahab as the sole character entitled to a voice. Whereas most pre-1980 SF had presented the immaterial frontier as

a myth betrayed or frustrated. it is the cyberpunk era which presents the most consistent use of this trope.

Precisely from SF come also the most important challenges to the hegemonic narratives. in terms of connection instead of individualism. realization of limits instead of unbounded expansiveness. Here. the intertextuality of SF provides a background on which these dialogic narratives can emerge. It his beyond the scope of this study to explore precisely who is the specific readership of these versions of the genre: here. I have limited myself to stressing the importance of women's writing, while I have not gone beyond some informed speculations about the genre at large; nevertheless, in the literary analysis of rhetorical treatments, different patterns and (to use Raymond Williams's term) different structures of feelings from the hegemonic ones emerge. From the sentimental stories of women's cyborgs to 1960s figures such as Dick and Delany, to the cyberpunk of Gibson, Cadigan, and Piercy, these stories present polyphonically a conflict among possible interpretations of the interface. If the instrumental cyborg and the virtual frontier had been posed as teleological manifest destiny for all, these writers stage a confrontation among interests and points of view. Against views revolving around notions of bodiless evasion of social conflict, they stage precisely a conflict among conflicting discourses. Again notions of society as monolithically consensual or monolithically forced into submission, they assume a view of society as contested terrain for different forces. always open to the possibility of change. For them, as for Donna Haraway's feminist theory, the cyborg and the interface with cyberspace is precisely an allegory for such a heterogeneity, with an opening for an alliance among subaltern differences.

In this hope, in the awareness of the ongoing literary and theoretical intertext that this hope has sustained from well before the postmodern or Post-Fordist era, lies the importance of the interface metaphors, and the importance of the mass genre of SF which best of all has sustained them.

## WORKS CITED

### PRIMARY BIBLIOGRAPHY

#### **1.1: Science fiction works featuring cyborgs and/or virtual space**

- Acker, Kathy. *Empire of the Senseless*. 1988. New York: Grove, 1989.
- Alexander, David. *Nomad: Desert Fire*. New York: Gold Eagle, 1993.
- Armen, Margaret. "The Gamesters of Triskelion." *Star Trek 12*. Ed. James Blish and J. A. Lawrence. New York: Bantam, 1977. 1-37.
- Asimov, Isaac. "The Bicentennial Man." 1976. *Opus 200*. Boston: Houghton, 1979. 52-91.
- . "Segregationist." 1967. *The Complete Robot*. Garden City, NY: Doubleday, 1982. 127-32.
- , and Robert Silverberg. *The Positronic Man*. 1992. London: Pan, 1993.
- Barnes, Steven. *Gorgon's Child*. New York: Tor, 1989.
- Bass, T. J. *The Godwhale*. 1974. London: Methuen, 1975.
- Bear, Greg. *Eon*. 1985. New York: Tor, 1986.
- . *Queen of Angels*. 1990. New York: Warner, 1994.
- Benford, Gregory. *Great Sky River*. 1987. New York: Bantam, 1988.
- , and Mark O. Martin. *A Darker Geometry. Man-Kzin Wars VII*. Ed. Larry Niven. New York: Baen, 1995. 81-308.
- Berlyn, Michael. *The Integrated Man*. New York: Bantam, 1980.
- Besher, Alexander. *Rim*. 1994. London: Orbit, 1995.
- Bester, Alfred. *The Stars My Destination*. 1956. New York: Berkley, 1975.
- Bethke, Bruce. *Headcrash*. London: Orbit, 1995.

Bisson, Terry. *Johnny Mnemonic*. New York: Pocket, 1995.

Bova, Ben. *Death Dream*. New York: Avon, 1994.

---. *The Dueling Machine*. 1969. New York: Ace, 1978.

Bradbury, Ray. "The Veldt." Jacobson. 3-20.

Budrys, Algis. *Who?* 1959. New York: Ballantine, 1975.

Bunch, David R. *Moderan*. New York: Avon, 1971.

Cadigan, Pat. *Fools*. New York: Bantam, 1992.

---. *Mindplayers*. New York: Bantam, 1987.

---. "Pretty Boy Crossover." Jacobson. 222-34.

---. *Synners*. New York: Bantam, 1991.

Caidin, Martin. *Cyborg*. New York: Warner, 1972.

Card, Orson Scott. *Ender's Game*. 1985. New York: Tor, 1986.

---. *Speaker for the Dead*. 1986. New York: Tor, 1987.

Carey, Diane. *Descent*. New York: Pocket, 1993.

Carver, Jeffrey A. *From a Changeling Star*. New York: Bantam, 1988.

Clarke, Robert. *Less Than Human*. New York: Avon, 1986.

Coney, Michael G. *Friends Come in Boxes*. New York: DAW, 1973.

Cook, Robin. *Brain*. New York: Putnam, 1981.

Crichton, Michael. *The Terminal Man*. 1972. New York: Avon, 1982.

Cronin, Lee [pseud. of Gene L. Coon]. "Spock's Brain." *Star Trek 8*. Ed. James Blish.  
New York: Bantam, 1972. 1-30.

Crowley, John. *Engine Summer*. 1979. New York: Bantam, 1984.

Daley, Brian. *Tron*. New York: Ballantine, 1982.

- Dalmas. John. "Maitreya and the Cyborg." *War World. Vol. III: Sauron Dominion*. Ed. Jerry Pournelle. New York: Baen, 1991. 80-115.
- David, Peter. *Vendetta*. New York: Pocket, 1991.
- Delaney, Joseph H., and Marc Stiegler. *Valentina: Soul in Sapphire*. New York: Baen, 1984.
- Delany, Samuel R. *Babel 17*. 1966. London: Sphere, 1977.
- . *Nova*. 1968. London: Gollancz, 1986.
- . *Stars in My Pocket Like Grains of Sand*. 1984. New York: Bantam, 1985.
- De Lint, Charles. *Svaha*. New York: Ace, 1989.
- Del Rey, Lester. "Reincarnate." *Astounding Science-Fiction* 25 (1940): 100-02.
- DeWeese, Gene. *The Peacekeepers*. New York: Pocket, 1988.
- Dick, Philip K. *Do Androids Dream of Electric Sheep?* 1968. London: Granada, 1982.
- . *Dr. Bloodmoney*. 1965. London: Arrow, 1987.
- . *A Maze of Death*. 1970. London: Grafton, 1986.
- . *The Three Stigmata of Palmer Eldritch*. 1964. Harmondsworth: Penguin, 1973.
- . *Ubik*. 1969. London: Granada, 1984.
- Dietz, William C. *Bodyguard*. New York: Ace, 1984.
- . *Prison Planet*. New York: Ace, 1989.
- Dillard, J. M. *Star Trek: First Contact*. New York: Pocket, 1997.
- Disch, Thomas M. "The Sightseers." 1965. *The Early Science Fiction Stories of Thomas M. Disch*. Boston: Gregg, 1977. 160-72.
- Dunn, J.R. *This Side of Judgment*. New York: Avon, 1994.
- Effinger George A. *The Exile Kiss*. New York: Doubleday, 1991.
- . *A Fire in the Sun*. New York: Bantam, 1990.

- . *When Gravity Fails*. New York: Bantam, 1987.
- Ellis, A. C. *Worldmaker*. New York: Ace, 1985.
- Esrbach, Lloyd A. *Tyrant of Time*. 1932. Reading, PA: Fantasy P, 1955.
- Flagg, Francis. "The Machine Man of Ardathia." *The History of the Science Fiction Magazine*. Vol. I. Ed. Michael Ashley. London: NEL, 1976. 68-81.
- Gallun, Raymond Z. "Mind over Matter." *Astounding Stories* 14 (1935): 116-23.
- Galouye, Dan. *Simulacron-3*. New York: Bantam, 1964.
- Gear, W. Michael. *The Warriors of Spider*. New York: DAW, 1988.
- . *The Way of Spider*. New York: DAW, 1989.
- . *The Web of Spider*. New York: DAW, 1989.
- Gerrold, David. *The Space Skimmer*. New York: Ballantine, 1972.
- Gibson, William. *Burning Chrome*. 1986. New York: Ace, 1987.
- . "Burning Chrome." 1982. *Burning*. 168-91.
- . *Count Zero*. 1986. London: Grafton, 1987.
- . *Idoru*. 1996. London: Penguin, 1997.
- . "Johnny Mnemonic." 1981. *Burning*. 1-22.
- . *Mona Lisa Overdrive*. 1987. London: Grafton, 1988.
- . *Neuromancer*. 1984. London: Grafton, 1987.
- . "The Winter Market." 1986. *Burning*. 117-41.
- . *Virtual Light*. New York: Bantam, 1993.
- Goulart, Ron. *The Cyborg King*. New York: Playboy, 1981.
- . *The Tin Angel*. New York: Daw, 1973.
- . *The Wicked Cyborg*. New York: DAW, 1978.
- Green, Joseph. *The Mind Behind the Eye*. 1971. New York: DAW, 1972.

- Haldeman, Joe. *The Forever War*. 1974. New York: Ballantine, 1980.
- Hamilton, Edmund. *Calling Captain Future*. 1940. New York: Popular Library, 1967.
- . *Captain Future and the Space Emperor*. 1939. New York: Popular Library, 1967.
- . *Captain Future's Challenge*. 1940. New York: Popular Library, 1967.
- . "The Comet Doom." *Amazing Stories* 2 (1928): 927-40.
- Harrison, Harry, and Marvin Minsky. *The Turing Option*. 1992. New York: Questar, 1993.
- Hawke, Simon. *Psychodrome*. New York: Ace, 1987.
- Heinlein, Robert A. *The Moon Is a Harsh Mistress*. 1966. London: NEL, 1974.
- . *Starship Troopers*. 1959. New York: Ace, 1987.
- . "Waldo." 1940. *Waldo & Magic Inc*. London: Pan, 1979. 5-109.
- Herbert, Frank. *The Eyes of Heisenberg*. 1966. New York: Berkley, 1984.
- Hjortsberg, William. *Gray Matters*. 1971. London: Sphere, 1974.
- Jacobson, Karie, ed. *Simulations*. New York: Citadel, 1993.
- Jahn, Mike. *The Secret of Bigfoot Pass*. New York: Berkley, 1976.
- Jeter, K. W. *Dr. Adder*. 1984. London: Grafton, 1987.
- . *Farewell Horizontal*. 1989. London: Grafton, 1990.
- . *The Glass Hammer*. 1985. New York: Signet, 1985.
- . *Madlands*. New York: St. Martin's, 1991.
- Jones, Neil R. *The Planet of the Double Sun*. 1931-32. New York: Garland, 1975.
- Jones, Raymond F. *The Cybernetic Brains*. 1962. New York: Paperback, 1969.
- Kadrey, Richard. *Metrophage*. New York: Ace, 1988.
- Keller, David H. "The Eternal Professors." *Amazing Stories* 4 (1929): 414-21.
- Kessel, John, and James P. Kelly. *Freedom Beach*. New York: St. Martin's, 1985.

- Knight, Damon. "Ask Me Anything." 1951. *In Deep*. New York: Ballantine, 1972. 56-82.
- Koontz, Dean R. *Demon Seed*. 1973. London: Corgi, 1977.
- Kostkos, Henry J. "The Emperor's Heart." *Astounding Stories* 13 (1934): 93-103.
- Kubasik, Christopher. *Battletech: Ideal War*. New York: Roc, 1993.
- Laidlaw, Mark. *Dad's Nuke*. New York: Bantam, 1985.
- . *Kalifornia*. New York: Bantam, 1993.
- Leiber, Fritz. "Coming Attraction." 1950. *The Best of Fritz Leiber*. New York: Ballantine, 1974. 109-123.
- . *The Silver Eggheads*. 1958. London: NEL, 1966.
- . *A Specter Is Haunting Texas*. New York: Walker, 1969.
- Littell, Jonathan. *Bad Voltage*. New York: Signet, 1989.
- MacGregor, Loren J. *The Net*. New York: Ace, 1987.
- Maddox, Tom. *Halo*. 1991. London: Legend, 1992.
- Manning, Laurence. *The Man Who Awoke*. 1933. New York: Ballantine, 1975.
- Mason, Lisa. *Arachne*. 1990. New York: Avon, 1992.
- McCaffrey, Anne. *The Ship Who Sang*. 1969. New York: Ballantine, 1990.
- , and Margaret Ball. *Partnership*. New York: Baen, 1992.
- , and Mercedes Lackey. *The Ship Who Searched*. New York: Baen, 1992.
- , and Judy Lynn Nye. *The Ship Who Won*. 1994. London: Orbit, 1995.
- , and S. M. Stirling. *The City Who Fought*. 1993. New York: Baen, 1994.
- McElroy, Joseph. *Plus*. 1976. New York: Carroll, 1987.
- McHugh, Maureen F. *China Mountain Zhang*. 1992. London: Orbit, 1995.
- . *Half the Day is Night*. 1994. New York: Tor, 1996.

---. "Nekropolis." *Asimov's* 18.4-5 (1994): 134-65.

McIntyre, Vonda N. *The Exile Waiting*. 1975. New York: Fawcett, 1976.

---. "Steelcollar Worker." 1992. Jacobson. 152-71.

---. *Superluminal*. 1983. New York: Pocket, 1984.

---. *Transition*. New York: Bantam, 1990.

McKinney, Jack. *Robotech: The Final Nightmare*. New York: Ballantine, 1987.

Misha. *Red Spider, White Web*. Scotforth: Morrigan, 1990.

Mixon, Laura J. *Glass Houses*. New York: Tor, 1992.

Moore, C. L. "No Woman Born." 1944. Scortia and Zebrowski. 63-118.

Morrow, James. *The Continent of Lies*. 1984. New York: Baen, 1985.

Naha, Ed. *Robocop 2*. New York: Jove, 1990.

Niven, Larry. "Becalmed in Hell." 1965. *All the Myriad Ways*. New York: Ballantine, 1975. 167-81.

---. *The Long Arm of Gil Hamilton*. 1976. New York: Ballantine, 1984.

---, and Steven Barnes. *Achilles' Choice*. 1991. New York: Tor, 1992.

Odle, E. V. *The Clockwork Man*. London: Heinemann, 1923.

Odom, Mel. *Lethal Interface*. New York: Roc, 1992.

---. *Stalker Analog*. New York: Roc, 1993.

O'Donnell, Kevin. *Mayflies*. New York: Berkley, 1979.

O'Neill, Pamela, and Kim Mohan. *Cyborg Commando. Book 1: Planet in Peril*. New York: Ace, 1987.

---. *Cyborg Commando. Book 2: Chase into Space*. New York: Ace, 1988.

Ore, Rebecca. *The Illegal Rebirth of Billy the Kid*. New York: Tor, 1991.

Osborn, David. *Heads*. New York: Bantam, 1985.

- Piercy, Marge. *He, She and It*. 1991. New York: Fawcett, 1993.
- . *Woman on the Edge of Time*. 1976. New York: Fawcett, 1988.
- Pohl, Frederick. *Beyond the Blue Event Horizon*. 1980. London: Futura, 1985.
- . *Man Plus*. 1976. New York: Baen, 1994.
- . "The Tunnel Under the World." 1954. *The Best of Frederick Pohl*. Ed. Lester Del Rey. New York: Taplinger, 1975. 8-35.
- , and C. M. Kornbluth. *Wolfbane*. 1959. New York: Ballantine, 1969.
- Pournelle, Jerry, et al., eds. *Warworld. Vol. I: The Burning Eye*. New York: Baen, 1988.
- Robinson, Spider. *Mindkiller*. 1982. New York: Berkley, 1983.
- Rosenblum, Mary. *Chimera*. New York: Ballantine, 1993.
- Rucker, Rudy. *Freeware*. 1997. New York: Avon, 1998.
- . *Software*. 1982. *Live Robots*. New York: Avon, 1994. 1-167.
- . *Wetware*. 1988. *Live Robots*. New York: Avon, 1994. 171-357.
- Russ, Joanna. *The Female Man*. 1975. Boston: Beacon, 1986.
- Russo, Richard P. *Destroying Angel*. New York: Ace, 1992.
- Sawyer, Robert J. *The Terminal Experiment*. New York: Harper, 1995.
- Scortia, Thomas N. "Sea Change." 1956. *Caution! Inflammable!* New York: Bantam, 1976. 4-18.
- , and George Zebrowski, eds. *Human-Machines: An Anthology of Short Stories about Cyborgs*. New York: Vintage, 1975.
- Scott, Melissa. *Dreamships*. 1992. New York: Tor, 1996.
- Shatner, William. *Teklords*. 1991. New York: Ace, 1992.
- . *Tek Secret*. 1993. New York: Ace, 1994.

- . *Tek Vengeance*. New York: Ace, 1993.
- . *Tekwar*. 1989. New York: Ace, 1990.
- Shiner, Lewis. *Frontera*. New York: Baen, 1984.
- Shirley, John. *Eclipse*. 1985. New York: Popular Library, 1987.
- . *Eclipse Corona*. New York: Popular Library, 1990.
- . *Eclipse Penumbra*. New York: Popular Library, 1988.
- Silverberg, Robert. *The Time Hoppers*. 1967. New York: Belmont, 1974.
- . ed. *Time Gate*. New York: Baen, 1989.
- Simmons, Dan. *Hyperion*. 1989. New York: Bantam, 1990.
- Siodmak, Curt. *Donovan's Brain*. 1944. London: Corgi, 1960.
- Skal, David J. *Antibodies*. 1988. New York: Worldwide, 1989.
- . *Scavengers*. New York: Pocket, 1980.
- Sladek, John. *The Muller-Fokker Effect*. 1970. New York: Carroll, 1990.
- Smith, Cordwainer [pseud. of Paul Linebarger]. *The Best of Cordwainer Smith*. Ed. J. J. Pierce. New York: Ballantine, 1975.
- . "The Burning of the Brain." 1955. *Best*. 84-94.
- [with Genevieve Linebarger]. "The Lady Who Sailed *The Soul*." 1960. *Best*. 40-66.
- . "Scanners Live in Vain." 1950. *Best*. 1-39.
- Spinrad, Norman. *Deus X*. New York: Bantam, 1992.
- . *Little Heroes*. 1987. New York: Bantam, 1992.
- . *The Void Captain's Tale*. 1983. New York: Pocket, 1984.
- . *A World Between*. New York: Pocket, 1979.
- Starlin, Jim, and Diana Graziunas. *Lady El*. New York: Roc, 1992.
- Steele, Allen. "Whinin' Boy Blues." *Asimov's* 18.2 (1994): 76-91.

- Stephenson, Neal. *The Diamond Age*. 1995. New York: Bantam, 1996.
- . *Snow Crash*. 1992. New York: Bantam, 1993.
- Sterling, Bruce. *The Artificial Kid*. 1980. New York: Ace, 1987.
- . "Cicada Queen." 1983. *Crystal Express*. New York: Ace, 1990. 47-84.
- . *Heavy Weather*. 1994. London: Phoenix, 1995.
- . *Islands in the Net*. 1988. New York: Ace, 1989.
- . *Schismatrix*. 1985. Harmondsworth: Penguin, 1986.
- . "Swarm." 1982. *Crystal Express*. New York: Ace, 1990. 3-28.
- , ed. *Mirrorshades*. 1986. New York: Ace, 1988.
- Stine, G. Harry. *Warbots # 2: Operation Steel Band*. New York: Pinnacle, 1988.
- . *Warbots # 4: Sierra Madre*. New York: Pinnacle, 1988.
- . *Warbots # 7: Operation Iron Fist*. New York: Pinnacle, 1989.
- Stirling, S. M., and David Drake. *The Chosen*. New York: Baen, 1996.
- . *The Hammer*. New York: Baen, 1992.
- . *The Steel*. New York: Baen, 1993.
- Swanwick, Michael. *Stations of the Tide*. 1991. New York: Avon, 1992.
- . *The Vacuum Flowers*. New York: Arbor, 1987.
- Thomas, Quentin. *Chains of Light*. New York: Roc, 1992.
- Thomas, Thomas T. *Crygender*. New York: Baen, 1992.
- Tiptree, James, Jr. [pseud. of Alice B. Sheldon]. "The Girl Who Was Plugged In."  
*New Dimensions III*. Ed. Robert Silverberg. New York: Signet, 1974. 52-84.
- Tuttle, Lisa, and George R. R. Martin. *Windhaven*. New York: Bantam, 1981.
- Van Vogt, A. E. *The World of Null-A*. 1948. New York: Berkley, 1974.
- Varley, John. *Blue Champagne*. New York: Berkley, 1986.

- . "Overdrawn at the Memory Bank." 1976. *The Persistence of Vision*. New York: Berkley, 1984. 209-40.
- . *Steel Beach*. 1992. New York: Ace, 1993.
- Vinge, Joan D. *Catspaw*. 1988. New York: Popular Library, 1989.
- . "The Tin Soldier." 1974. *More Women of Wonder*. Ed. Pamela Sargent. New York: Vintage, 1976. 214-78.
- Vinge, Vernor. *True Names*. New York: Baen, 1987.
- Watt-Evans, Lawrence. *The Cyborg and the Sorcerers*. New York: Ballantine, 1982.
- Williams, Walter Jon. *Angel Station*. 1989. New York: Tor, 1990.
- . *Aristoi*. New York: Tor, 1993.
- . *Elegy for Angels and Dogs*. *Asimov's* (May 1990): 6-109.
- . *Hardwired*. 1986. New York: Tor, 1987.
- . *Voice of the Whirlwind*. 1987. New York: Tor, 1988.
- Willis, Maud. *The Bionic Woman: A Question of Life*. London: Star, 1977.
- . *The Bionic Woman: Double Identity*. London: Star, 1976.
- Wilson, Robert Charles. *Memory Wire*. Toronto: Bantam, 1987.
- Wolfe, Bernard. *Limbo*. New York: Ace, 1952.
- Wu, William F. *Cyborg*. New York: Ace, 1987.
- Zelazny, Roger. *The Dream Master*. 1966. New York: Ace, 1981.

**1.2: Nonfiction wholly or partly discussing cyborgs and/or virtual space**

- Alaimo, Stacy. "Cyborg and Ecofeminist Interventions: Challenges for an Environmental Feminism." *Feminist Studies* 20 (1994): 133-52.
- Balsamo, Anne. *Technologies of the Gendered Body*. Durham, NC: Duke UP, 1996.
- Baudrillard, Jean. *Le crime parfait*. Paris: Galilée, 1995.
- . "The Ecstasy of Communication." *The Anti-Aesthetic*. Ed. Hal Foster. Seattle: Bay , 1983. 126-34.
- . *Simulations*. Trans. Paul Foss et al. New York: Semiotext(e), 1983.
- . *The Transparency of Evil*. Trans. James Benedict. London: Verso, 1993.
- Benedikt, Michael, ed. *Cyberspace: First Steps*. Cambridge, MA: MIT P, 1991.
- . "Introduction." Benedikt. 1-25.
- Bernal, J. D. *The World, the Flesh, and the Devil*. London: Kegan, 1929.
- Brand, Stewart. *The Media Lab: Inventing the Future at MIT*. New York: Viking, 1987.
- Bush, Vannevar. "As We May Think." *Atlantic Monthly* 176 (1945): 101-08.
- Carrel, Alexis. *Man, the Unknown*. New York: Harper, 1935.
- Clarke, Arthur C. *Profiles of the Future*. New York: Harper, 1963.
- Cole, Dandridge. *Beyond Tomorrow: The Next 50 Years in Space*. Amherst, WI: Amherst P, 1965.
- Connor, James A. "Strategies for Hyperreal Travellers." *Science-Fiction Studies* 59 (1993): 69-79.
- Cooley, Charles H. *Social Organizations: A Study of the Larger Mind*. 1909. New Brunswick, NJ: Transaction, 1983.

- Craik, Kenneth J. W. "Theory of the Human Operator in a Control System." *Cybernetics*. Ed. C. R. Evans and A. D. J. Robertson. London: Butterworths, 1968. 121-39.
- Crewe, Jonathan. "Transcoding the World: Haraway's Postmodernism." *Signs* 22 (1997): 891-905.
- Csicsery-Ronay, Istvan. "The SF of Theory: Baudrillard and Haraway." *Science-Fiction Studies* 18 (1991): 387-403.
- Daly, Mary. *Gyn/Ecology*. Boston: Beacon, 1978.
- Davis, Erik. "Techgnosis: Magic, Memory, and the Angels of Information." *South Atlantic Quarterly* 92 (1993): 585-616.
- De Landa, Manuel. *War in the Age of Intelligent Machines*. New York: Zone, 1991.
- Deleuze, Gilles, and Felix Guattari. *Anti-Oedipus*. Trans. Robert Hurley et al. New York: Viking, 1977.
- . *A Thousand Plateaus*. Trans. Brian Massumi. Minneapolis: U of Minnesota P, 1987.
- Delgado, José. *Physical Control of the Mind: Toward a Psychocivilized Society*. New York: Harper, 1969.
- Dery, Mark. *Escape Velocity: Cyberculture at the End of the Century*. London: Hodder, 1995.
- Drexler, K. Eric. *Engines of Creation: The Coming Era of Nanotechnology*. Garden City, NY: Doubleday, 1986.
- . *Unbounding the Future: The Nanotechnology Revolution*. New York: Morrow, 1991.
- Dublin, Max. *Futurehype*. Markham, ON: Penguin, 1990.

- Ellul, Jacques. *The Technological Society*. 1954. Trans. John Wilkinson. New York: Vintage, 1964.
- Ettinger, Robert C. W. *Man into Superman*. New York: St. Martin's, 1972.
- . *The Prospect of Immortality*. Garden City, NY: Doubleday, 1964.
- Ferkiss, Victor C. *Technological Man*. New York: Braziller, 1969.
- Fjermedal, Grant. *The Tomorrow Makers: A Brave New World of Living Brain Machines*. Redmond, WA: Tempus, 1986.
- Flaherty, Bernard E. "Introduction." *Psychophysiological Aspects of Space Flight*. Ed. Bernard E. Flaherty. New York: Columbia UP, 1961. 1-5.
- Freud, Sigmund. *Civilization and Its Discontents*. Trans. James Strachey. New York: Norton, 1961.
- Gates, Bill. *The Road Ahead*. New York: Viking, 1994.
- Gray, Chris H. "The Cyborg Soldier: The US Military and the Post-Modern Warrior." *Cyborg Worlds: The Military Information Society*. Ed. Les Levidow and Kevin Robins. London: Free Association P, 1989. 43-71.
- Hafner, Katie, and John Markoff. *Cyberpunk: Outlaws and Hackers on the Computer Frontier*. New York: Simon, 1991.
- Hakim Bey [pseud. of Peter L. Wilson]. *TAZ: The Temporary Autonomous Zone: Ontological Anarchy, Poetic Terrorism*. New York: Autonomedia, 1991.
- Halacy, David S. *Cyborg: Evolution of the Superman*. New York: Harper, 1965.
- Halberstam, Judith. "Automating Gender: Postmodern Feminism in the Age of the Intelligent Machine." *Feminist Studies*. 17 (1991): 439-60.

- Haraway, Donna. "Cyborgs at Large: Interview with Donna Haraway." *Technoculture*.  
Ed. Constance Penley and Andrew Ross. Minneapolis: U of Minnesota P,  
1991. 1-20.
- . *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New  
York: Routledge, 1989.
- . "The Promises of Monsters." *Cultural Studies*. Ed. Lawrence Grossberg et al. New  
York: Routledge, 1993. 295-337.
- . *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge,  
1991.
- Hardt, Michael, and Antonio Negri. *Labor of Dionysus: A Critique of the State-Form*.  
Minneapolis: U of Minnesota P, 1994.
- Hayles, N. Katherine. "Boundary Disputes: Homeostasis, Reflexivity and the  
Foundation of Cybernetics." *Markley* 11-37.
- . *Chaos Bound: Orderly Disorder in Contemporary Literature and Science*. Ithaca,  
NY: Cornell UP, 1990.
- . "The Materiality of Informatics." *Configurations* 1 (1992): 147-70.
- . "Postmodern Parataxis: Embodied Texts, Weightless Information." *American  
Literary History* 2 (1990): 394-421.
- Heim, Michael. *The Metaphysics of Cyberspace*. New York: Oxford UP, 1993.
- Helsel, Sandra K., and Judith P. Roth, eds. *Virtual Reality: Theory, Practice, Promise*.  
Westport, CT: Meckler, 1986.
- Henry, James P. *Biomedical Aspects of Space Flight*. New York: Holt, 1966.
- Herf, Jeffrey. *Reactionary Modernism*. Cambridge: Cambridge UP, 1984.

- Jones, Steven. "A Sense of Space: Virtual Reality, Authenticity, and the Aural." *Critical Studies in Mass Communication* 10 (1993): 238-52.
- Kelley, Robert T. "A Maze of Twisty Little Passages. All Alike: Aesthetics and Teleology in Interactive Computer Fictional Environments." *Science-Fiction Studies* 59 (1993): 52-68.
- Kelly, Kevin. *Out of Control*. Reading, MA: Addison-Wesley, 1994.
- Kester, Grant. "Out of Sight Is Out of Mind: The Imaginary Space of Postindustrial Culture." *Social Text* 35 (1993): 72-93.
- Kidder, Tracy. *The Soul of a New Machine*. New York: Avon, 1981.
- Kline, Nathan S., and Manfred Clynes. "Drugs, Space, and Cybernetics: Evolution to Cyborgs." *Psychophysiological Aspects of Space Flight*. Ed. Bernard E. Flaherty. New York: Columbia UP, 1961. 345-71.
- Kroker, Arthur, and Marilouise Kroker. "Theses on the Disappearing Body in the Hyper-Modern Condition." *Body Invaders: Panic Sex in America*. Ed. Arthur Kroker and Marilouise Kroker. Montreal: New World Perspectives, 1987. 20-34.
- , and Michael Weinstein. *Data Trash: The Theory of the Virtual Class*. New York: St.Martin's, 1994.
- Krueger, Myron. *Artificial Reality*. Reading, MA: Addison-Wesley, 1983.
- Landow, George P. *Hypertext*. Baltimore: Johns Hopkins UP, 1992.
- Laurel, Brenda. "Art and Activism in VR." *Wide Angle* 15 (1993): 13-21.
- . *Computers as Theater*. Menlo Park, CA: Addison-Wesley, 1991.
- , ed. *The Art of Human-Computer Interface Design*. Reading, MA: Addison-Wesley, 1990.

- Leary, Timothy. *Chaos and Cyberculture*. Ed. Michael Horowitz. Berkeley, CA: Ronin, 1995.
- Levidow, Les, and Kevin Robins. "Towards a Military Information Society?" *Cyborg Worlds: The Military Information Society*. London: Free Association P, 1989. 159-77.
- Lévy, Pierre. *L'intelligence collective: Pour une anthropologie du cyberspace*. Paris: La Découverte, 1994.
- . *Qu'est ce que le virtuel*. Paris: La Découverte, 1996.
- Levy, Steven. *Hackers: Heroes of the Computer Revolution*. Garden City, NY: Doubleday, 1984.
- Licklider, J. C. R., "Man-Machine Symbiosis." *IRE Transactions on Human Factors in Electronics* 1 (1960): 4-11.
- London, Perry. *Behavior Control*. New York: Harper, 1969.
- Maldonado, Tomás. *Reale e virtuale*. Milan: Feltrinelli, 1992.
- Markley, Robert, ed. *Virtual Realities and Their Discontents*. Baltimore: Johns Hopkins UP, 1996.
- Mazlish, Bruce. *The Fourth Discontinuity: The Co-Evolution of Humans and Machines*. New Haven, CT: Yale UP, 1993.
- McLuhan, Marshall. *The Gutenberg Galaxy*. 1962. New York: Signet, 1969.
- . *Understanding Media: The Extensions of Man*. 1964. New York: Signet, 1966.
- Moravec, Hans. *Mind Children: The Future of Robot and Human Intelligence*. Cambridge, MA: Harvard UP, 1988.
- Morse, Margaret. "What Do Cyborgs Eat?: Oral Logic in an Information Society." *Discourse* 16 (1994): 86-123.

- Negroponte, Nicholas. *Being Digital*. New York: Vintage, 1995.
- Nelson, Ted. *Computer Lib/Dream Machines*. Redmond, WA: Microsoft P, 1987.
- "The New Biology." *UCLA Law Review* 15 (1968): 267-550.
- Novak, Marcos. "Liquid Architectures in Cyberspace." *Benedikt*. 225-54.
- Page, R. M. "Man-Machine Coupling--2012 A.D." *Proceedings of the IRE* 50 (1962): 613-14.
- Perniola, Mario. *Il sex appeal dell'inorganico*. Turin: Einaudi, 1994.
- Peters, John D. "Satan and Savior: Mass Communication in Progressive Thought." *Critical Studies in Mass Communication* 6 (1989): 247-63.
- Pheasant, Stephen. *Bodyspace: Anthropometry, Ergonomics, and Design*. London: Taylor, 1986.
- Pines, Maya. *The Brain Changers: Scientists and the New Mind Control*. New York: Harcourt, 1973.
- Quéau, Philippe. *Metaxu: Theorie de l'art intermédiaire*. Lyon: Champ Vallon, 1988.
- . *Vertues du virtuel*. Lyon: Champ Vallon, 1994.
- Rheingold, Howard. *The Virtual Comunity: Homesteading on the Electronic Frontier*. Reading, MA: Addison-Wesley, 1993.
- . *Virtual Reality*. New York: Summit, 1991.
- Riesman, David, et al. *The Lonely Crowd*. Garden City, NY: Doubleday, 1953.
- Rorvik, David M. *As Man Becomes Machine: The Evolution of the Cyborg*. Garden City, NY: Doubleday, 1971.
- . *Brave New Baby: Promise and Peril of the Biological Revolution*. Garden City, NY: Doubleday, 1971.

- Ross, Andrew. *No Respect: Intellectuals and Popular Culture*. New York: Routledge, 1989.
- . *Strange Weather: Culture, Science and Technology in the Age of Limits*. London: Verso, 1992.
- Roszak, Theodore. *Where the Wasteland Ends*. Garden City, NY: Doubleday, 1973.
- Rucker, Rudy, et al., eds. *Mondo 2000: A Reader's Guide to the New Edge*. New York: Harper, 1994.
- Rushkoff, Douglas. *Cyberia: Life in the Trenches of Hyperspace*. New York: Harper, 1994.
- Scelsi, Raffaele, ed. *Cyberpunk: Antologia di testi politici*. Milan: Shake, 1990.
- Seltzer, Mark. *Bodies and Machines*. New York: Routledge, 1992.
- Schmeck, Harold M. *The Semi-Artificial Man: A Dawning Revolution in Medicine*. New York: Walker, 1965.
- Singleton, W. T. *Introduction à l'ergonomie*. Geneve: Organisation Mondiale de la Santé, 1974.
- Sobchack, Vivian. "New Age Mutant Ninja Hackers: Reading *Mondo 2000*." *South Atlantic Quarterly* 92 (1993): 569-84.
- Stableford, Brian, and David Langford. *The Third Millennium*. London: Methuen, 1985.
- Stelarc. "Prosthetics, Robotics, and Remote Existence: Post-Evolutionary Strategies." *SISEA: Proceedings*. Ed. Wim van der Plas. Groningen: SISEA, 1990. 227-36.
- Stenger, Nicole. "Mind Is a Leaking Rainbow." *Benedikt*. 49-58.
- Sterling, Bruce. *The Hacker Crackdown: Law and Disorder on the Electronic Frontier*. 1992. London: Penguin, 1994.

- Sterling, Bruce. "Preface." *Mirrorshades*. Ed. Bruce Sterling. 1986. New York: Ace. 1988. ix-xvi.
- Stine, G. Harry. *The Silicon Gods*. New York: Dell, 1984.
- Stoll, Clifford. *Silicon Snake Oil*. New York: Doubleday, 1994.
- Terranova, Tiziana. "Posthuman Unbounded: Artificial Evolution and High-Tech Production." *Future Natural*. Ed. George Robertson et al. London: Routledge, 1996. 165-80.
- Theweleit, Klaus. *Male Fantasies*. Minneapolis: U of Minnesota P, 1987-89.
- Toffler, Alvin. *Future Shock*. 1970. New York: Bantam, 1971.
- . *The Third Wave*. 1980. London: Pan, 1981.
- Valenstein, Elliot S. *Brain Control*. New York: Wiley, 1973.
- Vertov, Dziga. *Kino-Eye*. Trans. Kevin O'Brien. Berkeley: U of California P, 1984.
- Virilio, Paul. *Esthétique de la disparition*. Paris: Galilee, 1989.
- . *La machine de vision*. Paris: Galilee, 1988.
- . *Speed and Politics*. Trans. Mark Polizzotti. New York: Semiotext(e), 1986.
- . *War and Cinema: The Logistics of Perception*. Trans. Patrick Camiller. London: Verso, 1989.
- Wiener, Norbert. *God & Golem, Inc.* London: Chapman, 1964.
- . *The Human Use of Human Beings*. 1950. Garden City, NY: Doubleday, 1954.
- Wilson, Rob. "Technoeuphoria and the Discourse of the American Sublime." *Boundary 2* 19 (1992): 205-29.
- Woolley, Benjamin. *Virtual Worlds*. London: Blackwell, 1992.
- Zolla, Elemire. *Uscite dal mondo*. Milan: Adelphi, 1992.

## SECONDARY BIBLIOGRAPHY

### 2.1: Criticism discussing works from the Primary Bibliography

(See also, from Section 1.2. Balsamo, Davis, Dery, Ross *Weather*, and all entries by Haraway and by Hayles.)

- Ash, Brian. *The Visual Encyclopedia of Science Fiction*. New York: Harmony, 1977.
- Ayres, Susan. "The 'Straight Mind' in Russ's *The Female Man*." *Science-Fiction Studies* 22 (1995): 22-34.
- Barbour, Douglas. *Words Out of Worlds: The SF Novels of Samuel R. Delany*. Frome, UK: Bran's Head, 1979.
- Barter, Martha A. "The (Science-Fiction) Reader and the Quantum Paradigm: Problems in Delany's *Stars in My Pockets like Grains of Sand*." *Science-Fiction Studies* 17 (1990): 324-39.
- . *The Way to Ground Zero: The Atomic Bomb in American Science Fiction*. New York: Greenwood, 1988.
- Baruth, Philip E. "The Excesses of Cyberpunk: Why No One Mentions Race in Cyberspace." *Into Darkness Peering: Race and Color in the Fantastic*. Ed. Elisabeth A. Leonard. Westport, CT: Greenwood, 1997. 105-18.
- Ben-Tov, Sharona. *The Artificial Paradise: Science Fiction and American Reality*. Ann Arbor: U of Michigan P, 1995.
- Biddick, Kathleen. "Humanist History and the Haunting of Virtual Worlds: Problems of Memory and Rememoration." *Genders* 18 (1993): 47-66.
- Bier, Jesse. "The Masterpiece in Science Fiction: Power or Parody?" *Journal of Popular Culture* 12 (1979): 604-10.

- Booker, M. Keith. "Woman on the Edge of a Genre: The Feminist Dystopias of Marge Piercy." *Science-Fiction Studies* 21 (1994): 337-50.
- Brande, David. "The Business of Cyberpunk: Symbolic Economy and Ideology in William Gibson." *Markley*. 79-106.
- Brizzi, Mary T. *Anne McCaffrey*. Mercer Island, WA: Starmont, 1986.
- Broderick, Damien. *Reading by Starlight: Postmodern Science Fiction*. London: Routledge, 1995.
- Brooke-Rose, Christine. *A Rhetoric of the Unreal*. Cambridge: Cambridge UP, 1981.
- Bukatman, Scott. "Postcards from the Posthuman Solar System." *Science-Fiction Studies* 18 (1991): 343-56.
- . *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction*. Durham, NC: Duke UP, 1993.
- Cadora, Karen. "Feminist Cyberpunk." *Science-Fiction Studies* 22 (1995): 356-372.
- Cappio, James. "A Long Guide to K. W. Jeter." *New York Review of Science Fiction* 44 (1992): 1, 8-14.
- Caronia, Antonio. *Il corpo virtuale*. Padua: Muzzio, 1993.
- . *Il cyborg*. Rome: Theoria, 1985.
- , and Domenico Gallo. *Houdini e Faust: Breve storia del cyberpunk*. Milan: Sperling, 1997.
- Carter, Paul A. *The Creation of Tomorrow: Fifty Years of Magazine Science Fiction*. New York: Columbia UP, 1977.
- Case, Sue-Ellen. "Eve's Apple, or Women's Narrative Bytes." *Modern Fiction Studies* 43 (1997): 631-50.

- Cherniavsky, Eva. "(En)gendering Cyberspace in *Neuromancer*: Postmodern Subjectivity and Virtual Motherhood." *Genders* 18 (1993): 32-46.
- Christie, John R. R. "A Tragedy for Cyborgs." *Configurations* 1 (1992): 171-96.
- Clayton, David. "What Makes Hard Science Fiction Hard?" *Hard Science Fiction*. Ed. George E. Slusser and Eric S. Rabkin. Carbondale: Southern Illinois UP, 1987. 58-69.
- . "Science Fiction: Going Around in Generic Circles." *Intersections: Science Fiction and Fantasy*. Ed. George E. Slusser and Eric S. Rabkin. Carbondale: Southern Illinois UP, 1987. 201-24.
- Csicsery-Ronay, Istvan, Jr. "Antimancer: Cybernetics and Art in Gibson's *Count Zero*." *Science-Fiction Studies* 22 (1995): 63-86.
- . "Cyberpunk and Neuromanticism." McCaffery *Storming*. 182-93.
- . "Pilgrims in Pandemonium: Philip K. Dick and the Critics." R. D. Mullen et al. v-xxx.
- . "The Sentimental Futurist: Cybernetics and Art in William Gibson's *Neuromancer*." *Critique* 33 (1992): 221-40.
- , and David Dalgleish. "Naive and Postmodern Criticism: An Exchange." *Science-Fiction Studies* 24 (1997): 79-108.
- Davidson, Cynthia. "Riviera's Golem, Haraway's Cyborg: Reading *Neuromancer* as Baudrillard's Simulation of Crisis." *Science-Fiction Studies* 23 (1996): 188-98.
- Deery, June. "Ectopic and Utopic Reproduction: *He, She and It*." *Utopian Studies* 5 (1994): 35-49.

- Delany, Samuel R. Interview. "Black to the Future: Interviews with Samuel R. Delany, Greg Tate, and Tricia Rose." Ed. Mark Dery. *South Atlantic Quarterly* 92 (1993): 735-78.
- . *Longer Views*. Hanover, NH: Wesleyan UP, 1996.
- . *Silent Interviews*. Hanover, NH: Wesleyan UP, 1994.
- De Zwaan, Victoria. "Rethinking the Slipstream: Kathy Acker Reads *Neuromancer*." *Science-Fiction Studies* 24 (1997): 459-70.
- Dozois, Gardner. "SF in the Eighties." *Washington Post* (30 Dec. 1984): B2.
- Easterbrook, Neil. "The Arc of Our Destruction: Reversal and Erasure in Cyberpunk." *Science-Fiction Studies* 19 (1992): 378-94.
- Eizykman, Boris. *Science-fiction et capitalisme*. Paris: Mame, 1973.
- Fitting, Peter. "Beyond the Wasteland: A Feminist in Cyberspace." *Utopian Studies* 5 (1994): 4-15.
- . "Eating Your Way to the Top: Social Darwinism in SF." *Foods of the Gods: Eating and Being Eaten in Fantasy and Science Fiction*. Ed. Gary Westfahl et al. Athens: U of Georgia P, 1996. 172-87.
- . "The Lessons of Cyberpunk." *Technoculture*. Ed. Constance Penley and Andrew Ross. Minneapolis: U of Minnesota P, 1991. 295-315.
- . "Reality as Ideological Construct: A Reading of Five Novels by Philip K. Dick." *Science-Fiction Studies* 7 (1980): 219-36.
- . "'So We All Became Mothers': New Roles for Men in Recent Utopian Fiction." *Science-Fiction Studies* 12 (1985): 156-82.
- . "*Ubik*: The Deconstruction of Bourgeois SF." Olander and Greenberg. 149-59.

- Foster, Thomas. "Incurably Informed: The Pleasures and Dangers of Cyberpunk."  
*Genders* 19 (1993): 1-10.
- . "Meat Puppets or Robopaths?: Cyberpunk and the Question of Embodiment."  
*Genders* 18 (1993): 11-31.
- . "'Trapped by the Body'?: Telepresence Technology and Transgendered  
Performance in Feminist and Lesbian Rewritings of Cyberpunk Fiction."  
*Modern Fiction Studies* 43 (1997): 708-42.
- Fox, Robert E. *Conscientious Sorcerers: The Black Postmodernist Fiction of LeRoi  
Jones/Amiri Baraka, Ishmael Reed, and Samuel Delany*. New York:  
Greenwood, 1987.
- Franklin, H. Bruce. *Robert A. Heinlein: America as Science Fiction*. New York:  
Oxford UP, 1980.
- . "The Vietnam War as American Science Fiction and Fantasy." *Science-Fiction  
Studies* 17 (1990): 341-57.
- Freedman, Carl. "Towards a Theory of Paranoia: The Science Fiction of Philip K.  
Dick." *Science-Fiction Studies* 11 (1984): 15-23.
- Geduld, Carolyn. *Bernard Wolfe*. New York: Twayne, 1972.
- Giovannini, Fabio. *Cyberpunk e splatterpunk*. Rome: Datanews, 1992.
- Glazer, Miriyam. "'What Is Within Now Seen Without': Romanticism,  
Neuromanticism, and the Death of the Imagination in William Gibson's Fictive  
World." *Journal of Popular Culture* 23 (1989): 155-64.
- Gordon, Andrew. "Human, More or Less: Man-Machine Communion in Samuel R.  
Delany's *Nova* and Other Science Fiction Stories." *The Mechanical God*. Ed.

- Thomas P. Dunn and Richard D. Erlich. Westport, CT: Greenwood, 1982.  
193-202.
- Gordon, Joan. *Joe Haldeman*. Mercer Island, WA: Starmont, 1980.
- Grant, Glenn. "Transcendence through Detournement in William Gibson's *Neuromancer*." *Science-Fiction Studies* 17 (1990): 41-48.
- Gray, Chris H. "There Will Be War!: Future War Fantasies and Militaristic Science Fiction in the 1980s." *Science-Fiction Studies* 21 (1994): 315-36.
- Gubar, Susan. "C. L. Moore and the Conventions of Women's Science Fiction." *Science-Fiction Studies* 7 (1980): 1626.
- Hadas, Pamela W. "Green Thoughts on Being in Charge: Discovering Joseph Mc Elroy's *Plus*." *Review of Contemporary Fiction* 10 (1990): 140-55.
- Harper, Mary C. "Incurably Alien Other: A Case for Feminist Cyborg Writers." *Science-Fiction Studies* 22 (1995): 399-420
- Hayles, N. Katherine. "The Life Cycle of Cyborgs: Writing the Posthuman." *A Question of Identity*. Ed. Marina Benjamin. New Brunswick, NJ: Rutgers UP, 1989. 152-70.
- Higashi, Sumiko. "Hold It! Women in Television Adventure Series." *Journal of Popular Film and Television* 8 (1980): 26-37.
- Hollinger, Veronica. "Cybernetic Deconstructions: Cyberpunk and Postmodernism." *McCaffery Storming*. 203-18.
- . "Specular SF: Postmodern Allegory." *State of the Fantastic*. Ed. Nicholas Ruddick. Westport, CT: Greenwood, 1992. 29-39.
- . "Women in Science Fiction and Other Hopeful Monsters." *Science-Fiction Studies* 17 (1990): 129-35.

- Jameson, Fredric. "After Armageddon: Character System in *Dr. Bloodmoney*." *Science-Fiction Studies* 2 (1975): 31-54.
- . *Postmodernism, or the Cultural Logic of Late Capitalism*. Durham, NC: Duke UP, 1992.
- . "Science Fiction as a Spatial Genre: Generic Discontinuities and the Problem of Figuration in Vonda McIntyre's *The Exile Waiting*." *Science-Fiction Studies* 14 (1987): 44-59.
- Jones, Anne H. "The Cyborg (R)evolution in Science Fiction." *The Mechanical Gods*. Ed. Thomas P. Dunn and Richard D. Erlich. Westport, CT: Greenwood, 1982. 203-09.
- Kelleghan, Fiona. "Hell's My Destination: Imprisonment in the Works of Alfred Bester." *Science-Fiction Studies* 21 (1994): 351-64.
- Ketterer, David. *Canadian Science Fiction and Fantasy*. Bloomington: Indiana UP, 1992.
- Kuryllo, Helen A. "Cyborgs, Sorcery, and the Struggle for Utopia." *Utopian Studies* 5 (1994): 50-55.
- Laidlaw, Marc. "Virtual Surreality: Our New Romance with Plot Devices." *South Atlantic Quarterly* 92 (1993): 647-68.
- Lefanu, Sarah. *In the Chinks of the World Machine: Feminism and Science Fiction*. London: Women's P, 1988.
- Lem, Stanislaw. *Microworlds*. Ed. Franz Rottensteiner. New York: Harcourt, 1985.
- Linton, Patricia. "The 'Person' in Postmodern Fiction: Gibson, Le Guin, and Vizenor." *SAIL* 5 (1993): 3-11.

- Littlefield, Emerson. "The Mythologies of Race and Science in Samuel Delany's *The Einstein Intersection* and *Nova*." *Extrapolation* 23 (1982): 235-42.
- Maddox, Tom. "The War of the Coin's Two Halves: Bruce Sterling's Mechanist/Shaper Narrative." *Mississippi Review* 47/48 (1988): 237-44.
- Malmgren, Carl D. "The Languages of Science Fiction: Samuel Delany's *Babel-17*." *Extrapolation* 34 (1993): 5-17.
- . *Worlds Apart: Narratology of Science Fiction*. Bloomington: Indiana UP, 1991.
- McCaffery, Larry. "The Desert of the Real." *McCaffery Storming*. 1-16.
- . "The Fictions of the Present." *Columbia Literary History of the United States*. Ed. Emory Elliott. New York: Columbia UP, 1988. 1161-1177.
- . "Introduction: The Cyberpunk Controversy." *Mississippi Review* 47-48 (1988). 1-115.
- , ed. *Storming the Reality Studio*. Durham, NC: Duke UP, 1991.
- McCarthy, Patrick A. "Science Fiction as Creative Revisionism: The Example of Alfred Bester's *The Stars My Destination*." *Science-Fiction Studies* 10 (1983): 58-68.
- McGann, Jerome. "Canonade." *NLH* 25 (1994): 487-504.
- McHale, Brian. *Constructing Postmodernism*. London: Routledge, 1992.
- Mead, David G. "Technological Transfiguration in William Gibson's *Sprawl* Novels." *Extrapolation* 32 (1991): 350-60.
- Miller, Alicia M. "Power and Perception in *Plus*." *Review of Contemporary Fiction* 10 (1990): 173-80.
- Moore, John. "Shifting Frontier: Mapping Cyberpunk and the American South." *Foundation* 66 (1996): 59-68.

- Moylan, Tom. *Demand the Impossible: Science Fiction and the Utopian Imagination*. New York: Methuen, 1986.
- Mullen, R. D., et al., eds. *On Philip K. Dick*. Terre Haute, IN: SF-TH, 1992.
- Neverow, Vara. "The Politics of Incorporation and Embodiment." *Utopian Studies* 5 (1994): 16-35.
- Nixon, Nicola. "Cyberpunk: Preparing the Ground for Revolution or Keeping the Boys Satisfied?" *Science-Fiction Studies* 19 (1992): 218-34.
- Olander, Joseph D., and Martin H. Greenberg, eds. *Philip K. Dick*. New York: Taplinger, 1983.
- Olsen, Lance. *William Gibson*. Mercer Island, WA: Starmont, 1992.
- Omniveritas, Vincent [pseud. of Bruce Sterling]. "The New Science Fiction." *Interzone* 14 (1984.85): 61-67.
- Pagetti, Carlo. *I sogni della scienza*. Rome: Editori Riuniti, 1993.
- Pfaelzer, Jean. "The Changing of the Avant Garde: The Feminist Utopia." *Science-Fiction Studies* 15 (1988): 282-93.
- Pfeil, Fred. *Another Tale to Tell: Politics and Narrative in Postmodern Culture*. London: Verso, 1990.
- Pierce, John J. *When World Views Collide*. New York: Greenwood, 1989.
- Portelli, Alessandro. *The Text and the Voice: Writing, Speaking, and Democracy in American Literature*. New York: Columbia UP, 1994.
- Porush, David. "Cybernauts in Cyberspace: William Gibson's *Neuromancer*." *Aliens: The Anthropology of Science Fiction*. Ed. George E. Slusser and Eric S. Rabkin. New York: Greenwood, 1987. 166-78.

- . "Prigogine, Chaos, and Contemporary Science Fiction." *Science-Fiction Studies* 18 (1991): 367-86.
- . *The Soft Machine: Cybernetic Fiction*. New York: Methuen, 1985.
- Puschmann-Nalenz, Barbara. *Science Fiction and Postmodern Fiction*. New York: Lang, 1992.
- Rayner, Alice. "Cyborgs and Replicants: On the Boundaries." *Discourse* (1994): 124-43.
- Roberts, Robin. "Matthew Arnold's 'Dover Beach'. Gender, and Science Fiction." *Extrapolation* 33 (1992): 245-57.
- Robillard, Douglas. "Uncertain Futures: Damon Knight's Science Fiction." *Voices for the Future: Vol. 3*. Ed. Thomas D. Clareson and Thomas L. Wymer. Bowling Green, OH: Popular P, 1984. 30-51.
- Robinson, Kim Stanley. *The Novels of Philip K. Dick*. Ann Arbor, MI: UMI Research P, 1984.
- Rosenthal, Pam. "Jacked In: Fordism, Cyberpunk, Marxism." *Socialist Review* 21 (1991): 79-103.
- Samuelson, David N. "Critical Mass: The Science Fiction of Frederik Pohl." *Science-Fiction Studies* 7 (1980): 80-95.
- . "Limbo: The Great American Dystopia." *Extrapolation* 19 (1977): 76-87.
- Schmitt, Ronald. "Mythology and Technology: The Novels of William Gibson." *Extrapolation* 34 (1993): 64-78.
- Schroeder, Randy. "Determinacy, Indeterminacy, and the Romantic in William Gibson." *Science-Fiction Studies* 21 (1994): 155-63.
- . "Neu-Criticizing William Gibson." *Extrapolation* 35 (1994): 330-41.

- Seed, David. "Deconstructing the Body Politic in Bernard Wolfe's *Limbo*." *Science-Fiction Studies* 24 (1997): 267-88.
- Siivonen, Tiimo. "Cyborgs and Generic Oxymorons." *Science-Fiction Studies* 23 (1996): 227-44.
- Slusser, George E. *The Classic Years of Robert A. Heinlein*. San Bernardino, CA: Borgo, 1977.
- . *The Delany Intersection*. San Bernardino, CA: Borgo, 1977.
- . "The Homeostatic Culture Machine." *Science Fiction and Market Realities*. Ed. Gary Westfahl et al. Athens: U of Georgia P, 1996. 78-97.
- , and Tom Shippey, eds. *Fiction 2000: Cyberpunk and the Future of Narrative*. Athens, U of Georgia P, 1992.
- Somay, Bulent. "Towards an Open-Ended Utopia." *Science-Fiction Studies* 11 (1984): 25-38.
- Spinrad, Norman. *Science Fiction in the Real World*. Carbondale: Southern Illinois UP, 1990.
- Sponsler, Claire. "Beyond the Ruins: The Geopolitics of Urban Decay and Cybernetic Play." *Science-Fiction Studies* 20 (1993): 251-65.
- . "Cyberpunk and the Dilemma of Postmodern Narrative: The Example of William Gibson." *Contemporary Literature* 33 (1992): 625-44.
- Springer, Claudia. "The Pleasure of the Interface." *Screen* 32 (1991): 303-23.
- . "Sex, Memories, and Angry Women." *South Atlantic Review* 92 (1993): 713-33.
- Stevens, Tyler. "'Sinister Fruitiness': *Neuromancer*, Internet Sexuality and the Turing Text." *Studies in the Novel* 28.3 (1996): 414-33.

- Stivale, Charles J. "Mille/Punks/Cyber/Plateaus: Science Fiction and Deleuzo-Guattarian 'Becomings'." *SubStance* 66 (1991): 66-84.
- Stockton, Sharon. "The Self Regained": Cyberpunk's Retreat to the Imperium." *Contemporary Literature* 36 (1995): 588-613.
- Stover, Leon. *Robert A. Heinlein*. New York: Twayne, 1977.
- Suvín, Darko. "On Gibson and Cyberpunk SF." *Foundation* 46 (1989): 40-51.
- . *Positions and Presuppositions in Science Fiction*. Kent, OH: Kent State UP, 1988.
- Swanwick, Michael. "A User's Guide to the Postmoderns." *Asimov's* 10.8 (1986): 148-65.
- Tabbi, Joseph. *Postmodern Sublime*. Ithaca, NY: Cornell UP, 1995.
- Thompson, Craig. "Searching for Totality: Antinomy and the 'Absolute' in Bruce Sterling's *Schismatrix*." *Science-Fiction Studies* 18 (1991): 198-208.
- Tomas, David. "Old Rituals for New Space: *Rites de Passage* and William Gibson's Cultural Model of Cyberspace." *Benedikt*. 31-47.
- . "The Technophilic Body: On Technicity in William Gibson's Cyborg Culture." *New Formations* 8 (1989): 113-29.
- Vallorani, Nicoletta. "La rappresentazione imperfetta: Tecnologia, corpo e linguaggio in 'The Girl Who Was Plugged In' di James Tiptree." *RSA* 10 (1994):490-98.
- Voller, Jack C. "Neuromanticism: Cyberspace and the Sublime." *Extrapolation* 34 (1993): 18-29.
- Warrick, Patricia S. *The Cybernetic Imagination in Science Fiction*. Cambridge, MA: MIT-P, 1980.

- Whalen, Terence. "The Future of a Commodity: Notes toward a Critique of Cyberpunk and the Information Age." *Science-Fiction Studies* 19 (1992): 75-87.
- Wingrove, David. "Understanding the Grasshopper: Leitmotifs and the Moral Dilemma in the Novels of Philip K. Dick." *Foundation* 26 (1982): 21-40.
- Wolfe, Gary K. "Autoplastic and Alloplastic Adaptations in Science Fiction: 'Waldo' and 'Desertion'." *Coordinates: Placing Science Fiction and Fantasy*. Ed. George E. Slusser et al. Carbondale: Southern Illinois UP, 1983. 65-79.
- . "Instrumentalities of the Body: The Mechanization of Human Form in Science Fiction." *The Mechanical God*. Ed. Thomas P. Dunn and Richard D. Erlich. Westport, CT: Greenwood, 1982. 211-26.
- . *The Known and the Unknown: Iconography of Science Fiction*. Kent, OH: Kent State UP, 1979.
- , and Carol T. Williams. "The Majesty of Kindness: The Dialectic of Cordwainer Smith." *Voices for the Future: Vol. 3*. Ed. Thomas D. Claeson and Thomas L. Wymer. Bowling Green, OH: Popular P, 1984. 52-74.
- Wollmark, Jenny. *Aliens and Others: Science Fiction, Feminism, and Postmodernism*. New York: Harvester, 1994.
- Wood, Brent. "William S. Burroughs and the Language of Cyberpunk." *Science-Fiction Studies* 23 (1996): 11-25.
- Wood, Diane S. "Family Ties in the Novels of Vonda McIntyre." *Extrapolation* 29 (1988): 112-27.

Zebrowski, George. and Patricia Warrick. "More Than Human?: Androids, Cyborgs, and Others." *Science Fiction: Contemporary Mythology*. Ed. Patricia Warrick et al. New York: Harper, 1978. 294-307.

## 2.2: Other

- Akin, William E. *Technocracy and the American Dream*. Berkeley: U of California P, 1977.
- Aldiss, Brian W. *Trillion Year Spree*. 1986. London: Paladin, 1988.
- Altieri, Charles. "Canons and Differences." Nemoianu and Royal 1-38.
- Amis, Kingsley. *New Maps of Hell*. New York: Harcourt, 1961.
- Anderson, Benedict. *Imagined Communities*. London: Verso, 1991.
- Angenot, Marc. "The Absent Paradigm." *Science-Fiction Studies* 6 (1979): 9-19.
- . *La parole pamphlétaire*. Paris: Payot, 1982.
- . *1989: Un état de discours social*. Longueuil, QC: Le Preambule, 1989.
- Anzaldúa, Gloria. *Borderlands/La Frontera*. San Francisco: Aunt Lute, 1987.
- Armytage, W. H. G. *Yesterday's Tomorrow: A Historical Survey of Future Societies*. Toronto: U of Toronto P, 1968.
- Asimov, Isaac. *Asimov on Science Fiction*. Garden City, NY: Doubleday, 1981.
- Aspiz, Harold. *Walt Whitman and the Body Beautiful*. Urbana: U of Illinois P, 1980.
- Bainbridge, William Sims. *Dimensions of Science Fiction*. Cambridge, MA: Harvard UP, 1986.
- Bakhtin, M. M. *The Dialogic Imagination*. Trans. Michael Holquist and Caryl Emerson. Austin: U of Texas P, 1981.
- Barcellona, Pietro. *Il capitale come puro spirito*. Rome: Editori Riuniti, 1990.
- Barr, Marleen S. *Alien to Femininity: Speculative Fiction and Feminist Theory*. New York: Greenwood, 1987.
- . *Feminist Fabulation: Space/Postmodern Fiction*. Iowa City: U of Iowa P, 1992.
- Baudrillard, Jean. *America*. Trans. Chris Turner. London: Verso, 1988.

- Benhabib, Seyla. *Situating the Self*. New York: Routledge, 1992.
- Benjamin, Walter. "The Work of Art in the Age of Mechanical Reproduction."  
*Illuminations*. Trans. Harry Zohn. New York: Schocken, 1968. 217-51.
- Benthall, Jonathan. *The Body Electric*. London: Thames, 1976.
- Bercovitch, Sacvan. *The American Jeremiad*. Madison: U of Wisconsin P, 1978.
- . *The Office of the Scarlet Letter*. Baltimore: Johns Hopkins UP, 1991.
- Berger, Albert I. *The Magic that Works*. San Bernardino, CA: Borgo, 1993.
- . "Science-Fiction Fans in Socio-Economic Perspective." *Science-Fiction Studies*  
4 (1977): 232-46.
- Berman, Marshall. *All That Is Solid Melts into Air: The Experience of Modernity*.  
New York: Simon, 1982.
- Blish, James. *The Tale that Wags the God*. Ed. Cy Chauvin. Chicago: Advent, 1987.
- Bloom, Allan. *The Closing of the American Mind*. New York: Simon, 1987.
- Bolongaro, Eugenio. "From Literariness to Genre: Establishing the Foundations for a  
Theory of Literary Genre." *Genre* 25 (1992): 277-313.
- Bolter, J. David. *Turing's Man*. Chapel Hill: U of North Carolina P, 1988.
- Bonazzi, Tiziano. "Frederick Jackson Turner's Frontier Thesis and the Self-  
Consciousness of America." *Journal of American Studies* 27 (1993): 149-71.
- Bonner, Frances. "Difference and Desire, Slavery and Seduction: Octavia Butler's  
'Xenogenesis'." *Foundation* 48 (1990): 50-62.
- Bordo, Susan. *The Flight to Objectivity*. Albany: SUNY P, 1987.
- . "Reading the Male Body." *Michigan Quarterly Review* 32 (1993): 696-737.
- . *Unbearable Weight: Feminism, Western Culture, and the Body*. Berkeley: U of  
California P, 1994.

- Boucher, Anthony. "The Publishing of Science Fiction." *Bretnor Modern* 24-42.
- Bourdieu, Pierre. *Distinction: A Social Critique of the Judgement of Taste*. Trans. Richard Nice. Cambridge, MA: Harvard UP, 1984.
- Bova, Ben. *Assured Survival*. Boston: Houghton, 1984.
- . *Viewpoint*. Cambridge, MA: NESFA, 1977.
- Boyer, Paul. *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. New York: Pantheon, 1985.
- Brantlinger, Patrick. *Bread and Circuses: Theories of Mass Culture as Social Decay*. Ithaca, NY: Cornell UP, 1983.
- Bretnor, Reginald, ed. *Modern Science Fiction: Its Meaning and Future*. New York: Coward-McCann, 1953.
- , ed. *Science Fiction: Today and Tomorrow*. New York: Harper, 1974.
- Brown, Mary E. *Soap Opera and Women's Talk*. London: Sage, 1994.
- Budrys, Algis. *Benchmarks*. Carbondale: Southern Illinois UP, 1985.
- Bush, Vannevar. *Endless Horizons*. Washington, DC: Public Affairs P, 1976.
- . *Science: The Endless Frontier*. 1946. New York: Arno, 1980.
- Butler, Judith. *Gender Trouble*. New York: Routledge, 1990.
- Butler, Octavia. *Dawn*. New York: Warner, 1987.
- Cameron, Sharon. *The Corporeal Self: Allegories of the Body in Melville and Hawthorne*. Baltimore: Johns Hopkins UP, 1981.
- Campbell, John W., Jr. *Collected Editorials from Analog*. Ed. Harry Harrison. Garden City, NY: Doubleday, 1966.
- Cawelti, John. *Adventure, Mystery, and Romance*. Chicago: U of Chicago P, 1976.
- Clausen, Christopher. "'Canon', Theme, and Code." Nemoianu and Royal 199-213.

- Clute, John, and Peter Nicholls, eds. *The Encyclopedia of Science Fiction*. London: Orbit, 1993.
- Czitrom, Daniel. *Media and the American Mind*. Chapel Hill: U of North Carolina P, 1982.
- Davenport, Basil. *Inquiry into Science Fiction*. London: Longmans, 1955.
- , ed. *The Science Fiction Novel*. Chicago: Advent, 1959.
- Davis, Mike. *City of Quartz*. London: Verso, 1990..
- Dawkins, Richard. *The Selfish Gene*. London: Oxford UP, 1976.
- Debord, Guy. *Society of the Spectacle*. Detroit: Black & Red, 1970.
- De Camp, L. Sprague. *Science Fiction Handbook*. New York: Hermitage, 1953.
- De Certeau, Michel. *The Practice of Everyday Life*. Trans. Steven Rendall. Berkeley: U of California P, 1988.
- Delany, Samuel R. *The American Shore*. Elizabethtown, NY: Dragon P, 1978.
- . "Generic Protocols: Science Fiction and Mundane." *The Technological Imagination*. Ed. Teresa De Lauretis et al. Madison, WI: Coda P, 1980. 175-93.
- . "The Gestation of Genres." *Intersections: Science Fiction and Fantasy*. Ed. George E. Slusser and Eric S. Rabkin. Carbondale: Southern Illinois UP, 1987. 63-73.
- . *The Jewel-Hinged Jaw*. Elizabethtown, NY: Dragon P, 1977.
- . *The Motion of Light in Water*. London: Paladin, 1990.
- . *Starboard Wine*. Pleasantville, NY Dragon P, 1984.
- De Lauretis, Teresa. "Signs of Wa/onder." *The Technological Imagination*. Ed. Teresa De Lauretis et al. Madison, WI: Coda P, 1980. 159-74.

- Del Rey, Lester. *The Worlds of Science Fiction*. New York: Ballantine, 1979.
- Denning, Richard. "The End of Mass Culture." *Modernity and Mass Culture*. Ed. James Naremore and Patrick Brantlinger. Bloomington: Indiana UP, 1991. 253-68.
- Disch, Thomas M. "The Embarrassments of Science Fiction." *Science Fiction at Large*. Ed. Peter Nicholls. London: Gollancz, 1976. 141-55.
- . "The Road to Heaven: Science Fiction and the Militarization of Space." *The Nation* (10 May 1986): 650-56.
- Dobson, Joanne. "Reclaiming Sentimental Literature." *American Literature* 69 (1997): 263-88.
- Docker, John. *Postmodernism and Popular Culture*. Cambridge: Cambridge UP, 1994.
- Du Bois, W. E. B. *The Souls of Black Folk*. 1903. New York: Fawcett, 1963.
- Ebert, Teresa L. "The Convergence of Postmodern Innovative Fiction and Science Fiction." *Poetics Today* 1 (1980): 91-104.
- . *Ludic Feminism and After: Postmodernism, Desire, and Labor in Late Capitalism*. Ann Arbor: U of Michigan P, 1996.
- Eco, Umberto. *Apocalittici e integrati*. Milan: Bompiani, 1977.
- Ehrenreich, Barbara, and John Ehrenreich. "The Professional-Managerial Class." *Between Labor and Capital*. Ed. Pat Walker. Boston: South End, 1979. 5-45.
- Elsner, Henry. *The Technocrats: Prophets of Automation*. Syracuse, NY: Syracuse UP, 1967.
- Emerson, Ralph Waldo. *Essays and Lectures*. Ed. Joel Porte. New York: Library of America, 1983.

- Enzensberger, Hans Magnus. *The Consciousness Industry*. New York: Seabury P.  
1974.
- Escarpit, Robert. *Sociology of Literature*. Trans. Ernest Pick. London: Cass, 1971.
- Eshbach, Lloyd Arthur. *Over My Shoulder: Reflections on a Science Fiction Era*.  
Philadelphia: Train, 1983.
- , ed. *Of Worlds Beyond*. 1947. Chicago: Advent, 1964.
- Ewen, Stuart. *All Consuming Images*. New York: Basic, 1988.
- Feidelson, Charles. *Symbolism and American Literature*. Chicago: U of Chicago P,  
1953.
- Fekete, John. *The Critical Twilight*. London: Routledge, 1978.
- Felski, Rita. *Beyond Feminist Aesthetics*. Cambridge, MA: Harvard, 1989.
- Fiedler, Leslie. "The Criticism of Science Fiction." *Coordinates: Placing Science  
Fiction and Fantasy*. Ed. George E. Slusser et al. Carbondale: Southern  
Illinois UP, 1983. 1-13.
- . "Cross the Border--Close the Gap." *The Collected Essays*. New York: Stein,  
1971. 2: 461-85.
- Fisher, Philip. "Democratic Social Space: Whitman, Melville, and the Promise of  
American Transparency." *Representations* 24 (1988): 60-101.
- Ford, Henry. *My Life and Work*. Garden City, NY: Doubleday, 1922.
- Fox Keller, Evelyn. *Refiguring Life*. New York: Columbia UP, 1995.
- Franklin, H. Bruce. *War Stars: The Superweapon and the American Imagination*.  
New York: Oxford UP, 1988.

- Fraser, Nancy. "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy." *Habermas and the Public Sphere*. Ed. Craig Calhoun. Cambridge, MA: MIT P, 1992. 109-42.
- Freedman, Carl. "Science Fiction and Critical Theory." *Science-Fiction Studies* 14 (1987): 180-200.
- Frye, Northrop. *Anatomy of Criticism*. Princeton: Princeton UP, 1957.
- Fuchs, Cynthia. "Death Is Irrelevant': Cyborgs, Reproduction, and the Future of Male Hysteria." *Genders* 18 (1993): 113-33.
- Gabriel, Richard A. *No More Heroes: Madness and Psychiatry in Modern War*. New York: Hill, 1987.
- Gans, Herbert J. *Popular Culture and High Culture*. New York: Basic, 1974.
- Gardiner, Michael. *The Dialogics of Critique*. London: Routledge, 1992.
- Garson, Barbara. *The Electronic Sweatshop*. New York: Simon, 1988.
- Gates, Henry Louis. *The Signifying Monkey*. New York: Oxford UP, 1987.
- Genova, Judith. "Tiptree and Haraway: The Reinvention of Nature." *Cultural Critique* 27 (1994): 5-27.
- Gibson, J. William. *The Perfect War: Technowar in Vietnam*. Boston: Atlantic Monthly P, 1986.
- . "Redeeming Vietnam: Techno-Thriller Novels of the 1980s." *Cultural Critique* 19 (1991): 179-202.
- Gold, Horace L. *What Will They Think of Last?* Crestline, CA: IDHHB, 1976.
- Gramsci, Antonio. *Quaderni del carcere*. Ed. Valentino Gerratana. Torino: Einaudi, 1974.

- . *Selections from the Cultural Writings*. Trans. William Boelhower. Cambridge, MA: Harvard UP, 1985.
- . *Selections from the Prison Notebooks*. Trans. Quentin Hoare and Geoffrey Newell-Smith. London: Lawrence, 1971.
- Greenland, Colin. *The Entropy Exhibition: Michael Moorcock and the British "New Wave."* London: Routledge, 1983.
- Grossberg, Lawrence. *We Gotta Get Out of This Place: Popular Conservatism and Postmodern Culture*. New York: Routledge, 1992.
- Guillory, John. "Canonical and Non-Canonical: A Critique of the Current Debate." *ELH* 54 (1987): 483-527.
- Gunn, James. *Alternate Worlds*. Englewood Cliffs, NJ: Prentice-Hall, 1975.
- Habermas, Jurgen. *The Structural Transformation of the Public Sphere*. Trans. Thomas Burger. Cambridge, MA: MIT P, 1989.
- Hackett, Alice P., and James H. Burke. *80 Years of Best Sellers*. New York: Bowker, 1977.
- Haldane, J. B. S. *Daedalus*. London: Kegan, 1923.
- Hall, Stuart. "Notes on Deconstructing 'The Popular'." *People's History and Socialist Theory*. Ed. Raphael Samuel. London: Routledge, 1981. 227-240.
- Haraway, Donna. "Ecce Homo, Ain't (Ar'n't) I a Woman, and Inappropriate/d Others: The Human in a Post-Humanist Landscape." *Feminists Theorize the Political*. Ed. Judith Butler and Joan W. Scott. London: Routledge, 1992. 86-100.
- Harding, Sandra. "Rethinking Standpoint Epistemology: What Is 'Strong Objectivity'?" *Centennial Review* 36 (1992): 437-70.

- . *The Science Question in Feminism*. Ithaca, NY: Cornell UP, 1986.
- Hartwell, David. *Age of Wonder*. New York: Walker, 1984.
- Harvey, David. *The Condition of Postmodernity*. Oxford: Blackwell, 1990.
- Hassan, Ihab. "City of Mind. Urban Words: The Dematerialization of Metropolis in Contemporary American Fiction." *Literature and the Urban Experience*. Ed. Michael C. Jaye and Ann C. Watts. New Brunswick, NJ: Rutgers UP, 1981. 93-112.
- Hawthorne, Nathaniel. *The Scarlet Letter*. Ed. Millicent Bell. New York: Library of America, 1983.
- Hayes, Dennis. *Beyond the Silicon Curtain*. Montreal: Black Rose, 1989.
- Hebdige, Dick. *Subculture: The Meaning of Style*. London: Methuen, 1978.
- Heims, Steve *The Cybernetics Group*. Cambridge, MA: MIT P, 1991.
- Heinlein, Robert A. "On the Writing of Speculative Fiction." *Eshbach Worlds* 13-19.
- . "Science Fiction: Its Nature, Faults and Virtues." *Davenport Novel* 17-63.
- Hohman, Jeffrey R. "Stocking and Selling Science Fiction." *Publishers' Weekly* 14 June 1976: 60-61.
- Homans, Margaret. "Women of Color Writers and Feminist Theory." *NLH* 25 (1994): 73-94.
- Horwitz, Howard. *By the Law of Nature: Form and Value in Nineteenth-Century America*. New York: Oxford UP, 1991.
- Huntington, John. *Rationalizing Genius: Ideological Strategies in the Classic American Science Fiction Short Story*. New Brunswick, NJ: Rutgers UP, 1989.
- Huyssen, Andreas. *After the Great Divide*. Bloomington: Indiana UP, 1986.

- Jackson, Rosemary. *Fantasy: The Literature of Subversion*. London: Methuen, 1981.
- Jaggard, Alison. *Feminist Politics and Human Nature*. Totowa, NJ: Rowman, 1983.
- James, Edward. *Science Fiction in the Twentieth Century*. Oxford: Oxford UP, 1994.
- Jameson, Fredric. "Of Islands and Trenches." *Diacritics* 7 (1977): 2-21.
- . *The Political Unconscious*. Ithaca, NY: Cornell UP, 1981.
- . "Reification and Utopia in Mass Culture." *Signatures of the Visible*. New York: Routledge, 1990: 9-34.
- . "World-Reduction in Le Guin." *Science-Fiction Studies* 2 (1975): 221-30.
- JCUDI (Japan Computer Usage Development Institute). *The Plan for Information Society: A National Goal toward the Year 2000*. Tokyo: JCUDI, 1972.
- Jeffords, Susan. *Hard Bodies: Hollywood Muscularity in the Reagan Era*. New Brunswick, NJ: Rutgers UP, 1994.
- Jehlen, Myra. *American Incarnation*. Cambridge, MA: Harvard UP, 1986.
- Jenkins, Henry. *Textual Poachers: Television Fans and Participatory Culture*. New York: Routledge, 1992.
- Johnson, Glen M. "The Teaching Anthology and the Canon of American Literature." Nemoianu and Royal 111-35.
- Jones, Peter G. *War and the Novelist*. Columbia: U of Missouri P, 1976.
- Kammen, Michael. *A Machine That Would Go of Itself: The Constitution in American Culture*. New York: Knopf, 1986.
- Kaplan, Carey, and Ellen C. Rose. *The Canon and the Common Reader*. Knoxville: U of Tennessee P, 1990.
- Ketterer, David. *New Worlds for Old*. Garden City, NY: Doubleday, 1974.
- . "Science Fiction and Allied Literature." *Science-Fiction Studies* 3 (1976): 64-75.

- Kevles, Daniel J. *In the Name of Eugenics*. Berkeley: U of California P, 1985.
- Kilgour, Maggie. *From Communion to Cannibalism: An Anatomy of the Metaphors of Incorporation*. Princeton, NJ: Princeton UP, 1990.
- Kimmel, Michael S., and Michael Kaufman. "The New Men's Movement: Retreat and Regression with America's Weekend Warriors." *Feminist Issues* 13 (1993): 3-21.
- Knight, Damon. *The Futurians*. New York: Day, 1977.
- . *In Search of Wonder*. Chicago: Advent, 1956.
- Kombluth, C. M. "The Failure of Science Fiction as Social Criticism." *Davenport Novel* 64-101.
- Laurent, Alain. *Histoire de l'individualisme*. Paris: PUF, 1993.
- Lears, T. J. Jackson. *No Place of Grace: Antimodernism and the Transformation of American Culture, 1880-1920*. New York: Pantheon, 1981.
- Leary, Timothy. *The Politics of Ecstasy*. London: McGibbon, 1970.
- LeClair, Tom. *The Art of Excess: Mastery in Contemporary American Fiction*. Urbana: U of Illinois P, 1989.
- Le Guin, Ursula K. *The Language of the Night*. Ed. Susan Wood. New York: Putnam, 1978.
- Leps, Marie-Christine. *Apprehending the Criminal: The Production of Deviance in Nineteenth-Century Discourse*. Durham, NC: Duke UP, 1992.
- Leverenz, David. "The Last Real Man in America: From Natty Bumppo to Batman." *American Literary History* 3 (1991): 753-81.
- Levine, Lawrence. *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America*. Cambridge, MA: Harvard UP, 1988.

- Levitas, Ruth, ed. *The Ideology of the New Right*. Cambridge: Polity, 1986.
- Long, Elizabeth. *The American Dream and the Popular Novel*. Boston: Routledge, 1984.
- Lowentrou, Peter. "The 'Metamorphoses' of Darko Suvin: Final Synthesis or Dogged Antithesis?" *Foundation* 42 (1988): 37-49.
- Luckhurst, Roger. "Border Policing: Postmodernism and Science Fiction." *Science-Fiction Studies* 18 (1991): 358-66.
- . "The Many Deaths of Science Fiction: A Polemic." *Science-Fiction Studies* 21 (1994): 35-50.
- Lukács, Gyorgy. *History and Class Consciousness*. Trans. Rodney Livingston. Cambridge, MA: MIT P, 1971.
- Lundwall, Sam. *Science Fiction: An Illustrated History*. New York: Grosset, 1976.
- Marcuse, Herbert. *One-Dimensional Man*. Boston: Beacon, 1964.
- Markley, Robert. "The Irrelevance of Reality: Science, Ideology and the Postmodern Universe." *Genre* 25 (1992): 249-77.
- Martin, Terence. *Parables of Possibility: The American Need for Beginnings*. New York: Columbia UP, 1995.
- Marx, Leo. *The Machine in the Garden*. London: Oxford UP, 1964.
- . *The Pilot and the Passenger*. New York: Oxford UP, 1988.
- McDuffie, Dwayne, and Denys Cowan. *Deathlok: The Souls of Cyber-Folk*. New York: Marvel Comics, 1986.
- McHale, Brian. *Postmodern Fiction*. New York: Methuen, 1987.
- Melville, Herman. *Moby-Dick*. Ed. Tony Tanner. New York: Oxford UP, 1988.

- Merleau-Ponty, Maurice. "Eye and Mind." Trans. Carleton Dallery. *The Primacy of Perception*. Ed. James M. Edie. Evanston, IL: Northwestern UP, 1964. 159-90.
- Merril, Judith. "What Do You Mean? Science? Fiction?" *SF: The Other Side of Realism*. Ed. Thomas D. Claeson. Bowling Green, OH: Popular P, 1971. 53-95.
- Moretti, Franco. "The Spell of Indecision." *Marxism and the Interpretation of Culture*. Ed. Cary Nelson and Lawrence Grossberg. Urbana: U of Illinois P, 1988. 339-44.
- Morton, Donald. "Birth of the Cyberqueer." *PMLA* 110 (1995): 369-81.
- Moskowitz, Sam. *Explorers of the Infinite*. Cleveland: World, 1963.
- . "From Fanzine to Fame: Science-Fiction Figures Who Began as Fan Editors." *Foundation* 45 (1989): 5-23.
- . *The Immortal Storm: A History of the Science Fiction Fandom*. 1954. Westport, CT: Hyperion, 1974.
- . *Seekers of Tomorrow*. Cleveland: World, 1966.
- Mott, Frank L. *Golden Multitudes: The Story of the Best-Sellers in the U.S.* New York: Macmillan, 1947.
- Mullen, R. D. "Science Fiction in Academe." *Science-Fiction Studies* 23 (1996): 371-74.
- Nemoianu, Virgil, and Robert Royal, eds. *The Hospitable Canon*. Philadelphia: Benjamins, 1991.
- Nicholls, Peter, ed.. *The Encyclopedia of Science Fiction*. London: Granada, 1979.

- Nicol, Charles. "J. G. Ballard and the Limits of Mainstream SF." *Science-Fiction Studies* 3 (1976): 150-57.
- Noble, David F. *Forces of Production: A Social History of Industrial Automation*. New York: Knopf, 1984.
- Nora, Simon, and Alain Minc. *L'informatisation de la société*. Paris: Seuil, 1978.
- Nye, Russell B. *The Unembarrassed Muse*. New York: Dial, 1970.
- Ohmann, Richard. "The Shaping of a Canon: U. S. Fiction, 1960-1975." *Critical Inquiry* 10 (1983): 199-223.
- O'Neill, Gerard K. *The High Frontier: Human Colonies in Space*. New York: Morrow, 1977.
- Orth, Michael. "Reefs on the Right: Fascist Politics in Contemporary American Libertarian Utopias." *Extrapolation* 31 (1990): 293-316.
- Panshin, Alexei, and Cory Panshin. *SF in Dimension*. Chicago: Advent, 1976.
- . *The World Beyond the Hill*. Los Angeles: Tarcher, 1989.
- Parrinder, Patrick. *Science Fiction: Its Criticism and Teaching*. London: Methuen, 1980.
- Peppers, Cathy. "Dialogic Origins and Alien Identities in Butler's 'Xenogenesis'." *Science-Fiction Studies* 22 (1995): 47-62.
- Philmus, Robert M. *Into the Unknown*. Berkeley: U of California P, 1970.
- Poe, Edgar Allan. "The Man That Was Used Up." *The Complete Tales and Poems of Edgar Allan Poe*. New York: Modern Library, 1939. 405-512.
- Pohl, Frederik. *The Way the Future Was*. New York: Ballantine, 1978.
- Poirier, Richard. *A World Elsewhere*. New York: Oxford UP, 1966.

- Portelli, Alessandro. "Il presente come utopia: La narrativa di Isaac Asimov." *Culibano 2* (1978): 138-84.
- . "The Republican Element: Water Imagery and Democratic Ideology in the Age of Melville." *Sounding the Depths: Water as Metaphor in North American Literature*. Ed. Gayle Wurst and Christine Ragnet-Bouvard. Liège: Université de Liège, 1998. 21-34.
- . "The Sky's the Limit: Dove comincia e dove finisce l'America." *Àcoma 1* (1994): 8-18.
- Porter, Carolyn. *Seeing and Being: The Plight of the Participant Observer in Emerson, James, Adams, and Faulkner*. Middletown, CT: Wesleyan UP, 1987.
- Possony, Stefan T., and Jerry E. Pournelle. *The Strategy of Technology: Winning the Decisive War*. Cambridge, MA: Dunellen, 1970.
- Poster, Mark. *The Mode of Information*. Chicago: U of Chicago P, 1990.
- Rabinowitz, Peter J. "The Turn of the Glass Key: Popular Fiction as Reading Strategy." *Critical Inquiry* 11 (1985): 418-31.
- Rabkin, Eric S. *The Fantastic in Literature*. Princeton, NJ: Princeton UP, 1976.
- Remington, Thomas J. "Three Reservations on the Structural Road." *Science-Fiction Studies* 4 (1977): 48-54.
- Reising, Russell. *The Unusable Past: Theory and the Study of American Literature*. London: Methuen, 1986.
- Roemer, Kenneth M. *The Obsolete Necessity: America in Utopian Writings, 1888-1900*. Kent, OH: Kent State UP, 1976.

- Rose, Mark. *Alien Encounters: Anatomy of Science Fiction*. Cambridge, MA: Harvard UP, 1981.
- . "Introduction." *Science Fiction*. Ed. Mark Rose. Englewood Cliffs, NJ: Prentice-Hall, 1976.
- Rosenberg, Bernard, and David M. White, eds. *Mass Culture*. New York: Free P, 1957.
- Ross, Andrew. *The Chicago Gangster Theory of Life*. London: Verso, 1994.
- Rottensteiner, Franz. *The Science Fiction Book*. New York: Seabury, 1975.
- Russ, Joanna. "SF: Technology as Mystification." *Science-Fiction Studies* 5 (1978): 250-60.
- . "The Subjunctivity of Science Fiction." *Extrapolation* 15 (1973): 51-59.
- Sahay, Amrohini. "'Cybermaterialism' and the Invention of the Cybercultural Everyday." *NLH* 28 (1997): 543-67..
- Samuelson, David N. "Necessary Constraints: Samuel R. Delany on Science Fiction." *Foundation* 60 (1994): 21-39.
- , ed. "On Hard Science Fiction." *Science-Fiction Studies* 20 (1993): 145-240.
- Scarry, Elaine. *The Body in Pain*. New York: Oxford UP, 1985.
- Scholes, Robert. *Fabulation and Metafiction*. Urbana: U of Illinois P, 1979.
- . *Structural Fabulation*. Notre Dame, IN: Notre Dame UP, 1975.
- , and Eric S. Rabkin. *Science Fiction: History, Science, Vision*. London: Oxford UP, 1977.
- Sedgwick, Cristina. "The Fork in the Road: Can Science Fiction Survive in Postmodern, Megacorporate America?" *Science-Fiction Studies* 18 (1991): 11-51.

- Slotkin, Richard. *Regeneration through Violence: The Mythology of the American Frontier*. Middletown, CT: Wesleyan UP, 1973.
- Slusser, George E., and Eric S. Rabkin, eds. *Hard Science Fiction*. Carbondale: Southern Illinois UP, 1986.
- Smith, Michael L. "Selling the Moon." *The Culture of Consumption*. Ed. Richard J. Fox and T. J. Jackson Lears. New York: Pantheon, 1983.
- Sollors, Werner. *Beyond Ethnicity: Consent and Descent in American Culture*. New York: Oxford UP, 1986.
- Sorkin, Michael, ed. *Variations on a Theme Park: The New American City and the End of Public Space*. New York: Hill, 1992.
- Spencer, Kathleen. "The Red Sun Is High, the Blue Low': Towards a Stylistic Description of Science Fiction." *Science-Fiction Studies* 10 (1983): 35-48.
- Spinrad, Norman. "A Prince from Another Land." *Fantastic Lives*. Ed. Martin H. Greenberg. Carbondale: Southern Illinois UP, 1981. 157-74.
- . *Stayin' Alive: A Writer's Guide*. Norfolk, VA: Donning, 1983.
- Springer, Claudia. "Muscular Circuitry: The Invincible Armored Cyborg in Cinema." *Genders* 18 (1993): 86-101.
- Stableford, Brian. *Masters of Science Fiction*. San Bernardino, CA: Borgo P, 1981.
- . *Scientific Romance in Britain*. London: Fourth Estate, 1985.
- . *The Sociology of Science Fiction*. San Bernardino, CA: Borgo P, 1987.
- Steinbeck, John. *The Grapes of Wrath*. 1939. Harmondsworth; Penguin, 1982.
- Steinman, Lisa M. *Made in America: Science, Technology, and American modernist Poets*. New Haven, CT: Yale UP, 1987.
- Sterling, Bruce. "Slipstream." *Science Fiction Eye* 1 (1989): 77-80.

- Stine, G. Harry. *The Third Industrial Revolution*. New York: Putnam, 1975.
- Suvin, Darko. "Locus, Horizon, and Orientation: The Concept of Possible Worlds as a Key to Utopian Studies." *Discours social/Social Discourse* 1 (1988): 87-108.
- . *Metamorphoses of Science Fiction*. New Haven, CT: Yale UP, 1979.
- . "News from the Novum." *Foundation* 69 (1997): 26-43.
- . "The State of the Art in Science Fiction Theory: Determining and Delimiting the Genre." *Science-Fiction Studies* 6 (1979): 32-44.
- , ed. "The Sociology of Science Fiction." *Science-Fiction Studies* 4 (1977): 223-71.
- Taylor, Charles. *Sources of the Self*. Cambridge, MA: Harvard UP, 1989.
- Tichi, Cecelia. *Shifting Gears: Technology, Literature, Culture in Modernist America*. Chapel Hill: U of North Carolina P, 1987.
- Travis, Merle. "Dark as a Dungeon." *Folk Songs of the Hills*. Capitol Records 48001, 1947.
- Turkle, Sherry. *The Second Self*. New York: Simon, 1984.
- Turner, Frederick Jackson. *The Frontier in American History*. New York: Holt, 1962.
- Warner, Harry. *All Our Yestardays*. Chicago: Advent, 1969.
- . *A Wealth of Fable*. 3 vols. New York: Fanhistorica, 1976-77.
- Westfahl, Gary. "'A Convenient Analog System': John W. Campbell, Jr.'s Theory of Science Fiction." *Foundation* 54 (1992): 52-70.
- . "'An Idea of Significant Import': Hugo Gernsback's Theory of Science Fiction." *Foundation* 48 (1990): 26-50.

Wiener, Norbert. *Cybernetics: Control and Communication in the Animal and the Machine*. New York: Wiley, 1948.

Wilkerson, Abby. "Ending at the Skin: Feminism and Race in Feminist Theorizing." *Hypatia* 12 (1997): 164-73.

Williams, Raymond. *Marxism and Literature*. London: Oxford UP, 1977.

Wilson, Edward O. *On Human Nature*. Cambridge, MA: Harvard UP, 1978.

Wolff, Janet. *The Social Production of Art*. London: Macmillan, 1981.

Wollheim, Donald A. *The Universe Makers*. New York: Harper, 1971.

Zolla, Elemire. *L'eclissi dell'intellettuale*. Milan: Bompiani, 1965.

Zuboff, Shoshana. *In the Age of the Smart Machine*. New York: Basic, 1988.