“You bend over the hologram like God over his creature: only God has this power of passing through walls, through people, and finding Himself immaterially in the beyond. We dream of passing through ourselves and of finding ourselves in the beyond: the day when your holographic double will be there in space, eventually moving and talking, you will have realized this miracle. Of course, it will no longer be a dream, so its charm will be lost.”
—Jean Baudrillard, "Holograms"

“I never had to follow a ghost before.”
—Ridley Scott, Prometheus

1. Prefigurations

“There is no past,” Gene Youngblood states with a confidence that borders on the foolhardy in Expanded Cinema, his famous paean to the intermedia experiments of the ne-avant-garde. This assertion would lead many cultural critics to despair
about the future of human culture, but not Youngblood. He declares the death of history in the middle of a discussion of the merits of Stanley Kubrick's magnum opus, \textit{2001: A Space Odyssey} (1968), which Youngblood accepts, if not without some hesitation, as articulating a mythology of human progress that is proper to the emerging era of information technology or what the American critic prefers to call the Paleocytymetic age. One could say, therefore, that Youngblood appoints Stanley Kubrick as the Richard Wagner of intermedia art, although \textit{Expanded Cinema} makes no actual reference to the German inventor of the total work of art. However, what this comparison might help to clarify at the outset of my argument is, first of all, how expanded cinema envisions an interaction between aesthetics and politics through the active rearrangement of the senses and, secondly, that the declaration of a rupture between past and present, which was so often used to announce the birth of a new avant-garde during the 20th century, did not preempt the creation of a new origin myth. In fact, it necessitated the invention of such a myth to "reboot," as it were, the connection between past and present.

In the following, I shall address in particular this question of the political aesthetics of expanded cinema and I shall do so, largely, in dialogue with Youngblood's text. However, it should be clear from the beginning that I do not take Youngblood's book as an authoritative account of a set of practices, which are now assembled under the historical label of "expanded cinema," although Youngblood's text is one of the earliest, and most informative to address the wide assortment of multimedia screenings, performances and installations that went by the name of expanded cinema since the mid-1960s. No doubt this phenomenon forms a historical construct which does not possess an intrinsic, formal logic, despite the multifarious attempts, such as Youngblood's, to define such a comprehensive logic in retrospect. There should be no need to point out that expanded cinema—as the very term implies—does not consist of a homogenous and unified set of practices although, as I will indicate, recent scholarship has established a few basic, if divergent dispositifs of expanded cinema (not all of which are recognized by Youngblood in his book). Furthermore, if Youngblood's text will have a prominent presence in the following, I do not propose to undertake what would be a rather superfluous gesture; namely, to perform a critical deconstruction of his argument for its own sake. What I propose to undertake is of a more speculative nature, which requires that we productively work through the "ideological materials" that are contained within Youngblood's text, instead of simply dismissing its metaphor of "expanded consciousness" as a false resolution of underlying social conflicts. Such a mode of ideological critique would serve no real purpose in the present.

What I find compelling about Youngblood's text is its \textit{anticipatory} value, the manner in which it indicates a process of mediatization that has worked its way through into our present, although not in the manner that the author predicted. This historical development I shall attempt to grasp through the ambivalent figure of the holographic image, which must be understood here in a more allegorical than technical sense. It is a genealogy of the hologram, in other words, that will concern me here, but not in the sense of writing the history of a specific technological invention. What I wish to sketch, in a preliminary manner, is the genealogy of what we may call a \textit{hologrammatization} of the space of politics.¹

Hence I shall focus on the one phantom that haunts Youngblood's text throughout, if only putting in a full appearance at the very end of the book. Yet, even there, it shows up in an elusive manner, more dream than tangible reality, as a kind of holographic spirit that announces to Youngblood a vision of an utopian future. I propose that we consider this holographic figure in two, complementary ways: on the one hand, as representing a political allegory of expanded cinema, and on the other hand as drawing a social diagram, to borrow Gilles Deleuze's phrase, of the later 1960s. The hologram is more than a technological device in Youngblood's book; it exemplifies a specific apparatus of power. To understand what is at stake here, we need to recall Deleuze's crucial addendum to Michel Foucault's concept of a disciplinary society, in the "Postscript on a Control Society."² Since the Second World War, Deleuze contends, we have already been moving away from a disciplinary regime of power, which confined people within the institutional sites of work, entertainment, and education.
New forces have come into play, he insisted, constructing an informational society of communication and control, which is perhaps more open in character, but not less subject to administration. Controlled societies are organized by means of a new bio-political technology of continuous monitoring and information feedback loops.6 Cybernetic machines are the hallmark of this new society of control, yet as Deleuze points out, machines do not explain anything. Rather we must always "analyze the collective arrangements of which the machines are just one component."

One such collective arrangement of information technology was fantasized during the 1960s under the name of the "Global Village," and Youngblood wished to gather the tribal audience around its electronic hearth. In his opinion the creative media of the future would be formed by video, television, and computers. A new form of "synaesthetic" and "cybernetic" cinema would soon render narrative cinema obsolete. And thus Youngblood came to portray expanded cinema in 1970 as embarking on an adventurous mission to discover and harness the "universals of communication," drawing a parallel to the "interstellar morality play" of Kubrick's 2001: A Space Odyssey, in which the intrepid crew of the spaceship Discovery travels into outer space to investigate a mysterious signal emanating from the edge of the solar system. Two decades later, however, this journey into cyberspace would come to be viewed in a quite different light. As Deleuze remarked in 1991, any quest to establish a system of universal communication "ought to make us shudder."

"Through the Hologram Window"

To imagine a world of universal communication is to imagine the world as a closed circuit in which all contingency—as an "external" disturbance of the homeostatic balance of the system—has been submitted to algorithmic control. In short, all "noise" will be banned from such a realm. In such a world, we might imagine that information as such, which Gregory Bateson once defined as a difference that makes a difference, would be reduced to a single "live" signal, emptied of signification, coursing through the pathways of the system. At this point we would enter Jean Baudrillard's domain of hyperreality, or a world of total simulation. Indeed Baudrillard maintains that it is the accelerating degree of information circulating within the media system that causes information to divest of its ability to "make a difference": "the loss of meaning is directly linked to the dissolving, dissipative action of information, the media, and the mass media." And we may imagine how Deleuze begins to shudder at the thought of Baudrillard's future society of universal communication, a haptic world that consists of the "materialized projection of all available information on the subject," leaving nothing behind to be desired. Even the hand that passes through such a "materialized transparency" becomes unreal. Indeed, not only is the hyperreal populated by holographic bodies, it is nothing but a holographic projection.

There are then two fatal strategies, two transgressive acts that must be avoided, according to Baudrillard, in one's interaction with the realm of media technology. In the first place, one must never try to traverse the transparent plane of the image. One must never yield, that is, to the temptation to pass over to the side of the real. For this would cause the image to disappear, and with the vanishing of the image we would lose our sense of self-identity as well. To save ourselves, Baudrillard implies, the imaginary must be protected at all costs. Should our fantasy of "seeing ourselves" in a mirror or photograph somehow be brought to an end, the world as a whole would dissolve into a shapeless fog. Yet, Baudrillard contends, the opposite temptation is equally deadly: we must also not try to pass over to the side of our own double or holographic twin. To externalize, that is, our ideal ego as a hologram. It may be hard, he writes, to shake the fascination of "being able to circle around oneself, finally and especially of traversing oneself, of passing through one's own spectral body—and any holographed object is initially the luminous ecstasies of your own body." Yet, should a laser beam, as it were, be capable of exciting a secret double from our unconscious, creating an ideal prosthesis of ourselves, we would not be seen bending over our own creations "like gods." These more-than-perfect holographic others—existing "there in space, eventually moving and talking"—would render our own bodies immaterial in turn.
In short, Baudrillard employs the metaphor of the hologram—he is not speaking of any actually existing technology—to describe a process of "spectrogenesis." In pursuit of the status of a god, the human subject attempts to give autonomous life to the abstractions of his own thought. A process that, of course, Karl Marx had already shown to lie at the basis of capitalist society in his discussion of the commodity fetish. Only now it is the mind itself, not the body's physical labor that assumes a spectral shape. I shall develop this notion of spectrogenesis, but Youngblood was clearly not worried about the dangers of "passing to the side of the hologram" in 1970. Furthermore, he welcomed the accelerated flow of information and its effect of creating an "implosion of meaning.

This destruction of the social imaginary was emancipatory in his eyes as it released us from the hold of the past: "technologies such as television displace the individual from participant to observer of the human pageant, and thus we live effectively 'outside' of time; we externalize and objectify what previously was subjectively integral to our own self-image." In other words, the mass media produce a state of radical alienation in the spectator, but at the same stroke he is liberated from the specious images that enslaved former generations: "As we unlearn our past, we unlearn our selves."3

By means of our mediatised detachment from history, we are all being prepared, like astronauts, to step into the beyond and to become a "child of the new age, a man of cosmic consciousness." In order to illustrate this idea, Youngblood refers to a scene in 2001: A Space Odyssey in which a crew member receives a birthday message from his Earthbound parents. The moment is infused with sadness, Youngblood observes, but not because he longs for a past. The astronaut is both physically and mentally removed from the social institution of the family. What significance could a birthday have to someone who no longer shares his parent's comprehension of the difference between life and death? Are not his companions aboard the Discovery preserved in a state of cryogenic suspension? To this "child of the new age" who lives in a cybernetic symbiosis with the machine, there exists only a continuous gradation between the animate and the inanimate.

It is our current plight, therefore, to be filled with "an inevitable sense of melancholy and nostalgia, not for the past, but for our inability to become integral with the present." Furthermore, he continues, this is also not a nostalgia for the future, as "there are no parameters by which to know it." Youngblood perceived his own generation, therefore, as living in the antechambers of time waiting to be reborn, literally, in the artificial light of the electronic media, similar to the fate of the astronaut in 2001: A Space Odyssey, who finds himself in austere Regency chambers with an aqueous video-like atmosphere, constructed by whispering omniscient aliens. In this simulated environment or video-incubator, the astronaut undergoes a "series of self-confrontations," continuously processing himself as if he has become trapped in an endless feedback loop.6

Until, that is, the astronaut is reincarnated as the Star Child, "transcending logic far beyond human intelligence."7 It is clear what Kubrick's movie, this "interstellar morality play," has to offer Youngblood: he comprehends it as an allegory of human redemption by means of technological development.8 Human consciousness is to ascend "beyond infinity" through the administrations of an alien intelligence. Yet it is easy to grasp that this "alien" mind is nothing else than an objectification of human thought. In this continuous mimesis of mental images into some form of "alien intelligence," Youngblood is, as it were, laying a holographic trap for himself.

We might sense his holographic double already standing in the wings, waiting to step out onto the central stage. But there is a hitch. As Youngblood complains, Space Odyssey suffers from an "unfortunate syndrome": namely, a disturbing fear of the dehumanizing effects of computer technology. Once again, a shudder is felt. This time it is caused by HAL, the panoptic computer of Discovery, who monitors every thought and action of the starship crew. To Youngblood, HAL represents the "highest achievement" of artificial intelligence—a machine that not only thinks, but can sense emotion—yet it goes berserk and murders all but one astronaut. Nevertheless, Youngblood is willing to overlook the "confused" thought of the director, preferring to see HAL not as an evil machine, but as a metaphor of the "end of logic" that releases the "cosmic mind" from its
earthly bounds. Alternatively, HAL might represent the necessary victim: that needs to be sacrificed if Youngblood's myth of redemption is to be brought to its final conclusion. The ghostly HAL functions as the uncanny incarnation of abstract, algorithmic thought, a product of the human brain, which turns against its own creator. And just as television exorcises the ghosts of the past, humanity must now exorcise the ghost of the future as well. But in this case, exorcism means a flight forward or what Baudrillard described as a passage to the side of the hologram. This trajectory of sublimation runs from human intelligence to artificial intelligence to alien intelligence to cosmic intelligence.

Indeed we must “pass through” our holographic double, Youngblood implies. We must become more ghost-like, not less, in order to realize our full potential as god-like creatures. To quote “Saint Max,” only “as a specter has [the human subject] been regarded as sanctified.”

Which brings me to my next point: political theology masquerades as media theory in Expanded Cinema. As the author explains: “expanded cinema does not mean computer films, video phosphors, atomic light, or spherical projection. It is not a matter of technology as such; rather “like life it is a process of becoming, man’s ongoing drive to manifest his consciousness outside of his mind, in front of his eyes.”

Expanded Cinema pursues not so much an expansion as an externalization of consciousness. And once consciousness has assumed this autonomous, exterior status, it becomes not simply alien, but angelic: a “star child.”

In constructing this myth, however, Youngblood is actually following the script of cybernetic theory. For the “star child” is what Gregory Bateson, for instance, would call the “larger Mind,” which as the latter concedes might be called God by some people, but refers to the fact that the mental world is not limited by the envelop of our bodies. As a true cybernetician, Bateson equates consciousness with the processing of information and circuits of information that extend beyond the skin. The mind is not only inmanent to the “whole communication system within the body—the autonomic, the habitual, and the vast range of unconscious process.” Such a corporeal inmanence of the mind, as Bateson notes, was already established by Freudian psychology. What is truly radical about the notion of the “larger Mind” is that it no longer considers human consciousness as a mere epiphenomenon of a bodily substrate, but as seamlessly integrated within the “total interconnected social system and planetary ecology.” This posthuman view of a non-archetypal universe in which autonomous subjects can no longer claim to occupy center stage should teach us a certain humility, Bateson advises. We are but temporary patterns of data coalescing in a continuous flow of information. Yet, it should also be reason to rejoice as cybernetic theory proposes that we are part of something bigger than ourselves; “a part—if you will—of God.”

I shall come back to this question of political theology, shortly, as there is another issue that we need to settle first. For someone who claims that the parameters of the future cannot be known, Youngblood seems quite eager to fulfill the role of a prophet. As a matter of fact, he actively seeks out his own experience of epiphany. In the final chapter of Expanded Cinema, called “Holographic Cinema: A New World,” the author constructs a memory of the precise moment in time when he came to stand face-to-face with infinity, sensing the eternity within all of time:

In April, 1969, overlooking the Pacific from the crest of Malibu Canyon in Southern California, I became one of the few persons to view the world’s first successful holographic motion picture. There at Hughes Research Laboratories one can look across the canyon to see a Catholic monastery...perched majestically atop its own mountain...the temples of science and religion separated by a canyon as old as time, each in its own way dedicated to the same quest for God...Through the hologram window we peer into a future world that defies the imagination, a world in which the real and the illusion are one, a world at once beautiful and terrifying.”

Looking back, we might wonder about Youngblood’s excitement about the medium of holography, which still stood in its infancy in 1969. Yet at the time, the new 3D image technology seemed to contain an endless promise for the future. Practical applications of holography in the field of science, mass culture, and artistic practice seemed to be
imminent. Youngblood had no doubt: it was certain, he asserted in *Expanded Cinema*, that holographic cinema and television will be common features by the year 2000. Nevertheless, Youngblood did misread the parameters of the future: holography would acquire its most widespread application elsewhere, not in the domain of art and entertainment, but primarily in the sphere of military surveillance and control. Which comes as no big surprise, considering the fact that the principle of holography was discovered as an offshoot of military research in the use of radar and that Youngblood himself, in his quest to learn more about the medium, would visit several labs that were part of the aerospace and defense contracting system.

The military genealogy of holography will be of more interest to me later and, therefore, I shall have little to say about the short-lived history of the hologram as artistic device. I am even less inclined to engage in the rather fruitless discussion of why the hologram was never fully embraced by the art world. In passing, it is interesting to note that holography quickly escaped from the secretive military lab in the later 1960s, spreading both to the commercial world and the artistic community. Bruce Nauman was one of the first artists to experiment with the new medium, creating his *Making Faces* series in 1968. Soon thereafter the first exhibitions with holograms were organized at Cranbrook Academy in Detroit (1969) and Finch College in New York City (1970). In 1971, the School of Holography was established in San Francisco (1971) and in 1976 the New York Museum of Holography was founded. However, with a few exceptions, such as the Simone Forti's *Striding Crawler*, the medium, in contrast to other new media technologies, such as video, did not fully mesh with the dominant concerns of advanced artistic practice and it remained largely confined to the cultural realm of optical curiosities. Until lately, that is.

What is holography? In brief, a hologram is a three-dimensional representation of an object that is created when a laser beam is split, with one part of the beam reflecting off the object onto a photographic plate and the other part—the reference beam—projected directly onto the plate. The plate registers the interference pattern that is caused by the light waves from the two beams. Subsequently, by shining the reference beam back onto the hologram, a virtual, 3D image of the object becomes visible to the naked eye. In essence, a hologram is an informational storage device, it encodes a “wave front construction” of the object. The resulting images, certainly in the later 1960s, were far from perfect, creating ghoulish effigies clad in shimmering, rainbow-like effects. As one contemporary critic put it:

Three-dimensional holographic images were disturbingly there but not there. They hovered like ectoplasm both before and behind the transparent or reflective plates to which clear celluloid sheets bearing lasergenerated interference patterns were attached.

This unsettling confusion by the hologram between presence and absence, inside and outside, appears to have triggered an historical memory of the 19th-century seances and its conjuring of ghosts. It is, then, not so much the actual technique of holography that is at play here, but its imaginary potential that is both fascinating and “disturbing.” Even Youngblood admits that holography suffers from a popular misconception, which maintains that it is possible to interact with the holographic image—moving around and through it. However, he immediately adds that this misconception may become reality soon. When, successively, Baudrillard writes in 1981 about “the day when your holographic double will be there in space” and the “dream of passing through ourselves and of finding ourselves in the beyond” has become reality, the confusion between the hologram and virtual reality (or, alternatively, volumetric display technologies) is complete. Of course, Baudrillard is doing nothing less than filling in Youngblood’s dreamy view of the future that was revealed to the latter as he stood on the bluffs overlooking the Pacific Ocean. But Baudrillard does so with apocalyptic fervor, converting Youngblood’s vision of a posthuman future of imminent being into a nightmarish scenario of total implosion. With Baudrillard’s concept of hyperreality, capitalist society is indeed conceived as a vast hologram, which is inhabited by simulacra of ourselves, pure informational bodies which leave no remainder, no supplement that escapes representation. Abstraction vanquishes the real, although in his essay on
the hologram the French theorist appears to hedge his bets. Baudrillard displaces the actual technological implementation of this nightmarish dream to an indefinite future where it has become possible to send our holographic avatars to travel the world in our stead. The dialectic between the "non-living" and the "living" would then be complete, the battle decided in favor of the former, and with the establishment of a total regime of simulation, human desire would itself become an extinct species.

Two totalizing views of the future, one utopian, the other dystopian, but both are focused on the holographic image as an entity that occupies a threshold space, which is mesmerizing and terrifying due to the manner in which it allows the sensuous and the non-sensuous, the abstract and the concrete, to become interwoven. Let us explore this strangely twisted, topological realm a bit further.

"A Materialist Below and an Idealist Above"

Let me now return to the question of political theology as it is raised in Expanded Cinema. According to Youngblood, we are no longer able to identify ourselves in the images of the past that are transmitted into the present. And this radical uprooting of the contemporary subject, the author goes on to argue, may seem traumatic, but it is, nevertheless, a blessing in disguise. But to what calamity do we owe this death of history? How did the calendar become reset to year zero? Time was certainly not stopped by any human act of insurrection, unlike those 19th-century revolutions that allegedly fired on the clock towers of Paris during the first day of fighting. Our detachment from the past, Youngblood maintains, is the inevitable result of our exposure to the "implosion of information" in the mass media. Television, as noted above, is blamed for displacing the individual to the sidelines of time. But what could this mean: to live "outside" of time? Is Youngblood to be considered guilty of an old perversion of the avant-garde project; namely, to glorify in the self-alienation of the human subject? Is Youngblood a futurist-in-disguise who is enthralled by the spectacle of technological domination? Has he not succumbed to that old ruse of history: to confuse a political aesthetic of emancipation with the politicization of aesthetics?

Allow me to suggest a more fruitful mode of analysis. Perhaps it is more apposite to define Youngblood as "a materialist below and an idealist above," to borrow Friedrich Engels' famous characterization of Ludwig Feuerbach. At this point, we may recall how the latter undertook a critique of religion by accusing Christians of hypostasizing "their mental states into beings and qualities of things, their dominant emotions into powers dominating the world." Religious thought, in other words, gave birth to a confusion between what is internal and what is external to consciousness. Mental abstractions were given a body as "self-subsisting beings," and unlike the sensuous object that exists apart from man, "the religious object exists within him—it is itself an inner, intimate object, indeed, the closest object, and hence an object which forges him as little as his self-consciousness or conscience." Like ghosts, these "self-subsisting beings" that are exposed on the outside of the subject consist of a shadow nonsensuous nature: they are both spirit and body, living and nonliving entities. Feuerbach took it upon him to expel from human society these demons, which had sprung from the human mind, achieving an autonomous presence only to enslave humanity in turn. The complaint of Engels—as well as Karl Marx—was that Feuerbach's exorcism had not been radical enough; he had left the idea of divinity intact by reinscribing it within the human "essence." Man, in Feuerbach's estimation, was the equal of God.

Yet, the problem for Marx and Engels was not only that Feuerbach injected consciousness with a spectral notion of divinity. As the radical anarchist, Max Stirner, had already enjoined, Feuerbach's divine subject is derealized by his own ghosts: "the man identified here with the unique, having first given thoughts corporeality, i.e., having transformed them into specters now destroys this corporeality again, by taking them back into his own body, which he thus makes into a body of specters." Like Baudrillard's hologram, which makes the hand that passes through it unreal, Feuerbach's living body becomes spectral by absorbing its own phantomatic projections within itself. And thus the human subject becomes the absolute ghost: "simulacrum of simulacra without end," as Derrida puts it. Yet even Stirner, in rejecting Feuerbach's anthropological critique of
emergence of a “postindustrial” society that is organized by immaterial, or informational modes of labor. The general intellect refers to the exterior, collective, and social character of intellectual activity, which, in the present, has become integrated within the capitalist system of production; a system that is more engaged in the invention of new life styles, affective experiences, and financial derivatives than the reproduction of the material commodities of industrial society. According to post-operaist theory, therefore, the valorization of the general intellect by capital has led to an expropriation of our own mental faculties, bringing the biopolitical control of society to a state of near completion. I shall not be concerned here with the post-operaist response to this dystopian scenario—i.e., that the general intellect, as embodiment of the multitude, contains the seeds of resistance within itself. Rather, I am interested in how expanded cinema and, in particular, Youngblood’s holographic dispositif of a “cosmic consciousness,” can be accommodated within the Marxist concept of the general intellect. In this manner, we may begin to comprehend how expanded cinema was both “idealistic above” and “materialist below” or, in other words, how it could operate as both a critique and a prefiguration of a control society that existed at most on the horizon in 1970. Or, as Youngblood put it, the holographic window of expanded cinema delivered a premonition of a future that was both “beautiful and terrifying.”

Network Power

What are the facts that have been established thus far? We know how expanded cinema celebrated the liberating potential of the new technologies of communication; technologies that oddly enough were themselves the product of the military-industrial complex. Indeed expanded cinema happily ransacked the military warehouses in search of surplus equipment. But we also know that a particular technology does not equal an apparatus or dispositif of power; technology is not inherently emancipatory or repressive. Expanded cinema opposed the new mechanisms of social control and surveillance which were being implemented on a world-wide basis, and therefore artists such as Stan VanDerBeck set out to build, as it were, their own
multi-media “control rooms” to counter those of the media conglomerates, financial corporations, or the Pentagon. We must transform weaponry into living, as the awkward conglomerates, financial corporations, or the Pentagon. 

slogan of Buckminster Fuller put it, and expanded cinema took this demand seriously (even more so than Fuller did). But, unfortunately, in its attempt to articulate an alternative, more democratic model of media ecology, the practitioners of expanded cinema more often than not failed to acknowledge the concrete nature of the power relations it engaged in. In a perverse twist on Foucault’s panoptic diagram, expanded cinema imagined the central control room to be empty, although clearly there was the need for someone or something to twist the dials and pull the switches; to keep, in short, the negentropic feedback loop between subjects and images running and alive. And so we arrive at a familiar question of political theory: Is it possible to conceive of a critical position outside the current system of social organization? Once such a strategy might have seemed to be possible. As Michael Hardt and Toni Negri assert in Empire, the emergence of a modern, governmental system of nation-states establishes a bounded space of sovereignty where power always resides at the limit. Which is why, during modernity, political critique would fashion itself upon a dialectic of inside versus outside. The revolutionary dialectics of Marxism, for instance, was grounded on the concept of an inside that desires to connect with an outside through the abolition of the nation-state. Yet, if we are to take the premise of a control society seriously, it may be clear that the former dialectic of inside versus outside no longer applies. As Alexander Trocchi put it already in 1963, writing in the pages of the Situationist International: “We are concerned not with the coup d’état of Trotsky and Lenin, but with the coup du monde, a transition of necessity more complex, more diffuse than the other, and so more gradual, less spectacular.” What might constitute an “outside” to the global closed circuits of information? Youngblood himself seems confused by this question. On the one hand he appears to embrace the social model of a “closed world” of control and communication, which has its origins in a military politics of “containment” that was first developed during the Cold War. On the other hand, Youngblood is in thrall of the ideology of the new space age where we will be free to wander as astronauts in the infinite expanse of a cosmic consciousness: “we’ve left the boundaries of Earth and again have entered an open empire in which all manner of mysteries are possible. Beyond infinity lurk demons who guard the secrets of the cosmos.” But what is it to be: closed circuits or open empire? 

Hardt and Negri propose that we grasp this paradox in terms of a “network power.” What is network power? In contrast to the transcendent character of sovereign power, which determined the European system of nation-states, network power operates in an immanent fashion, constituting and redistributing social relations from within the very fabric of society as such. Hardt and Negri state that network power is based on three principles: (i) the drawing of a territory which allows the “productive synergies of the multitude” to construct its own political institutions; (ii) the establishment of an internal limit to the conflictive and plural nature of the multitude itself; and (iii) the maintenance of equilibrium between constituent and constituted forces by opening up ever new lines of flight. It immediately follows from these three principles that a republican confederation of people will exist in a constant state of exodus, always seeking to populate new territories. Yet ideally, if not always in actuality, this expansion takes place by means of inclusion, not repression of that which is foreign. This amounts to saying that imperial (but not imperialist) power works in a topological, rather than a geometric fashion: it concerns a new folding of space. Of course, the Republic of the United States, which Hardt and Negri credit with the invention of network power, did not always adhere to its original principles. Hardt and Negri point, for instance, to the Vietnam War as a symptom of America’s occasional lapse into colonialist behavior. But, at the same time, this regression was countered by the rise of the New Left, which reaffirmed the principle of constituent power within American society. There can be no doubt that the 1960s were characterized by an unbinding of social energies, a deterritorialization of the social spaces internal to American society. In a similar fashion the American counter-culture, to which expanded cinema was intimately linked, set a kind of internal exodus in motion, which attempted to resettle
the countryside with its dismountable, geodesic domes—Fuller's gift to the nomadic generation of the 1960s. But in seeking a mode of self-governance, these communes or “drop cities” did not simply try to carve out a natural paradise, an Eden of sexual innocence, from the derelict remains of industrial society. The pleasure domes of these new communes were actively plugged into the new information spaces. They functioned as a kind of biopolitical laboratory of self-experimentation in which cybernetic as well as psychotropic modes of feedback were explored in order to open the stargates of expanded consciousness.48

We still need to determine, however, what bearing network power has on expanded cinema’s project. In recent years we have established a profound understanding of the way in which expanded cinema, in all its mutable forms and shapes, is entangled with the agonistic sphere of the political. How, that is, expanded cinema articulates, often unwittingly, a set of variable and conflicted relations between art, technology, and subjectivity. On the one hand, Branden Joseph has offered the interpretation of the expanded cinema event, as embodied by Andy Warhol’s Exploding Plastic Inevitable [1966–1967], which attenuates the disintegrative effects of the multimedia performance: a series of stroboscopic blasts that allow no mercy in breaking down the defenses of the self.49 Or, as Jonas Mekas famously declared, the sensory overload of EPI establishes “the last stand of the Ego, before it either breaks down or goes to the other side.”50 On the other hand, there is the psychedelically or mystical variant of expanded cinema, which was perhaps the more dominant form, and which aimed to push beyond the barrier of the ego, beyond the “screeching, piercing personality pain” (Mekas) in order to accomplish a retrivialization of society. This alternative, integrative paradigm of expanded cinema is the one celebrated by Gene Youngblood and exemplified in his book by such practices as Stan VanDerBeek’s Movie-Drome [1963–1965] and the road show We Are All One, by the media art collective USCO.51 In these projects, the immersion of the viewer in the flow of images and other sensory stimuli is meant to induce an erosion of all distinctions between the self and its environment, allowing one to become absorbed in an ecstatic “flow” of sensations. Or, according to USCO, producing “a journey of this being riding and fighting the waves from birth through love’s body, searching living currents, sampling peaks of illumination, holding on and letting go of the experience of time-space-death, finding potential rebirth in the consciousness WE ARE ALL ONE.”52

In other words, expanded cinema pursued a project of social reprogramming in which the human subject was not only trained to master the accelerated pulse of informational processes, but to shed his or her former identity and fuse within the new networked space of a global tribe. It was VanDerBeek, in particular, who established the link between expanded cinema and the latest frontiers of network power. “It is imperative,” he wrote in his manifesto “Culture: Intercom” and Expanded Cinema, “that we quickly find some way for the level of world understanding to rise to a new human scale. This scale is the world ... Technical power and cultural ‘over-reach’ are placing the fulcrum of man’s intelligence so far outside himself, so quickly, that he cannot judge the results of his acts before he commits them ... the world hangs by a thread of verbs and nouns. It is imperative that the world’s artists invent a non-verbal international language.”53 Hence his proposal to construct a global system of Movie-Dromes connected by satellites that would establish an “image flow and image density” (also to be called “visual velocity”) “both to deal with logical understanding and to penetrate to unconscious levels, to reach for the emotional denominator of all men, the nonverbal basis of human life, thought, and understanding, and to inspire all men to goodwill.” The Movie-Drome was thus merged, as Beatriz Colomina has argued in a now classic essay, with a series of other contemporary “spaces” that were the product of the new space age: the mission control and war control rooms to which we may now also add, the data centers of the financial industry and drone command sites.54

I am not the first to point out that expanded cinema stood in a highly ambivalent relationship to a new dispositif of techno-scientific visuality, one that is enabled by the dome of communications satellites that began circling the Earth after the Russian launch of the Sputnik to the startled eyes of the West. In the 1960s network power had discovered a new frontier, a new boundless space of expansion, which seemed to open up new lines of flight even while closing
some old frontiers. Thus, Youngblood’s notion of an “open empire.” Yet we might also listen to Marshall McLuhan, for instance, as he welcomes the closure of Earth from its outside: “Since Sputnik and the satellites, the planet is enclosed in a man-made environment that ends ‘Nature’ and turns the globe into a repertoire theater to be programmed.”

Or, elsewhere, “For the first time the natural world was completely enclosed in a man-made container. At the moment that the Earth went inside this new artifact, Nature ended and Ecstasy was born. Ecological thinking became inevitable as soon as the planet moved up into the status of a work of art.” To transform the Earth into a work of art—i.e., an artificial, self-enclosed and controlled environment—is to treat it as a computer simulation on a planetary scale. The world as holographic projection. Es spukt in der ganzen Welt—the world is itself an apparition—ever since Sputnik was sent aloft.

We have seen how network power not only unleashes constituent forces; it also sets an internal limit to their expansion. This becomes apparent when we consider how the global technology of satellite surveillance serves, in the words of Eyal Weizman, a new politics of verticality, which literally upsets the former horizons of political thought and social control. Here is how another critic rephrases Weizman’s notion of a politics of verticality:

Everywhere, the symbolics of the top (who is on top) is reiterated. Occupation of the skies therefore acquires a critical importance, since most of the policing is done from the air. Various other technologies are mobilized to this effect: sensors aboard unmanned air vehicles (UAVs), aerial reconnaissance jets, early warning Hawkeye planes, assault helicopters, an Earth-observation satellite, techniques of “hologrammatization.” Killing becomes precisely targeted.

In the present text, I will not be able to develop this more lethal genealogy of the hologram, but what is important here is that it shows another aspect of the collective arrangements of which the hologram was part. On the one hand, we have Youngblood encased within the technological dome of communication, yet imagining this closed space, like a planetarium, to be infinitely larger. On the other hand, we have the symbolics of “who is on top,” which relates to the actual situation of military commanders looking down on a miniaturized battlefield, rendered within the sphere of a holographic display.

The Real Image

“The new consciousness does not want to dream its fantasies, it wants to live them.”

—Gene Youngblood

We have seen how Youngblood developed a political theology of the image in expanded cinema, thereby putting a fresh spin on Karl Marx’s famous comments about the mystical character of the commodity fetish, “abounding in metaphorical subtleties and theological niceties.” As a matter of fact, the substitution in expanded cinema of the presentation of art objects by the processing and circulating of images, partakes of a further development in the dialectics of capitalist production, but I shall not dwell on this topic here. In Youngblood’s view, expanded cinema’s purpose was to reveal a supersensory, even metaphysical reality wavelengths beyond ordinary human perception and the means toward attaining such a revelatory awareness would be provided by nothing else than the “instrumented and documented intellect that we call technology.”

This remarkable phrase can be found in the concluding section of Youngblood’s Expanded Cinema, called “Technoanarchy: The Open Empire.” Here the rhapsodic quality of Youngblood’s prose is driven up a further notch as he unfolds his ecstatic vision of the future. Throughout the chapter, Youngblood recounts a tour he made of the research laboratories of the aerospace and computer industry, allowing himself to become enthralled by the phenomenon of holographic images. The conviction of the scientists, whom Youngblood reverently addresses by their professional titles, leaves no doubt in his mind: the reality of a truly participatory cinema is imminent. The medium may not be quite ready to fulfill its promise right here and now, but Youngblood remains full of anticipation nevertheless.
As he explains, a hologram is not made with lenses and therefore it creates a virtual image that appears to exist out there, on the other side of the film from the viewer. It is as if the viewer looks through a window. Yet it is possible, he exults, to develop an optical system of projection that will create a “real image” on this side of the film; that is to say, to produce a holographic image that assumes a three-dimensional, bodily form in actual space. In fact, a process for the creation of such real images already exists, he asserts, and has been practiced by magicians for centuries.

This conjuring trick, Youngblood explains, is known as “The Illusion of the Rose in the Vase” and all that is needed to produce such a real image in space is the combination of a lens, a concave mirror, and a pinhole light. What the viewer experiences when looking at the concave mirror is a floating image or phantomatic object that seems to exist in actual three-dimensional space as the focal point of reflected light rays lies in front of the mirror’s surface, rather than behind it as in the case of a regular, flat mirror. Little did Youngblood know that Jacques Lacan had used the very same mirror trick of the inverted bouquet to expose the self-deception at work within the psychic processes of identification. But more on this below. The hologram, Youngblood maintained, stood in service of truth not deception. Holographic technology that would soon produce real images that are incapable of telling a lie. Just ask the experts: as “Dr. Wuerker of TRW Systems group” assures, when you watch a holographic movie “your own eyes are the lens, just as in reality ... [hence] holograms cannot be doctored ... you won’t be able to pull the tricks that are in movies or on TV because holography is too dependent on actuality.”

Real images, indeed.

Throughout this text, Youngblood sounds very impatient, but it appears he had a valid reason to be so. The future seemed already on the make as his book went to press. On its last pages he describes the trial run of an inflatable, mirrorized dome that Experiments in Art and Technology (E.A.T.) was developing for the Pepsi-Cola Pavilion at the Expo’70 in Osaka. “An astonishing phenomenon occurs,” Youngblood writes, “inside this boundless space that is but one of many revelations to come in the Cybernetic age: one is able to view actual holographic

images of oneself floating in three-dimensional space in real time as one moves about the environment.” What does this epiphany of the real image signify to Youngblood? That technology as such has come to mean a means of self-realization: “Only through technology is the individual free enough to know himself and thus to know his own reality.” For him technology becomes a means toward self-realization (i.e., the real image) because the apparatus as such (the catoptrical device) is able, or so it seems, to create alternative worlds. The technological medium functions both as an environment that sustains a way of life and an instrument that differentiates a form of life. In other words, Youngblood conceives of technology as a dispositif of subjectivation that not only modulates us, but somehow we are able to modulate in turn. This celebration of information society as a kind of auto-poietic machine might remind us, once more, of Deleuze’s physical revulsion at the notion of universal communication. Yet let us look a bit closer at the nature of this looped pathway, which E.A.T.’s pavilion, according to Youngblood, helps to engrave upon the circuit board of society. For what is presented here in the shape of an inflated, mirrorized dome, developed from the “synergetic technologies of computer science and polyvinyl chloride (PVC) plastics,” is nothing less than the social diagram of its own historical moment.

The Pepsi Pavilion was not revolutionary in all its aspects. Referring back to the earlier link that he made between expanded cinema and the space program and their joint exploration of “the larger spectra of experience,” Youngblood notes that NASA had already experimented with the construction of mirrorized, Mylar spheres in developing the Pegasos and Echo satellites. Yet, after establishing this pedigree of the Pepsi Pavilion within the military and communications industry, he believes it is necessary to point out the obvious: “one could not enter them” (i.e., the satellites). Indeed, the Pepsi Pavilion conflates the outer “dome” of information technology with the interior space of a networked subjectivity: environment and instrument become fused within the “synergetic efforts of all men applying all disciplines.”

It requires no stretch of our imagination to move from Youngblood’s concept of the “synergetic Pegasos,”
cooperative forces of mental labor at work in E.A.T.'s project to Karl Marx's notion of the general intellect. Although in taking this step, we will obtain a quite different perspective on Youngblood's position. As noted above, the general intellect refers to the exterior, social character of intellectual activity, which is the principle source of economic productivity in post-Fordism. What is important to emphasize is that this notion of the general intellect is related to the phenomenon of "real abstraction" whereby an idea becomes a thing, as, for instance, money. And, I should add, a real abstraction is not just an inert thing, but also a thing that seems to be magically endowed with agency, with the power to act independently of human beings. Which, of course, is exactly how Marx described the commodity fetish. But how does the general intellect manifest itself in contemporary society? It does so not merely in the objectified form of fixed capital—say, factory machines—but in the communicative performances of living subjects who are involved in the productive cycles of immaterial labor. It follows that we must consider information technology as both the product of the public intellect and the very medium in which its distributed intelligence operates. For Youngblood, as we have seen, technology has indeed acquired some of this independent power, it has become spirit, in the same way that industrial relations of production had provided the commodity with a spectral presence of its own.

So how might the Pepsi Pavilion be connected to this notion of the general intellect? In the first place, the Pepsi company was one of the first corporations to implement an advertising campaign which leveraged a life-style—the famous "Pepsi Generation"—rather than selling a product in the classical sense. The Pepsi Generation commercials were innovative in that they did not attempt, as previous advertisements did, to distinguish the product by means of its price or taste. This explains, in part, why the advertising executives of PepsiCo were willing to take a chance with the pavilion, handing the project over to a group of artists and composers, among which were Robert Breer, Robert Whitman and David Tudor, who, at the time, were completely unknown to the company men. What these individuals had in common, however, was an interest in the staging of lively, performative events, and the corporate strategy of PepsiCo, as we will see, had become directed at the exploitation of "experiences" in order to sell their actual product. More importantly, however, the design process and programming of the Pepsi Pavilion provides a good example of the collaborative, social nature of the general intellect's mode of production. Not only were various artists and musicians involved in the design of the pavilion, but also an extensive team of engineers, scientists, and architects. The design process was open-ended, with no preconceived goal. Indeed the planning stage was organized according to the protocols of the so-called Delphi method, a system of forecasting based on a collaborative process of decision-making that was developed by Olaf Helmer at the RAND corporation.

 Apparently the system did not operate all too smoothly in the case of E.A.T.'s project. Only after several inconclusive meetings of the initial planning group was it possible to settle on a shared concept: the Pepsi Pavilion was to operate as a kind of multi-sensory, feedback apparatus or a "living responsive environment" to borrow a phrase of the engineer Billy Kliver who was a co-founder of E.A.T. In other words, the dome was conceived as a social laboratory of affect—"an experiment in individual experience"—submitting a steady stream of visitors to an endless modulation of audio-visual stimuli. E.A.T.'s plan was to invite a succession of Japanese and American artists, choreographers and composers to operate as joint "programmers" of the space during a residency period of a few weeks. They were expected to work in a collaborative fashion in order to develop a different program of events and performances every week. The programmers had the ability to manipulate a multi-channel light and sound system by means of a control console, placed within the dome, which was connected to a "Master programmer"—an 82-channel punch paper tape machine in a separate room that was not accessible to the visitors.

Unfortunately, there is a lack of substantial information on what actually transpired in the dome. After a month, the contract with E.A.T. was cancelled by the executives of PepsiCo who had become alarmed by the rising costs of the project, and, it seems, the provocative nature of some of
the events taking place in the dome. What we do know is that the interior of the dome was equipped with specific features and apparatus which was meant to excite those partial drives of the body that were symbolized by Lacan's "bouquet of real flowers" [my emphasis] within his diagram of primary identification. For instance, the center of the floor was built of different materials such as rubber, wood, lead, and stone. The visitors were supplied with a hand-held device that emitted distinctive sounds coordinated to the floor material. For example, above a grassy segment, the visitor heard birds, cicadas, or a lion roaring, above a tile section horses' hooves and shattering glass, and above asphalt, trucks, motorcycles, a traffic jam, and squealing brakes. Also a multi-speaker sound system, using a switching network, was able to create spatialized sound environments. David Tudor, who helped develop the sound system, created oscillating patterns that moved between the speakers, using environmental and microscopic sounds such as fog horns, a beetle walking, ultrasonic bat sounds, earth vibrations, heart beats, and nerve impulses. Thus the body became subjected to a micro-modulation of affective experience. But stimulated in what direction? And what would be the equivalent of Lacan's moment of secondary identification within the environment of the dome?

In his seminar, Lacan figured this secondary process of identification by visualizing a spectator that stood with his/her back to the convex mirror and looked at the reflection of the real image in a plane mirror (i.e., looked at a virtual rather than a real image). The result of Lacan's optical experiments is to illustrate, as one commentator puts it, "how the ego functions at various levels simultaneously—as container and thing contained, as subject and object, as a mechanism of spatial location and as a displaced and displacing actor trapped in its own identificatory mirages." Secondary identification within the Lacanian scheme of things signifies the originary alienation of the subject that becomes expressed in social relationships of desire, aggression, and competition. But in the case of the E.A.T. pavilion, it is the total interior of the dome, and its cybernetic circuits of regulation, that operate as a means of containment; that is to say, the dome not only replicates the spherical mirror in Lacan's diagram of identification, but it also functioned, in a more complex and contradictory fashion, as the enveloping vase within Lacan's demonstration. Although one might imagine the dome to be boundless in scale, as an ecstatic Klüver noted, it also had the function to enclose, in more sense than one, the dispersive energies it released.

If the dome's shell functioned as Lacan's concave mirror, it did so on a vastly grander scale, completely enveloping a group of spectators and multiplying their real images several times over. The real images produced by the reflective surface of the dome are inverted, seeming to hang upside down within the interior of the pavilion. The dome produces image worlds to the first, second, and third order and in principle these image worlds may extend indefinitely, but they become increasingly difficult to identify by a spectator standing in the space. More importantly, each spectator sees the real image of another person in a slightly different position due to the effects of spherical aberration. Spectators can walk around the suspended real image of another individual, which appears to materialize in thin air, but they cannot share the same view of the bodily mirage. In fact, as one of the scientists involved in the dome project observed: "If many people on the Pavilion floor point to the same man's image, they will find they are pointing in different directions. This fact, when appreciated by the observer, lends an air of uniqueness and individuality to his images. No two people can have exactly the same image world." Furthermore, due to the sloping floor of the dome, visitors obscured each other's view of what was happening on the floor level. They only had direct access to the reflections hovering above their heads. And, finally, it was possible to exclude the point of view of other spectators altogether by standing in the exact center of the dome: "no matter where you look into the Mirror [sic], you see only yourself ... You see all your own images and, in fact, no one else can see them but you. Your image world is filled solely with yourself." In other words, the specular properties of the dome replicated Lacan's thesis of secondary identification, according to which "you never look at me from the place which I see you," but it also enabled a subject position of primary identification in which I can identify with the externalized image of my own body—as in the famous
"mirror stage"—without being conscious of the location of this “real image” of myself within a visual field that is dominated by the gaze of a transcendent Other.

In this sense, the dome does not conform to Baudrillard’s totizing notion of a hologramatic space that, as it were, fully occludes the dimension of the real in the Lacanian diagram of identification, but it also does not fully coincide with Youngblood’s vision of a “heaven on earth” that, as he writes at the very end of his final chapter on “Technoanarchy: The Open Empire,” is on the verge of being realized by the “art and technology of expanded cinema.” The split within the visual field according to which, as noted above, “no two people can have exactly the same image world,” appears to precept the singular event, which Youngblood desired and Baudrillard dreaded, according to which the real bodies and real images that comingle in the enclosed, simulated world of the dome became the avatars of that “concrete-abstract” entity of self-regulating thought, which Bateson called the “larger Mind.” Considering E.A.T.’s aesthetic politics of cooperation it is perhaps surprising that this fundamental inability of the spectators to share an identical view of the image world within the dome was celebrated by in their publication. As if all suspicion had to be removed that the pavilion functioned as a cybernetic machine of social programming, it was the “uniqueness” and “individuality” of the viewer’s experience within the dome that was stressed by most authors.

At the basis of E.A.T.’s project, therefore, a basic contradiction existed between a liberal conception of the human subject as autonomous agent, whose individual freedom must be protected against exterior forces of domination, and a cybernetic conception of the human subject who is only “individuated” as an immanent part of the informational loops of the social system. On the one hand the pavilion was conceived as a complex cybernetic machine which allowed the “programming” of multiple, audio-visual feedback loops between the visitor and the environment, whereas on the other hand any totizing effect of this program was meant to be counterbalanced by the free movement of the audience through the space. There is, then, a conflict between the emancipatory politics of the pavilion and its cybernetic technology of control.

Yet, there is a further differentiation we need to make. In so far as the pavilion was conceived as an “open-ended” experiment with new forms of sociability in a cybernetic age, it operated predominantly on an affective, rather than cognitive level.

To illustrate this idea, we may contrast the manner in which the Pepsi Pavilion (under the directorship of E.A.T.) served to create a corporeal mode of shared, intensive experience to the well-known example of the IBM Think Pavilion at the New York World’s Fair of 1964–1965, which was designed by Charles and Ray Eames. The objective of the multimedia program of Think was not only to entertain the vacationing visitor to the fair, but also to train the future citizens of an information society, to teach them how to navigate the torrents of data flooding their way. To think, in this context, meant to perform a split-second, cognitive act of pattern recognition that transpired on an almost intuitive level, below the threshold of self-reflective consciousness.

If the corporate medium of expanded cinema contained a message, therefore, it was that the human brain had to develop its own bio-rhythmic subroutines in order to keep up with the violent speed of the computer’s algorithmic processing of digital data. Therefore, in the case of Think, the informatization of society is predominantly linked to the cognitive and linguistic faculties of the human subject, testing their adaptability to the new forms of communicative labor. Indeed, during the Think presentation, a live commentator was present to help guide the bewildered spectators through the fast-paced screening.

The program of the E.A.T. Pavilion, on the other hand, was meant to resist any instructional (and, therefore, discursive) content. It was intended to “tend toward the real,” as their call for proposals read, and the inclusion of sociopolitical commentary or pedagogic performances were strongly discouraged. As Klüver put it, introducing the theme of individualism that others would employ as well: “The Pavilion would not tell a story or guide the visitor through a didactic, authoritarian experience. The visitor would be encouraged as an individual to explore the environment and compose his own experience. As a work of art, the Pavilion and its operation would be an open-ended situation, an experiment in the scientific sense of the word.”
The viewer was not to be instructed in the manner of *Think*, so much is clear, but what was so new about this open-ended situation that Klüver announces? What is the nonfinite character of the Pepsi Pavilion? Klüver explains his intentions by making a striking observation that distinguishes the Pepsi Pavilion from its 19th century precursors. Whereas previous universal exhibitions functioned as a showcase for the industrialization of society, the Pepsi Pavilion consolidates “a change away from concern for the object—its engineering, operation, and function, and toward aesthetics—human motivation, and involvement, pleasure, interest, excitement.” In other words, Klüver—the-engineer appears to be bidding farewell to the industrial fairgrounds of the past, ushering in a new era in which a postindustrial economy is no longer dominated by the manufacture of durable goods, but is directed at the valorization and governance of the intersubjective faculties of “involvement” and “interest” and the presubjective sensations of “pleasure” and “excitement.”

Entrusting these thoughts to paper in August 1970, Klüver could not be aware of their full bearing on the future. However, it is not difficult to comprehend from our present viewpoint how Klüver’s statement already points to the emergence of a new stage of capitalist production; that is, to a biopolitical regime of immaterial labor that succeeds, if not completely supplanted, a disciplinary regime of industrial production. At this point, life itself enters into the capitalist cycles of reproduction and it becomes all the more remarkable that Klüver even noted with satisfaction that social scientists had expressed an interest in studying the reactions of the visitors to this constantly changing environment, and he marveled at how “the Pavilion became theater conceived of as a total instrument, using every available technology in which the accumulated experience of all the programmers expanded and enriched the possibilities of the space.” But before we collapse the complex moment of 1970 all too quickly within a linear narrative of the transition from a Fordist to a post-Fordist society, it is essential to return to my previous comment about the two different modes of immaterial labor: a cognitive or informatized aspect versus a corporeal or affective aspect. With regard to the latter aspect, the historical rise of an information society reveals itself to have followed a process of complex struggle and resistance. During the 1960s, for instance, the neo-avant-garde, as embodied in the performative activities of Fluxus, Happenings, the Situationist International, Hi Red Center, or, in our present case, expanded cinema, practiced an aesthetic of indeterminacy and immateriality in order to defend the potentiality of a “ludic” mode of life, which might counteract the excesses of instrumental reason by catering to the affective needs of the body. The neo-avant-garde understood, if not always with equal clarity, that an aesthetic politics of affect (rather than an ideological politics of representation) could lead to the formation of alternative, collective subjectivities that are no longer submitted to the dominant forces of administration and standardization. And to this end, as we have seen, some neo-avant-garde groups would engage the new possibilities of sensorial micro-modulation that cybernetic technology provided. Yet, as several critics have argued, affective experience would not be immune to the capitalist processes of valorization in the long run. Indeed, such was the ultimate fate of the pavilion in Osaka, after the contract of E.A.T. was cancelled. Subsequently, the pavilion was converted into the pleasure dome of a joyful, if rapid “Pepsi Generation.”

In the end, it remains an open question to what extent the cybernetic apparatus of the Pavilion furthered the emancipatory agenda of the neo-avant-garde or fore-shadowed the biopolitical regime of immaterial labor. The Pavilion kept its underlying contradictions in suspension. Within its seemingly infinite interior, all spatiotemporal coordinates of habitual behavior were meant to fall away. Nevertheless, the programmers were requested to make sure that the visitors would not outstay their individual 15-minute time-slot: “To aid the programmers, a graph in the control room will plot the number of people in the Pavilion at any given time. A given section of the programming may be shortened or lengthened by manual controls. This will add flexibility in affecting the length of stay of the visitors.” PepsiCo had to make sure the Pavilion would not open a permanent black hole within the curvature of informational space, which would release time from all means of measurement.
Yet despite the inconclusiveness of E.A.T.'s experiment in the production of affective experience, the main idea that I wish to get across is the following: the real images projected in the Pepsi Pavilion figure as a ghostly manifestation of the "general intellect." The inverted crowd of spectral bodies hovering at the top of the mirrored dome exist as more than mere phantoms. What the Osaka Pavilion proposed was a hologrammatization of life, an externalization of techno-scientific consciousness within the interior of the dome. Yet Youngblood could only interpret this biopolitical process of control within a mystic framework. For him, technology formed the noosphere or "film of organized intelligence that encircles the planet, superposed on the living layer of the biosphere and the lifeless layer of inorganic material, the lithosphere." And he continues to note that the combined minds of all the inhabitants of the globe, which are distributed by a growing intermedia network, "nourish" this spiritual noosphere of collective, technological consciousness.

**Surplus of the Inside**

"Performers will move through the Pavilion as aliens in a human environment or as humans in an alien environment."

—Alvin Lucier

We have seen how the Pepsi Pavilion has assumed the character of a "real allegory" in Youngblood's thought, combining in a paradoxical fashion the notion of a "global closed circuit" and an "open empire." The mirrored dome is a bounded space, but due to the multiplication of reflections in its exterior it seems, like a planetarium, to expand infinitely outward. In a psychological sense, the inside of the dome seems to surpass its actual perimeter in scale. We face, therefore, yet another topological puzzle in which the relation of inside and outside becomes confused, similar to the manner in which the holographic trope of Youngblood has operated all along.

Yet this psychological reversal in scale between inside and outside not always the case when we enter an architectural space, if not in such an intense manner as the Pepsi Pavilion made possible? The interior of a building will always seem to us more expansive than seems possible from the outside. There is always a "surplus of the inside," as Slavoj Zizek has pointed out. Why this phenomenon occurs, he attempts to illustrate by means of the plot of a sci-fi novel by Robert Heinlein and it is only fitting that I end this essay with a counter-myth to Youngblood's own allegorical take on 2001: A Space Odyssey.

The basic premise of Heinlein's tale is the notion of the multiverse: our world is but one of numerous, parallel worlds that are created by a set of transcendent beings as works of art. On occasion these originators of all worlds, or "universal artists," will dispatch one of their own kind to visit a particular world and, acting as an art critic, to evaluate its state of aesthetic perfection. In this case, a fault has been found in the design of the world that demands repair. The divine art critic informs two protagonists of the story to step into their car and drive home, but under no circumstance to open their window. When they witness an accident, however, they are compelled to roll down their side window and are horrified to see absolutely nothing. That is to say, "nothing but a gray and formless mist, pulsing slowly as if with inchoate life."

The moral of this story is apparent to Zizek: what else can this horrifying, throbbing mist as signify than the Lacanian real, "the pulsing of the presymbolic substance in its abhorrent vitality?" What Heinlein has done, in fact, is to intensify our basic phenomenological experience of being inside a car, which produces a discord or disproportion between interior and exterior. Once we are withdrawn within the car, external objects appear to undergo a muta-
tion. They become fundamentally "unreal" and assume the insubstantial character of cinematic images that are projected onto the window shield. As a result the world outside the car has become "fictional," and it is this very projection of an outside reality that the final scene in Heinlein's story rudely disturbs, emptying out the imaginary screen of fantasy with a roiling, gray fog. As Zizek argues, in a phenomenological (and psychological) sense there is always a surplus of the inside in relation to the outside. By excluding ourselves within an interior space, it will always seem to be larger, more vivid than thought possible from the outside. This surplus of the interior is a structural effect of the boundary
itself. Once the barrier comes down, however, the inside—or fictional world—will become engulfed by the formless flux of the real. According to psychoanalytic theory, of course, we continuously dream that we are behind the wheel of a car. In other words, we move through this world as if seated within the bubble of an automobile. Hence, when we think we are awake we are living an illusion: "This social reality is nothing but a fragile, symbolic cobweb that can at any moment be torn aside by an intrusion of the real." In other words, the psychoanalytic worldview is not unlike the fictional world of the television sci-fi series Under the Dome: we are all trapped within a translucent hemisphere which appears to have a will of its own, even if the desires of this dome, the demands it places on us, must remain opaque and mysterious.

Curiously, the exterior of the Pepsi dome was shrouded in a white cloud of vapor. The Japanese artist, Fujiko Nakaya, had been employed to transform the geodesic dome into a "fog sculpture"; that is, to create a "fog to walk in, to feel and smell, and disappear in." This is formless mist, which, on occasion would drift into other areas, causing neighboring pavilions to complain. On the inside, everything was transparent. The inverted, holographic projections of the viewers floating within a silvery expanse, surrounded by the whispering of alien voices, produced by a computerized sound system. Within the hemisphere, if the visitors listened attentively enough, they might have recognized the murmur of Bateson's "larger Mind," or what I have called the general intellect, as if they inhabited the cranial dome of the control society as it slowly came to life, creating specters out of us all.

[5] "Saint Max" is the name given by Karl Marx to Max Stirner in The German Ideology. Stirner's philosophy is often found in the "Althusserian" section of Chapter Three of the German Ideology.
[6] Youngblood, Expanded Cinema, p. 41. There is no need to read the whole of this fascinating book to grasp the broad themes of Stirner's work. The following quotes are taken from Stirner's work, as translated in Max Stirner, Individualismus in der Geistesgeschichte des 19. Jahrhunderts, (Berlin, 1844), pp. 350-351.
Traditions of Imaging in Postmodernity

Jacques Janson establishes that, in the history of visuality under capitalism, the final, third stage is announced by a "explosion of high technology projects, a celebratory affirmation of images as independent from the social and political contexts of culture transmitted by computers and cybernetics.


6

The story is recounted by Walter Benjamin in his "Theses on the Philosophy of History" (see W. Benjamin, "The Eyes of the World," su 1994, p. 252).

7

Dardick, Spectres of Mass, p. 190.

8

As Paul Thomas observes: "a reality like the same cannot be arrived at by removing at the level of consciousness its utopian position... although it is, an illusion that it is, unless Marx indicated that "alien consciousness" functions not only by actively constructing the real world". Paul Thomas, Karl Marx and the Anarchist, Routledge & Kegan, London, 1970, p. 172.

9

Youngblood, Expanded Cinema, pp. 193. Youngblood borrowed this phrase from Baudrillard's Fullness. "The camera, in general, "is another kind of camera", he said... it is, of course, the camera in the tradition of Étienne-Jules Matheron of Le Mittin's "The Camera Obscura", 1948, pp. 467-497.

10

Scott, "Acid Visions," 121. It is noteworthy in light of my comments on the relation of the practice of expanded cinema to the practice of the former members of USCGO who would join up with a group of behavioral scientists at Harvard University to form the International Society for the Study of the Expanded Cinema, 1979, pp. 140-145.

11

Youngblood, Expanded Cinema, p. 390.

12

It should be noted, in this context, that there is a difference between the term "expanded cinema" and expanded cinema as an art movement. The former is used to describe the exploration of the possibilities of the use of images and the latter is used to describe the use of images in the context of political and social movements.
in the larger context of Expo '70, which presented a model of the "information city" of the future by experimenting, for instance, with automated crowd control. Expo '70 marks the culmination in a shift of the world exhibitions from the presentation of industrial products to the staging of international information. Since the previous world fairs of New York (1933-1934) and Montreal (1967) the focus of the fair had come to reside on media-projections of intangible "experiences," rather than the exhibition of physical commodities. Kenzo Tange, the master architect of Expo '70, stated that the purpose of the fair was to display an environment connected with software, rather than display purely physical hardware. He wished, therefore, to produce a "space without fixed form" that would be like "nothing resembling clouds." To this end he produced the so-called Space Frame, a triangulated space-frame structure, as the anchor point of the so-called Symbol Zone, which was to house the central facilities of the fair. Upon the request of Tange, Isao Atsu took on the assignment to develop the technical design of the Festival Plaza, an open space placed under the Space Frame. Isao Atsu had been closely involved with the avant-garde group Environment Society (Kansyu no Kai), which shared the post-Capitan aesthetics of Kurokawa's Happenings and Shinjuku events. The Festival Plaza was meant to provide a platform for such a democratic approach to culture. As Tange put it: "We wanted the Plaza to be a space of spontaneity, not one where the spectators alone would have complete control, but a space where the audience too can participate and help create a feeling of swelling movement.""[Some Thoughts about Expo'70: Dialogue between Kenzo Tange and Noboru Kawazoe]" in [Japan Art Deco] 45, 707-708 (May-June 1970), p. 39. Despite the rhetoric of spontaneity and freedom employed by the Expo organizers, the Festival Plaza would be perceived in a more utilitarian light by the critics. In Hisayuki Cho's description "the Festival Plaza was less a conventional building than an architectural ensemble in which visitors could be immersed in a vast field of perceptual space of light, color, sound, and dynamic movement." Two giant robots, equipped with sensory systems connected to a main control computer, formed the main attraction of the Festival Plaza as they rolled across the stage blaring stereo. In relation to the cybernetic urban model of the Festival Plaza, "it could be argued," Cho writes, that the "Festival Plaza functioning as a vast control system." Indeed, Isao Atsu himself would later distance himself from the project, famously claiming that "I felt as though I had participated in executing a war." Despite the massive participation of avant-garde artists in the programming of the various pavilions, Expo '70 was highly criticized within artist circles as furthering a state-sponsored agenda of totalized, social control by means of cybernetic systems. Unless noted otherwise, all quotes are from Hisayuki Cho, "Expo '70: The Model City of an Information Society," Journal of Japanese Culture and Society, no. 23, December 2001, p. 57-71.


