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Abstract: This paper begins by arguing for a materialist reading of art rooted in the status of the object in the avant-garde and in the critical work of Heidegger and Benjamin. Next, it argues against the assignment of art to a rhetorical-political notion of 'the virtual' as a site or topos outside of materialist construction. And last, it extends these arguments to a critique of cybertechnology as developed within the aesthetic and technological frame of television.

What is the Virtual in the Necessity of Art?[i][ii]

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First, following Robert Smithson's statement that "it is scale that determines art" ("The Spiral Jetty," 112) (a concept enlarged upon by Barrett Watten in his book Total Syntax), I would like to suggest that the material of art (--that is, art as techne, in Heidegger's sense--) appears in the gap, strain, or a tear of signification.[iii] This gap occurs both through the critical work of art operating in social space and through the opening up of history to that work. I would also like to suggest, following Heidegger in "The Question Concerning Technology," that the techne that may be called this work is recognized not by aesthetic categories, but by a sense of historicity and debt that illuminates objects with a sense of being meaningful—as things that literally matter—in the singularity of their relationships. Thus, for Heidegger, the techne that is the art work is an event wherein materials become evident and valued in terms of their historicity. And for Heidegger, these events occur not only through relationships with traditional art objects, but through other types of relationships, as well.[iv]

Next, in the context of such a view of the workings of art, I would like to discuss some critical problems that computer teledigital art faces in relation to the history of the televisual frame and screen.[v] Today, technology such as the World Wide Web share both the technical device and the cultural inheritance of the televisual frame and screen. That the computer screen is now emerging as multimedia as television (that is, in terms of being a unifying simulacrum for experience) creates certain tensions between a critical art practice which is tied to reflexivity, fragmentarity, and historicity and a medium that has often taken upon itself to become the screen of knowledge and memory.[vi] With the coming of virtual reality, the difference between the tele-digital and the tele-visual is becoming blurred through a shared goal for a simulated environment of total representation. The tension that such a vision for 'the virtual' has to the critical workings of art may make us wonder why television is not more fully acknowledged and encountered as

a critical horizon by teledigital art. For the inability of much of teledigital art to account for its historically constituted 'frame' (both physical and formal) and instead to define itself within the problematic category of 'the virtual' suggests that the interruptions that are the essence of critical art practices in the 20th century are not carried forth in much teledigital art (at least on the Web) and instead, that this medium, for whatever reason, encounters similar difficulties as video does in overcoming the representational and historical presumptions laid down in the history of television.

To begin, we should first note that the World Wide Web and those technologies that are often placed under the moniker of 'the virtual' were not created for a critical art practice. In fact, just the opposite is true. Emerging out of a general historical tendency for military technology to seemingly reduce the distance toward an identified enemy through representational means, virtual reality is designed, very purposefully, to create an absorbing simulacrum of reality. Such a simulacrum scripts in and scripts out representations of objects and relationships in order to lead the viewer toward an identification of values and the accomplishment of a task. Virtual reality seeks a 'correct simulacrum'—that is, a simulacrum whose grammar is clear and distinct, and in this sense, pragmatically usable. The problem of what is scripted in and out of the virtual world should immediately tell us that the question of the virtual is not that of technologies per se, as it were, but rather of their mediation—of culturally and socially situated techniques and methods.

Walter Benjamin, for example, was quite clear about this when he wrote about the emerging cultural medium of film. Moving pictures were not new when Benjamin wrote "Art in the Age of Mechanical Reproduction," but the appearance of film as a medium for the construction of political community was new, and in fact, was gigantic. What is unique in Benjamin's analysis is that technology emerges as something that is illuminated by political conditions. The central question in the essay is (necessarily) always postponed: does technology lead to a fascist or to a counter-fascist politics. This is a more difficult question than it appears, for the undecidability of any essential or transcendental political or cultural value to film in this essay is intrinsic to its status as an object within a caesura of history (a caesura that is both utilized and made to appear by Benjamin's own essay). Political or cultural meaning comes about not essentially, but through the social engagement of the object. From the perspective of production for example, rather than understanding 'film' as what appears within the frame of the cinema screen alone, Benjamin understood the material construction of film as itself a cultural value: film itself as an object could either be used toward the dissemination of meaning or toward its unification. These two cultural-political values corresponded to two aesthetic techniques. And from such a choice, different futures were imaginable, and at least one—fascism—did use film and television technology to occur.

Film materials had cultural meaning because they were created out of, and were extended into, social space. For Benjamin, the difference between the 'physicality' of film and the 'conceptuality' of political ideas and cultural mythologies was mediated

by this medium which combined image and sound in specific social spaces. As allegorized in Vertov's A Man with a Movie Camera, film could be an empowering agency for change in as much as it juxtaposed itself in historical discontinuities. And, unlike Reifenstahl's Triumph of the Will, for example, this juxtaposition was not to be screened within the scale of a unifying mythological frame, but instead, was to emerge as a technical device, beholden to, yet itself discontinous to its cultural enframement. Though Benjamin's essay indicates that the political value for technology, in this case, for film, remains essentially undecidable, it is clear that for Benjamin the artistic evaluation of film technologies as materials in social space leads away from totalizing narratives. As for Vertov, the assignment of an object value for materials and technologies gives to works very determinate cultural and political values. The essential undecidability of technology and what will become materials only means that no transcendental values can be assigned to them. This, however, increases or decreases their relational value all the more, depending on their relation to mechanisms of enframement. For example, within the totalitarian states of Nazi Germany and the Stalinist Soviet Union, avant-garde works—for which the cultural value of the object was primary—were logically judged as 'degenerate' to these types of states.

The material presence of film in 'film' has been, of course, one indicator of a displacement of the realist cinematic frame from the time of Vertov to current avant-garde productions in film and video.[vii] Beyond being historicized in terms of 'technique,' alone, however, this material appearance in film and other arts during the pre-Stalinist Soviet era marked an historical discontinuity that was the reality of the Soviet citizenry caught between a tsarist world, a capitalist world and an everencroaching form of bureaucratic communism—the latter two, at least, which were all too eager to 'virtualize' their historical beings within greater dreams of production. For Benjamin, the praxis of film, as for criticism, at the time of his essay was not 'just' technique, however, and the choice was not just between competing aesthetics. Film didn't have the luxury of being purely self-reflexive or 'formal' (if, indeed, it ever had such a value), but instead, film was immediately immersed in an historical caesura where its relationship to social space had to be accounted for.[viii]

Today, these type of concerns for the cultural meaning of digital technology seem strangely absent. Whereas the cultural power of film in the first third of the century was read in divergent manners according to an aestheticized and non-aestheticized sense of art, one is hard put to find in teledigital art works that contest the problems of their historical enframement and that reflect on the relationship of their own material to historical narrative. In this manner, there speaks, though in a somewhat different range, the naturalizing tendencies that Benjamin argued were the products of capitalization in the film industry. Today's futurology, of course, is not mediated by the film industry alone, but it is driven by those who are engaged with the development and/or promotion of digital technologies. So strong are the ideals of a 'virtual reality' in regard to digital technologies—utopias that are the result of the convergence of military and corporate desires[ix]—that we can quickly lose track of what exactly we are talking about when we talk about digital technologies. (That

such technologies are so often spoken about in terms of creating a global future suggests that our virtual of the digital is located more in a modernist fantasy than in the real.)[x]

That 'the virtual' is so often spoken of in terms of being a world in itself continues the military mission of VR: namely, to aesthetically unify the senses and conditions for communication through a common set of mediums. The historical appropriation and imposing of that set of mediums--that is to say, of those conditions for the understanding--is a phenomenon that we are witnessing today throughout, and very much as, 'the Web.'

In contrast to the unification of experience presented by 'virtual worlds,' modernist arts have played the role of being mediums for the establishment and reestablishment of objects and relationships that are diverse from, and sometimes against, unifying aesthetics. Subsequently, they work against the experience of unifying cultural histories, as well. Within the modernist arts, and particularly within the avant-garde in the West, the status and function of the object remains a deciding question for any work. The function of modernist art is not simply to be an alternative or a disruptive presence to unifying histories (though this can be an effect of their presence), but to reestablish objects in singular and reflexive material relationships--thus, not only marking the finitude of the real, but also opening the question of measure.[xi]

Much recent hypertext theory has argued that the Web is the ideal place for counter or 'alternative' events, since it is by its very nature quantitatively limitless and thus (so the story goes) qualitatively diverse. But, I would argue, that the very gesture that names 'the virtual' or 'cyberspace' as a place (that is, as a topos) for digital art work on the Web, for example, immediately removes such work from the differential workings of art and reinscribes its ability to work within a representational topography already conditioned by, among other frames, the technical and semiological history of television. In general, it is problematic how well art can critically work in a medium that is already technically and culturally framed as a world. Within a critical art, the question of the virtual is not really about finding 'alternative' spaces for doing representation, but of challenging the notion of being located in a defining presence—in a topos—itself. Within a topos—especially one so informed by television as the so-called, 'virtual'—the workings of critical art become extremely difficult.

Art's critical relationship to unifying aesthetics and narratives is expressed as critical distance. Within this space, the techne of art involves bringing the materiality of objects into the open as objects that give relations in space and that give the possibility of a sense of time. In this historical caesura, as and through the work (as Benjamin's writing suggests and, to my mind, somwhat exemplifies), objects are illuminated with an historically specific cultural meaning. Within the Western avant-garde, as well as within more 'everyday' Western and non-Western rituals, relations of exchange are marked and remarked in their singularity by the

materiality of the objects involved in such relations.[xii] The engagement and generation of relations and concepts in constructivist, minimalist, and conceptual art has direct links to the marriage banner woven for an Indonesian marriage ceremony or the exchange of handwritten books by adolescent girls. For, what is created by the material presence of the object in these examples is the fragile historicity of the event before and beyond its narrative as history. (Material, here. doesn't primarily act as a surface for the symbolic inscription of the occasion (though it may), but rather, the very presence of the material opens up spatial and temporal relations whose undecidability is paradoxically evident in this material, as something that matters.)[xiii] Against the context of a globalized, generalized system of representation, the historical avant-garde becomes allied to Western and non-Western cultural practices in which objects play roles in creating relationships and measures. The importance of objects as agencies for cultural rearticulation means that there is a critical distance between the techne through which this takes place and the narratives that take up objects as grammatical elements in a certain future.

The difficulty of thinking the present topos of the digital (and foremost, that 'the digital' has a topos) must not be underestimated. Today, discussion toward technology quickly shifts into one that looks toward 'experience,' even though, ironically, it is the future that is supposed to be the direction of our gaze. We are often told that the defining characteristic of that 'new look' of our new age of, and toward, the digital, is that which we still must discover. Indeed, in this new look of the virtual age, information is said to be "out there" (including information regarding the future of technology) and all we must do is to come upon it with our informational tools (as if we were coming upon objects whose self-evidence were obvious). If the virtual begins and ends in information, then we must say that the future—as virtual—also begins and ends in information. The informational facticity of the future is thus guaranteed through the techne of information, and that techne of information is most commonly read in terms of information technology.[xiv]

The circular relations of techne and technology in this line of argument are obvious. But what they present is today's common-sense belief that the topos of the virtual is not only a present, but is an unavoidable, future. An epistemology of informational facticity supports the dominance of information technology for the future, and circularly, the dominance of information technology determines that an information-based epistemology becomes the thinking of that future. We are no longer 'in' 'knowledge'; 'we' are in (the) 'information' (age). This is the temporal horizon of our 'virtual.'

But we may ask, what are the formal and the social conditions through which such a future is built, projected, and deployed as the present's future, and therefore, in the present's reading of itself, today? In the preceding remarks, we have already implied a few of these conditions, so let us briefly make these explicit: the reduction and condensation of space and time in the smooth space of certain representational forms; the shifting of analytical rhetorics and complex affective assemblages to

logically cohesive, but un(self)acknowledging grammars with reductive avatars and simplifying logics replacing more complex, variable, and indeterminate actors and occurrences; and last, the hiddeness of materials and devices in virtual representational constructions (this, simply at the level of the technology, proves one of the strongest problems for an art engaged with the virtual, since the conditions for construction are often beyond the technical range of artists). But beyond these formal conditions of the virtual, however, there is the ideological context that gives these conditions such value, namely, as I have been suggesting, the privilege that 'the virtual' is culturally given as a place unto itself, a place whose technological and cultural frames may cancel out critical distance. Thus, what the term 'virtual art' can mean may be problematic—not at the level of technology, as it were, but at the point where technology articulates itself culturally, that is, at the point where art critically works. The ideal is a triumph over the materialism of art, it is the negation of critically constituted space through the settlement of what the future already is.

Each year the teledigital screen seems to become more like the televisual screen. First of all, despite the claims of much hypertext theory, most hypertext documents are not overwhelmingly dialogical: their mode of communication is presentational, often in small 'visual-bites' corresponding to an 'atomic' notion of information and the mode of presentation that television has adopted. Further, the mode of linkage that hypertext engages is that of information retrieval; most hypertext formats are no more dialogical than television's Home Shopping Network. Linkage is not synonymous with dialogicality.[xv] Hypertext's presentational mode of informational facticity means that hypertext interfaces seem to be addressing that familiar receptive horizon of the standardized viewer. On the other hand, what remains unspoken for in these (re-)presentational unities of experience that are broadcast on the Web is the subject beyond 'the viewer.' Already, so heavy are the "virtual's" cultural bets placed upon the subject-as-viewer that artists may have to begin with the horizon of this subject within the fold of the televisual 'world' as this latter constitutes the historical precedence for what is appearing on, and as, 'the Web.'

Several questions occur within and around this t.v./so-called post-t.v. world: how is the unity of experience that is the projective screen of the virtual/multimedia Web different than seemingly less multimedia internet technologies (such as email and listservs)? Further, does the 'inevitability' of the multimedia Web follow a trajectory of representational thinking that negates some of the values that have become evident in a computerized tele-phonos and a tele-writing—technologies that carry at their core not what we know as the 'tele-visual,' but rather, values from other technological lineages (i.e., the telephone and the letter)? What is the necessity of art in the digital when the latter's value is dominated by a multimedia tele-visual, namely, television? And from this last question, of course, the question occurs as to how the teledigital can critically work beyond the television's very deterministic frame.

Today, given the degree to which discourses on computer-aided communication drive our modernist horizons, one of the foremost critical functions of art in relation to Web technology may be that of engaging the Web's horizon of 'the future.' Futurologies based on imaginations of a global information web were played out in the 1930s in the form of international bibliography and the global uses that early information theorists, such as the documentalist Paul Otlet and the writer H.G. Wells, imagined for bibliographies, databases, and the distance transmission capabilities of television.[xvi] Both nationalist and internationalist forms of statesanctioned futurism, of course, utilized these technologies for (what in library science is called) the control or the organization of knowledge, not just to propagate established or emerging modes of power, but in due course to marginalize nonrepresentational modes of art and non-representational modes of political activity. In early 20th century political theory, the spread of information technology is often viewed as a good, and not coincidentally, as a genuine future for the state and for 'mankind.' Hence, as a particularly technologicalized world becomes valued in terms of its being a trope for the social good, the promise of technology should become a critical horizon for the engagement of any politically concerned art.

If, indeed, the promise of the Web today is inextricably tied to the early promise of television in a repetition of 20th century strategies of political hegemony and cultural empire building, should we be encouraged that some horizons of television are being engaged in some Web art? Or should we be somewhat concerned that even that preliminary—though tremendously important--frame known as 'television' remains largely unexplored in much Web art, and further, that the issue of art is all too often absorbed within a traditionally narrative and teleological art history that sees 'the virtual' as the newest place for art? Is it difficult to see that various affective scenes that are familiar to the traditional television viewing audience (for example, as Avital Ronell has pointed out, that of being at home in the remote ("Trauma TV: Twelve Steps Beyond the Pleasure Principle")) are repeated while one is 'on the Web'; that some of the same organizational actors (for example, Disney) are rushing in—not to change the 'net,' but to profit from its already current flow; and that the dominant formal values of television (e.g., presentation and entertainment as knowledge, a multimedia unity of experience as actuality, and subsequently, as informative of 'the real') seamlessly enter and define the telecomputational screen (sometimes with deadly effect, as we witnessed with the Gulf War). For it hardly matters whether the screen is a computer screen or a ty screen or a surveillance screen or a war screen, for if the faith in the teledigital screen is reproduced through those same formal and rhetorical conditions for televisual experience, then the material conditions for the screen will be evaluated according to the frame of its historical precedents.

What, then, is the necessity of art in relation to the virtual? Will the necessity of art be net work or network? I would argue that as a critical material practice the necessity of art lies first of all in the critical engagement of the virtual as a topos. This necessity precludes us from discussing 'digital art' as a domain in itself, independent of the possibility of art's critical relationship to the function of the

object and to issues of history and historicity. A critical art practice's engagement with 'the virtual' must engage questions regarding the cultural evaluation of certain technologies associated with this term—along lines of not just the narrated 'present,' but the narrated future and the past. So-called 'virtual technologies' must be engaged at another point of production than the rhetoric of 'the virtual.' I have suggested that critically viewing the historical and aesthetic frame of television offers one cultural horizon for viewing 'the virtual.' Another horizon for a critical art practice might be the congruence of 'the virtual' and the Kantian beautiful at the point where a unity of experience passes into a feeling of certain knowledge, that is, where 'information' seems to appear. 'Virtual technologies' are not all of one kind; why digital art is often expressed in terms of an aesthetics involving a unity of experience seems to me to be an historical issue that requires investigating the privileging of a certain type of highly coded art practice and art history.

What will become of the Indonesian marriage banner with its site and time specific function, creating a future out the materials of an indebted past? What will become of the exchange of handwritten books between adolescent girls which makes a context and a future through a very specific set of productive materials and inscriptions—namely, through the sanctity and the finitude of writing that book, in etching that script of writing those words, and in enacting that exchange--rather than in a sharing of objects as if they were common property in an infinite amount of time. What becomes of the creation of relations, rather than in the 'experiencing' of relations? With such questions more is at stake than the 'impact' of certain technological objects. Rather, with these questions relations occur that create contexts which criss-cross what capital would like to see as the unitary context of 'the global.' Such relations form singular, historical persons whose informational desires are not reducible to an economy of users and producers.

The materiality of texts is not reducible to seamless exchanges of information, to the free circulation of commodities of 'found' values between providers and users, to an historical time in which texts are 'factual' and fully 'present.' Cultural weavings, whether they be texts or textiles, are textured by time and they give rise to time. Today, these weavings --as that which both marks finitude and gives time--are what are at stake in the relation of the necessity of art to the topos of 'the virtual.'

- [i] An earlier version of this paper was presented at the Liverpool Institute for Peforming Arts (UK) on July 3, 1998 in the conference, Art and Technology: In the Age of Information, cosponsored by Keele University and the Tate Gallery, Liverpool. I would like to thank the conference directors, Bob Cooper, Toby Jackson, and Fiona Candlin for the opportunity to prepare and present this paper.
- [ii] I use the term "necessity" in this paper in the sense of the ancient Greek ananke, signifying a compulsive necessity, born out of circumstance. It is the argument of this paper that objects and relations appear as issues of/that matter (in both the physical and semantic meaning of the word) within breaks of habitual signification. That matter would then appear as what matters indicates that the event of art as techne (which Heidegger names Gestell—a term that means neither the technological nor the aesthetic, but rather, a framing that is given to human being, and thus, is given in the context of various types of interdependent debt (which Heidegger reads in terms of rereading Aristotle's four 'causes')) is born out of the necessity of this break and at the same time comes to signify this event as event. I will argue that such materials as wedding banners in an Indonesian wedding ceremony (even as they occur in ritual), as well as art works that issue problematics of relations and generation in their encounter (e.g., minimalist and conceptualist works) have a quality of self-signifying historicity which bring them into critical relation with idealism, including the idealism of 'the digital' or 'the virtual.' Thus, the contrast between a materialist reading versus an idealist reading of digital work involves a willingness to evaluate the work in terms of its encounter with its own cultural frames as these occur within both 'technological' phylums and 'ideological' phylums (for example, the technological lineage of the tele-visual frame and the cultural rhetoric of 'the virtual' and other tropes of, what we might call, modernist 'technological fiction'). In other words, the necessity of art as an event (or equally, the event of art as a necessary compulsion—a material necessity, not a logical necessity--) would be problematic without some sort of critical opening.
- [iii] For Watten, a critical art practice involves an expansion of scale by the work (Total Syntax, 197). My argument continues this notion of expansion, though I would suggest that this expansion is actually part of a more general displacement of scale that involves the work of art and that it involves a collapse of signification back to a 'focal point' originating in the object and its material relations. I would also like to suggest that this displacement of scale is not just a function of the art work as agency, but that it involves the necessity of a historical break through which the work occurs. The difference, here, between seeing the work as an agency in creating a break in signification and seeing that break (and the corresponding gap in historical narrative) as creating the opportunity for the emergence of the work of art seems to me to be one of perspective. Beyond intention, the more important point is that the work occurs within and out of a gap that brings materials into relations of necessity--though this is also to declare that an event's necessity is also partly determined by that very signification which has now collapsed. The material of the work is, thus, partly made up of the residue of that collapse (this, however, to

my mind speaks even more loudly of the real inmovability of objects beyond their symbolic or imaginary relations).

(The illustrative metaphor that comes to my mind for this is that of digging a hole. Some earth falls into the gap, and the surrounding earth above certainly defines the sense of how the hole will appear. But beyond that, the shovel and the earth beneath are more or less in obligatory relations in terms of their material coencounters and their encounters of mutual resistance. The earth and the shovel form relations, along with the digger, that determine how the hole will be dug; one finds one can only dig this or that way with the particular available materials (including one's own body). In a similar scenario of material encounters, tripping over a root on a forest path breaks one out of one's narrative revelries and forms relations that are quite specific in time and give rise to distinct possibilities. Smithson's earthworks, particularly, the various mediums for The Spiral Jetty, seem to me to have a keen sense of how environmental relations determine what can be expressed by the earthwork. Indeed, conceptual art works are all about relations especially the relationship of abstract and concrete materials in social space. For Smithson, each form of The Spiral Jetty (earthwork, film, and written text) had specific limits and relationships that could be realized by the materials in which this title was based. Smithson worked each form as a translation of the other, but without any illusion of metaphorical duplication or aesthetic reproduction. Watten discusses the resistance or 'weight' of various forms in relation to social space and the production of meaning in his Total Syntax. Through these examples, I think it should become clear that "material" is meant in the sense of resistance and compulsion rather than as something strictly "physical" (versus, "abstract").)

[iv] Within Heidegger's notion of techne, the work (of art) is recognized by a debt to its means of production (including, the material means—or 'cause' (aiton)--) rather than by its harmonizing of cognitive faculties as noted by Kant in his notion of the beautiful. This critique literally explodes the Kantian notion of the aesthetic object, recuperating such objects as works within a phenomenological context that is marked by an acute sense of historicity. Though such a sense is certainly not lacking in Kant's notion of the beautiful, Heidegger's reclaiming of the art work back to the Greek techne repositions the historical value of the art object as an object. Objects here no longer embody history in terms of a strictly symbolic or ideal economy, but rather, objects are part of an event in which history is rereleased in terms of the historicity of the event. The craft or skill of art (as techne) is, thus, no longer confinable to aesthetic objects, but now can be spoken of in terms of rituals through which context is produced. Heidegger's inversion of the teleological tradition in speaking of techne explicitly includes a critique of aesthetics ("The arts were not derived from the artistic. Art works were not enjoyed aesthetically" (The Question Concerning Technology, 34)). It is out of this context that I speak of objects as being important participants in relational events out of which history is produced (e.g., the Indonesian wedding banner, the exchange of handwritten books between adolescent girls (see note xii, below)) and I draw a correlation between the work of these rituals and the work of critical art in their common displacement of

hegemonic or continuous scale and the importance given to their material extensions in cultural space in and through such displacements.

[v] I use the neologism "teledigital" in order to denote those digital art mediums which originate at a distance, such as those art works which appear on the World Wide Web. The inadequacy of this neologism is obvious in terms of the commercial availability of digital television, for instance. However, as a neologism, this term doesn't fall into the rhetorical, ideological, and even the aesthetic assumptions that appear with the use of such terms as "cyber" or "virtual" in connection with these new mediums. The importance of maintaining this distance will become more apparent through this essay as it is the very nature of 'the virtual' which will be contested. At the same time, the problematic of distance and the aesthetics that distance may or may not impose (especially in light of "television") remain in the term, "teledigital."

[vi] How far the tele-visual screen has come to producing 'screen memories' is, of course, difficult to say. On the other hand, the fact that the television screen has become the most dominant producer of memories of ostensibly distant or 'public' events, is, I believe, undeniable (--can 'public' events even be thought, today, in other than televisual terms?). This paper argues that a multimedia unity of experience produces psychologically privileged conditions for a certain type of aesthetic cognition. How, and even if, the tele-visual can gain critical distance on this historical frame is difficult to say. I would not agree, however, that consumption alone constitutes adequate grounds for reading the tele-visual appearance criticially. It seems to me that too many other factors—aesthetic unity, ideological privileging of what I would call the rhetoric of 'informational facticity' (which involve certain assumptions about 'factual' objects as well as certain constructions of the viewing subject)—constitute the meaning of the 'frame' of the tele-visual experience in which the physical frame of the television and the computer screen becomes a trope for historically constituted experience. Further, pointing to such genres of television as the archetypically elicited example of the soap-opera as non-traditional forms of representation that do not have the 'informational' quality that are discussed in this paper is, I believe, somewhat of a red herring. The issue here is not the relation of narrative to truth, but rather of the frame of televisual narrative to time and historicity. Further, the allegorizing of problematic relationships to time and historicity within the televisual frame does not in itself force a critical relationship to the materials of that frame. The televisual frame is not simply a genre, but it is a set of technological conditions that are neither just physical nor just cultural. Televisual experience is rooted in technologies and cultural histories that are not reducible to genres within television. Further, the very experience of historicity is not reducible to historical narrative, but as suggested in this paper, is an event that becomes obvious within the latter's collapse.

[vii] The phenomenon I am pointing to here has less to do with the physicality of the medium and more to do with the materiality of the medium. Materials in art works

are both 'conceptual' and 'physical.' As suggested by my discussion of Benjamin, physicality emerges as material at the point that it understood as a cultural value. It is precisely because material is culturally valued that it can interact with 'abstract' notions and we can have, for example, the enactment of parody through a conceptualist art work.

- [viii] "Technique," in terms of the historicity of materials, means how materials come to speak in relation to conditions that they themselves have not directly created. The social context of technique means that it is largely a matter of response, and with that, a matter of respons-ibility. And this is not at all an indicator of passivity, but of activity and agency. It is a question of an acute sense of attunement and a specific and immediate sense of agency in which the meaning of the work is risked. In this sense, art participates in a form of ethical—not moral, but ethical—action.
- [ix] Andy Pickering has discussed this convergence of military and industrial technologies in terms of the history of cybernetics. In the context of some of Pickering's notions regarding cybernetics (e.g., its definition of human actors according to engineered 'worlds,' its intrinsic reliance on feedback, and even on an affective level, its claims toward universality), I believe it would be difficult to argue that cybernetics is not part of 'virtual reality.' Both cybernetics and virtual reality (as we think of it today) claim a functionalism based on the occurrence of 'correct simulacrum.'
- [x] Discourses of the global pervade, of course, colonialist endeavors of the 19th and 20th century. In terms of a vision of technological globalness, especially in information science, see the work of Paul Otlet and others arising out of 20th century European Documentation, as well as the global claims made by proponents of cybernetic, and cybernetic-influenced theory up to the present day.
- [xi] Finitude and the question of measure, here, are two sides of the same event. Measure cannot appear as a question without finitude, and finitude cannot occur as an event without measure and a break in measure. Finitude occurs in the gap of signification that I have located as the site of the work of art. Finitude marks a displacement in scale, so that scale once again becomes a function of objects and their relationships, of negative resistance and of necessity, rather than of positive continuum. Finitude marks what cannot move and yet must be. It marks a collapse of signification and a reassertion of the material. This is what makes it both a singularity and an event (of 'historical proportions.')
- [xii] An adolescent student of mine once objected to the dominance of 'the virtual' (qua 'the web') by citing an exchange relationship that she had with a friend: each one of the girls would write a book for the other and then they would exchange them at some appropriate point. The material of the book and the handwriting within were specific to the singular value of this exchange and, therefore, its value could not be simply duplicated on a digital surface. (Though digital technologies,

might, of course, obtain a similar structure (e.g., email), it remains to be thought if this can occur in the unification of experience that is seen as the future of 'the virtual.' One of the problems here, of course, involves an analysis of different specific digital technologies and their critical relationship to the dominance or precise meaning of 'the virtual.')

[xiii] That techne's relation to the singular can be understood in the history of art as that of displacement or defamiliarization (ostranenie) expresses a relation to the universality of modernity that was often stated at the beginning of the century in terms of 'primitivism' and 'localism,' or in the avant-garde, as 'shock.' But, since the issue here is neither the local nor the general, but the constitution of meaning in cultural space, such a dialectic fails to describe the cultural conflicts that link formerly disparate, but increasingly, in a 'globalized' world, allied events in a relation to the Gestell of technologicalized techne that Heidegger spoke about. In the same way, "material" in this paper no longer refers simply to the physical, but to that which, in the manner of Benjamin's cultural criticism, is illuminated by the work. Out of the work's physical extension in culture, the material of the work shines and works. The material of art is that which is illuminated by the extension of art into 'the present.' Art matters in as much as it critically works in relation to 'the present.' That is to say, as it simultaneously extends into and withdraws from that which is present to itself as 'the present.'

[xiv] By "informational facticity" I am not only referring to virtual reality, but more generally, the idealogy of information-as-presence, or as Michael Buckland calls it, "information-as-thing." That the presence of information can be understood as a guarantor of the future can be seen in the early 20th century work of the European documentalist Paul Otlet, for whom universal bibliography was a means toward world peace (see W. Boyd Rayward).

However, as much as information can be seen as literally constituting a future (as in the case of virtual modelings that have real world applications) the situation becomes more curious. Here, we must, as Benjamin warned in footnote twelve in his "Art in the Age of Mechanical Reproduction," be aware of the formal conditions by which a history of technology shapes how the real is brought to presence (Benjamin's example is in regard to the appearance of future political leaders whose political techniques will follow the techniques of screen actors). In this regard, we may also note Derrida's discussion of the formal and social factors of television that determine what may and may not be presentable on television (Échographies 45-49) and Bourdieu's discussion of the demands that television makes for a discursive 'general intelligibility' and for acting and speaking in a constant and consistent narrative manner while on television (On Television). These events, however, are not difficult to understand, and they can be placed within a tradition following a notion of information as 'presentational knowledge.' Paul Otlet, for example, advocated such a notion in the form of knowledge consituting atomic units of information to be found, or created out of, documents according to his "monographic principle" (see Rayward). This facticity of

information is, of course, tied to the Descartian notion of true knowledge as "clear and distinct" (Meditations), and as such, atomic and further unanalyzable. As Rayward points out in the case of Otlet, such a philosophy is positivistic (though I have contested the unproblematicness of this positivism in Otlet by discussing Otlet's notion of the book (see Day, 1996)).

It is not difficult to see, as it were, that this "clear and distinct" criteria to knowledge is carried to its fullest aesthetic sense in the unifying media of virtual reality. Descarte's metaphor for knowledge, is after all, a metaphor grounded in representation. Nor is it difficult to experience the effects of the 'information age' upon the rhetorical structure of internet texts where short, presentational pages are de rigor. In general, the rhetorical forms (and thus the content) of books and Web sites, today, are still extremely different from one another in terms of their rhetorical stratgies, and subsequently, their analytical powers. In order to account for this difference, it is necessary not only to examine the indexical powers of digital technologies (as compared to paper technologies), but also to examine the history of the tele-visual screen in which Web pages appear.

[xv] The difference between information retrieval and dialogicality in hypertext is not just a difference between the actuality and the potential of hypertext, today, but it is a difference that is fundamental to the medium. It is not a difference of degree, but of type. Hypertext is an information retrieval technology in that one document is used to retrieve another, a priori linked, document; meaning may or may not be involved in this retrieval, but it is by no means necessary that the documents have any 'meaningful' link to one another outside of their technical linkeage. Dialogicality, on the other hand, involves issues of dialogue and interpretation. It is an interesting question as to how metanarratives of 'the virtual world' conditioned a necessary linkage of these two terms in hypertext theory of the early 1990s in the United States and in Europe. (See for example, the works of George Landow in the United States and Pierre Lévy in France.)

[xvi] See Rayward.