The Problem of Meaning and Borgmann's Realist Response

Phil Mullins

Missouri Western State College

Albert Borgmann, *Holding on to Reality: The Nature of Information at the Turn of the Millennium*, University of Chicago Press, 2000.

> In the philosophy of these two books the task is to move from a forefeeling, foreboding, or foresensing to fully articulate expression of what at bottom bothers us. The task of philosophy, at least in part, is to provide us with a language within which we can comprehend what troubles us (our bonds of engagement have become disrupted), see what is decisively at issue for us (technology as a way of life), and choose alternatives deliberately (hyperreality vs. focal reality) (Strong 2000, 322).

David Strong here characterizes what he takes to be Albert Borgmann's philosophical task in two of his earlier books, *Technology and the Character of Contemporary Life* and *Crossing the Postmodern Divide*. Strong's assessment applies equally to Borgmann's most recent book, *Holding On to Reality: The Nature of Information at the Turn of the Millennium*: perhaps in an even more pointed manner than earlier, Borgmann aims to develop a language that shows how "our bonds of engagement have become disrupted." He intends, first, to help us "see what is decisively at issue" about "technology as a way of life" and, second, to encourage us deliberately to select alternatives to this life. In the discussion that follows, I comment on *Holding On to Reality* as a book that develops a semiotic perspective as a vehicle to show the nature of the disruption in "our bonds of engagement." Borgmann, in this book, focuses on the problem of meaning in modernity and, now, postmodernity. Much of the appreciation of Borgmann's work has focused on his account of the "device paradigm" and, no doubt, commentators are correct who point to the connections between *Holding On to Reality* and Borgmann's earlier writings. Although the continuity is clear, it is important to appreciate the way in which Borgmann develops a semiotic envelope within which to situate his larger historico-cultural account of meaning. The way in which Borgmann reckons with information theory and the computer as a materialization of this theory is an interesting and significant discussion that fits nicely into a semiotic context; so also is his account of the problems of

emerging digital culture shaped by networked computing. In the next section, I lay out what I take to be the sweep and the scope of Borgmann's semiotic perspective in terms of his claims about meaning.

Following this discussion, I turn, in the final section of the essay, to an analysis of the important metaphysical claims embedded in Borgmann's semiotic account. What I provide is not so much a critique of Borgmann's ideas about digital technology as a reading of Borgmann from the standpoint of his metaphysics. I admit this is perhaps an odd approach to a new book by a first rate philosopher of technology, but I find something elusive yet intriguing about Borgmann's semiotic account in this latest book, and it is helpful to turn to metaphysical analysis to get a clearer bearing on the scope of Borgamann's project. I expect that David Strong is correct in his suggestion that Borgmann is particularly sensitive about the shortcomings of much philosophical discourse. Borgmann believes philosophy becomes "beneficial and appropriate" when it is "carried out in the service of things"; a philosophy that serves things, Strong suggests, "is not going to outdo metaphysical accounts in terms of adequacy" (Strong, 320). Nevertheless, it seems to me that metaphysics does matter and metaphysical matters are worth paying some attention to. Looking at Borgmann's metaphysics is an approach helpful for grappling with *Holding On to Reality* as a book about meaning. Borgmann's ethic and his call to recover meaning surely also calls for a new metaphysics. I believe what Borgmann offers is an interesting effort to be a realist of sorts in what Charles Peirce calls the very nominalistic era of modern (and now postmodern) thought. His turn to semiotics is of importance because it is a road around modernism. Borgmann is making many of the same points about the device paradigm that he has made before, but now these are cast into the broader context of a semiotic perspective.

I acknowledge at the outset that my way of reading Borgmann and Borgmann's metaphysics is much influenced by ideas of Michael Polanyi, a thinker, who like Borgmann, insisted on putting the person at the center of philosophical discussions about meaning, and Charles Sanders Peirce, a thinker who, like Borgmann, found in semiotics a path around some of the dilemmas of modern philosophy.

Borgmann's Semiotic

Borgmann argues that in the modern period, and certainly now in the postmodern era, meaning seems to be less and less a gripping, natural feature of the world;

this change coincides with the emerging prominence in recent human affairs of the notion of "information." But in fact, beginning in the early modern period, "eloquence and meaning began to drain from reality" (Borgmann 1999, 10). Borgmann constructs his case for this view through an extended discussion of how information has functioned in human history. He outlines three broad eras, each of which has a different "economy of signs" (1). Signs or information "can illuminate, transform or displace reality" (1), depending on the sort of sign economy operative.

At the heart of Borgmann's account is a rather commonsensical relational view of human sign use: "… INTELLIGENCE provided, a PERSON is informed by a SIGN about some THING within a certain CONTEXT" (22). He contends that signs are our access to the real things that human beings are situated in the midst of: the sign is "the fulcrum of the economy of information, and on it revolves the relation that mirrors the symmetry of humanity and reality…" (22). Borgmann is quite careful to point out that, although signs (or information) provide our access to reality, reality has a comprehensiveness that exceeds and outruns signs or sign use. Signs cannot exhaust manifold reality. Human engagement in time and space always precedes our human efforts to use signs to understand where we find ourselves: "Signs are always and already meaningful things. We can discover, explain, and qualify their meanings. But there is no such thing as the original bestowal of meaning on a meaningless sign"(23).

Borgmann identifies the earliest economy of signs as the "the ancestral environment" which "is the ground state of information and reality" (24). The ancestral environment was eloquent; it spoke through natural signs, orienting human beings by articulating a focal area of presence and a more distant, broader world. Natural signs (e.g., a mountain) were points of reference, but quietly turned back into things. Humans could read the signs in nature and achieved a kind of balance and attunement. Borgmann allows that the scope of the world opened by natural signs was quite limited, but it was coherent since reality was "alive with eloquence" (29). Although we in the modern world are inclined to think humans invent signs to stand for things, in the ancestral environment, the eloquence or grandeur of a thing gives rise to a sign: ". . . the message of a sign is sent by a thing rather than selected by a person, though the recipient needs the capacity to gather the message from the sign" (29).

Eventually the economy of natural signs is supplemented and supplanted by the "economy of cultural signs" (2) which does more than simply illumine reality.

Borgmann shows how writing eventually conquerors and transforms oral societies and proves to be both a "tool of alienation and domination"(52) as well as an "instrument of liberation" (53). The case he makes outlines how writing and the culture of literacy operate to "transform reality and make it richer materially and morally" (1). Recipes, plans, blueprints, scores, constitutions and all similar cultural manifestations of literacy, unlike information about reality, are "information for reality" (1). They allow humans to create, build and organize by "realizing information" (85). Reading, performing and building are paradigmatic types of realization. But Borgmann emphasizes that in our significant human achievements as artists and builders what has been accomplished is also testimony to the contingency, unpredictability and darkness of human history.

While the economy of natural signs discloses natural reality, the economy of cultural signs allows us to prosper in an enhanced natural reality. That, of course, is just what humanity has done in the West with a certain aggressiveness that we are only now beginning to question.   According to Borgmann,

> Human culture lay lightly or narrowly on nature until the vehicles of cultural information became available and aided in the moral and material transformation of the human condition, a development that has reached a crescendo since the industrial revolution (57).

Borgmann argues that in the long history of the economy of cultural signs, there has been a persistent "search for structure" which "is the quest for the secret of the nature of reference – the tie between signs and things" (59). Much of inquiry, including modern science, is propelled by "the unspoken hope or belief that we can come to know the world clearly and comprehensively if we can penetrate the mysteries of structure, that is uncover the ultimate constituents and the lawful arrangements of signs and things" (59). Borgmann masterfully discusses several "structural devices" (74) – the grid, the clock, printing mechanisms, and money – with which we have extracted information from reality and organized our lives, but have done so in a way that often overshadowed eloquent natural reality.

According to Borgmann, the nature of signs or information today is more and more "technological information" (2). Information in today's world is primarily carried not by natural things or "cultural texts" but by "a technological device, a stream of electrons conveying bits of information" (2). Cultural signs reorder and

enrich reality, disclosing "reality much more widely and incisively than natural signs ever could have done" (2). Technological information, however, "lifts both the illumination and the transformation of reality to another level of lucidity and power" but it does so by adding to information about reality and information for reality a third kind of information: "information as reality"(2). In the economy of digital technological signs, "information through the power of technology steps forward as a rival of reality" (2).

Borgmann characterizes technological information as a type of information that both supplants natural and cultural reality and presents itself as reality. This characterization points to several matters. It points first to what Borgmann thinks is the vision of information technology, which is regarded as the fulfillment of the dream of penetrating "the mysteries of structure," by uncovering "the ultimate constituents and the lawful arrangements of signs and things" (59). Information theory, using the binary system, "an irreducible system of least signs" (129), developed a way to measure information and judge the economy of communicating information. An increase in the quantity of information within this framework can be equated with an increase in the precision of information:

> Another way of looking at the guiding intuition of information theory is to think of the increase in available signs as corresponding to a growing precision in the information conveyed. If the system of signs is a grid, then greater variety of signs corresponds to a finer grid and a finer grid to more precise information (134).

The foundational claim of information theory is that the "possibilities of reference" can be understood in terms of "the elementary measure of information, the bit" (136). Increasing power and sophistication in the vehicles of information, according to information theory, should bring richer and richer contents of information. Borgmann argues, however, that there is a fundamental confusion at the heart of the optimism of information theory:

Alas, it is confused at best and misleading at worst to assume that in information the linkage between signs and things can be rendered so clear and precise that the contingency of things can be measured by the variety of signs. And it is misguided to believe or merely to hope that larger and more sophisticated systems of signs will increasingly accommodate the presence of things (136).

To represent the real world in a binary scheme forces a flattening of reality into a discrete set of states or events, and this distortion must be recognized: "Reality does not often assume such a sharply etched outline of two possibilities, and one bit of information rarely comes to be the vehicle of resolution" (137). There is no necessary connection between the measure of space for information and the nature of meaning conveyed: "The bit of information in its most austere sense is a measure of information space, and by itself the number of bits of a set of signs tells us nothing about whether or how the space has been filled with content" (138). Borgmann contends that information theory vastly overrates the promise of "unencumbered and clearly structured possibility space" (138). Insofar as information theory encourages certain illusions about the unlimited ways in which our lives can be enriched through perfect knowledge and control, information theory seems to be merely certain Enlightenment dreams in new dress.

In Borgmann's account, the computer is, of course, the new technology that brings information theory to life. It is a device in which the binary system and Boolean algebra are instantiated in material. Borgmann shows how the computer works in the sense that electron flow is set up and controlled for particular kinds of counting and transforming of counting into other kinds of information. The computer is a cleverly designed logical device that draws inferences in complex ways according to sequenced instructions and data input. While Borgmann appreciates the ingenuity of the computer, he suggests it is a device in which "mind becomes matter" only in the sense that "information become structure" and "we can soberly satisfy ourselves that the whole is comprised of nothing but physical particles, lawfully ordered" (162).

The cultural problems that the emergence of the computer has brought are what most trouble Borgmann. Contemporary society and culture in the West is characterized by "digital rigor, the massive logic and data structures, and the rapid processing of technological information" (167). Borgmann holds that in no earlier period of human history have we combined these three elements or features. That is, the information of earlier eras simply was not binary based, was not gathered and compiled at the speed of light and was not compiled and stored in the quantities now possible with the computer. In a sense, Borgmann claims, humans are living in a new time, the time when information functions as reality. Unlike earlier information eras, "technological information, to the contrary, is a marvel of permanence, perspicuity, and pliability" (167). Borgmann thinks

ultimately "technological information promises to render reality not just perspicuous or surveyable but altogether transparent. Transparency seems to be the perfection of information about reality" (168). What Borgmann is suggesting is that technological information in the emerging postmodern period replaces or supplants natural reality and the achievements that he links with cultural enhancements of reality.

Borgmann argues that in the last fifty years, the era in which information technology was developed, society has simply produced more and better commodities. Although we have been committed to the idea that the good life is available by perfecting technological devices that could materially enrich us and disburden us from labor, more omnipresent and more sophisticated technological devices (now digital) have come to dominate postmodern culture. But, since technological information is largely self-realizable (and humanly unrealizable), we know less and less about these complex devices; we are de-skilled as we are enriched. We are likely engaged less by some important activities (that required skills) that formerly gave life order, dignity and meaning. We seem, in the postmodern period of increasing anomie, to be more and more enchanted by the virtual environments or simulations that digital devices make possible. Often we seem to be infatuated with "hyperreality," a term Borgmann uses to point to the conviction "that virtual reality, rather than being second best and a mere substitute, is superior to actual reality" (184). We seem to be increasingly captivated by the "supernatural brilliance, limitless variety, and unreal availability" (185) of the world which networked computers makes possible. Borgmann argues the "glamour" of this world

> could not coexist with the gravity and duress of actual reality if the former were not discontinuous with the latter. In its pure form, virtual reality is separated from the ordinary world by a threshold that can be crossed easily and at any time and yet marks the entry into a separate reality (185).

Borgmann claims that virtual reality "is or aspires to be richly and engagingly informative within" (186), but it is infected with a deep and unresolvable ambiguity. This ambiguity comes from the combination of the richness of a digitally simulated environment and the absence of the sort of resistance that is necessarily part of the real world: much of the electronic world is an "impossible union of unencumbered glamour and profound engagement" (191). Borgmann dubs the "allure of cyberspace a confusing fog in contemporary culture" that is at

work spreading "virtual confusion" which blurs "the shape of things and events with glamour and triviality" (191).

To summarize, Borgmann argues for three types of information that are layered and grind against each other in contemporary culture. There is information about reality, which is the fruit of the economy of natural signs. There is information for reality, which enriches reality and is the fruit of conventional signs and the cultural texts such signs have made possible. And there is information as reality, which is technological information. Technological information is undergirded by information theory and made possible by the sophisticated electronic logical inference device, the computer, that can be networked. Borgmann believes that the flood of technological information will "erode, suspend and dissolve its predecessors" (2). In the final paragraph of his book's introduction, Borgmann suggests that contemporary culture needs "both a theory and an ethics of information--a theory to illuminate the structure of information and an ethics to get the moral of its development"(6). He says that the theory and the ethics will bring us to a point where "once we have understood information, we will see that the good life requires an adjustment among the three kinds of information and a balance of signs and things" (6). What Borgmann provides in *Holding On to Reality* is a semiotic envelope in which the theory and the ethics of information are woven tightly together.

Borgmann's Metaphysics

> Every man of us has a metaphysics, and has to have one; and it will influence his life greatly. Far better, then, that that metaphysics should be criticized and not be allowed to run loose. (Pierce 1965, 1.129)

Charles Peirce suggests here that metaphysical affirmations are pervasive and important; although not necessarily obvious, such commitments deserve scrutiny. I think it may be of interest to collect and clarify what seem to be some of the significant metaphysical claims that are embedded in the semiotic perspective Borgmann develops in *Holding On to Reality*. His three-fold developmental account of the way signs "illumine, transform and displace reality" (1) is a scheme that focuses primarily on the ways in which different sign economies operate to make available meaning for human beings. But his account of meaning is very much entwined with certain larger claims about reality. Borgmann, of course, did not intend his book as a systematic treatise on metaphysics. I take

Borgmann's claim straightforwardly when he indicates he hoped to produce in his book both a theory and an ethics of information. His discussion is circumspect.   In most of his writing, this book included, Borgmann struggles to develop a discussion framework and an idiom that speaks to all intelligent people. He for the most part succeeds in avoiding the internal debates and exclusive vocabulary of professional philosophers. Nevertheless, it seems to me worth examining the metaphysical roots of the link between reality and meaning that Borgmann develops in this book; such an analysis makes clear that Borgmann's philosophical vision is not on the metaphysical track that much philosophy since Descartes has been on.

As with all of Borgmann's writing, *Holding On to Reality* is a tightly organized discussion in which the case unfolds by stages and builds masterfully. Borgmann develops a semiotic (a doctrine of signs) or a semiotic perspective as a broad based philosophical vehicle within which to interpret technology and particularly the emergence of modern digital technology. As he notes in a response to recent essays on his thought, "information technology is currently the most prominent and most influential version of the device paradigm." (Borgmann 2000, 352) But Borgmann's turn to a developmental or historically-oriented semiotic is at least in part a move beyond the device paradigm and cultural history approaches used in earlier books. The continuity with these approaches is clear, yet semiotics is a new framework that ties together the elements of the human story in terms of how we humans make our way in the world through signs. Making our way in the world by reading and manipulating signs is a way of discovery and interaction. In Borgmann's hands, semiotics particularly draws attention to human agency as it is situated in the context of material culture.

Borgmann contends that much of the talk about "information" in the contemporary world is misleading because it obscures important things. He discusses (1999, 12-14) the fact that in the late modern and postmodern eras, we have come to recognize that we select information and this has led to all sorts of questions about whether there is such a thing as "reality" and/or whether "reality" is a construction or fabrication. With our modern notions of "information," we worry about the ambiguity of things in a way that ancient and medieval people did not. Borgmann makes the rather commonsensical claim that the closer one is to the context in which something is rooted, the less one is inclined to regard that something as "information" and as ambiguous. The seemingly sophisticated notion of "having information" is a notion that does not distinguish direct (acquaintance) and indirect (descriptive) knowledge; when we don't make this

distinction, we lose an important sense of the presence of things. Borgmann also points out that the notion of information actually should include a notion that some real things are focal (or nearby, at the center of attention) and some other things are distant (or at the periphery). He believes that dominance of the notion of "information" and the leveling (or overlooking) of the distinction between direct and indirect knowledge and the difference between the nearness and farness of real things contributes to the loss of meaning in the modern world. It produces a diminution of definitive contour or pattern in the lifeworld. To put it more pragmatically, our habits or dispositions to respond in our environing world in a particular way when the occasion arises seem, in the postmodern information age, to have become too fluid. Today is a time, Borgmann says, in which "cultural landmarks, dimensions, and distinctions are dissolving. Everyone is becoming indifferently related to everything and everyone else. This process began with the modern era, and it is now approaching its culmination through information technology"(15).

As I described in the previous section, Borgmann insists that sensible discussion of the manner in which "information" works in any human world requires five elements: only a person with intelligence situated in a context can be informed by a sign about some thing. It is worth noting that Borgmann's semiotic is focused on the human world. That is, he does not cast his doctrine of signs more broadly so that human sign use fits into a larger pattern of sign function in the natural order. A semiotics like that of Peirce, for example, is more broadly cast. Peirce's semiotic focuses on the operation of natural sign systems and then treats human sign use as a subset.[1] I take Borgmann's choice of a more circumscribed focus to be a practical one for a book that he pitches as a theory and an ethics of information. It certainly would have complicated his task to broaden the scope of his semiotic. Nevertheless, situating human sign use in a broader natural (or even cosmological) perspective offers interesting philosophical opportunities. It could be a venue to show the continuity and solidarity of human and the non-human natural kinds, something that Borgmann often seems to find of interest. There are hints in Borgmann's book that he senses that a semiotic that draws in a more panoramic vision offers a more satisfying depth of meaning. At the end of his book, for example, Borgmann suggests that "to recover a sense of continuity and depth in our personal world, we have to become again readers of texts and tellers of stories" (231). Borgmann suggests that a broad reading of history is required to generate a truly comprehensively meaningful world. History is, he says " the meaningful sequence of unpredictable events. It is contingency" (232). Nevertheless, *Holding On to Reality* does not move very far toward casting the

problem of meaning as more than a human problem that can be addressed philosophically only by situating human sign use in the context of grander and deeper transformations in nature or cosmos.[2] But the scope of Borgmann's semiotic is sufficiently wide to make clear that it is the conditions of meaning – rather than simply the conditions of knowledge – that Borgmann wants to explore. Borgmann's philosophizing *in Holding On to Reality* thus moves beyond epistemology to a semiotic focusing on the ways in which technologies develop in and reshape the human world.

Although Borgmann identifies five elements in his semiotic pentad (intelligence, context, person, sign and thing), his five might be consolidated into three basic elements: the person thickly (richly) described, the sign and the thing. But these three are the irreducible and necessarily related components of an account of the discovery and growth of human meaning.[3] Human engagement with the world is through signs. For Borgmann, "a sign is the promise of some thing" (17-18); a sign is not merely present but addresses a person. The world in which humans live is not merely things with presence, but must also include some things that present in some respect other things to persons. What is important is that Borgmann uses a triad rather than a dyad to account for sign functioning. Rather than a dyadic model focusing on signifiers and signifieds, Borgmann anchors his triadic model in the person. A person must be intelligent; he or she must be capable of developing and combining skills and skills are always cultivated in some historical community and put into play in some particular social domain or context. It is within this kind of broad socio-personal scheme that Borgmann seems to conceive of representation, of being informed by a sign about some thing.

Although he does not say it explicitly, anchoring his semiotics in a thick description of a person marks Borgmann as a realist. By claiming Borgmann is a realist, I do not mean simply that he holds that there are mind-independent entities. Borgmann's realism is much richer than this sort of contemporary minimalist way of framing issues. Marjorie Grene's notion of "comprehensive realism"[4] seems a description that is perhaps apt for Borgmann: Grene indicates such a realism claims, first, that humans exist within a real world and are surrounded and shaped by it, and, second, that humans are themselves real creatures, that is, capable or skilled agents both shaped by the natural and social environment and shaping the natural and social environment. Often in discussions of realism one of these points gets undervalued. But Borgmann's triadic semiotic holds on to both points. He emphasizes that at least some

realities, focal things, have had and should continue to have for persons "commanding presence" (17). Such things are genuine and serious and have, as he puts it in an earlier essay, the highest degree of reality (Borgmann 1995, 38). Such things have a kind of eloquence that presses upon us and grounds us; they are objects of a judgment or conclusion – a reading of the signs – that cannot be avoided by a skilled person nurtured in a particular community who brings into play personal skills or powers in a particular context.[5]

Borgmann's interest in realism was more overt in his earlier book, *Crossing the Postmodern Divide*, in which he discussed "postmodern realism" as "an orientation that accepts the lessons of the postmodernist critique and resolves the ambiguities of the postmodern condition in an attitude of patient vigor for a common order centered on communal celebrations" (Borgmann 1992, 116). Postmodern realism, of course, in the scheme of *Crossing the Postmodern Divide*, was a counter to the aggressive realism of modernity. But Borgmann also warned that "postmodern criticism gets caught in dogmatism when it restricts the postmodern conversation to humanity and dismisses without further thought the possibility of eloquent things" (117). Eloquent things, in *Crossing the Postmodern Divide*, are natural and cultural realities and they are clearly alternatives to disposable and discontinuous things or experiences. In this earlier book, Borgmann suggested that even in the contemporary world shaped by sophisticated technology there are openings for eloquent realities, which Borgmann also calls "focal realities" when they collect and illuminate human lives. Focal realities are all those things that "have engaged mind and body and centered our lives. Commanding presence, continuity with the world, and centering power are signs of focal things…Focal things warrant themselves" (119-120). But Borgmann was also quite clear in *Crossing the Postmodern Divide* that those things that warrant themselves and serve to center persons require from persons cultivation and skill:

> Focal reality is alive in the symmetry of things and practices – of nature, craft, and art entrusted to the care of humans. Human skill commensurate with the commanding presence of a thing, and human devotion corresponds to the profound coherence of the thing with the world (121).

The realist foundation of the semiotic perspective of *Holding On to Reality* is consistent with what Borgmann says about focal realities and human skills in *Crossing the Postmodern Divide*. To put this matter another way – a way perhaps more appropriate to the semiotic account of this new book – Borgmann's realism

might be called anti-nominalist.[6] A nominalist semiotic is dyadic in that it points only to signs and things and not to the skilled but fallible person in a particular context that links signs and things. Signs from a nominalist view are mere signifiers with no binding to things. Meaning in a dyadic semiotic is a function of a system or the structure of a system rather than the participation of an engaged person. There is, in a nominalist account, only the infinite play of signification that ultimately reduces particular acts of signifying to insignificant acts of bad faith.[7] Alternatively, with his triadic approach, Borgmann argues signs came to work (i.e., an economy of signs came to function) only when reality was eloquent for persons attuned to it. When the world is merely an ordered realm regarded (as moderns do) as everywhere embodying "structural information" (1999, 17), nothing stands out; nothing has "commanding presence" (17). Borgmann contends, however, that signs can only work at all when elements of the world have "significant structure" (24) for a living person. A sign is the link or "fulcrum of the economy of information" and as a fulcrum it "mirrors the symmetry of humanity and reality"(22). But in the modern period, this symmetry has given way to sharp distinctions between, on one hand, the purportedly internal thinking mind, and, on the other, the external world. This division itself has led us to assume that we can map and dominant time and space. Borgmann argues that this bifurcation is fundamentally in error. The possibility that we can employ signs to make our way in the world presupposes a reality in which we always already are immersed, indwelling instantiations:

> Time and space have always and already engaged and surpassed me. The symmetry of humanity and reality is encompassed by reality. Within the world of eloquent and interrelated things and intelligent persons, it is possible to specify the reference of a thing, that is, to let one thing refer to another in a special way and make the former into a sign. Signs are always and already meaningful things. We can discover, explain, and qualify their meanings. But there is no such thing as the original bestowal of meaning on a meaningless sign (23).

Persons, for Borgmann, are engaged figures whose world can give rise to reference. Our thinking is in and with signs whose meaning we appropriate and re-make in our ongoing relations. Although Borgmann does not put it this way, his account of signs is grounded in a sharp criticism of metaphysical presuppositions that constantly play upon a fundamental difference between mind and matter.

Borgmann's semiotic reflects monistic metaphysical tendencies. In making this claim, I do not mean to suggest that Borgmann is an idealist bent upon emphasizing mind. Monism is not inconsistent with his realism. As I have noted, Borgmann seems to be a realist whose triadic approach affirms a real world inhabited by persons regarded as real instantiations of that world; persons as real instantiations read the signs to make their way in the real world. Borgmann's monistic tendencies are clearest in his explanation of how signs worked in the ancestral environment, which is the original condition or situation of human beings. The ancestral environment is not merely a domain in which everything can be regarded as structured and as therefore containing "structural information" (17) but this "ground state of information and reality" has "significant structure" (24). The ancestral environment includes natural signs, that is, points of reference that quietly turn back into things. Things can point only because they are also something other than pointers; things do point or serve as signs only in some respect or other, and they cannot point in every respect. The ancestral environment is not, however, a world in which humans must struggle to "make" meaning, but a world in which reality speaks compellingly to human inhabitants. Borgmann muses (about the modern world) that "if it is true that reality has fallen silent and declined to the level of structural information, it is reasonable to assume that semantic energy can only flow from subject to object, from human to reality" (28) But this modern assumption does not hold for the ancestral environment: "For the Salish and the Native Americans generally, however, meaning flowed in both directions, from subjects to objects and from objects to subjects." (28). Borgmann seems to think that today we have extraordinary difficulty even imagining how real things once precipitated meaning upon those whose lives were tightly bound up with those things. That precipitation in a certain sense allowed the two directional flow. But it is the flow from objects to subjects that is grounding:

> To be sure, some meaningful structures are formed by humans. But as a guiding metaphor for the rise of meaning, the picture of material being shaped is misleading. It is more an issue of foreground and background, of emergence and eloquence. And in the ancestral environment particularly, things did not just present themselves minimally and furtively. They were alive with eloquence (29).

Awe-inspiring real things in the ancestral environment are person-like and they importantly impact human beings as they move into the foreground. Such things

in a sense give rise to signs. To be sure, humans in the ancestral environment are receptive and prepared to hear eloquent reality. Nevertheless, an account of early human life that assumes simply that eventually human minds cleverly contrived that some things must stand for other things is an account that misses much that is important. Signs in the ancestral environment invoked a whole world; they made an undeniable impression, situating a person in a world. Putting it pragmatically, such signs shape their human interpreters, endowing them with certain clear habits or dispositions for response in the future:

> The eloquence of things makes it possible for signs to be *about-some-thing*. A sign cannot contain a thing entire; but, given human intelligence, it can convey and provoke the impression a thing would leave on a person. In the ancestral environment, the message of a sign is sent by a thing rather than selected by a person, though the recipient needs the capacity to gather the message from the sign. (29).

Reality was eloquent and gave rise to gripping, life-shaping signs in the ancestral environment. In such a context, it, of course, makes no sense to think dualistically, to ask such questions as whether reality was mind-dependent and interactively generated or mind-independent. Such questions appear, in the context of Borgmann's ancestral environment, to be answers masquerading as questions, since they impose a certain more modern framework that acquired plausibility only as the fullness of meaning diminished. Borgmann's monistic overtones are a monism in the service of meaning.

Natural signs, as Borgmann's book patiently charts, came to be supplemented in human affairs by conventional, intentional signs whose "message exceeds what can be gleaned from its surroundings." (30) Borgmann suggests there is some evidence that in earlier eras conventional signs spoke with eloquence and power that at least was closely akin to that of natural signs. But in history conventional signs develop, changing from "the stationary and monumental to the mobile and instrumental and so became better signs if lesser things. In fact the slight and footloose signs we call letters turned out to be much more reliable and durable containers of information than monumental signs of stone or bronze" (37). The development of "better signs" that are "lesser things" is a transition from a time when the "relative weakness of signs was balanced by more robust intelligence, a fuller engagement of the person, and greater intimacy of the context" (38). The weighting of elements in Borgmann's semiotic pentad (intelligence, person,

context, sign and thing) thus shifts in his developmental account. Better signs require persons with intelligence and skills that move beyond an intimate and circumscribed lifeworld. A literate environment, unlike the ancestral environment, is no longer a place where "to recognize signs for what they are is to know what they mean"(49):

> In the natural economy of information, signs and things keep a fine balance. Natural signs emerge, refer, and disappear. They do not get in the way of things. Writing, to the contrary, allows for an endless accumulation of information, and unchecked accumulation leads from perspicuity—the signal benefit of natural information—to confusion (49).

The development of elaborate cultural signs in Borgmann's account changes the human relation to reality. Cultural information must be "wrested and abstracted from reality" (69) but ultimately it works to make reality materially and morally richer for those who master the specialized skills necessary for "realizing information" (85). While the economy of natural signs discloses natural reality, the economy of cultural signs makes possible grand human achievements that allow us to prosper in an enhanced natural reality. Clearly, Borgmann appreciates the ways in which cultural information provides focal practices or disciplined venues through which things altogether wonderful happen in the world of complex cultures: "…musicians give voice to the grandeur of reality. They bring out the common and concealed kinship of movement in things and raise the resonance of reality to singing" (103). The undetermined conventional sign makes room for human realizations that vie with the eloquence of ancestral natural things: "When the creative power of humans and the contingency of reality are consummated in a great work, the latter has a presence more commanding and expressive than that of a text, a score, or a plan" (113-114). On such occasions of "high contingency, moments of celebration and, if there is such a thing, of redemption," Borgmann suggests that, "humanity and reality seem gracefully joined" (120-121).

Technological development, ranging from the development of writing to complex building, is folded into Borgmann's developmental semiotic perspective. The quest for structure, in his account, eventually became central in human affairs, for structure came to be seen as the key to mapping and enhancing reality. Humans came to believe that structure makes signs possible and signs make structure visible. But it is not possible to reveal pure structure, despite human

dreams to the contrary. Borgmann contends that there is not only the structure or lawfulness of things, but also the contingency, the idiosyncrasy, of things: "Structure and contingency are the two principal ways reality presents itself. Yet reality is not divisible into structure and contingency without remainder. . . . Reality is both knowable and unsurpassable" (99).

Contingency, for Borgmann, is testimony that human engagement with reality always outruns our ability to represent and control reality. Contingency confronts us in our cultural projects and blesses them with its own kind of existential meaning; contingency is "inherently meaningful and so makes significant information possible" (105).

Despite the importance of the contingency of things, reality in modernity has come to be regarded predominantly as entities with structure; the key to enhancing reality is to grasp and properly signify that structure. As I have implied above, discerning and referencing structure came to be considered in history more and more as a peculiarly human function or labor and this human function and our human identity (understood as thinking substance) came to be separated from real things seen as external, malleable and material: "Our sense for the force of reality has hardened, however. We tend to think of reality chiefly as material that is ours to shape. Contemporary thought, in particular, has little regard for the expressions of reality. Still, contingency is the one concession thoughtful theorists make to the eloquence of the world" (105) All in all, the discussion of cultural information in Borgmann's developmental semiotic provides a convincing explanation of how mind came to be regarded as so different and distant from matter. Real things become primarily material things to be mapped and exploited; they are meaningful not because they express the nature of the world and life in the world but because they are subject to manipulation.

Borgmann argues that our modern consuming interest in reality as structured culminates in the presently emerging digital culture in which "information through the power of technology steps forward as a rival of reality" (2). It is in this third phase of Borgmann's semiotic account, in the economy of digital technological signs, that information technology has put human beings in a position something like "the sorcerer's apprentice, unable to contain the powers we have summoned and afraid of drowning in the flood we have loosed" (4). Borgmann's suggestion that information theory lies in the background of much of the inflated, optimistic, recent discussion about the age of information is an

intriguing claim. Information theory takes the idea that reality has structure (and that signs can mirror that structure) to a new conclusion: the electron is the foundational element of structure and the ultimate sign, and electronic signs are quantifiable; more signs provide more precision in information conveyed. Borgmann clearly identifies the problem with transposing such conclusions in the world of electrical engineering to a domain of a different scale, the human world of signs: "…it is misguided to believe or merely to hope that larger and more sophisticated systems of signs will increasingly accommodate the presence of things" (136). It is only in the world of electrical engineering that it is possible to think that "resolution" of information approaches a point where "the structure of the sign is as detailed as the structure of the thing the sign refers to, information has virtually become reality" (181). Surely, Borgmann is correct in arguing that an account of signs in information theory is fundamentally at odds with the relational account of signs in his semiotic pentad. In his relational account, it makes no sense to claim the quality of signs is directly proportional to the quantity of information. A sign in a world with a human scale represents an object to a person and it does so (i.e., represents) in some respects, but not in all respects. A sign can not stand for that which a person focuses attention upon unless it differs from the thing in some ways. The quality of a sign in the world of human scale cannot necessarily be improved by providing a greater quantity of information, by more closely emulating that which it presents. There is a fundamental disconnection between the idiom of information theory and the world of sign operation on a human scale: "The bit of information in its most austere sense is a measure of information space, and by itself the number of bits of a set of signs tells us nothing about whether or how the space has been filled with content"(138). In fact, as Borgmann argues, in digital artifacts such as a CD it is not really the quality of a sign at the human level that becomes superb in the artifact; instead, the CD is a complex entity (a technological product inextricably bound up with realization devices) that can produce digital music that "mimics the appearance rather than discloses the structure of the piece" (197).

The way in which Borgmann emphasizes the tensions between his human scale semiotic and ideas about signs in information theory again points to Borgmann's peculiar realism. Any account that merely links and focuses on structure, sign and information quantity but relegates the person to the shadows as a device user or consumer is no longer an account in which the sign is a fulcrum that "mirrors the symmetry of humanity and reality"(22). It is an account that omits contingency, forgetting that human engagement with reality always outruns our ability to represent and control reality.

The computer and networked computers are the devices through which the de-personalized dreams of information theory are played out. Borgmann suggests that information generated, stored and manipulated by the computer "promises to render reality not just perspicuous or surveyable but altogether transparent"(168). The "transparency" of technological information as "the perfection of information about reality" differs strikingly from natural information which "opens up reality, but it does not encompass it. The world remains endlessly open and eminently contingent" (168). Digital information is extraordinarily pliable and readily stored at hand in vast quantities; this gives to those who manipulate it with complex tools an unprecedented sense of control. In a sense, Borgmann suggests, information technology aspires to "overwhelm the contingency of reality" and also to "reveal its very secret" (174). Digital information also represents how the human project of obtaining and maintaining information about the world has now almost completely "shifted from the internal space of memory to an external space of signs" (168). This externalization of signs as binary code requires that signs be self-realizing to a degree they have not been in earlier human history. Digital devices excel in reading digital signs and delivering a product. What gets lost in this commodification of the world is the engagement of the person. I read Borgmann as arguing that the natural and even the social world is in danger of losing its human scale in emerging digital culture; human beings are in danger of overlooking our grounding in the world:

> Engineering technology has increased our control over information to the point where information has assumed a distinctly new and powerful shape. Technology as a way of taking up with reality has put the power of technological information in the service of radical disburdenment (183).

As technological information proliferates, human skills or practices of realization are less and less requirements of daily life and the good life seems less a function of the nurture of and deployment of active skills: ". . . overall, and emphatically so in the realm of leisure and consumption, technology in the narrow engineering sense and technology in the broad cultural sense have converged to obviate powerful skills and habits of realizing information" (183).

Meaning understood as human achievement – the outgrowth of the engaged, skillful participation of persons – does not grow well in an environment

increasingly dominated by technological information. The world dominated by technological information is less resistant and the loss of resistance impacts human beings understood as real instantiations shaped by the world. In such a world, Borgmann says "reality will become lighter, both more transparent and less heavy" (216) and "what is likely to get lost is the symmetry of natural information and human competence" (217). As technological information becomes more and more prominent in culture, as Borgmann puts it, "information gets more and more detached from reality and in the end is offered as something that rivals and replaces reality" (182). Eventually, Borgmann thinks, in an environment in which more and more information is technological information, human beings come to prefer readily available and captivating hyperreal things rather than the real things that we always already are anchored in. Glamorous virtual realities are discontinuous with but always parasitical upon a larger reality in which humans dwell as living, embodied creatures. Our bodies as engaged in natural reality are the "original point of our existence" which is "unsurpassable" and thus the body "remains the inescapable pivot" (190).

Holding On to Reality, of course, ultimately proposes the task of "righting the balance of information and reality"(221). This is not a Romantic return to the past, but does involves cultivating better attunement to the moral eloquence of the real things of nature and patiently re-establishing "practices of realizing cultural information"(221). I hope I have also shown that Borgmann suggests such an adjustment is also a project that requires transforming some of the larger metaphysical commitments firmly embedded in modern and postmodern thought and culture.

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Endnotes

[1] David Strong points out that Borgmann's philosophical perspective is one in which "matter matters." One of the ways in which Borgmann's account moves beyond Heidegger's approach is that he forces "us to attend to the significance of our physical world and tangible things."(332).   Although this is true, it also the case, as I suggest below, that Borgmann's shift to a semiotic perspective seems to be a move, like that of Peirce, that thwarts easy philosophical distinctions between mind and matter. One might put Strong's point within a more Peircean framework by saying that Borgmann emphasizes that secondness, resistance, is important for human beings.

[2] I suspect for two reasons Borgmann may be wary about a broader sort of semiotic like that of Peirce: much of the broader discussion of semiotics has been captivated by suppositions that I call below dyadic and nominalistic. Also much of the attention in *Holding On to Reality* is devoted to information theory where the ultimate sign is the electron. A broad doctrine of signs grounded in information theory is clearly something that Borgmann thinks is nonsense.

[3] Peirce's semiotic is, of course, also triadic (object, sign, interpretant) and he argues that triads cannot be further reduced. In a late essay, Polanyi uses a triadic model to describe how human beings participate in the world in ways that allow them to discover and make meaning. He calls such human action "sense-giving" and "sense-reading." One way in which he formulates his triad sounds very like Borgmann: "A person A may make the word B mean the object C" (181).

[4] Grene acknowledges that her term is an ambiguous one; she does not mean by "comprehensive" merely that everything is real, but that human beings are embodied, creatures situated in a world in which they try to make their way. Some of my comments which follow draw from Grene's discussion in her chapter "The Primacy of the Real" which draws upon Darwin, Polanyi, and Merleau-Ponty. See Grene, *A Philosophical Testament* , 113-126 (especially, 113-115).

[5] Borgmann's realism seems also akin to that of Peirce in some respects.. De Waal comments that Peirce held "something is real when it is the object of a conclusion one cannot avoid drawing" (47) To define the real this way is to restate Peirce's adaptation of Duns Scotus' claim that the real is that which is

unaffected by what anyone in particular thinks it to be. As my convoluted sentence tries to reflect, this way of conceiving the real is antiCartesian in that it binds together skilled person and community. Judgment is personal, but the person is not an absolutely autonomous individual but a social being; inquiry is a communal process. Borgmann implies that this is the way that he regards persons

[6] As I have noted above, Peirce claimed that all of modern philosophy is nominalist. Realism is not the antithesis of idealism for Peirce but the antithesis of nominalism. Nominalists claim reality is what is external to the mind, but Peircean realists claim (as De Waal puts it) "something is real when it is the object of a conclusion one cannot avoid drawing" (47). This does not mean, however, that conclusions humans draw are always correct. In fact, realism and fallibilism belong together for Peirce.

[7] Sheriff offers an illuminating comparison of the ways in which dyadic and triadic semiotic models affect notions of meaning. He discusses de Saussure, structuralism and poststructuralist literary theory and shows how Peirce's different semiotic starting point yields a fundamentally different account. He shows that much hangs in the balance philosophically on the definition of a sign and its relations to other signs.