1. Albert Borgmann: Technology and the Character of Everyday Life

Pieter Tijmes

Of all those philosophers who concern themselves with technological culture, Albert Borgmann speaks with a distinctive and recognizable voice. His claim that contemporary culture bears the imprint of technology is not quite new, of course; predecessors include thinkers such as Hannah Arendt, Jacques Ellul, Arnold Gehlen, Martin Heidegger, and Lewis Mumford. But Borgmann articulates this vision in original ways. He discerns in technology an underlying design that he calls a *device paradigm,* with which he shows that the relation of human beings to reality is subject to change. While Borgmann finds this transformation regrettable, he offers a therapy at the same time as he makes the diagnosis—and precisely this is what distinguishes him from his illustrious predecessors.

Following a short biographical sketch, I shall discuss how Borgmann diagnoses the ills of contemporary life, what his concept of the device paradigm of technology is, and what its implications are. I shall discuss how he uses this idea in showing that technology is indeed a revolutionary factor in society, politics, and culture, and how he charts the course of these changes. What concerns him most are those changes in the human relation to reality brought about by the device character of technology. Borgmann does not hesitate to speak of the "loss of meaning" of things, and laments the transformation of culture at the hands of technology. The therapy he counsels involves a new engagement with things, one that does not involve turning away from technology.

• • •

Albert Borgmann was born in 1937 in Freiburg—"In the shadow of a Gothic cathedral, the Black Forest, and the university where Husserl and Heidegger taught," as he puts it at the beginning of a short autobiographical essay (1993). Those conversant with his work may already recognize traces of his heterodox Catholicism, love for nature, and respect for Heidegger. Concerning his relation to the latter, Borgmann has often spoken of his "respect, but never love for Heidegger," a phrase that indicates in a subtle way both his nearness to but also distance from that thinker. In 1958 Borgmann went to the United States, where he studied German literature. In 1961, after receiving an M.A. degree from the University of Illinois, he returned to Germany to study philosophy in Munich with Max Müller and Wolfgang Stegmüller. After completing his dissertation under Müller,[1] Borgmann returned again to the United States to seek a university position. He held several temporary positions before winding up in 1970 at the University of Montana in Missoula. In 1974 he published *The Philosophy of Language.* But in the mid-1970s he was forced to rethink his philosophical position. Heidegger had shown him the relevant philosophical problems, while political thinker John Rawls had provided him with the model of a solution. His next book, *Technology and the Character of Contemporary Life* (1984), reflected this new philosophical stance, though in his autobiographical article "Finding Philosophy" Borgmann claims to doubt whether in it he managed to weave both traditions together successfully. True or not, Borgmann has remained fascinated by both traditions, though as he began to develop his own lines of inquiry the references to other traditions became less relevant. Borgmann is often referred to, not inaccurately, as "an American of German origin"; still, from a European perspective, in many ways he is the most American of all the American philosophers of technology.

THE DIAGNOSIS OF CONTEMPORARY LIFE

Under the influence of technology, Borgmann claims, human beings become ever more detached from things. Things lose their weight and meaning for humans, slackening their bonds to us on many levels: physically, mentally, socially. Humans have but fleeting and often boring contacts with their surrounding material world. Borgmann couples this diagnosis with a suggested therapy; he seeks a renewed engagement *alongside* the usual, superficial dealings with reality. This cashes out to a plea for activities like running, gardening, cooking, and the culture of the table—practices that orient the lives of humans

but coexist uneasily and with much tension alongside the prevailing activities of our fast-paced technologically driven existence. Borgmann does not want to condemn these latter activities, only to complement them. If the therapy does not sound intuitively pleasing at first, it is nevertheless important to understand his diagnosis. This will make his philosophy comprehensible and more easily evaluated; the diagnosis has its own qualities and can be analyzed separately.

Borgmann makes his vision of a positive relation with a reality due to technological devices plausible through his account of a *pattern* that he discerns in the use of technological devices. Technological devices, Borgmann says, deliver a product. A CD player delivers a product—music—in such a way that it is available to me at any hour of day or night. Each time that I use a CD player, it delivers the product with the same high quality. The CD, however, represents a high level of abstraction in the sense that I can't see from the disc itself whether the music I'm about to hear is made by a harmonica or an organ, by a soloist or an orchestra; I can't even tell whether a disc has pictures or music stored on it. Whatever kind of music I want I can find on a CD and play it in my living room.

Once upon a time, this took more doing. If one wanted to hear music, one had to stage an event that required an infrastructure and some organizational talent. Musicians were not always available to perform, the way they are on a CD. Only the very rich who were able to support court musicians could have music played for them whenever they wanted. The quality of the performance could not be guaranteed in advance: the musical event could be a good day or a bad day. We are more blessed in that respect than the Margrave of Brandenburg, Christian Ludwig, though in comparison with the way he heard the Brandenburg Concertos, the way we hear them in our living rooms lacks something in the way of spectacle and atmosphere. Our CDs, too, of course, require organizational talent and technical infrastructure, but in a much different way than those earlier musical events.

Modern technology is all about product, while the device itself withdraws. The consumer knows nothing of the science of sound recording and reproduction, nor of the manufacturing processes involved, nor of the distribution system that brought the CD from Japan (or wherever) into the home. Modern technology shows the device responsible for the product but hides the whole "machinery" making it possible from the notice of the consumer. The products are destined for the consumer; the technology is the business of the engineer. It hardly needs to be said that the advantage and disadvantage of technologically available recorded music cannot be weighed in an easy and proper way: the

advantage (availability) and disadvantage (lack of engagement) are heterogeneous quantities. The valuation that expresses itself in enthusiasm or disapproval is tightly bound to different effects.

THE TECHNOLOGICAL PATTERN

Borgmann seeks to map out technologized society—what Heidegger designates with the term *Gestell,* or framework—with the aid of his device paradigm. This method has a great advantage over Heidegger's own method, for instance. According to Heidegger, the modern technological approach to reality delivers over to humans a universe of manipulation in which they express their will to power. If one asks where this will to power comes from, Heidegger's answer is that this specific modern approach to reality is not a human choice; it belongs to the fate of a specific period, it is the "sending of being" in the modern age. In what follows I shall show, among other things, how Borgmann's characterization of technology can help us understand how attractive technology has become in our society, and why.

Modern technology is modeled on a specific pattern that we can recognize in all of its forms even outside the practice of engineering. That pattern consists of a device that makes commodities or products available on demand. One important characteristic of such a device is a sharp separation between means and end. The end is the product, while the means are exclusively in the service of this product; these form, as it were, the hidden machinery. A watch has the function of providing the time, and its machinery has only that one end and cannot be used for anything else. Discarded watches are useless and cannot take on another function. The same holds for discarded washing machines or dryers, which are good only for the scrap heap. However, from the outside of a watch one cannot directly see whether its machinery is digital or analog, meaning that its machinery can be radically altered without affecting the function. This is what Borgmann has in mind when he says that the means and end are sharply separated from each other. The machinery has been set up to produce the end in a safe, easy, instantaneous, and ubiquitous way. It is a pure means, and as such withdraws from sight.

For this reason, one might say that our existence is characterized by the permanent presence of technology that does its work in secret. Clear water flows conveniently and safely from the faucet whenever we want, and we use it without dwelling on the hidden conditions of this comfort. We trust in the availability of the water and anticipate that it will always flow when we open the faucet. *That* the faucet works is a matter, not for us consumers, but for the engineers, the technicians, the experts. The same holds true for all of the devices that surround us in our everyday lives—automobiles, vacuum cleaners, washing machines. Whenever these break, we take them to the experts to be repaired, or junk them if they cost too much to fix. We have internalized, as it were, the division that the device effects between pure goal (its product) and pure means (the machinery that gives rise to the product) as a specific modern posture with respect to reality—an internalization that represents an extreme form of functionalization. We like the product and count ourselves lucky that we don't need to concern ourselves with the conditions that have to be satisfied to produce it.

This pattern of the device paradigm is not limited to technology itself but also occurs in adjacent areas. Technology, one might say, institutionalizes this pattern and its progressive advancement—even in our thinking. The device paradigm is seamlessly incorporated into consumer society, apparently realizing the dream of effortless consumption. Microwaves can make a store-bought meal ready in five minutes, and shorten even the lengthy time it used to take to prepare a big holiday meal in the old-fashioned, tasty way. Stop & Shop offers not only all the ingredients to make traditional meals, but also fully prepared pizzas and pre-cooked chicken and ribs. One might think of the supermarket here as the device that delivers "buy and serve" products, but in these products we can also recognize the devices that produced the old-fashioned Thanksgiving or Christmas meals. The holiday rituals surrounding the preparation of such meals have been replaced by the trip to the supermarket. We sacrifice these holiday rituals for convenience, and this convenience is linked with less engagement.

THE PAST AS CONTRAST?

The revolutionary character of the device paradigm becomes clear when contrasted with the role of technology in traditional society; the contrast serves to rob, as it were, the paradigm of its obviousness. In modern society, goods are produced in order to enrich our lives and make them more pleasant; in creating its stream of goods, technology thereby plays the role of lightening our burdens. Heating is now technologically available everywhere, in all nooks and crannies of every house, office, vehicle, and so forth. This was not always so: in earlier times not every room in the house was heated, no room was heated all the time, and there wasn't much difference between the temperature inside and outside a vehicle like a carriage. The production of warmth, to put it in modern terms, was based on a division of labor in which the entire family took part. The open fireplace generally would be cleaned and reset, and thereafter continually restoked, by the woman of the house early in the morning.

Procuring the wood was the job of the man of the house, while the children were responsible for making sure that there was always enough wood available in the bin. Everyone in the family, in short, had a role in heating the home. One finds another example of social division of labor in the obtaining of water from a communal well. The well not only fulfilled the technological role of providing the water supply, but also and at the same time served as a social meeting point, where one could pick up all the village gossip. Abraham's servant found Rebecca, the future wife of Isaac, by a well, while a well was also the site of the first kiss between Jacob and *his* future wife Rachel.

Following Heidegger, Borgmann clarifies the difference between traditional and modern technology via the pair of concepts "thing" and "device"; devices are contextless technological means, while things, by contrast, are socially embedded. The term "contextless" is not pretty, but the meaning is clear. Water doesn't flow from every spigot; whether it does so or not is a function of its hidden machinery, which is looked after by the engineer. This hidden machinery, rather than the social environment, provides the context for the spigot.

By contrasting the spigot (a device) and the well (a thing), we can read off interesting differences between modern and traditional technology. A well requires more labor and exertion than the spigot; the human-reality engagement or interaction is greater. Whoever draws water from a well must be familiar with its machinery: the steadiness of the pulley, the wear on the rope, the way the water table varies with the seasons, and so on. These features are visible and accessible for the required interventions by the users. The reliability of the water supply is the concern of all those who draw the water. When Borgmann asserts that things have become *devices,* this is not merely a matter of a technological improvement but involves, more importantly, a change in a complex social process.

The love that Borgmann lavishes on his descriptions of the interactions and social embeddedness of traditional technology leaves him open to the charge of nostalgia. This charge is not necessarily interesting; what's wrong with a little nostalgia? It would be interesting only if it revealed weaknesses in his account of the difference between present and past. But it is difficult to see any. The weekly ritual of stocking the woodpile next to the fireplace in days of yore has a completely different meaning than today. In the first case it concerns a life necessity—even survival—and in the second case a relaxing exertion in preparing a convivial atmosphere for gatherings of friends and acquaintances. Seemingly similar activities are in reality extremely different. Completely lacking from the latter happy social occasions is the labor, responsibility, and urgency attaching to the former.

Still, the positive virtues of the technologically framed world should not obstruct our vision of its drawbacks. One could think of the reduced physical contact with reality as well as the social atrophy brought about by many forms of modern technology. On the other side, there is a certain irony in the thought that the attempt to adjudicate past versus present by *measuring* certain isolated values is itself a technological process more befitting the present than the past. It is therefore not a simple matter to evaluate the changes resulting from modern technology. It is hardly meaningful to pose, let alone answer, the question, "Have the changes effected by modern technology led to good or bad?"

In short, we face two key problems in attempting to contrast the present with the past. First, the replacement of the thing by the device has altered the conditions by which we could make a good comparison; such a comparison would be legitimate only if the conditions remained the same. The evaluation depends on the parameters that we choose for the purpose of making the comparison. Both assertions—that modern technology means progress, and that it represents a desiccation of social life—can be defended on solid grounds. Second, modern technological (device-oriented) thinking reveals itself at work, though concealed, in the very attempt to compare thing and device, though as we have already seen the thing cannot be thought of in this way.

THE DESIRABLE FRUITS OF MODERN TECHNOLOGY

One prominent feature of modern life, Borgmann points out, is the sharp division between work and free time, and he sees this as connected above all with the division between machinery and products in the framework of modern technology. Free time consists in the unencumbered enjoyment of consumable products, while work is generally oriented to the construction and maintenance of the machinery that sees to these goods. The attraction of technological progress lies in the lightening of heavy work loads, better health, possibilities for cultural development, and free and unlimited consumption of goods. We prefer to enjoy the blessings of technology in the form of an increase of goods for consumption. The increase in productivity therefore translates not into more free time but into expanded consumption. In the contemporary world, Western society plucks the fruits of technology in the form of mass consumption.

Already at the beginning of the seventeenth century, Francis Bacon, in his book *The New Atlantis,* expressed a sunny belief in the liberating and enriching lives that would be bequeathed us by science and technology. It took some time for technological society to get under way, but when the industrial revolution finally arrived in the second half of the eighteenth century, it brought along

exploitative labor practices, bitter misery, and utter poverty. It would take still more time for the promised predictions about technology to come true—and it is also understandable that technology initially met with opposition and even aggression (for instance, by the Luddites; see chapter 6 of this book). Only at the end of the nineteenth century and then finally in the twentieth did technology lead to widespread prosperity in western Europe and North America. The history of technology and the spreading of prosperity is thus a complicated story: initial exploitation, misery and poverty, followed later by plentiful consumption. Borgmann, however, focuses his interest on technology as it characterizes our *contemporary* life. According to him, our entire reality, including nature, culture, and social relations, is modeled in accordance with the device paradigm. His working hypothesis is that we judge our lives and our society in the light of technology. Before returning to Borgmann's interpretation of the workings of contemporary technology, it will be enlightening to follow Borgmann's train of thought about the political implications of the device paradigm in liberal-democratic society.

POLITICS AND TECHNOLOGY

Ideas like freedom, equality, and self-realization are central in today's liberal democracies, and are even mutually supportive. As free-standing ideals they tend to have short lifetimes; if one is absolutized, it is at the cost of the rest. In this sense they need each other: freedom by itself implies an assault on equality, the ideal of pure equality is an obstacle to freedom, and self-realization can scarcely arise as an ideal without the counterbalance of equality and freedom. One part of the political ideal of a free democratic society is that the individuals in it strive freely, and as equals, to realize their respective abilities. The term "self-realization" is formal in the sense that it is not prescribed in advance which abilities these are or in which direction they are taken. This triad of realization, freedom, and equality stands in a strained relation with the principle of the capitalistic market as the regulator of opportunities and goods, which liberal democracies also hold sacred. A difference of opinion presides over this strained relation between political ideals and the market. To some, the market provides a very efficient—in a certain sense unimpeachable—way of adjudicating positions and opportunities and of correcting gross inequalities; others, however, do not share this optimism regarding the market's functioning.

Current political debates are dominated by financial and social-economic issues. These debates proceed as if economic politics provided the boundary conditions for the resolution of all other issues, including ecology, education,

and social security. The logic that every dollar can be spent only once governs acceptance of the result; the quarreling takes place mostly about the means. Discussions about the good life, the presumable goal that the means hope to realize, rarely arise.

In this context one may argue the case for affinities between democracy and technology. Democracies, as previously mentioned, do not specify the form of the good life, nor the lifestyles of their citizens. They try not to be paternalistic, leaving the responsibility for how to live up to the citizens themselves. Technology seems to hook up with this extremely well; it promises to open up new opportunities for self-realization, liberating us from life's chores, while continuing to leave open and indeterminate the question of the good life.

But there is more than just an affinity between democracy and technology; democracy also *depends on* technology to realize its goals. Many practical obstacles stand between the democratic ideals of equality, freedom, and the good life and their realization. How can a democracy cope with concrete inequalities among its citizens? Striking inequalities of material, social, and cultural opportunities are best dealt with, not by redistribution, but by increased productivity. This role is perfectly suited to technology, through increasing the stream of goods. The good life thereby receives a concrete content along the lines of technology. Although technology is conceived instrumentally, it makes the good life equal to consumerism—which undermines the claim for the value neutrality of technology.

Technological products such as the automobile, telephone, and television have changed the world so much that a return to a world without them is no longer even thinkable. Choices made about technology cannot be revoked. A decision about the content of a good life is implicitly made once these devices are accepted. While choices between specific products might well be made impartially on the basis of social and economic structures, a choice has already been made in the conflict between an engaged dealing with things versus a consumerism of commodities. To put it another way: technology is never offered to us as a way of life that we can prefer above other ways of life, but is advanced as a basis for choices. Humans can make choices as consumers, but technology itself is always present as the basis for the choices. According to Borgmann, a choice against technology, or rather against a technologically impregnated democracy, would amount to a choice against freedom and for prejudice and paternalism. To reject the promise of liberation and enrichment is to accept oppression, poverty, and suffering—not, therefore, a real choice. Technology is deeply anchored in our existence yet tends to become invisible. Put more strongly: to the extent that technology withdraws from sight, it becomes that much more astounding.

In short, the promise of technology develops into a lifestyle in which the political ideals of freedom, equality, and so on undergo erosion; conversely, the promise of democracy is technologically specified. In this context, politics can take on mainly the character of a meta-device of technological society. Even political behavior is modeled on the device paradigm. Whenever a crisis occurs, a special commission is appointed to study what broke down. The role assigned to the citizen is to be a supporter of the government machinery by, among other things, paying taxes. The government minds the technological store—and in the shadow of this task political party identifications hardly matter.[2]

Modern technology provides the inescapable horizon of our existence. In a sense, we are all accomplices to its domination by virtue of the fact that our enjoyments strengthen its hold. If despite this we ever dare to express doubts about this hold, we are led to reflect on norms and values. But this reflection is like running in loose sand, and jumping is out of the question. It is of course important which norms, values, and goals are selected, but within the technological framework they remain commodities to consume. The political discussion always comes down to a matter of money or its distribution: political goals are discussed in market terms. However deeply they purport to cut, proposals for greater responsibility, greater technical efficiency, and more citizen participation leave the basic structure of technology untouched. These reform efforts may arise from a dissatisfaction with technology but, however strong, are doomed to fail because they remain on the side of technology, and are blind to its idiosyncrasies. This discussion is quite different from the idea of the so-called *technological fix,* in which technology is pitted against technology.

HAS BORGMANN BURNED HIS BRIDGES?

It might appear as though many possibilities for a normative discourse about how to lead a good life have gone up in smoke. The very fact that Borgmann is so persuasive in his demonstrations of the revolutionary power of the device paradigm leaves him with little normative wiggle room, because things evidently are regulated in the shadow of the dominant paradigm. Technology preordains or at least channels our decisions. However, Borgmann does not share the liberal view that the good life remains a still-to-be-specified aspect of our society. Again, this is not to deny that all sorts of normative questions crop up in certain sectors of technological society, such as the honesty, integrity, and responsibility of those functionaries who tend to the maintenance and expansion of technology; or litmus issues of the Christian right, such as abortion, euthanasia, pornography, and capital punishment. The all-important issue of technology and its goal of endless consumption never comes up for discussion.

After burning his bridges, how is it possible for Borgmann to reopen the question of the good life? This is a tricky one, for Borgmann, who does not yield an inch here to postmodernists, denounces the practice of many philosophers who reach strong conclusions on the basis of weak assumptions. They begin with certain specific axioms that are self-evident or noncontroversial, and wind up with a vision of a well-ordered society or the existence of God—rich conclusions. John Stuart Mill, for instance, invites us to strive to seek to do nothing less than the greatest good for the greatest number of people, while John Rawls would have us adopt the perspective of a rational person striving after his own interest among equals. According to each of them, rational calculation shows that the result will be an almost ideal society. These approaches are modeled on a certain view of philosophical procedure. The trouble is that if one begins with few assumptions, one ends up with few important conclusions; one can arrive at important conclusions only by first assuming a lot. The philosopher's secret, then, is often the ability to smuggle in extra suppositions unnoticed along the way. Borgmann refuses to operate in this manner, convinced as he is of philosophy's inability to press toward important truths via an internal route.

In place of this traditional, quasi-rational discourse, Borgmann introduces what he calls a "deictic" discourse, from the Greek for "to show" or "point out." He describes this as a discourse that is preeminently "testimonial" or "appellative." Deictic discourse does not lead to a logical deduction or scientific conclusion but rather to a plea for assent. It points to a new engagement with things and respects the other's integrity and feelings. It has been said that Borgmann's philosophy is in the service of things—things not in the sense of pebbles and flowerpots, but of what Borgmann calls "focal things." The term "thing" is the counterpart of "device." The term "focal" refers to the central meaning that a thing can have for our lives. The Latin word *focus* means hearth. In a pre-technological house, the hearth represents the center of light, heat, and daily activities. For the Romans it was the place where the house gods dwelt, where they ate and gave offerings to the house gods, and where marriage ceremonies were performed. In Greece a baby was accepted as part of the family and household when it was carried around the hearth. A trace of these old traditions is carried over in the central place that an open hearth usually occupies in modern houses. Above and below the mantelpiece one no longer hangs pictures of the gods, but photographs of loved ones and family members who have passed on. It is also a place where clocks are often kept. In short, the word "focal" refers to the granting of a central orientation.

Focal things incorporate a sense or meaning. Their sense or meaning cannot be derived philosophically, but may be brought out via more literary means. Deictic discourse does not negotiate commitments, but rather exhibits the importance of a thing or practice. It is an enthusiastic discourse, and the enthusiasm is contagious. It teaches us what we ought to do by telling us what the activity is. This deictic discourse, Borgmann claims, is a way of bridging the gap between "is" and "ought." Deictic discourse is contestable; even though it points away from itself toward things (or to practices associated with things), it always remains possible that the meaning of the thing is not brought out eloquently and in its own right.

One searches in vain for a definition of focal things; rather, Borgmann shows them off deictically—testimonially or appellatively. Focal things are of different origins and often fulfill different roles, making it impossible to point to a specific definition. Focal things form a group and belong to each other without sharing a fixed general characteristic. They exhibit a family relationship, so to speak. A further complication is that Borgmann also discusses the *practices* that are deployed about things, and therefore focal practices—those practices that center, orient, and enlighten our lives.

Borgmann discusses a number of things and practices belonging to this privileged "focal" family. The earlier examples are the clearest and most appealing to us; the modern examples are more vulnerable and ambiguous. Thus Borgmann speaks about temples and cathedrals (things), but also of processions and celebrations (practices) central to the meaning and coherence of life. The cathedral of the Middle Ages is a point of convergence of its lifeworld, embodying the medieval vision of the world: the beginning, middle, and end of the history of salvation, the hierarchical order of reality that culminates in God, and encompasses the place occupied by each individual. To be sure, there is no present-day equivalent of the medieval cathedral—not even the technology laboratory, where we send our cleverest young men and women. Religious rituals such as attending church, prayer, and Bible readings are focal. In certain respects these things serve as a good contrast to the world of devices, in which everything is available on call. But examples taken from religious activities can mislead by suggesting a stronger kinship between the focal and the religious than Borgmann intends. In his appeals for focal things and practices against the dominant technology, Borgmann in no way makes a case for Catholicism. Practices such as running, reading books, dinner table conversation, and gardening count as members of Borgmann's focal family. Such practices, he stipulates in defending their inclusion, do not have to be oriented to specific ends or goods but can be done as ends in themselves. If they are carried out with specific goals in mind, of course, they cease to be focal activities and must be

interpreted instead as technologies in the service of an end. Some examples of specific focal things and practices that forsake the device paradigm will help clarify what Borgmann means.

FOCAL THINGS AND PRACTICES

Nature and culture are hardly independent things. In Europe one speaks of cultivated nature—a nature of fields, meadows, and woods. On the American continent it is possible to come across nature unencumbered by cultural contributions: "wilderness." Wilderness, Borgmann claims, possesses focal power, and is a focal thing. What does that mean? Wilderness preceded human history and owes nothing of its beauty to humanity. Borgmann calls nature in such an untouched state a challenge to technology, because it represents the contrary of technology. This is not to say that it is something to be subdued, but rather that it is capable of summoning human beings to a special kind of experience. It is capable of eliciting a respect that arises out of something other than enlightened self-interest or the valorization of sustainability, a respect that arises from the recognition of something other in its own right. The technological universe, however, is inhospitable to language that would express and affirm such a recognition, and constantly threatens to undermine the language of deictic reflections on wilderness. That something comes to be expressed at all is due to the power of nature itself; nothing else is as eloquent.

This assertion must not be confused with the claim that nature possesses a value, based on the supposition that the preservation of nature requires a justification. Thus wilderness is sometimes defended in the name of formal properties like complexity or diversity. Borgmann is dubious of this strategy, as he is of values such as beauty, stability, and integrity, which are suspect in deictic discourse. What he sees at issue here is not judging nature in the light of beauty, but the reverse: learning from nature what beauty really is. Terms such as "stability" and "integrity" are so flexible that they can be used to judge anything. Nature itself, in other words, begins to emerge only when such concepts are given up, as in literature and poetry. Only then can we learn what it is to be confronted with something that is other, and greater, than ourselves, letting it stand in its own glory without having it serve our own interest. Wilderness, as it were, can speak to us in a pre-technological language. In experiencing wilderness, we experience ourselves anew. With respect to wilderness, we are neither consumers nor conquerors; those who encounter it are summoned with their entire being. What we get as consumers from nature is limited: water, firewood, berries, and fish perhaps. But the blessings of technology also feed us and keep us warm. Without technology, surviving in the wilderness is

difficult and risky. Wilderness therefore teaches us to cherish technology, while thanks to technology we can respect nature.

The point is not for philosophy in its deictic deliberations to cite poetry, but to reflect on conditions that hide and disclose matters of ultimate concern. Borgmann learns from nature that pre-technological things are not simply hopeless relics of an unrecoverable order, but beacons scattered here and there in the midst of technology. Wilderness is indeed focal, because it can illuminate for us a new orientation toward technology.

Other focal things and practices include music making, gardening, and the culture of the table. Borgmann calls these things and practices "inconspicuous." They flourish in the margins of public attention, and form no unity. But Borgmann associates them with the idea of a reform of technology. By that, he does not have in mind the implementation of a new master plan for the universe of technology, but rather the discovery of sources of power that do not deny or rival the dominant forms of technology so much as limit or complement them.

In the discussion of the culture of the table, Borgmann refers to the simple joys of washing salad leaves and slicing bread—focal but also highly vulnerable practices. The discussion clarifies the aim of his reforms: to accept technology and simultaneously recover certain focal daily practices that have been eroded in American life by the technological order. Thus Borgmann describes running as the opposite of the device paradigm. "The long-distance runner is the least of all athletes. His sport the least of all sports," Borgmann quotes marathoner George Sheehan as saying (Borgmann 1984, 202). Running consists simply of moving oneself through space and time, step by step. But there is splendor in this simplicity. Borgmann describes eloquently how effort and joy are one in the runner, overcoming the split between means and ends, labor and leisure. This unity between achievement and enjoyment, competence and consumption is only one aspect of a central wholeness that running provides us. Running engages mind and body. "The mind is the sensitivity and the endurance of the body" (203). Running in its wholeness, Borgmann says in his remarks on Sheehan, is something utterly different than exercise for physical health. Borgmann cites observations by marathoner George Wood that he feels more in touch with the realities of the inner city while running through it slowly enough to take in the grim details, and that he experienced such a great proximity to the crowd that he felt he had to run well *for* them, in response to their support. Sheehan comments that, for him, running discloses the divine; when he runs, he "wrestles with God" (204). Serious running brings us to the limits of our existence. We meet unbearable pain. Sometimes this experience obstructs our vanity and ambition. But running can also bring us nearer to the point where suffering allows us to experience our greatness. Thus the experience of these marathoners provides us with a possible place from which to escape from technology, metaphysics, and the gods of the philosophers and to reach for something more like the personal god of Abraham, Isaac, and Jacob. Borgmann's discussion of marathoners is yet another instance in which he seeks to bring an experience deictically into language.

REFORMING TECHNOLOGY

At the heart of the reform of technology lies the attempt to make life hospitable, within the technological universe, for focal things and practices. "Reform," so conceived, consists not so much of a change or repudiation of the technological paradigm, but of an attempt to circumscribe it so that focal things and practices receive a central place. The device paradigm is put where it belongs—and it belongs in the background and on the periphery of focality. When this happens, the device paradigm ceases to determine the characteristics and dominant manner of dealing with reality. Focality is the antidote to the sway of the device paradigm over our lives. This antidote is neither pre-technological nor anti-technological, but meta-technological; it opens the door to the meaning of things and to human dignity, it tells human beings what they really need in the world, it supplies us with riches—not of course to be confused with the technological superabundance of material goods—it summons us to care for the safety and well-being of human beings and the environment. According to Borgmann, there is much intuitive evidence for the thesis that focal devotion points to an intelligent restriction of technology, and invites us to toss a significant amount of technological junk out of our lives.

The entire technological complex, therefore—devices, machinery, and commodities—are to be arrayed about focal practices. The idea of the good life then receives its content from focal participation: the good life is focal praxis. But the good life cannot be attained unless it unfolds both in the world of work and in the public domain. It remains a makeshift solution, but an individual can make a beginning on the personal level by centering one's life around focal practices. Borgmann emphasizes that, in our time at least, focality does not have a center but only a disparate character.

Given Borgmann's noble words about the reform of technology and its permeation of the world of the individual, one naturally grows curious about what he has to say about reformation on the collective scale. How can the reformation be spread to the workplace and the public world? Better: how can we transplant focal concerns to the political sphere and to the machinery of technology? It should already be clear that the public world cannot be structured around one or another focal gestalt, because focality has a disparate and

heterogeneous character. The reforming of technology does not consist of a definite, implementable plan, but rather of the flowering of focality. This means, however, that human beings must be prepared to pay an economic cost, for the turn to focality bends away from technology. Studies show, Borgmann claims, that human beings are ready to take this step. In this framework a collective affirmation of a reforming of technology is necessary, and must emerge from a public deictic discourse, one in which the difference between quality of life and standard of living is sharply articulated. The quality of life has to do with goods that cannot be commercially produced or individually procured. The technological universe, therefore, will be recast differently.

Borgmann finds support for these ideas in the notion of a dual economy advocated by certain economists. Such an economy consists of two sectors, one comprising large corporations and the other smaller businesses. Borgmann distinguishes between the two in that the former is almost completely automated while the latter are local and labor intensive. In Borgmann's view, the reforming of technology requires that we recognize, affirm, and promote this "dual economy." He appeals to Galbraith in support of this view; Galbraith claimed that such an economy already exists, though he draws the difference between its two elements somewhat differently. Borgmann refers to Mumford as well, who distinguished between authoritative and democratic technology; Mumford sees the first as systems oriented, very powerful, but inherently unstable, and the latter as technology oriented to human beings, relatively weak, but resilient and durable. Borgmann is extremely wary of accepting any of these distinctions; in referring to them he is mainly interested in the possibility of an engaged work that contrasts with technological work. The issue of reform on a collective scale is developed in a later book in another way.

REALITY, CELEBRATION, AND RELIGION

In 1992, Borgmann published a book entitled *Crossing the Postmodern Divide,* which essentially carries forward the insights of his earlier book in the form of a critique of culture. In it, he continues to write and think in terms of the device paradigm, though he no longer uses the term. In this book Borgmann outlines a project of modernization along the lines that he had worked out in the context of technology and economy. This project has fallen out of favor among postmodernists and others because the remorseless realization of modern ideals has turned against the project itself. The domination of nature has turned out to be problematic; the sovereignty of the individual and equality of opportunities have not been realized. Postmodernism found the modernist project to be a deception and turned against it, but Borgmann finds that what

postmodernism has to offer in its stead is incomplete. Borgmann has his own alternative, which he calls *postmodern realism.* Three of its key points—realism, communal celebration, and religion—can be thought of as pieces of a puzzle that were missing from his first book.

1. Realism

In *Crossing the Postmodern Divide,* Borgmann again speaks of focal things as eloquent reality, to be contrasted with the (hyperreal) products that are made available on demand by modernist technological machinery. The concept of the real has always been battered by science and technology, but never as much as in our age of multimedia communication and virtual reality. Which eloquent reality does Borgmann have in mind? His reply: the reality that lies between the microworld of atoms, subatomic particles, and their constituents on the one hand, and the macroworld of suns and galaxies on the other. But even this reality is not unambiguous, whence his need to distinguish between the real and the hyperreal.

Borgmann sees an underlying coherence throughout all reality that runs from wilderness—the clearest voice of eloquent things—through animals and plants to the matter such as stones, clay, wood, and fiber with which human beings come into intimate and active contact in manual labor. "Nature" does not disappear in the crafted piece, but becomes observed and celebrated in new kinds of skills. Things can be focal in the care of human practices: a wilderness in a hike, a horse in grooming and riding, a fishing rod in fishing. In one and the same breath, Borgmann now broadens the family of focal practices from the culture of the table, reading poetry, and worship; then adds in passing that this last is more than just one of many focal points. All focal practices, he argues, display an analogy with worship as a concentrated way of dealing with reality; evidently, Borgmann holds the religious attitude toward reality as a model for focal practices, and it is no coincidence that he borrows the phrase "the ultimate concern" from theologian Paul Tillich.

2. Communal Celebration

It should be obvious that Borgmann is not infected by that great phobia of liberal thought: namely, specifying the character of the good life on the collective level and intervening in society to achieve it. He is wary of modernist successes due to individualization and the atomization of society. He does not think that much can be gained from the justice and solidarity that many say they strive for, because liberalism rejects so dogmatically the idea of community. Liberal justice, he says, is dangerously incomplete. But neither does Borgmann belong in the camp of republican champions of the cause of com-

munitarianism. Their communitarianism, he finds, is undermined by their dependence on the dominant technology and economy. (Hyper)modernism is always the enemy of genuine urbanity; Borgmann in this connection refers to the automobile as the catalyst of urban destruction.

At this point Borgmann steps forward as an ambassador of sports, art, and religion, for he maintains that the realization of public life cannot take place in a hyperactive glorification of the everyday (work work work!) but rather in festive celebrations of the sort provided by these activities. He invites us to his home town of Missoula, Montana, to attend a baseball game, which he describes, using lyrical language, in terms of the essential features of celebration: reality, community, and divinity. The reality of the game consists of the flat field, the green lawn, the bat and the ball. Borgmann celebrates this reality and says it should not be impoverished by a hyperreal environment: Astroturf and a domed, air-conditioned enclosure. The definition of community of players is anchored in the game. They pretend not to share their possessions and convictions. The rules of the game and the boundaries of the field mark the limits of their teamwork. The game itself is shared by the spectators and makes of them a community as well. When reality and community work together in this way, then divinity descends upon the game, a divinity of an impersonal but yet potent character. Such celebratory events do not take place in any quarter of the technological universe; technology indeed constitutes a threat to such celebrations. When modern technology moves in on such celebratory events and attempts to take over, it undermines the key elements and can eventually obliterate them completely—as it often does, for instance, in pop concerts. The game becomes a commodity, something for the spectators to consume.

The task of postmodern realism, Borgmann concludes after reviewing artistic events in Missoula, is the care of communal celebrations. Political steps must be taken to make a large and central space for art and athletics in our local communities. Opportunities for uniting reality, community, and divinity in celebration must be supported. In the absence of political action, such opportunities will remain marginal in the social environment. Why all these communal celebrations? Borgmann expects much from the contagious enthusiasm of these celebrations; he sees them as coming to animate society and functioning as a panacea for the evils of hypermodernism.

Borgmann concludes his book with a discussion of a religious celebration that highlights for him a crucial fact of celebration. Human beings ask after the beginning and end of all things, he asserts, and situate themselves by their answers. Sports and art have much to offer here, but not everything. He then sets out for upper Manhattan, to the Cathedral of St. John the Divine, a congregation open to all classes, tongues, and denominations, where one is surrounded by the poor and homeless. Again the coordinating elements of this ritual are reality, community, and God. It is remarkable that Borgmann draws our attention to such events in the context of his philosophy of technology, but he makes clear why.

3. Role of Religion

Borgmann's view of the role of religion in other activities has already been touched upon. In an essay entitled "Technology and the Crisis of Contemporary Culture" (1996), he provides a new summary of his thinking as well as a justification for his Catholicism. In it he speaks of three spheres: that of the device paradigm, that of the sacred, and that of the Christian religion. He argues that the culture of modern technology and (Christian) religion are mutually exclusive in several respects. The sphere in which grace and sacrament have a role is quite different from the one in which commodities are made available on demand. A technological culture is inhospitable to grace and sacrament: it welcomes and is fully prepared for the notion that human beings are incomplete and deficient, and sets to work making a product to remedy the lack. As a result, where the device paradigm holds sway, the formative power of religion is weak. Thus it is our duty as Catholics, he says, to strengthen reverence and piety wherever we can find them. He considers his allies any environmental thinkers, artists, or scientists in whose work he discerns a respect and wonder that he himself articulates in religious terms. He considers public, joyous celebrations to be signs of the holy, and sporting events or artistic performances that are experienced as unanticipated and undeserved gifts to be signs of grace. Thus Borgmann wants to walk from the secular culture through the sacred and divine to the Christian space of sacraments, and back again. One would think that this is a project in and of itself; in any case, we know its basic blueprint.

INFORMATION THEORY

In 1999 *Holding on to Reality* appeared, Borgmann's most artfully composed book to date, in which he considers technology yet again, this time from the point of view of information theory. This perspective is elaborated in a crystal clear manner via a careful architecture. It is unmistakably in the tradition of his other masterwork, *Technology and the Character of Contemporary Life,* which makes forays into politics and economics. These are extremely interesting and call for further illumination and development, but in Borgmann's universe these now appear to be of minor importance. His premier importance lies in the characterization of technology and its consequences for the thinking

and behavior of the average person—for you and me. Borgmann diligently pursues his own way in this new book toward a cultural interpretation of information technology. From the beginning, the political implications of this revolutionary development have been shoved to the side, because "it tends to divert us from the deeper question of whether the recent and imminent flood of information is good for anybody, rich or poor" (Borgmann 1999, 4). His opinion of this development is unambiguous: information technology is the high point of the semantic ice age, as he characterizes modernity. This harshly critical position is sometimes softened by conciliatory remarks about the need to seek a certain balance between the different kinds of information with which we are besieged, a balance between modern *technological* information on the one hand and the older *natural* and *cultural* information on the other. His slogan, "holding on to reality," does not make this task easy, as we shall see. The result, however, is an interesting theory involving the embedding of information in a spirituality with a heavy deictic cast.

Borgmann speaks about three kinds of information. The oldest is *natural* information, which contains information about reality. He finds this information already in the late and final stage of human evolution. The hunting and gathering cultures give us the earliest complete picture of the human condition. This brings him to the next stage: The ancestral environment is the ground state of information and reality. Human beings evolved in it, and so did their ability to read its signs. It is reasonable, Borgmann says, to assume that the attunement of humans to their original environment felt good. Here we find the basic and deeply pleasant structure of information. The ancestral environment was profoundly coherent because of the regular interplay of signs and things. With loving care Borgmann describes how natural signs disclose the environment. Some natural signs stood out as landmarks from among the conspicuous and transitory signs of creeks, rocks, trees, and tracks. Landmarks were focal points of an encompassing order. To pass beyond one's landmark was to lose one's orientation. Reality expressed itself with great eloquence. The meaning of a sign is not something selected or projected by human beings, but sent out by reality, though the human recipients must have the ability to glean the message from the sign.

In this formulation one feels Borgmann's phenomenological heartbeat. When signs begin to speak, they acquire personality. He refers to that moment in Genesis when eloquence rises to its highest in divinity and its most personal in the voice of God. The commanding presence of the divine voice suddenly spoke to Abraham and summoned him from the civilization of Babylon to a kind of environment and life that was closest to the ancestral condition of humanity. When, by contrast, *science* begins to describe reality, it has an eye only for general, law-governed structures. This gives rise to a kind of information

gap between structural information that is uncovered by science and the contingent information about the expressive faces and eloquent voice of people and things. In modernity, the meaning of reality has declined and become occluded. It has been reduced to contingency—the unexplainable residue of accident and randomness. This is not true in an absolute sense, for Borgmann also uncovers indications of scientists "attesting to faint echoes of divinity, to the gratuitous beauty and sacred magnificence of reality" (33). It is clear that Borgmann highly values natural information in its eloquence. This openness to a speaking reality is also indicated in the title of his book: *Holding on to Reality*. In a plea for "focal things and practices" that is already familiar from his other books, Borgmann wants to provide something to help us winter over in this semantic ice age.

The *cultural* information—the second type—does not concern itself with natural signs like smoke and clouds, stones and footprints, but rather with conventional signs: letters and texts, lines and graphs, notes and scores. When cultural information steps into the world, it is not exactly as welcome as roses in May. Compared with the riches of spoken language, writing amounts to a radical abstraction, an idea encapsulated in the difference between, as we say, "the letter and the spirit." Borgmann recalls Plato's belief that philosophy is possible only in the form of a living interaction between people. Borgmann describes the difference between natural and cultural information at one point as follows: "Natural information emerges of itself, intimates rather than conveys its message and disappears. Cultural information, to the contrary, is wrested and abstracted from reality, carries a definite content, and assumes an enduring shape" (59). A price is paid for cultural information: "When literacy invades the oral culture, it drains vitality from the community" (51). Natural information, of course, never becomes obsolete, and remains important—but cultural information takes its station alongside, setting itself up as information for reality. Cultural information, as it were, is a recipe for reality, akin to an architectural blueprint or a musical score. In this account of cultural information, Borgmann describes reading fondly: "Thus to read is to gather our past and illuminate our present. It is a focal activity that collects our world and radiates back into our world. Reading at its best realizes a world view. It is solitary and outwardly passive. But in reality it vigorously engages and shapes our vision of the world. Intelligent reading of fiction and poetry, far from being an escape, is a tacit conversation with actual reality" (92). Borgmann does not disguise his deep appreciation for cultural information: "[N]othing so concentrates human creativity and discipline as the austerity of cultural information, provided the latter again is of the highest order, consisting of the great literature of fiction, poetry and music" (220).

Still, Borgmann esteems oral culture highly. Oral culture has its own value,

which is especially evident when compared with literary culture. Borgmann speaks of cultural information in the beginning of modernity in quite ambivalent terms: "Things have the richness and particularity of a picture while conventional signs have the precision and generality of a concept. When meaning began to decline early in the modern era, the profuse ambiguity of natural things and works of art came to compare poorly with the austere definition of printed information" (114). Borgmann claims in fact, following Victor Hugo, that "the latter in fact hastened the demise of the former" (114). Again and again he repeats his view that reality has become silent, though poets can still be its advocates. Before, reality could speak to everyone; today, it speaks only to a select few.

Borgmann makes it clear that the intrusion of cultural information into the world of natural information has changed the human world. This is even more true in the case of *technological information,* Borgmann's third type of information. Technological information comes to be independent of reality—a tendency that already shows up in the case of cultural information—and ultimately appears as something that rivals and even replaces reality (182). This information is not *about* reality (natural information), is not a *recipe for* reality (cultural information), but it appears *as* reality (technological information). Musical performances sold in the form of CDs are a striking example of this—of technological information passing as reality. The thought that technology represents a specific way of dealing with reality is a classic Borgmannian theme. In information technology this is carried to an extreme. Such technology not only overcomes the resistance of reality, which we encounter in our everyday dealings but above all in human labor; it makes short shrift of it—liquidates it. In the word "hyperreality," used as a synonym for virtual reality, Borgmann detects the sense that virtual reality is superior to reality itself. This wedge between genuine (actual) reality and virtual reality has brought about a new ambiguity in contemporary culture. Genuine reality threatens to become only a part of cyberspace. "Supernatural brilliance, limitless variety, and unreal availability constitute the normative identity and charm of virtual reality. The actual world seems drab, poor, and hard in comparison" (187). This is meant ironically, of course; Borgmann is no believer in the "glamour and trivialization" that virtual reality offers us. He even holds it to be dangerous in that technological information blurs the boundary between fact and fiction, and "compared with the vividness and interactivity of actual reality virtual reality turns out to be a pale and brittle world and is bound to remain so" (198). However much one tweaks it, technological information leads, culturally, a parasitic life: "It draws much of its life blood from real and traditional culture" (199). Borgmann is as at war with "the noisy rhetoric of so-called radical innovation and liberation" and shudders at the thought that "this new age will change forever the way an entire nation works, plays, travels, and even thinks" (203). His remedy is to "hold on to reality," because it alone "remains at bottom inescapable and unfathomable. It is the ground on which ambiguities of the technological information can be resolved and its frailties repaired" (216). Borgmann's greatest concern is the damage that culture suffers thanks to information technology (221). The only possible way to address the resulting cultural crisis, he claims, is to right the balance of information and reality. "It amounts to the restoration of eminent natural information. A well ordered realm of natural information in turn is both hospitable to practices of realizing cultural information and enlivened by such practices. As for technological information, it is best allowed to develop freely within a world whose natural and cultural ecologies are guarded and engaged in their own right" (221).

A PERSONAL LOOK BACK

Borgmann's interpretation of technology and technological culture is rich and inspired, and offers a complete research program for the philosophy of technology that can be fruitfully explored. Borgmann has pursued it in connection with American society. The idea of the device paradigm is an extremely fertile one, and the different variations it can take make it even more interesting. In my own research on scarcity I have connected Borgmann's device paradigm with a theory of scarcity. This theory functions as a heuristic paradigm for interpreting modernity. In the realm of scarcity one wrestles with the inevitable shortage that arises due to the limitless desires of modern human beings. Technology claims to be able to solve this problem—indeed, to provide the only possible solution for it—insofar as its calling is the overcoming of this scarcity through the generation of endless amounts of infinitely varying commodities. But this solution is never finalized. New technological products fail to silence the demand for production, and instead stimulate new demands, with production and consumption leapfrogging each other. The two paradigms of scarcity and device thus go hand in glove. These insights may involve a slight transformation of Borgmann's theory; while he views the character of contemporary existence as stamped by technology, it may well be that contemporary existence is characterized more fundamentally by scarcity. In such a view, technology would appear on a scene *already* characterized by scarcity. Thus the scarcity theory might well provoke interesting clarifications of the dynamics of technological development.[3]

Borgmann's attempt to give an account of the implications of technological development for spirituality and for the orientation of everyday life is engag-

ing. He is unequaled among philosophers in his ability to take a difficult notion such as focality and lay out its meaning in a very concrete and everyday manner. But while it is easy to subscribe to many of his critical observations about the technological revolution, his theory of focal practices on the micro- and macro-level, as well as his pleas for deictical discourse, are not completely convincing. He is surely right that technological culture is hardly hospitable to Christian faith, and even that it threatens to shut out all of its inspiration. The Christian concern for the powerless and the lost—the warm undercurrent of Christianity, Ernst Bloch calls it—has never been received with thunderous applause. But Borgmann's desire to use focal practices to make room for this tradition is surprising; trying to use focal practices to recover a disappearing engagement with reality is one thing, but it is quite another to be concerned with the care of "strangers, widows, and orphans." When Borgmann travels to upper Manhattan, he is encountering a community that cares for others. It is difficult to see how one can legitimately put this community in the same category as the Missoula baseball players, even in the terms of Borgmann's own descriptions. The celebrations that take place in the stadium in Missoula are completely different from those in the cathedral of St. John the Divine in upper Manhattan. The celebrations move in opposite directions: the first is oriented toward its own activity and glorification, while the second is oriented away from its own activity to the sphere in which "the left hand does not know what the right does," in the sense of that passage from the Sermon on the Mount where Jesus says, "But when you give alms, do not let your left hand know what your right hand is doing."[4] The winning team, that is, bids for the public's accolades, while Christian love does not call attention to itself.

In fact, it is precisely where Borgmann gives focal practices and celebrations a religious garnishing that he is least convincing to me. His descriptions of communal experiences couched in sacred terms raise numerous questions. For instance: which divinity is being celebrated? An exposure of these manifestations and mass experiences seems more adequate.[5] This is no small theological point, but has potential repercussions for the philosophy of technology as expounded in Borgmann's latest book.

The three types of information—natural, cultural, and technological—are structured differently. The ultimate criterion for judging the worth of information appears to be "reality." Natural information comes off well in this respect, cultural information a little less well thanks to its abstractions, while technological information receives the most critical treatment. The last two fare badly because the first is used as the measure. The *cultural* value of the natural information that he ascribes to hunters and gatherers he withholds from our technological culture. But each type of information needs to have its own standards

of evaluation; they are distinct from each other, and cannot be judged in the same way. This does not mean, however, that I would deny the parasitic life of cultural and technological information.

Borgmann, I think, also speaks far too uncritically about natural information, and is far too accepting of religious declarations about reality. He tries not to restrict himself to a particular interpretation of the divine, and in his deictic discourse he chooses examples borrowed from different religions. This tolerance is very engaging, but as a good Bible reader Borgmann must be aware of how the children of Israel struggled with their beliefs and with those of their surroundings. Belief in Jahwe meant a constant struggle with the temptation of idolatry. The exclusivity, and the specific historical character, of the belief in Jahwe is revealed in the very first passage of the Ten Commandments.[6] The Jews had important historical events, such as the exodus out of Egypt, as constitutive for their belief. In other words, the one interpretation excludes the other. The ground state of information and reality is not univocal and unambiguously given. It is always disputed and contested. What holds for natural information also holds for the other types.

Each type of information, I said, requires its own criterion; moreover, cultural and technological information need to be treated as new creations in their own right. In his discussion of cultural information Borgmann implicitly relies on a standard of evaluation other than "holding on to reality"—and his evaluation of technological information turns out to be an implicit moral judgment. That not all that glitters is gold is self-evident in the technological world. Philosophers need to carry out an independent and adequate evaluation of the three types of information. And while I think it is clear that Borgmann's theory provides a superb beginning, more work needs to be done.

NOTES

1. Albert Borgmann, *Übereinkunft und Auseinandersetzung. Die ontologische Implikationen und Gundbegriffe in fünf von Newmans Schriften* (Freiburg im Breisgau, 1964).

2. In Holland, former arch-enemies such as liberals and social-democrats have participated in the government for several years now, and maintaining the governmental machinery has become their principal concern. The 1999 economic reform of Chancellor Schroeder in Germany is an austerity policy. An election promise was made to create new jobs, but that July the government imposed a steep cutback in expenditures. Its so-called reform amounted to a tax reduction for corporations and businesses, and a cutback in pensions was billed as a modernization of the social system. Schroeder's program is plain neoliberalism and has little to do with social-democracy. The Socialist Party of Lionel Jospin in France is a little different in that Jospin does not consider neo-Keynesian techniques outdated. But Great Britain's Tony Blair represents the neoliberal

"third way," which holds that markets are more intelligent than governments and that entrepreneurs are better informed than politicians; one hears no talk from him about the inability of markets to optimize economic and social benefit.

3. See my articles, "Scarcity, Labor and Modern Technology," in *Research in Philosophy and Technology: Technology, Ethics, and Culture,* vol. 17, ed. Carl Mitcham (Greenwich, Conn.: Jai Press, 1998), 81–106; "Desire, Technology and Politics," *Contagion* 6: 85–95; "Philosophy in the Service of People," *Technology in Society* 21, no. 2 (1999): 175–89. But Borgmann has remained skeptical of scarcity theory; see "A Scarcity of Focal Things: Reply to Pieter Tijmes," *Technology in Society* 21, no. 2 (1999): 191–99.

4. See, for instance, the poem "Christen und Heiden," in *Widerstand und Ergebung* (Munich: Chr. Kaiser Verlag, 1961), 246.

5. See *Sport-Eros-Tod,* ed. Gerd Hortleder and Gunther Gebauer (Frankfurt am Main: Edition Suhrkamp, 1986), 1335.

6. "I am the Lord thy God who brought you out of the land of Egypt, out of the house of slavery; you shall have no other gods before me." Relevant in this context is Herbert Butterfield's book *Christianity and History* (Glasgow: Fontana Books, 1960).

BIBLIOGRAPHY

Borgmann, Albert. 1974. *The Philosophy of Language: Historical Foundations and Contemporary Issues.* The Hague: Nijhoff.

———. 1984. *Technology and the Character of Contemporary Life: A Philosophical Inquiry.* Chicago: University of Chicago Press.

———. 1992. *Crossing the Postmodern Divide.* Chicago: University of Chicago Press.

———. 1993. "Finding Philosophy." In *Falling in Love and Wisdom,* edited by David D. Karnos and Robert G. Shoemaker, 157–60. New York: Oxford University Press.

———. 1996. "Technology and the Crisis of Contemporary Culture." *American Catholic Philosophical Quarterly* 70: 33–44.

———. 1999. *Holding on to Reality: The Nature of Information at the Turn of the Millennium.* Chicago: University of Chicago Press.