

Less is More: A Response to Ihde, Rosenberger, Borgmann, Barney and Sørensen

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Abstract

This response paper begins by countering the contributions of Don Ihde and Robert Rosenberger to this special issue, making its case in existential terms. Then, addressing Darin Barney, these arguments are developed further in aesthetic terms, making use of the “modernist” educational theory of René Arcilla. This response article concludes by returning to the realm of the educational with the help of Albert Borgmann's and Estrid Sørensen's feedback.

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I have enjoyed the rare privilege of being placed in dialogue with a range of highly accomplished scholars, with a common focus on concerns and arguments that have preoccupied me for some time. It is not easy to answer to this rich variety of theoretical, methodological, and personal responses. However, I will try to do so first by countering the contributions of Don Ihde and Robert Rosenberger, making my case in existential terms. Then, addressing Darin Barney, I develop my arguments further in aesthetic terms, by making use of the “modernist” educational theory of René Arcilla. Finally, I conclude by returning to the realm of the educational with the help of Albert Borgmann and Estrid Sørensen.

In my original paper, I argued that to undertake high school dissection using a computer simulation is to omit important experiential elements that are available only in the dissection laboratory. I used Albert Borgmann's (1992) characterizations of hyperreality as “pliable,” “discontinuous,” and “brilliant” to argue for the fundamental conformity of the hyperreal and its interfaces with intentionality as defined in the phenomenological tradition: Software is carefully designed to anticipate and accommodate intention and habitual action at every turn—to cultivate a “liv[ing]-in-certainty-of-the-world”—whereas an animal carcass used in lab dissection offers little by way of instructionally convenient “brilliance,” and, indeed, is not “designed” at all. The systematic exclusion of elements of deprivation, interruption and upheaval in hyperreal interfaces provides students with an on-screen experience of transparency and intentional flow with which they are likely already all too familiar. The experiential elements of deprivation and interruption, I conclude, are by definition unrecognized and unrecognizable in the rational processes underlying an instructional simulation's development.

Ihde and Rosenberger respond to this by advancing two important and interrelated claims: that the hyperreal brings more than a single modality of engagement to students, and that the kinds of skills and experience involved in these modalities are constitutive (in part) of natural scientific knowledge itself. Ihde for example writes:

My first point here is that today's biology education, as with today's scientific practices, takes up a wide set of *variant instrumentally mediated perspectives*, each producing different ranges of knowledges ...physiological, neurological and other... which synthesized produces a much richer and robust result than the limited dissection/simulation example given (2012, 224).

Rosenberger similarly argues that hyperreal dissection need not “reduce to the context of classroom laboratory dissection: there are other contexts made possible by computer simulation” (2012, 40). What Rosenberger refers to as “expanded simulation” could facilitate a much wider range of experiences and possibilities, he implies, by including also imaging different types of representation and remote action. Rosenberger and Ihde cite examples of “robotic surgery,” “external imaging [of] a frog... catching insect prey,” and a “3D tour within vessels or along [the frog’s] nerves” as examples of the expanded, “variant instrumentally mediated perspectives” and modalities that are possible (Ihde and Rosenberger, 2012).

The claim that hyperreality would, in these terms, provide a student so much *more* than the “inherently inert object” (Rosenberger 2012, 219) of a preserved animal is consistent, I believe, with my original argument that simulations, when designed effectively for predefined outcomes, can manifest instructional brilliance: The “truly brilliant hyperreality,” I quote Borgmann as saying, “will exclude all unwanted information” (1992, 97), and would heighten, enhance, enrich, and expand the information that *is* wanted. As an inherent quality of hyperreality, this type of brilliance is manifest in my original descriptions of the frog simulation, however technically modest this example may be. The appearance and disappearance (as appropriate, or on command) of prompts, instruments, and even the entire dissection exercise itself for multiple users, anywhere all evince a convenience, pliability and disposability that this relatively simple simulation would share with much more technically impressive and sophisticated technologies of hyperreality. In its ability to facilitate enhanced representation and remote action, the computer does indeed open up a wide field of exciting possibilities for education. And to reference Rosenberger’s and Ihde’s second claim, many of these possibilities are of great relevance and value to natural sciences and other knowledges currently in high demand. The ability to master computer interfaces of various kinds is certainly a prerequisite for work in the 21st century as Ihde suggests, from the activities of a remote, micro or “Nintendo” surgeon, to the labours of a franchise short-order cook. I do not hesitate in granting all of these points. Highlighting, pointing, enhancing, enabling, and simplifying are all indispensable pedagogical acts, and in granting them flexibility, ubiquity, flow and interchangeability, the instructional potential of the Internet and of hyperreality is indeed enormous.

But all of this misses an important point: What is valuable in an educational experience is not just a matter of Ihde’s “richer and more robust results” and Rosenberger’s vastly “expanded simulation.” Experiences of educational value do not simply involve engagement with *more* -- enrichment, augmentation, highlighting, or increases in flexibility and interchangeability. Education also involves experiences of *less*: deprivation, limitation, disruption and finitude. Relevant examples provided in my article include the confinement and inconvenience presented at various stages in a laboratory dissection. The examples I mention also include a rather different simulation (referenced only in a footnote): The virtual representation of the “true horrors of concentration camps” that educational gaming enthusiast Marc Prensky suggests has potential value for instruction on the Nazi era.

This last example is perhaps troubling, and probably not just because of Adorno’s interdiction against poetry after (or aesthetic representation of) Auschwitz. The trouble with Prensky’s example can indeed be articulated in aesthetic terms, but it is also a matter of the inherent logic of hyperreality. It has to do with the impossibility of simulating the deprivation, encumbrance, disruption and finitude that may be a part of an experience. There are many commonplace experiences—both in and out of the classroom—where limitations and encumbrance (*much* less extreme than those of a death camp) are both inherent to the experience have evident educational value. Think simply of what is involved in working competently with physical materials --the patience and cultivated attunement called for in working with wood, or in repairing an obstinate

mechanical malfunction. Think also of engaging with phenomena of the natural world, the patience and care required—and sometimes rewarded—in growing bean seeds in the classroom or in gardening at home. Finally, think of simply engaging with others as co-present embodied beings—subject to the reciprocal restrictions (and possibilities) presented by the time and space that our bodies are always inhabiting.

In all of these examples, limitation, encumbrance and deprivation are to varying degrees an inescapable part of the experience; they are not an arbitrary, external imposition. Instances where deprivation and confinement are *extrinsic* to the experience or matter at hand are equally illustrative. Outside of the context of games or competitions (where handicaps are a common device), to arbitrarily deprive or to limit someone's ability generally has the significance of a punishment or penalization. I would argue, contra Rosenberger (2012), that this is how limitations imposed in hyperreality, like the disabled “undo” button that he envisions, would be experienced: It would turn the simulation into either a punishment or a game (both reducing its manifest content to a matter of secondary concern). Simply put: A simulation, as a technology or tool, is by definition a means to an end; elements not consistent with this means-ends structure are alien to its character as a tool.

This is why arbitrary limitations on a simulation's functions and capabilities would be experienced as impositions, not as themselves part of the simulated reality. Still, Rosenberger (and Ihde) might reply that the representation and simulation of experiences of encumbrance, limitation and finitude could avoid this problem by being richer, more expansive and robust through the deployment of more advanced technologies and techniques. I would argue, though, that this only reinforces what I understand as the inherent logic of the simulation. This is a cumulative, multiplicative logic that looks to add features and heighten immediacy, consistently taking the simulation every further from encumbrance and finitude that might be intrinsic to what is being simulated.

To follow this argument further, I now move into the aesthetic domain, and consider the dissection simulation (and its variants) in terms of the responses they produce in their viewers or audience. Referencing Adorno, I've already mentioned the “troubling” implications or possible responses associated with Prensky's death camp simulation. In his recent book *Mediumism: A Philosophical Reconstruction of Modernism for Existential Learning* (2011), René Arcilla articulates a modernist critique of representation and simulation that reflects some aspects of Adorno's aesthetics. Adapting modernist critiques of aesthetic realism to apply to a generalized notion of simulation, Arcilla suggests that one aesthetic category in particular would be relevant to simulation; he refers to this as *kitsch*. Kitsch “...is an art and a culture of instant assimilation, of abject reconciliation to the everyday [and] of avoidance of difficulty...” (Arcilla, 2011, 7, quoting T.J. Clark, 1985); it is “...formulaic art calculated to trigger automatic, unthinking reactions” (Arcilla, 2002, 462).

Arcilla then goes on to explain why simulation and its cumulative, multiplicative logic of “more” are emblematic of kitsch:

...the most efficient form for accomplishing this [instant, convenient assimilation] is one that conveys the strongest sense of immediacy. The more the work enables us to feel that we are *there*, as if in the blink of an eye we had been whisked to some other scene, the more irresistible its diverting power. ...Our thirst for the startlingly new and distracting is apt to be quenched, and rearoused, more by works, or channels, that overwhelm us with the sheer quantity of their ...bits of information... (2011, 70, 72; emphasis in original).

It is precisely the aesthetic of a simulated dissection—perhaps especially in its “extended” sense—that is illustrative of Arcilla’s characterization of kitsch. Such an enhanced simulation would seek to convey the strongest sense of immediacy, enabling us to feel that we are *there*: in the frog’s habitat, or in the lab, slicing its abdomen to reveal its highlighted organs, or even miniaturized and weightless flying along its vessels and nerves. In addition, for Arcilla, this sense of readily accessible presence (as the term “im-mediacy” suggests) involves a kind of sleight-of-hand concerning the medium or the technology that makes it possible. The medium underlying the experience of the simulation or hyperreality, Arcilla argues, must become a kind of “occult technique,” a technology that “withdraws into invisibility” behind the simulation’s manifest, immediate content (2011, 71). “The work’s miraculousness,” according to Arcilla, “is a function of how well it cloaks its medium” (2011, 71).

The problem with this type of medium or technology, and the responses it cultivates is that it alienates the viewer not only from the technology underlying it, but also from his or her situation and embodied finitude. In this sense, media of hyperreality by definition bear the traits of inauthenticity. The immediacy of digital kitsch, Arcilla explains, acts as “transporting force, and transport in this sense... is flight from our authentic condition” (2011, 72). It “requires me [the viewer or user] to be distanced enough from the event that nothing about it reminds me of myself or of my condition” (2011, 70). To return to the original example of the frog simulation, the student does not need to seek out the inert bean-like mass of a reptile heart within a shrivelled corpse, and in this sense to confront the certainties of finite, physical embodiment—destined also to inertia and decay. Instead, taking a “view from nowhere” (see Nagel, 1989) she is able to fly along arteries, see the frog move in slow motion, or practice remote microscopic interventions—experiences unimaginable within the limits of her quotidian embodied existence, and unachievable without sophisticated technologies of hyperreality.

In contrast, education should provide students with a view from *somewhere*, specifically from their own developing identity, and their own “authentic condition,” as Arcilla puts it. This is the condition presented by the student’s own existence. Correspondingly, Arcilla describes to this kind of education as individual “existential learning.” The process of existential learning, according to Arcilla, is above all one of interrogation and questioning --a questioning directed towards the authentic conditions of our “existence:”

Existence is questionable: it calls us to exercise our freedom, to understand its meaning for us. [It leads us to ask questions like:] Is there truly no reason for existence or for why I exist? ...Who am I [in this existence]?...How should I live concretely with [the fact and the] sense of existence? (2011, 23, 25)

Answers to such questions of existence, of freedom and identity are of course ultimately undecidable: there is no one, “right,” answer to any of them. They do not present problems to be solved, but predicaments to be confronted. And like any predicament requiring action towards an uncertain outcome, they also involve *risk*.

Such characterizations converge remarkably with Darin Barney’s response in this issue. In particular, the kinds of questions and uncertainties raised in Arcilla’s “existential learning” are strikingly similar to those that are implied by what Barney calls “actual politics:”

When politics happens, the shape and operation of power is exposed, and questions are raised about justice and the good life, questions whose answers cannot be given in advance, questions whose very undecidability calls upon us to make judgments and to act. ...expos[ing] us to differences that disrupt our certainties, [these issues] thwart

immediate gratification of our desire for convenience, and impose burdens of consideration, care, judgment and action that cannot be shed without draining the situation of its political character (2012, 210).

Occult mechanisms are exposed, undecidable questions are raised (and addressed) through unavoidably risky endeavors, and burdensome conditions are confronted. The questioning and knowing implied in this real and existential engagement is a very different from the “scientific knowledges” invoked by Ihde—and the “variant instrumentally mediated perspectives” that would be used to produce them. In one type of knowledge, as Ihde describes the student confronts something fully transformed into a “scientific object,” and learns modalities of “human-instrument interactivity” (2012, 203) in the other, the student confronts (on some level) his or her own finitude, and encounters aspects or consequences of the human domination of the natural world, as well as the limitations of this domination. And the student does so precisely *through* (and not at all in spite of) the desultory paltriness of the frog’s shriveled corpse. Other experiences of the body are central to Barney’s actual politics (and arguably, to experiences of “existential learning” as well). In Barney’s case, these experiences are described specifically in gustatory terms, in terms of the aesthetics of taste (in one’s mouth) and the unavoidability of one’s own “gut response:”

It is when the disgusting taste, sight, smell, sound or feel of injustice turns our stomachs that we are given over to empathy and outrage, and thereby incorporated into a political event that might otherwise present itself as an imprudent wager. . . . Politics, like actual dissection, takes guts (2012, 212).

But exactly what kind of curriculum would be adequate to the “gutsy” politics advocated by Barney? An answer is adumbrated in my response to Albert Borgmann’s and Estrid Sørensen’s contributions. Borgmann concludes his piece in this issue by stressing the need for an “alternative that can take the place of instrumentalized and virtualized education:”

To reject the conventional instrumental view of education that is so easily commandeered by technology is a good thing, but rejection can mean rebellion or replacement. Rebellion in the name of disruption and upheaval may be a helpful beginning, but it is not enough, and it is less than that if it is extended to the teachers, the pupils, and the parents as a choice between yielding or withdrawing (2012, 201).

An adequate alternative to simple rebellion, if I read Borgmann correctly, would be more specific than what Arcilla describes as “existential learning” or what I have just mentioned concerning Barney’s “actual politics.” An adequate alternative would offer teachers, pupils, and parents a curriculum which (for example) would help differentiate the educational differences separating a dissection and simulation rather than cloak them through claims of technological necessity or superiority. In the monograph in which a version of my original paper on dissection has subsequently appeared (Friesen, 2011), I take the time to outline at least some of the alternative “non-instrumentalized” curricular possibilities. These possibilities, I show, are grounded in embodied relation, subject to the reciprocal encumbrances (and possibilities) presented by our bodies, and the singular place and time we are always necessarily inhabiting. Through further examples that build on the descriptions of dissection featured in this issue, I show this alternative curriculum to be realized not so much in the form of *individualized* “learning” as through an asymmetrical pedagogical *relationship* between students and teacher. On the teacher’s side, this relationship is marked by a greater responsibility than is held by the student or child. And I emphasize that this responsibility is exercised just as much by what is *not* done, by what is withheld or muted, as by what is explicitly emphasized and enacted. Following Dewey, I refer to

this withholding as “negative capability:” a non-specialized capacity to suspend intentionally focused awareness and action. In addition, I oppose this capability to what are generally seen as positive, specialized instructional abilities, such as instructional planning, behavior modification and other instrumental techniques.

This negative capability, to conclude, can only be manifest contextually, in relationship with a particular student or child. And it is in this connection that Sørensen’s response is particularly illuminating; for she reminds us that in education, particular

...children [are always] present in flesh and blood, and through their activities with the computers and stories around them, they [come] to relate a great variety of facets of their lives to the digital technology. Digital technology is always embedded in rich social practice (2012, 207).

The instructional brilliance of hyperreal technologies can add a great deal to the richness of social practice in which they are embedded. However in this embedding, it is the surrounding social and embodied practice ultimately stands out as primary.

The very interchangeability, renewability, and convenience of the hyperreal gives it an educational value that is easy to recognize and affirm in an already-technologized educational world. It is more difficult to recognize and affirm educational places and experiences that are embodied, particular, non-interchangeable, and flesh-and-blood. However, it is to these places and these experiences that we are repeatedly and unavoidably forced to return, by our own bodies, and through our relations with others and with the world around us.

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