World Mirroring versus World Making: There's Gotta be a Better Way.

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There are many issues presented, touched upon, and presupposed in these papers — issues that have, in some cases, ancient historical roots and many variants and complexities. In searching for a framework within which I felt that I could approach these papers in some integrated way, I was forced back to these historical roots. The conference was a moment in a very long conversation (Melchert, 1991), and cannot be understood outside of the context of that conversation. Consequently, I will devote some time to elaborating the general historical issues, commenting on and criticizing them as well as their instances here at this conference.

I will to some extent contextualize the *points* in the papers with respect to the histories. Not all papers, then, will be addressed in the order in which they were presented, and some points in some papers will be pulled out of their paper-context and dealt with in what I take to be their issue-context.

The stakes in the debate around which this conference was organized are adumbrated in the beginning in Kenneth Gergen's paper. Gergen issues a challenge not only to the major positions concerning epistemology that have dominated throughout Western history, but even more deeply to the dichotomies that he claims framed the entire historical debate. His proposal is to escape these dead-end frameworks — escape into a social constructionism that never permits those ancient epistemological incoherencies to arise in the first place.

Thus, the focus on educational theory and practice at this conference formed the stage for examination of some of the widest encompassing assumptions, and most ramified framing assumptions, concerning the nature of knowledge and education alike. I take the issues introduced here, therefore, to be critical to the theory and practice of education. More broadly, I take the issues introduced here to be critical to the further development of both science and society. There is an important sense in which this conference was a stage for playing out some of the deepest philosophical issues roiling the contemporary scene. The conference *ipso facto* is also a demonstration that these issues are not arcane and irrelevant — they bear directly on many of the formative assumptions and practices throughout culture and society, including society's ongoing re-creation and modification of itself through the education of its children.

I applaud Gergen's introduction of some of the most fundamental issues of epistemology and ontology into the center of this discussion. I also agree with Gergen concerning of the massively social and language constitutedness of human beings (Bickhard, 1992a). I find serious problems, however, with the positions he takes on those

fundamental issues, and, therefore, with many of the specifics of his positions concerning that social and language constitutedness of human existence. So, I turn to the first of the encompassing perspectives.

MODELS OF REPRESENTATION

One overarching framework for the issues that Gergen introduces focuses on the nature of representation. I will outline a specific diagnosis of the assumptions and problems involved here. In particular, I will indicate some of the arguments for two claims: 1) the source of the major historical issues and battlegrounds of epistemology is the ubiquitous presupposition that representation is fundamentally constituted as some form of encoding, and 2) this encodingist position is incoherent. If these two points hold, then *all* sides of these classical issues and battlegrounds are equally and radically impeached, since the very issues that they debate, even prior to any particular positions taken in those debates, presuppose the encodingist incoherence.

Encodingism Critique. My purpose here is to outline and indicate only. More thorough presentations of my critique of encodingism must be found elsewhere (e.g., Bickhard, 1980, 1987, 1991a, 1991b, 1992a, 1992d, in press; Bickhard and Richie, 1983; Bickhard and Terveen, in preparation; Campbell and Bickhard, 1986). Encodings are representational stand-ins. In Morse code, for example, "**...**" stands in for "**S**" and "**- - -**" stands in for "**O**". "**S**" and "**O**", in turn, represent particular phonemic classes (or positions in a Saussurean system of differences, if you prefer), and the dots and dashes pick up these representational contents via their stand-in definitions. Such representational stand-ins can be of enormous usefulness: dots and dashes can be sent over telegraph wires, while characters such as "**S**" and "**O**" cannot, and marvelous things can be done with bit codes in computers.

But some form of encodingism has, for millennia (Graeser, 1978), been taken as constituting the essence of *all* representation, not just as a stand-in form of representation. In this guise, encodings, though only occasionally by that explicit name, are assumed to provide the basic epistemic contact from mind to world in perception, and from other mind to mind in language. Encodings have been taken as stand-ins for *that which is being represented*, not just as stand-ins for *other representations* per se.

Skepticism. One classical problem to which this has given rise is that of skepticism. An epistemically grounding encoding is taken to represent that which it "stands-in" for — to represent that which it is in correspondence with, and to represent by virtue of that correspondence (Bickhard, in press). But if the question is raised of how we can be assured that our representations are correct, encodingism cannot provide an answer. To check my presumed mental encoding of a desk to see if it is correct requires that I check my encoded representation that it is a desk against the reality which that encoding is supposed to represent. But, by assumption, my only epistemic access to that presumed external reality of a desk is my encoding of that desk. Consequently, any check of my desk-encoding can be only via that same desk-encoding: all such checks are viciously circular, and provide no ground for assurance of correctness at all. Struggles with the problem of skepticism have driven philosophy for much of Western history (Burnyeat, 1983; Groarke, 1990; Popkin, 1979).

Idealism. One classic reaction to the unsolvability of skepticism is to conclude that the postulation of the external world, of the other end of those encoding correspondences, is simply superfluous. There is no world external to our representations of it: there are only our encodings, but nothing that they are encodings of. One version of this reaction is solipsism: the thesis that my world is my creation, or my dream, and there is nothing more. Solipsism is a version of idealism: the thesis that the world is constituted by the representations of it, and that there is no world outside of those representations. Idealism is broader than solipsism in that the presumed epistemic locus for those world-constituting representations can be the universe as a whole — Hegel — or society or language — for example, the later Heidegger, Gadamer, and Derrida, at least on some interpretations — rather than the individual mind. The caveat regarding varying interpretations of Heidegger, Gadamer, Derrida, and even at times the later Wittgenstein, is that none have explicitly advocated a full social or linguistic idealism, a social solipsism, but many argue that they are committed to such a position by their own systems, regardless of their personal inclinations (see, for example, Gier, 1981; Habermas, 1977; Norris, 1982, 1983). I will not be concerned with an analysis of the details of whether or not such commitments are logically forced (see Dreyfus, 1991, for example, for a decidedly non-idealistic discussion of Heidegger), but, rather, with the linguistic idealist interpretations of them, and beyond them, that have contributed to the contemporary current of social idealism.

Incoherence. Encodingism, however, which *poses* the skepticism-solipsism dichotomy, is logically incoherent. One perspective on this incoherence is to note that, although encodings are representational stand-ins, and although that stand-in relationship can be seriated — "**X**" stands-in for "**Y**", and "**Y**" stands-in for "**Z**" — such a chain of stand-ins cannot proceed forever. There must be some grounding level of representations in terms of which all higher level stand-ins obtain their own representational content — in "standing-in" for another representation, an encoding borrows that other representation's representational *content*, its specification of what the representation is *supposed* to represent. Otherwise, we face an infinite regress of actual stand-in relationships — and still no way to provide any of the encodings in that infinite chain with any representational content.

On the other hand, if we suppose that that regress does halt, and we consider some purported grounding encoding at that basic level, say "**X**", and ask how it is specified what "**X**" is supposed to represent, there is no answer. "**X**" cannot be defined in terms of any other representations, because it is by assumption a grounding representation, but "**X**" cannot provide its own representational content either — that yields merely "**X**" stands-in for "**X**". "**X**", therefore, cannot *have* any representational content, therefore cannot *be* an encoding, and therefore cannot *ground* any higher level stand-ins. But if *none* of the elements in such a system — "**X**" is clearly just a generic representative — can be given any representational content, then none of them are representations at all: encodingism collapses on the viciously circular incoherence of its presupposition that it can provide its own representational contents.

Note that genuine stand-in encodings can be defined and can exist because we who use them *already know* both ends of the encoding correspondence and the stand-in

correspondence between them — both "•••" and "**S**" *and* the Morse code relationship between them. It might appear that we can simply iterate this stand-in one more time at the grounding level, so that my representation of "desk", for example, "stands-in" for my desk. But my desk is per se not a representation at all, rather it is *to be represented*. The desk is not known except via my representation of it, unlike the prior or provided knowledge of "•••" and "**S**". The stand-in relationship between my representation of my desk and the desk itself, then, is not a borrowing of representational content by the stand-in from what is stood-in-for (the desk doesn't have any representational content to be borrowed); that grounding "stand-in" relationship is instead the representational relationship itself, the relationship that was supposed to be explicated. Assuming that the grounding relationship can be just another stand-in relationship, then, is an equivocation on two senses of "stand-in": "stand-in" as substitute for, and "stand-in" as representation of.

Emergence Impossible. A second difficulty of encodingism is that this basic incoherence makes it impossible for representational contents to *come into being* — encodings can't be given the representational contents that would make them encodings in the first place, so long as the resources for doing so are restricted to encodingism itself. A standard assumption that constitutes a partial recognition of this impossibility of emergence, or at least a presupposition of it, is that of a *substance metaphysics* for representation — a metaphysics in which the basic substances are presumed to combine and disperse, as with the Greek's earth, air, fire, and water, but in which those substances themselves are unchanging. Usually, an *atomic element* version is postulated for representation (unlike the Greek continuous substances of earth, air, and so on) in which the presumed grounding encoding elements are taken as the atomic encodings (encodings of basic features, or basic facts, perhaps) — the atomic encodings out of which all other representations are constructed, and in terms of which all other representations are defined (Bickhard, 1991a, in press).

Empiricism and Rationalism. The basic atoms in such a metaphysics do not emerge, do not come into being. They persist, unchanged and unchangeable, but capable of motion and combination; complex representations are viewed as (well-formed) combinations of atomic representations. In this view, since atomic representations cannot come into being, they must already have been existing somewhere, and simply moved into the realm under consideration — representations must of necessity come *from* somewhere.

When considering human beings, there are only two possible sources for representation to come from: the *outside* or the *inside* — the environment, yielding classical and contemporary empiricist epistemologies, or the mind or genes, yielding classical and contemporary rationalism (Mackie, 1985; Moser, 1987; Dancy, 1985). These are the two positions that Gergen discusses under his terms "exogenous" (empiricism) and "endogenous" (rationalism). Note that both of these positions arise only because of the encodingist atomic-substance consequence that representations must come from *somewhere*, that representations cannot be emergently created (Bickhard, in

preparation-a). One well known contemporary version of such presuppositions is Fodor's innatism (Bickhard, 1991a).

Regarding such innatism, note that the impossibility of emergence of encoding representations is a *logical* impossibility, and, thus, is impossible for evolution as much as for learning and development. The typical 'out' of contemporary innatists, then, of pushing all issues of origin off onto evolution, can't work (Piattelli-Palmarini, 1980). The classic Chomskyan argument for innatism is "the poverty of the stimulus" argument: the stimulus inputs for language learning are impoverished, and could not yield knowledge of language, therefore, language knowledge must be, at its core, innate. Again, we see the assumption that knowledge, representation, must come from somewhere: if not from the environment, then it must come from the genes. This is a false assumption, and Chomsky's argument is invalid.

Here, I agree with Gergen that the dichotomy between empiricism and rationalism is ill-conceived. I am pointing out, in fact, that both positions make the same underlying error — that fundamental representations must come from somewhere, since they cannot come into being. That error, in turn, presupposes that representations *are* encodings.

From a wider perspective, however, we note that representations, presumably, did not exist at the big-bang origin of the universe, yet they do exist now. They must have come into existence at some point. But, if representations can emergently come into existence at *any* point in cosmological history, then the encodingist consequence that they *cannot* come into existence must be wrong, and, therefore, encodingism must be wrong. If representations *can* come into existence, then both the empiricist and the rationalist assumptions that knowledge must come from somewhere must be invalid.

Evolutionary Epistemology. Evolution provides a contrary example in which we attribute knowledge to the gene pool of a species, but have little inclination to posit that that knowledge came from anywhere else: it was constructed, emergently, in the variation and selection constructivism of evolutionary processes and *tried out* against the world of the species. It did not come in from the environment, nor up from some infinite innate past. Generalizing this point to a general approach to epistemology (no small task) yields an evolutionary epistemology (Campbell, 1974).

I have argued that encodingist assumptions concerning the nature of representation underlie the skepticism-idealism dilemma, and the empiricist-rationalist dichotomy. Since encodingism is incoherent, neither of these oppositions is well founded or coherently motivated. Furthermore, evolutionary epistemology provides at least a glimmer of an approach that might escape the entire array of encodingist impasses. These points provide the initial framework for my comments.

DISCUSSIONS OF THE PAPERS

Gergen.

Gergen is well aware of the issues of empiricism and rationalism — it is this apparent dilemma that he claims to transcend — and he is aware of the issues of skepticism and solipsism: Skepticism he treats in asking how can we know the world, and in arguing that classical approaches have not provided an answer to this question. Solipsism, he points out, is a danger encountered in attempting to escape dualism by moving to a monistic interiorism. Solipsism results from rejecting or ignoring the other side, the external world side, of the dualistic epistemic pair of subject-object.

Gergen's move to a position that allegedly avoids these ancient problems is a move to language:

> In my view, social constructionism represents a radical break with both the exogenic and endogenic orientations to knowledge, and thereby suggests a substantially altered agenda — both in terms of scholarly inquiry and educational practice. In its radical form, social constructionism does not commence with the external world as its fundamental concern (as in the exogenic case), nor with the individual mind (as endogenists would have it), but with *language*. (p. **).

He claims that

> Surely the work of historians of science (such as Kuhn and Feyerabend), and sociologists of knowledge (for example, Latour, Knorr-Cetina and Barnes) have helped to underscore the importance of historical and social context in determining what becomes accepted as valid knowledge. And the work of literary theorists (such as Derrida and DeMan), semioticians (Barthes, Eco), and rhetoricians (Simons, McClosky), have demonstrated the extent to which knowledge claims gain their force neither from observation nor rationality but from literary technique (p. **).

More radically,

> Thus, the meaning of words and actions is not derived by comparing them against the subjectivity of their authors, but against the governing conventions of the communities in which we reside (p. **).

And even more so,

> there is nothing about the nature of the world that demands, requires, or necessitates any particular linguistic representation. In principle, then, we are free to use whatever configuration of sounds and markings we please on any particular occasion. In principle, this is no more a table before me than it is Gouda cheese or a griffin. In practice, of course, we are not free. By virtue of negotiated agreements widely shared within the culture, we agree to speak of it — dully perhaps — as a desk. Or, to put the conclusion more bluntly, all that we take to be the case — our propositional representations of everything from physics to psychology, geography to government — gain their legitimacy not by virtue of

> their capacities to map or picture the world, but through processes of social interchange (p. **).

Idealism. I claim that Gergen's remarks reveal a social, or linguistic, idealism. There are, in fact, subtle caveats, hedges, that might be sufficient to keep them from forcing an idealist position. For example, to contend that our claims gain their *social* legitimacy "through processes of social interchange" is almost a truism, even if a sometimes overlooked one. Similarly, that the world does not force any particular "configuration of sounds and markings" is an easily acceptable point, resulting from, among other things, the conventionality of language and the multiplicity of questions and interests that can be brought to the world. That historical and social context and literary technique play important roles in determining the force and acceptance of knowledge claims is also of interest and importance, but it does not explicitly claim that such facets of the social process are *exhaustive* of all warrant for knowledge claims. Nevertheless, idealism is shown in such claims as "In principle, this is no more a table before me than it is Gouda cheese or a griffin." Of course, whether or not that brute object in front of Gergen is *called* "table" is fully a matter of social and historical context, rhetorical technique, and so on. But that is a very uninteresting claim, and not the one Gergen makes. His conflation of what something is called with what something is, or with whether that something exists at all, is typical of contemporary social constructionist social idealists.

To put the point differently: in what way, on Gergen's account, could that table ***be*** a Gouda cheese — setting aside issues of the outcomes of negotiations concerning how we *speak* of it? It is not clear that this question, with its caveat, is coherent from within Gergen's framework. If it is not coherent, that is further testament to his idealism; if this question is coherent, he owes an answer.

Gergen's social idealism is perhaps most straightforwardly revealed in the sentence

> Yet, to sustain this position [von Glasersfeld's notion of adaptivity] requires two admissions, first that there is a real world that is separate from one's experiences of it — thus reasserting the dualist assumption (p. **).

Insofar as Gergen claims to escape this dualism, then by his own logic he is committed to the position that there is **no** "real world that is separate from one's experiences of it."

In any case, my hypothesis is that Gergen's system does constitute a social idealism. Certainly he makes no attempt to show that it does not, nor how he could possibly avoid social idealism given the rest of his positions (and he is well aware of the issue). However, there is a certain unclarity in Gergen's statements, such as the implicit hedges mentioned above, that could provide a technical slipperiness with regard to whether or not he has explicitly made a logical commitment to idealism.

I am concerned with the position of social idealism in a larger sense, and with what I take to be the errors and dangers in that position, *and* with the fact that Gergen certainly *sounds like* he is advocating a social idealism — and will be taken so by others. So, I will take him as being responsible for advocating a social idealist position unless

and until he repudiates that position and shows how his explicit positions can avoid being committed to it.

I claim, then, that Gergen is proposing a social idealism, and I will proceed on the basis of that claim. If he feels that my claim is in error, then it would be helpful if he would show how he thinks his system can possibly avoid a social idealism. On the other hand, if he is in fact making such a commitment, it would be appreciated if he would acknowledge it and argue directly for it.

A History of Social Idealism. There is a history to positions of social idealism that might be worth inspissating. Kant argued that the mind could not be blank and passive, that it must be epistemically contributory in order for knowledge to be possible. The concepts, the frameworks, for understanding must be provided by the mind; they cannot derive from the understood themselves. In a progression from Kant through Hegel, Dilthey, and Heidegger, to Gadamer, Derrida and other contemporary philosophers, the move has been made from the position that *mind* provides the resources for understanding the world to the position that those basic frameworks and concepts are provided by *language*.

Furthermore, developing Dilthey and German philosophical anthropology of the 19th century, Heidegger argued that the nature of human existence, the ontology of human Being, is itself hermeneutic, or interpretive. That is, because interpretation is itself intrinsically linguistic, the ontology of human nature is linguistic (Bubner, 1981; Schnädelbach, 1984). But if human beings are intrinsically and exhaustively linguistic in their ontology, then they cannot step outside of that social and historical context of language to judge it against some external world. We find "That which can be understood is language" (Gadamer, 1975, p. 432). "Man's relation to the world is absolutely and fundamentally linguistic in nature" (Gadamer, 1975, p. 432). "... we start from the linguistic nature of understanding ..." (Gadamer, 1975, p. 433). "All thinking is confined to language, as a limit as well as a possibility" (Gadamer, 1976, p. 127) — a full social idealism.

Social Solipsism. Such a position, unfortunately, is a solipsism at a social linguistic level. It is a solipsism with the epistemic locus at the social-linguistic-cultural-historical level, instead at the level of the individual. *All* of the basic epistemological issues *recur* at that level with respect to everything outside of that linguistic context. How does society know anything about the world? What sorts of warrants can it have for its knowledge claims? And so on.

A socially located idealistic epistemics avoids such questions *only* in the manner that solipsism does: either by ignoring them, or by denying that there is any world "outside" about which such questions can be asked. A social idealism still posits an epistemic locus, it's just a social locus instead of an individual locus. That shift, contrary to Gergen's claims, does nothing to avoid the classical epistemic questions. At best, it simply shifts their locus. At that new locus, that social locus, precisely the classical skepticism-idealism dilemma recurs. The contemporary fad of making the idealistic

choice at the social level of epistemic locus is still caught within precisely the same framework as the millennial debate has always been.

Furthermore, the social idealistic version of solipsism is in even worse logical shape than classical individualistic solipsism. It must not only address epistemic questions concerning the world outside of society, it must also address epistemic questions concerning its own interior (Bickhard, in preparation-b). For example, how do individual human beings participate in the social processes of which social constructionists are so enamored? How do people know what's going on and what's being said? How do they know, how do they learn, the "conventions of the communities in which we reside."? Or, if the allusion to individuals is repugnant, how does one sub-community or culture "know" anything about any other sub-community or culture? How do prelinguistic infants come to be linguistic entities? How do they learn or develop to be so? What happens to their biological nature when they become socially constituted entities? Are rocks and pollution and the galaxy and mathematics and birth and death all just social constructions, with no further reality? The only avoidance of these sorts of questions for the social idealist is a move to a full monism at the idealistic level, such as in Hegel's absolute knowledge, in which there are no epistemic differentiations within the ontology of the epistemic locus — everything is all One, so no such epistemic questions about the relationships among the 'parts' arise. Contemporary social constructionists do not advocate such a monism, but they do not address any of the questions internal to their position either. They simply ignore those questions.

Ignore the World. How can such questions be simply ignored? There is a history here too. The enlightenment rejected Medieval metaphysics, framed by Thomistic renderings of Aristotle, for many good reasons. Among them were 1) the elitist epistemologies that claimed that only the initiated could understand the Truth, 2) the support that such epistemological elitism provided to medieval social oppression, 3) the correspondence teleological model of meaning and truth, in which the world is designed by God, and every particle and person has its place in correspondence with its position in God's plan, and 4) the enormous support that this position too provided to medieval social oppression. In particular, the only way to live a meaningful life was to live out one's position in God's plan, even if that position was one of a serf — a rather strong social conservatism — and only the elite could interpret the teleological divine purposes arcanely hidden in the world's affairs — so authority is to be simply accepted, socially, politically, and epistemically.

The enlightenment's rejection of such positions yielded an intoxicating sense of freedom. Freedom from authority both socially and politically — God's imprimatur had been removed. Freedom from authority epistemically: metaphysics was rejected in favor of "positive" knowledge, knowledge that *anyone* could check for themselves — an epistemic anti-elitism, that yielded positivism. And freedom from pre-determination of one's own meaningful life — God's plan in which each life already had its place was rejected. Persons could determine for themselves what was meaningful and fulfilling, just as they could determine for themselves what was true or not true.

Freedom versus Belonging. A powerful consequence — an unintended consequence — of this last point, however, was a sense of radical alienation of human life. Human beings are concerned with issues of meaning, and their own meaning in particular, but, according to this view, human life exists in a world of billiard balls moving according to inexorable laws — efficient causality, one of the few pieces of Aristotelian metaphysics that was retained — that are incapable of caring at all about any such issues of meaning. That is, the freedom had been obtained at the cost of a sense of alienation from, of not belonging to, the world.

One move to attempt to overcome this dilemma between freedom and belonging was a shift to a non-correspondence notion of meaning — to an expressive conception of meaning, as in art or music. If some sense could be found in which human life was expressive of something outside of itself, and thereby "belong" to that something, perhaps that could be a source of belonging. In general, this move did not succeed: any such expressivity, if accepted, simply constrained meaningful life in virtually classical ways and extinguished freedom.

Hegel was the last major thinker to attempt to resolve this dilemma, and he did so with his own version of life as expressive (Taylor, 1975). Kierkegaard demolished any claims that Hegel's system could capture the realities of human existence, and Kierkegaard thereby introduced concerns with the nature of human existence — existentialism — deeply into philosophy. A critical aspect of this move for my purposes is that Hegel was the last major philosopher to attempt an integrated account of human life and meaning in the natural world, the cosmos. Kierkegaard, and the existentialist tradition in general, has basically accepted the alienation of human life in the world, the diremption of human nature from the world. Existentialists have generally attempted to elevate such alienations into being themselves sources of meaning, as in the courage to face the intrinsic absurdity of life in the universe — including the absurdity of any such courage mattering a whit to the universe at large.

There are two connections between this historical story and my current concerns: the first is the diremption of human life from the world. It is this historical tradition, I conjecture, that has permitted social constructionism to ignore ontological and epistemic questions about the world outside of and prior to society. Social constructionism has inherited from existentialism a tradition of treating human life and meaning as intrinsically encapsulated and alienated, divorced from the cosmos.

The second connection is the tension between freedom and belonging, as values and as conditions. This tension has not been resolved within Western culture, and persists today in sometimes virulent forms. The belongingness side of this dilemma played a central role in the ideology of Nazism. The Jonestown massacre is a more recent aberration of desperate belongingness. The dilemma shows up in several of the papers in this conference: clearly the issues of freedom from authority versus the belongingness to authority, or freedom from the group versus belongingness to the group, play themselves out in the classroom at least as much as anywhere else.

Ideological Critique. Gergen also introduces a form of criticism called ideological critique:

> the traditional views of knowledge are allied to a particular ideological stance, namely that of *self-contained* or *possessive individualism* (Sampson, 1977). To view knowledge as the possession of single minds is consistent with other propositions holding individuals to be the possessors of their own motives, emotions, or fundamental essences. Within this tradition, people are invited to see themselves as the center of their actions, the arbiters of the true and the good. As it is argued, such beliefs not only favor a narcissistic or "me-first" disposition toward life, but cast others (along with the physical environment) into a secondary or instrumental role. Persons and environments are viewed primarily in terms of what they can do for oneself. Furthermore, because of the sense of fundamental isolation ("me alone") bred by this orientation, human relationships are viewed as artificial contrivances, virtually set against the natural state of independence. Most importantly, as the peoples of the globe become increasingly interdependent, and as they gain the capabilities for mutual annihilation (either through arms or pollution), the ideology of self-contained individualism poses a major threat to human well-being. We are not then speaking of an abstract and arcane property of the academy, but of a system of beliefs that the world's peoples can ill afford to maintain. (p. **)

I have several comments on this passage. The first is simply to note that such concerns with arms and pollution seem curiously inconsistent with holding that there is no "real world that is separate from one's experiences of it."

The second is a brief historical comment on why such a critique might be considered to be relevant: it might be countered, for example, that the dangers of traditional views of knowledge that are mentioned are real enough, but that those are the dangers of the truth — that is, it might simply be countered that traditional views of knowledge are correct nevertheless. Why would Gergen's *ideological* critique be taken as impugning the "traditional views of *knowledge*"?

In an idealism, especially a monism such as Hegel's, it is not at first clear how any critique of anything could proceed — on what grounds could it be based, since there is nothing outside of the idealist whole? Hegel introduced the notion of immanent critique as a solution to this problem. Immanent critique is not an externally grounded critique, but a critique of internal contradictions in a whole, even an idealistic whole. Such immanent critique of internal contradictions, Hegel claimed, could drive development of the whole via his familiar thesis-antithesis-synthesis version of dialectic: such critique provided thesis-antithesis contradictions.

Such contradictions internal to a whole are not limited within classical domain boundaries, of knowledge or belief, for example. Ideology is just as much a part of the "whole" as anything else. So an ideological critique of a theory of knowledge makes perfectly good sense in this view. Note that even the Enlightenment rejection of Aristotelian metaphysics exemplified a version, pre-Hegelian, of ideological critique.

My third comment on this critique of Gergen's is to point out that his particular critique criticizes the individual freedom side of the classical dilemma in favor of the communitarian belongingness side. To recognize that this is not necessarily a desirable emphasis, recall that this is the side that gave rise to "freedom as expression of the socio-culture" — Nazism, and, in fact, Heidegger's own Nazism. An exclusive emphasis on communitarianism inevitably squashes freedom. Gergen gives no balance at all to his emphasis on communitarianism, even though communitarianism is extremely far from an inherently innocent and laudable ideological position itself. Not only has Gergen not transcended the classical dilemma of skepticism and idealism, he has not transcended the dilemma of freedom and belongingness either.

A Twentieth Century Irony. There is an irony in the twentieth century history of these themes. Much of the century has been characterized by a deep rift between Anglo-American and continental approaches to philosophy. On the Anglo-American side, logical positivism flourished, with a disdain for continental philosophy as being mired in meaningless metaphysics. On the continental side, concern with metaphysics, and particularly with the metaphysics of the human condition and of human nature, proceeded with an equal disdain for the trivialities of the minute, merely technical problems of the logical positivists. The mutual disdain has abated on both sides, and there is now a more fruitful dialogue underway. But these two positions, nevertheless, did and still do dominate the scene.

The irony in all of this is that both positions are founded on essentially the same assumptions concerning the encodingist nature of representation, and are results of essentially the same moves into language. Logical positivism resulted from attempting to account for logic, mathematics, and language from within a positivist framework; continental social idealism resulted from the move, mentioned above, taking human ontology as being essentially hermeneutic, and constituted in language. The logical positivist tradition spawned investigations of the nature of the world via investigations of language, since the world must be such that language could and does correspond to it (as in Wittgenstein's *Tractatus*). The social idealist tradition spawned investigations of the nature of the world via investigations of language, since the world *is* language. Language was central to both positions, and the encodingist assumptions concerning representations — and language, since language was, and is, considered to be fundamentally representational by both positions — were common to both positions. The only fundamental difference was that logical positivism construed the world as being there, and representations as *mirroring* that world via the encoding correspondences with it, while continental social idealism rejected the world end of the correspondences and construed the language as constituting the world, *making* the world — the difference, in other words, is fundamentally that of the skepticism-idealism split, the split that holds only because of the common underlying encodingist assumptions about representation. Social idealism, social constructionism, is just the idealistic flip side of logical positivism, and vice versa — and, for the most part, similarly for the freedom-communitarian dichotomy.

The mutual antipathy between the positions, then, was ironic because of the massive and pervasively shared assumptions and shared history between them, and the

rather narrow divergences within that common framework that distinguished them. In spite of the thaw in the relations, and the ensuing dialogue, these are still the major positions, and that framework is still the encompassing framework for the discussion. Gergen's voice in that discussion is on the idealistic, communitarian side of the discussion — it does not transcend it.

Epistemologically, then, what recent history faces us with, and what formed a major theme in this conference, is a rivalry between classic encodingism — the epistemology of world mirroring — and social idealist encodingism — the "epistemology" of world making. In both cases, the mirroring and the making, respectively, are supposed to be fundamentally in terms of language.

There's gotta be a better way.

von Glasersfeld.

Von Glasersfeld speaks from a tradition moving forward from Vico and Kant through Hegel, Peirce, Baldwin, and Piaget. Crucial aspects of this tradition include a recognition of the necessity of a contributory mind, rather than a blank mind, and of those contributions being necessarily active and constructive, rather than passive. Von Glasersfeld's position, in fact, is known as "radical constructivism".

Within a view of the mind as epistemologically contributory, there is the possibility of it being passively contributory or actively, constructively contributory. Passivity is precluded by the incoherence of encodingism — encoding correspondences cannot be simply impressed into a passive mind — and by representation being emergent in action systems, since the *organization* of active, interactive, systems cannot be passively impressed into the mind. Epistemic passivity is impossible, then, which leaves constructivism. Within a constructivism, there are also two possibilities: a variation and selection constructivism, and an internally self-organizing constructivism.

Internally Self Organizing Constructivism. Piaget represents primarily a version of the internally self-organizing view of constructivism. The self-organizing constructions of the mind involve an intrinsic tendency for the mathematical completion of algebraic structures, and, thus, of the intrinsic emergence of mathematical necessity. Such an emergence of necessity is truly an emergence — it neither comes in from the environment, nor up from the genes. It is genuinely, as Piaget claimed, a "third way" outside of empiricism and rationalism.

It also focused on what has been a classical battleground between empiricism and rationalism: mathematical and logical necessity. Necessity has played a central role simply because it has never been plausible that knowledge of necessity was a strictly empirical knowledge: no matter how many times it has been experienced that two pebbles plus two pebbles makes four pebbles, that doesn't make it necessary. Note that the problem here is not the certitude or lack thereof of the *knowledge* of necessity, it is the nature and possible origin of the very notion of necessity — the notion that makes sense out of the claim that the number of planets, though in fact nine, is not necessarily

nine, but three times three is not only in fact nine, it is *necessarily* nine. For Piaget, that knowledge emerged in the necessities of algebraically closed mental structures (Bickhard, 1988a).

Piaget's major metaphor here is the intrinsic unfolding of embryology. In fact, he argued explicitly *against* the variation and selection version of constructivism — his is an embryological rather than an evolutionary constructivism (Bickhard, 1988a). Embryology is *strictly* a metaphor for Piaget, however: his "third way" rejects preformationist innatism just as strongly as it rejects empiricism. Piaget's model is embryological in the sense that the tendency to generate algebraically closed structures, and, thus, necessary properties, is an intrinsic and inherent tendency of development that is largely independent of much of the particulars of action and experience. Piaget has room for something like variation and selection constructivism in his model — it can be discerned, for example, in his notions of assimilation and accommodation — but he considered it to be a logically inadequate form of construction (Bickhard, 1988a).

Ultimately, however, Piaget's attempted solution, in spite of deep advances and insights, doesn't work (Bickhard, 1988a, 1988b; Bickhard and Campbell, 1989). To mention just one central problem, even if it is granted that mathematically closed algebraic structures *possess* various mathematical properties *necessarily*, and that there are mental "structures" that *instance* such properties necessarily, it does not follow that the individual possessing or constituted by such structures would know anything about those properties of his or her "structures" at all, and, therefore, not about their necessity either.

Essentially, although Piaget does in important ways escape the empiricism-rationalism dilemma with regard to the *origins* of knowledge, he ends up with an essentially Aristotelian model of the nature of knowledge, though with the Aristotelian forms elevated to a realm of potentiality of action. What is represented is forms of potentiality for action in the world and what represents is the same forms — of potential actions in that world. In Piaget's case, however, the forms are algebraic forms of potential transformations, operations and coordinations (Chapman, 1988 - see especially the discussions of concepts and universals), both in the world and in the mind. The representation is still by correspondence of the forms, even though, for Piaget, the emergences in the world and the emergences in the mind that are correspondent to those in the world are both intrinsic, and do not have to come *from* anywhere (Chapman, 1988). Such a model still falls to the incoherence arguments.

Variation and Selection Constructivism. The alternative version of constructivism is a variation and selection constructivism, an evolutionary epistemology. An embryological epistemology does not *require* any feedback concerning its constructions; an evolutionary epistemology does, but only, in the limit, a minimal information feedback — error or lack of error. An evolutionary epistemology, again in the logical limit, requires that constructions be initially blind to correct or incorrect forms of construction. Much of our knowledge is in fact heuristic, and, therefore, *not* blind, but this knowledge too must be accounted for, and, ultimately, knowledge cannot logically require prior knowledge for its origin without falling into an infinite regress or circularity

identical to the encodingism requirement of already having representation in order to get representation (Bickhard, 1988a, 1991b, 1991c, 1992a; Campbell and Bickhard, 1986). It is of interest to note that in Piaget's later works, he gave increasing acknowledgment and increasing importance to feedback (e.g., Piaget, 1985), yet continued to argue against variation and selection (e.g., Piattelli-Palmarini, 1980).

Adaptivity and Viability. Von Glasersfeld's radical constructivism construes knowing as an adaptive activity. Issues of truth are replaced by issues of viability. This is most definitely an evolutionary epistemology, and von Glasersfeld extracts from Piaget those aspects and parts that are closest to and most consistent with such an evolutionary perspective. Radical constructivism focuses on emergent construction, under selection constraints of viability, and repudiates correspondence notions of meaning and truth — constructions must viably "fit" within the potentialities and impossibilities of the world, not correspond to them. Yet, in the concern with viability, radical constructivism does not lose contact with a world "separate from one's experiences of it".

That contact with a world is constituted in selections, in experiences of lack of fit. Experience is temporally structured in anticipations, and violations of anticipation — surprises — constitute experiences that cannot be explicated within the anticipatory intentional organization of experience per se. That is, suprises *arise* within experience, but cannot be *accounted for* strictly within experience. A monistic epistemology, on the other hand, cannot experience surprises. Surprises constitute contact with a world that is logically separate from one's experiences of it.

On the other hand, however much surprises may provide the grounds for lack of fit, they provide no instruction on what that fit is with (or not with). They provide no grounds for anything akin to a correspondence notion of truth; they provide nothing to be in correspondence with. Notions of the reality that is contacted in surprises is necessarily constructed and is necessarily fallibilistic.

In all of these respects, radical constructivism is *much closer to escaping the classic epistemological traps than is linguistic idealism*. Radical constructivism does not directly fall into either empiricism or rationalism, because of its *emergent* constructivism, and it does not commit to the dilemma of either being vulnerable to skepticism and the encoding incoherence or falling into an idealism, because of its *non-correspondence epistemic contact* with the cosmos of viability and consequent feedback of error.

Representation? Nevertheless, there are some questions to be raised. Von Glasersfeld does not develop any model of representation. Piaget does, but it does not escape all of the basic problems. Von Glasersfeld *could* argue against representation altogether, in favor of a purely pragmatic view in which possible action and possible success and failure are the *only* aspects. Phenomena of representation, however, are simply too ubiquitous to be simply dismissed in that manner — no matter how deficient our theoretical and philosophical models of them might be. Rejection of correspondence models does not suffice to reject representation per se. A rejection of representation per se would have to somehow account for all phenomena that we currently construe as

representational or intentional in a manner or manners that are aguably, in *some* sense, *not* representational. That, I suppose, is conceivable, but it is not plausible.

Von Glasersfeld does not propose a model of representation, but, ultimately, a radical constructivism must account for representational phenomena. Otherwise, among other problems, it risks a default implicit reliance on encodingism. Note that, within an encodingist framework there is not even the possibility of error, and, thus, of the feedback of error upon which viability and radical constructivism depend. The circularity argument of skepticism is precisely an argument against the possibility of discovering error.

No model can be held to doing everything all at once, and radical constructivism has already achieved the superlative accomplishment of avoiding empiricism-rationalism and correspondence-idealism in what has been proposed thus far. Nevertheless, the absence of an account of representation is an incompleteness, and constitutes an important lacuna, since the radical constructivist approach could potentially fall, for example, to internal inconsistency or incoherence, depending on the answer to the representational question. Encodingism is often not explicit, but is instead often deeply buried in implicit presuppositions that, superficially, may not look anything like encodingism at all — witness the reliance of idealism on the encodingist presuppositions of the empiricism-rationalism and correspondence-idealism dichotomies: rejection of correspondence yields idealism only if there are no other possibilities, and there are no other possibilities only from within an encodingism. Such presuppositional dangers, among other things, make encodingism extremely difficult to avoid. The representational lacuna in radical constructivism, then, is a dangerous one. (For some proposals in this direction, see Bickhard, 1992a, 1992d, in press; Bickhard and Campbell, 1989.)

Functional Scaffolding.

There is a very important possibility that follows from a variation and selection constructivism, and that cannot follow from an idealism, that I would like to point out: the possibility of functional scaffolding (Bickhard, 1992b). Functional scaffolding is a generalization of the standard notion of scaffolding in developmental literature, in which scaffolding results in the "internalization" of constructions or organizations within the Vygotskian "zone of proximal development" (Vygotsky, 1978; Wertsch, 1985; Wertsch and Stone, 1985). Functional scaffolding is a potentiality that arise from the variation and selection constructive nature of epistemology. It is a suspension or a blocking of selection pressures in the service of furthering development.

The central realization is that variation and selection constructions can, in general, not succeed in constructions that are too complex, too "big", too "far away" from, what is already known. Constructions must generally be "small". One consequence is that if a task facing a child would require massive construction beyond the child's current knowledge and abilities, then that task is not likely to be accomplished — the selection pressures of that task are not likely to be satisfied.

Development, then, must proceed via trajectories of successful constructions, in which the points of success, the points of stability against selection pressures, are relatively close together. Tasks and domains of tasks that do not afford such intermediate points of possible success are, therefore, difficult or impossible to master.

Enter functional scaffolding: if some of the selection pressures can be bracketed or blocked, for example, by an adult, such an alleviation of selection pressures, even if temporary, may permit constructively close constructions to succeed — to be stable relative to the reduced selection pressures. If such "scaffolded" points of successful construction are sufficient to support a trajectory of constructions toward a resultant knowledge and skill that does not require such scaffolding — that is successful, therefore stable, relative to the full original selection pressures — then such scaffolding can nurture development and learning that otherwise could not occur, or could occur only with difficulty and rarely. Examples of such scaffolding would include: providing organization or coordination, breaking down into simpler problems, moving to ideal cases, using analogies and metaphors, using only temporarily available resources, and so on.

Note that a number of these moves can be made by the learner or thinker himself — a self scaffolding. Blocking selection pressures, such as in breaking problems down into subproblems or moving to idealized cases, does not necessarily require already having knowledge of what will ultimately succeed. Classical scaffolding notions *do* involve such a requirement: they are constituted by the provision of knowledge or organization or coordination, etc., that is otherwise not present — they involve supplementation with parts or aspects of the ultimately correct construction (which can then be internalized). Self-scaffolding is incoherent within standard views of scaffolding: one cannot provide to oneself knowledge that one does not already have (Bickhard, 1992b).

Such a notion has obvious relevance to education. It shows up, in fact, in several of the conference papers. Functional scaffolding also has a number of additional interesting complexities and importances (Bickhard, 1992b). I introduce it now for two reasons: 1) it follows rather naturally from the viability constructivism of von Glasersfeld, and 2) it is impossible to define from within a social idealism — there are no external sources of error, no surprises, no external sources of selection pressures, thus no coherence in the notion of blocking or suspending such selection pressures. Functional scaffolding, then, is a conceptual resource that necessarily requires a variation and selection constructivism as a context.

Shotter.

Endorses Social Constructionism. Shotter endorses much of Gergen's social constructionism. He also, however, supports the possibility of contacts and resistances that might surprise us in activity — a possible source of selection within a variation and selection constructivism — and suggests that argument and criticism may be at least as important as consensus and collaboration. Both of these positions are contrary to

Gergen's, but the possibility of surprise, in particular, commits Shotter to a non-idealism: surprise is not possible for an epistemic monism.

A Critique of Radical Constructivism. Shotter also offers some criticisms of his own of radical constructivism: "Nothing in radical constructivism leads us to consider the skills to do with 'occupying different discursive positions' as being of any importance." If this is meant in the sense that von Glasersfeld doesn't focus on such issues, then it is true, but so also is it true that social constructionism doesn't focus on how the organism has any epistemic relation to its language community or to its physical environment: the proper question here is, so what? If this is meant in the sense that von Glasersfeld's model *cannot in principle* handle such issues, then an argument, at least, is needed.

There is also a suggestion that radical constructivism cannot acknowledge any non-physical origins of error, but why can't social realities provide as much "points of contact of experiential failure" as physical realities? For that matter, why can't error be experienced with respect to logic and mathematics?

Embryology. Shotter attributes an embryological metaphor to constructivism. As mentioned above, this is relatively correct regarding Piaget, but not regarding von Glasersfeld: Piaget argues *against* variation and selection constructivism. Even for Piaget, however, embryology is *only* a metaphor: Piaget's "third way" between empiricism and rationalism is not merely a disguised innatism of embryology.

The Imputation of Consciousness. Shotter also critiques von Glaserfeld's model of the imputation of consciousness. I have no defense of this model — I agree that it is inadequate — but I do not see that it necessarily follows from his constructivism. It is an attempted addition to that constructivism. So, if it falls, the constructivism is not damaged. Shotter acknowledges that this is a separate theory.

"These are [argumentative or rhetorical] skills the radical constructivist approach ignores, and thus it suggests no ways in which they may be taught." Again, a simple absence of some topic may simply be a matter of incompleteness or difference in emphasis. Social constructionism ignores the physical and biological world, and, in this case, it's not so clear that the oversight can *possibly* be made good.

Defending Gergen and von Glasersfeld. Shotter makes one charge against both von Glasersfeld and Gergen:

> Both, to my mind, are in the thrall of what I shall call 'the way of theory' ... That is, both exhibit in their writing the desire to survey a whole set of (essentially historical) events retrospectively and reflectively ... with an overarching aim of bringing them all under an adequate conceptual scheme; their project is to find a place for them all within a framework, thus to create a stable, coherent and intelligible unitary order amongst them that can be intellectually grasped by individual readers of their texts (p. **).

Such a project is supposed to manifest a dream of seeing into the hidden inner workings so as to be able to be a seer, predictor, of important sequences of events — a dream passed down by the Enlightenment. It is a dream impossible to fulfill.

Here I wish to defend both Gergen and von Glasersfeld. Shotter attributes to each of them a presumption of the possibility of, and a desire for, an ultimate culmination of their respective constructivisms, a cessation of further construction, with each of them respectively on top. This desire for an "end of history" or "end of philosophy" — with the desirer ending up on top! — is one that is common enough. And it is even *possible* that both Gergen and von Glasersfeld share in it. But I find nothing in either the rhetoric nor the logic of either position that suggests or commits to that. In fact, the very possibility of any such ending would seem to contradict the fallibilism of von Glasersfeld's epistemology. (Shotter, however, has already overlooked that fallibilism in endorsing the view that radical constructivist constructions would be deterministically fixed by experiential failures.) In the conclusion of the revised version of his paper, Gergen explicitly disavows such a position, and it would also be a contradiction to the historically contextualized "all is rhetoric" position that he develops.

Inconsistencies. There are some apparent inconsistencies in Shotter's presentation: "in our social lives together, there is no already-made meaningful order to be found; *we* are the ones who (**within certain constraints, not of our own choosing**) construct between ourselves connections between things *which make sense to us*." (emphasis added). What constraints? Wouldn't such constraints constitute an already extant order? Perhaps not (yet) a meaningful order, but real in its consequences nevertheless? Either our constructions are free, or they are not; Shotter cannot have it both ways.

Shotter poses to Gergen: "I want to argue that those [linguistic] artifacts are primarily known to **us** as if like 'tools', as 'means' for our use in the making of 'meanings'" This also raises several interesting questions. What is the "us" to which "they", the artifacts, are known here? Toward what ends do we use these tools? Is it possible that such tool usages might *fail*? Aren't we getting close to being in von Glasersfeld's backyard here?

According to Shotter, von Glasersfeld "claims that it is our *experiential worlds* which represent what we call our realities to us". This is certainly not the way I read von Glasersfeld. Since, according to radical constructivism, we construct our representations, and since Shotter has our experiential worlds constituting those representations, this would have us constructing our experiential worlds. This is not what von Glasersfeld was proposing.

Consensus versus Struggle. Shotter claims that "To represent this lived, temporal, disorderly process, in which many possibilities are considered but few are chosen, as an already, orderly and coherent process, is to hide from ourselves the character of the social negotiations (and struggles) productive of its order." He contrasts his responsive-argumentative approach, in this respect, to Gergen's referential-logical approach.

As a matter of what must be taken into account about social process, I *fully* agree with Shotter here: social reality construction is not only consensus and smoothly flowing dialogue between dialogic positions. It involves trials and failures and withdrawals, negotiations and conflicts, power and authority, resource competition — both physical and social resources — and so on. To ignore this is to fundamentally misconstrue social process and social reality.

As a matter of theory, however, I find this position to be seriously problematic given what Shotter has endorsed of Gergen's position. In particular, what is there within a linguistic idealism to be engaged in conflict? Differing social realities? Differing socio-cultural traditions? But how do they have any epistemological access to each other? How could it make sense to have *two* (or more) idealisms communicating with each other? What about conflict between two individuals? The epistemological questions emerge again. What about conflict between pre-verbal infants and adults? How is it even possible for infants to have any ontology other than that of a social construction — and the epistemological questions emerge yet again, and emerge with a vengeance with regard to the *infant's* epistemology.

My point is that the processes that Shotter justifiably points to as being left out of Gergen's position cannot be accommodated within the idealistic ontology of Gergen's that Shotter seems to have endorsed. Shotter expresses several caveats regarding and differences with Gergen, but does not explicitly disavow the social idealism of social constructionism, nor show how to avoid it.

Shotter's endorsement of the possibility of surprise is consistent with, and necessary to, his more conflictual model of social constructive process, but in order to be surprised within any epistemic unit, there must be something epistemically not part of the unit. This position of Shotter's is also, and similarly, not consistent with social idealism.

Gergen on von Glasersfeld.

The tension between surprise and idealism that is manifested in Shotter's positions returns us to the issues of epistemological dualism that frame much of Gergen's discussions. It is this classical dualism that provides *classical* accounts of surprise, and it is this classical dualism that Gergen charges against von Glasersfeld and claims to transcend himself.

According to Gergen:

> The focal difference [between social constructionism and radical constructivism] for the present context is the alliance of radical constructivism with the dualistic formulations traditional to Western epistemology, and the constructionist attempt to break with this tradition. In major degree radical constructivism is, in present terms, an endogenic theory: the primary emphasis is on the mental processes of the individual and the way in which they construct knowledge of the world from within (p. **).

For Gergen, clearly, this counts as a criticism.

But, as developed above, Gergen's own social idealism does not escape the traditional dichotomies itself. In fact, it is simply a choice from within the classical correspondence-idealism dichotomy. Still further, it cannot solve the epistemic problems inherent in the relationship between the social epistemic locus and the rest of the world — instead, it denies them by moving to an idealism — and it does not address the epistemic problems inherent in the internal relations within that alleged social locus. Gergen's charge that *radical constructivism* does not escape classical dichotomies, then, constitutes a serious irony.

An Empirical Irony. There is still another irony here. Social idealisms strongly tend to belittle considerations of empirical data, of empirical constraint, as being allied with empiricism — especially of the logical positivism variety, of which social idealism is merely an idealist flip side. This was manifested by Gergen at the conference in response to empirical considerations put forward in discussions.

In the first place, this is merely a bad pun: a conflation between empirical constraints and empiricism. The integration of empirical constraints within an epistemology that avoids the classical problems is a non-trivial task, but it takes only a second of reflection to note that empirical constraints and empiricist epistemology are not the same thing.

The real irony, however, is that, although most empirical results are belittled, ridiculed, and dismissed — at least when it's rhetorically convenient to do so — the entire argument for a social idealism rests directly on its *own* set of empirical claims. In particular, it rests on the empirical claims concerning the historical failure of classical epistemologies to solve their internal problems, such as that of skepticism (e.g., Gergen, this volume, or 1985). The social idealist case evaporates without these historical claims: it gains whatever credence it might appear to have *only* from being the alternative that

purportedly avoids these classical, and classically unsolved, problems. Without that background of millennia of unsolved epistemological problems, social idealism becomes merely a wildly implausible, noisily contentious, irruption of bad rhetoric.

I do not contest the accuracy of those historical claims. In fact, I argue them myself (for example, Bickhard, 1987, 1992a, in preparation-a). However, on the one hand, it is internally inconsistent for a social idealism to rest its claims on *any* kind of empirical considerations. If all is merely social construction, if everything is constituted in conversation, if there is no "real world that is separate from one's experiences of it", then this historical story has no more warrant than any other story that anyone might invent — about *anything*, natural or supernatural, coherent or incoherent, sensible or crazy. All stories become equally merely matters of "literary technique" — become purely matters of technique, style, bedazzlement, and so on. After all, "knowledge claims gain their force neither from observation nor rationality but from literary technique". (As pointed out above, there is in fact a hedge in the sentence from which this quote is taken, but, also as pointed out above, any significance that this hedge could have is vitiated by the overall idealism — Gergen *provides* no other grounds for warrant to fill in the hedge, and his idealism *allows* for no other grounds: "the extent to which knowledge claims gain their force neither from observation nor rationality but from literary technique" is not partial, but total.) On its own terms, then, the "knowledge claims" concerning the alleged failures of classical epistemology have no more warrant than that of literary technique.

On the other hand, it is also internally inconsistent for a social idealism to impugn other claims of empirical considerations while maintaining this historical one. If historical empirics are OK, why not that of physics, psychology, logic, education? For that matter, what warrants claims concerning alleged experiments in education taking place, or having taken place, in other parts of the world, but fails to warrant the claims that others wish to bring against Gergen's position — isn't it all just old fashioned empiricism in this view? This undefended offering of empirical claims when convenient, and belittling dismissal of empirical claims when it's not convenient, in the end, can itself be nothing more than rhetorical technique. Linguistic idealism ideologically rationalizes disingenuousness and inconsistency as rhetorical techniques — after all, there *is* nothing more than rhetoric anyway.

Note, once again, that such an "anything goes" position, the lack of any external criteria, is fundamentally inconsistent with von Glasersfeld's position: the surprises and constraints, the errors, that are central to von Glasersfeld's constructivism do not exist, and cannot exist, in Gergen's view. Any such notions, supposedly, re-introduce classical dualisms. Gergen's critique of von Glasersfeld, then, is simply that von Glasersfeld doesn't share Gergen's idealism. Radical constructivism, however, at least doesn't commit an inconsistency every time it appeals to matters of history or logic or contemporary fact.

Gergen on Education.

Gergen claims to transcend the endogenic-exogenic dichotomy via his move to language. I argue that this constitutes instead just a shift in epistemic locus from the

individual to society that fails to transcend the classical dualism and its attendent epistemological issues. His move to language and society, in turn, frames his communitarian proposals concerning education. I have already pointed out that this communitarianism is also a selection from within classical dichotomies, not a transcendence of them — in this case, the dichotomy of individual freedom and belongingness. In Gergen's attempt to resolve some of the difficulties of these dichotomies from *within* those same dichotomies, we can expect to find in Gergen's proposals concerning education manifestations of the consequent tensions and impossibilities involved. In fact, we find some deeply ironic such manifestations. These manifestations, however, are not specific to Gergen: tensions involving communitarian values, children's epistemologies, and educational practice were evident in many positions throughout the conference.

An Epistemological Irony. Gergen's notion of education in which teachers are just resource aids, and students educate themselves, presupposes that knowledge and relevance of knowledge are manifest, obvious to anyone. All that teachers are supposed to do is to provide resources, and to model the construction of rhetorically effective presentations — the students will simply absorb it.

First of all, there is a questionably cynical conception of knowledge presented here: knowledge is just the ability to construct rhetorically effective presentations.

> 'I know' when, for purposes of the conversation, I speak in ways that enable you to treat me as if I know, and vice versa. We successfully generate dialogue as we are mutually accorded the status of knowledgeables across time (p. **).

> The ability to take a position of "knowing that" such and such is the case may often be important, and may be the subject of no little preparation. However, for the educator to emphasize the objectivity and rationality of one's utterances above all else is to dis-able the student. For well executed content is not always critical to a dialogue, and indeed, it may sometimes even be detrimental (p. **).

> ... from the constructionist standpoint lecturers are primarily demonstrating their own skills in occupying discursive positions (p. **).

As is by now familiar, if we take all the hedges seriously, this could seem unexceptional, but Gergen provides no content to his own hedges: no importance for anything *other* than rhetorically effective presentations. There is, however, a consistency here: within a social constructionist linguistic idealism, there *is* nothing else than rhetorical effectiveness.

The irony, however, arises from the conception of knowledge involved here as being manifest. The notion that knowledge is manifest, obvious once seen, easily learned if only we would expose them to it — instead of hiding it: "To face the issue more bluntly, the very processes necessary for the public production of authority, are hidden from student view. ... Such removal is essential, of course, in sustaining the myth of authority as an individual possession." — is itself already a very familiar one. In fact,

this is ***a pure Enlightenment notion*** . This is precisely the Enlightenment's manifest knowledge, positive knowledge. The irony is that this is the origin of the despised "positivism" — manifest to anyone who looks. Furthermore, there is not only the appeal to positive, manifest knowledge here, but also to the Enlightenment's, to positivism's, release from authority — from the authority of the educator in this instance.

Note that there is nothing like educational scaffolding proposed in Gergen's story. There is no sequencing, no (ideally) course prerequisites, and none needed, since knowledge is, purportedly, manifest. There is no direction or planning by educators. Instead, there is a diffusion of authority, no fixed agenda, no curricular agenda.

Contrast this with von Glasersfeld (and Spiro, below) — the contrast could hardly be greater, both with respect to the space for the scaffolded organization of knowledge acquisition, since knowledge is mostly *not* manifest, and with respect to the space for educational authority, since educationally deliberate scaffolding requires some form and degree of prior knowledge and authority. Once again, it is *not* Gergen who has escaped from classical positions — in this case, *positivism*.

Communitarianism. Within these presuppositions, however, Gergen pursues his notions of communitarian approaches to education.

> To focus this inquiry more sharply I propose that we extricate from the constructionist metatheory a single metaphor, and employ this metaphor in evaluating a variety of educational practices. More specifically, it is the metaphor of the dialogue or conversation that seems most fruitfully applied in this case (p. **).
>
> The challenge for the educational process, then, is not that of storing facts, theories and rational heuristics in individual minds. Rather — and here constructionism has much in common with the pragmatist tradition — it is to generate the kinds of contexts in which the value and meaning of the constituent dialogues may be most fully realized, conditions under which dialogues may be linked to the ongoing practical pursuits of persons, communities, or nations. In effect, the constructionist would favor a substantial reduction in the canonized curriculum in which students are required to take courses either because they are prerequisites for other courses, or necessary preparations for life (p. **).
>
> In contrast, the constructionist would favor practices in which students work together with teachers to decide on practical issues that are important to them, and the kinds of activities that might allow significant engagement. For example, if students are concerned about ecology, racial tension, abortion, drugs and so on, can they develop projects that will elucidate the issues, and can they communicate their insights and opinions effectively to others? (p. **)

Structure in Learning? Concerning prerequisites: should students be permitted to take calculus before algebra? If not, on what grounds is this prerequisite reasonable or

legitimate — or even just rhetorically effective — and others not: how is this to be determined?

Concerning the reduction in "canonized curriculum" in general: does knowledge have *no* internal structure, so that anything could be learned at any time, regardless of background? This is truly a "knowledge as manifest" position. But, if not, then why should a purely student directed, practical concern focused, approach be expected to rediscover the prerequisite and relevancy relationships inherent in the organization of knowledge — relevancy relationships that have in some cases required *centuries* of work to discover? Why remove the scaffolding inherent in curricular structuring? Gergen acknowledges *no* grounds for any such impositions — again, he presupposes that knowledge, and knowledge relevancy, is manifest.

Gergen's discussion, with its focus on "practical pursuits", makes no mention of any considerations, of any motivations, such as curiosity or esthetics. In this, he was not alone: such topics seemed curiously absent from the entire conference. Furthermore, he is being consistent in this respect: curiosity and esthetics are individual level considerations, not aspects of social dialogue per se. In my judgment, however, this lack of space for such considerations in the social constructionist perspective is just one additional indictment of the perspective.

For example:

> To put it in other terms, why should education be preparatory to communal existence rather than a significant form of existence itself? When one is carrying out responsible practices in the world, books, mathematics, and experiments are not hurdles to be jumped under threat of punishment. Nor are they building blocks for a good life to begin at some point in a hazy future. Rather, they serve as resources for ongoing dialogues and their associated practices. ... Or, mathematics for example, is no longer an odious medicine, swallowed by most students even when they cannot articulate the sickness for which it is said to be the cure. Rather, mathematical techniques may become the needed tools of understanding and expression — for determining the significant rise and fall in various phenomena, for assessing costs and benefits, for reading demographic charts, or for effectively communicating the results of one's studies to others (p. **).

There is an utter neglect of esthetics and curiosity in this notion of mathematics. Mathematics becomes merely an odious but sometimes rhetorically useful tool. Further, if mathematics is so odious, and if all knowledge is just whatever society says it is, why don't we agitate, persuade, society to simplify mathematics? Wouldn't our rhetoric be better directed in that way? Wouldn't our world be much simpler if pi (π) simply equaled the integer 3? Is that question absurd? How, within a social idealism, is it absurd? Gergen owes some answers to such prima facie reductios of his position — without re-introducing the abhorrent classical epistemologies.

Values? Concerning Gergen's notion of education as "conversation", as dialogue: **why not authoritarian dialogue?** This is not to suggest such, but to point out that the values embedded in Gergen's proposals have nothing directly to do with social constructionism per se — though they are historically related in the Enlightenment's rejection of authority, both social and epistemological. What's worse about Nazi dialogue, or ancient Aztec dialogue, than Gergen dialogue? Again, there is no answer derivable from within social constructionism. (Even the *notion* of "derivation" is suspect.)

What this points out is that Gergen's positions constitute an importation of communitarian values on top of a classical, positivist, epistemology — and an importation of values that do not acknowledge complicated technical knowledge, or the difficulty of discovering the relevance of some sorts of knowledge to others. "Students should choose" is nice, and can be argued for on multiple grounds, but as a *paramount* value, it assumes that knowledge is manifest — anyone can see it and have it. In fact, in this view, knowledge is obtained freely *de novo* and without constraint, so long as one's dialogue community accepts it as such. There is no explication of these assumptions, and certainly no defense of them. And they are most certainly wrong in many cases. Gergen's examples are not of anything beyond marshallings of "facts" and arithmetic in the service of advocacies — and that is no accident. Gergen's assumptions of obviousness and accessibility, both of knowledge and of its relevance, are just false for much complicated knowledge.

A Counter Ideological Critique. Gergen offers an ideological critique of classical dualisms as being allied with possessive individualism. I would like to offer a counter-critique to Gergen's positivism: Popper points out that, if knowledge is assumed to be manifest, then it becomes very difficult to explain error (Popper, 1965) — especially when you've just *shown* them the error of their ways or positions. The conclusion is standardly reached, in this view, that error can only be deliberate — evil — since the truth is manifest. (If there's no truth at all, and no error either, then what's wrong with Nazism? Idealism readily yields relativism.) But such a view of error, in turn, makes any who judge acceptability, that is, everyone, into defenders against deliberate error, against evil. Error is evil, and evil is not merely wrong, it is odious, heinous. This, in turn, yields virulent and vicious totalitarianism, as in the French revolution. How does Gergen avoid this progression? He may not want any such thing, but he is espousing a position that has such consequences as very real dangers.

Gergen's positions concerning education are not really a model of *learning*, but of what really is and ought to *be learned*. Gergen does have some intuitions about learning, however — aside from the implicit positivism, his proposals amount to a sort of learning by doing. Prima facie reasonable, at least in part, but why *that* within his framework? For contrast, why not voodoo incantations invoking the community spirit? The point is that he leaves to his undeveloped presuppositions an essential part of his proposal — how

does the learning of authority-granted behavior occur? Could it be, for example, that it occurs via radical constructivism?[1]

On a Conclusion. The conclusion of Gergen's paper is, simultaneously, disingenuously inconsistent and, nevertheless, consistent with the rest of his position. It is disingenuous in that he claims that:

> Thus, in the end, a certain rapprochement is invited: constructionism welcomes the continued participation of all our traditions in the current challenges of education, champions its antagonists, and favors the development of still further modes of practice (p. **).

This sounds nice, but it is a rather odd position regarding "antagonists" that face such problems as

> how can we ascertain whether our subjectivities match the objective world when we can never confront the external world independent of our subjectivity? If we live in a world of private experience, on what grounds can we presume that indeed there *is* a second world outside of this one? (p. **)

and antagonists that have such consequences as favoring

> a narcissistic or "me-first" disposition toward life, but [that] cast others (along with the physical environment) into a secondary or instrumental role (p. **).

and, much worse, that pose "a major threat to human well-being." Gergen's stories are not consistent.

On the other hand, Gergen also points out that

> From the constructionist standpoint, there is nothing about the theory that demands assent. Constructionism offers no 'first philosophy,' no ultimate justification for its voice above all others (p. **).

This too is rather odd given the destruction and rejection of empiricism and rationalism, of correspondence notions of meaning or truth, and the proclamation of the linguistic ontology of human beings and of knowledge. If all of that is not an attempt to "demand" assent, if, in fact, it would not demand assent if it were correct, then what is or was the point of it all? But, if all is just rhetoric, then *nothing* can demand assent, even tentatively or fallibilistically. If all is rhetoric, then we are in fact faced with a relativism of knowledge claims, whether they be in physics or mathematics or education or values

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[1] This is part of the question of the epistemological relationship between the individual and the social-linguistic reality. It will not suffice for Gergen to simply decline to address such questions. Either the questions must be shown to be ill-formed in some way, or they must be addressed. Gergen does neither.

and ethics or history or whatever. If all is rhetoric, then this applies to social constructionism too, and it too is nothing but more rhetoric. In this respect, Gergen's position here is consistent.

Steier.

Steier's root metaphor is that of second order cybernetics, with its emphasis on reflexivity and the community of active observers. "Constructionist research programs that take seriously issues of reflexivity then necessarily become programs of *collaborative learning*."

Idealism Again? I agree with Steier's emphasis *as a corrective*, but as a full perspective, there are problems. Second order cybernetics arises from a recognition of the intrinsic, necessary, omnipresence of an observer. Furthermore, there is the recognition that the cybernetics of cybernetics is fundamentally changed by its own self-pointing. What is not clear, however, is where in this perspective the errors that ground radical constructivism could arise. If there is nothing beyond the observer, or the community of observers, then what is there to observe, and perhaps encounter surprises with. In other words, it is not clear how Steier avoids the problems of idealism.

We find "being grounded in our assumed shared pre-understandings embedded in the language of our community (generated and jointly stipulated by inter-personal communication activities) marks our constructing processes as decidedly constitutively social (and is the core of e.g., Gergen's (1985) and Shotter's (1984) programs of social constructionism)" and "objects can be seen as socially constructed by us and embedded in our activities". If objects are embedded in our activities in such ways that they might resist our social constructions, then we have a ground for constructivism; if not, then we have idealist constructionism.

Maturana. Maturana, for example, disavows solipsism and idealism (Maturana and Varela, 1987), yet has explicitly endorsed a linguistic idealism (Gordon Conference, 1986), and the purported avoidance of it in the 1987 book is *solely* a construal from within the necessary observer perspective: an observer can make connections between a system and its environment, since the observer is, by assumption, external to them both. If we inquire about observers themselves, however, the circularities that so enamor second order cyberneticists become vicious: if nothing *is* except insofar as an observer construes it that way, and if observers *are* only insofar as other observers construe them that way — in language, according to Maturana — then we have a full idealism, despite the disavowals. And, as is pointed out (Maturana and Varela, 1987), this yields, among other things, relativisms.

Idealism, Relativism, and Tolerance. Maturana seems to feel that the relativism to which such a position leads is conducive to a humility about knowledge claims, especially claims concerning ethics and politics — that is, recognition of relativism should yield tolerance and a lifting of oppression. Unfortunately, this is not so. Having no grounds for any sorts of knowledge claims, other than rhetoric, within an idealism does yield relativism. But relativism, as Rorty (1987) points out, simply means that we have no grounds for complaint when the torturers and the men in jackboots come kicking in our door — there is no implication from relativism to tolerance.

The stakes involved in this contemporary issue of idealism are quite serious. Furthermore, the idealist positions are conceptually malignant: they rest on legitimate and generally accurate renderings of the historical failures of classical epistemologies and offer a sometimes heady feeling of transcendence of those failures — but the progressions from idealism to relativism, from linguistic idealism to rabid communitarianism, are intrinsically powerful and unavoidable once the premises are accepted. They remain unavoidable even in spite of the good will and pacific intentions of some of the propounders of such idealisms.

Spiro.

Spiro proposes, and presents examples of, a hypertext architecture designed to aid the learning of complex domains. The aspect of this proposal that I wish to focus on is that of such hypertext systems as *scaffoldings* of learning. In general, I applaud the power and the creativity of the approach; I'm currently studying differential geometry, and I wish I had one of these for that subject.

Content and Relevance. It is obvious that Spiro's systems serve scaffolding functions: among other things, they greatly reduce the search space that the learner must otherwise rather blindly explore. But what is scaffolded in such systems is not just the *content* knowledge of a domain, but, perhaps more important, the *relevance* of potential knowledge, knowledge that the learner does not as yet have. *That* certain issues, topics, facts, or whatever might be relevant is often of as much importance as the particular issues, topics, facts, and so on, per se. Such relationships of relevance are of even more than usual importance, and difficulty of mastering, for the ill-structured or complexly structured domains that Spiro discusses. What is most importantly learned in this view is not knowledge per se, but a sort of *meta*-knowledge of how to construct relevant knowledge when it is needed. Furthermore, multiple experts, multiple authorities, multiple sources in general, helps scaffold reflection on the variability of constructions and purported answers.

Errorless versus Errorful Learning. One additional point that I would like to make about such a scaffolded notion of learning is that it is *not* compatible with classical notions of learning as being *optimally errorless*. In classical passive-mind perspectives, tasks to be learned should be broken down into successive layers of subcomponents and subtasks, and then taught from the bottom up. Ideally, the breaking down would be so refined that the learner would make no errors in moving up the hierarchy. Practically, of course, errors are expected, but ideally they are minimal. In a scaffolding view, however, errors are *necessarily* a part of optimal learning and developmental trajectories. The whole point of a scaffold is to block errors from having selection pressure effects; intermediate constructions, then, will necessarily be errorful with respect to those currently blocked pressures. Furthermore, it is arguable that learning what constitutes error, and how it constitutes error, is at least as important as learning what constitutes the "right" answer (Bickhard, 1991b). In fact, I would argue that it is *only* in terms of learning how a "right" answer succeeds in avoiding the various possible errors that one has gained any understanding of how and why a "right" answer is correct. That is,

understanding, as opposed to rote passive learning, requires error learning. This is a vastly under-emphasized aspect of education.

Wertsch and Toma.

I applaud Wertsch and Toma's presentation of the genetic method, of the importance of social situatedness and social constitutedness, and of the balance between universal and particular considerations — most of what they have written. These are extremely important acknowledgments of and corrections to contemporary perspectives.

Mediation. I'm concerned, however, about two theoretical points. The first is the notion of *mediation*. Instrumental mediation as with tools is potentially quite complex and troublesome, but, more importantly, mediation as with tools used as a conceptual framework for representations, as in the Vygotskian conception of language, seems to me to presuppose an encoding notion of representation.

Put as questions: *What is the relationship between the instrumental and the representational?* How can the representational be accounted for? If representations and other phenomena can be emergently constructed, then might not there be something more than just mediation going on?

Leont'ev's version doesn't suffice: "the process of internalization is not the transferal of an external activity to a preexisting, internal 'plane of consciousness': it is the process in which this internal plane is *formed*." Internalization is "the process of gaining control over external sign forms." This still presupposes representational sign forms.

It also implies that consciousness **is** the internal plane of control over external sign forms. Again, we need a model of how this occurs, not just with respect to instrumental perspectives on tool use, but with respect to understandings and usages of *representations*. This distinction seems fundamentally conflated in the Vygotskian framework.

Similarly, what sorts of processes could account for Lotman's dialogic generative function of language? How could these fit with a notion of tool mediation?

Internalization. My second theoretical concern: *Internalization is a bad metaphor for variation and selection constructions***.** In my judgment, this is so for either the Piagetian or the Vygotskian version of internalization. What's outside? How does it come in — even if it is changed in doing so? More fundamentally, why does what *comes to be* inside *ever* have to be outside, in any form? This sounds like the classical assumption that representation and knowledge must come *from* somewhere.

Consider constructions under selection pressures: what satisfies the selection pressures is not an internalization of those pressures, but, rather, something that is successful in meeting them, satisfying them, accommodating to them, blocking them, and

so on. There is no coherent way to get from “internalization” to variation and selection constructivism. This I contend is a fatal problem for internalization based frameworks.

Bauersfeld.

Bauersfeld wants to emphasize consideration of social situatedness and social processes in education. But the perils of such a needed corrective seem to appear in his account too. According to Bauersfeld, there are "two theoretical views: reading or discovering realities (the realist position), versus constructing viable ways of interpreting in social interaction (the social constructivist position)."

Non-exhaustive Dichotomy. First, this is not an exhaustive dichotomy. Furthermore, problematics of this false dichotomy seem to manifest themselves in Bauersfeld's paper. We find, on the one hand: "we understand the development of mathematizing in the classroom as the interactive constitution of a social practice." and "Students arrive at what they know about mathematics mainly through participating in the social practice in the classroom rather than through discovering external structures existing independent of the students." These would seem to construe mathematics and mathematical knowledge as strictly social in *constitution*, not just in origin.

On the other hand:

> The **selective force of social practice** on the participants' constructing endeavors is open to an interpretative analysis in three ways:
>
> 1. In actual social interaction (from a short term perspective), through the failure or **rejection of the enacted construction**. Under the "obligation" to answer a teacher's question, this can lead the participant to abandon, correct, or change the construct.
>
> 2. Also in actual social interaction, through a **relevant person's** (teacher or student) **pointing at** or placing emphasis on something. As another part of the regulation of classroom communication, this indicates a change of the actual focus of attention. It is what Maturana in general has called "the orienting function language", and can inspire participants to a redirecting of their actions and to related reconstructions.
>
> 3. From a long term perspective, and more indirectly, through the absence of alternatives and **the non-existence of certain obstacles**. What has not become reality in the subject's own experiencing has — if at all — very little chance of being created out of itself (p. **). (emphases added)

Furthermore, "rejected constructs, as well as ‘pointing at’ and changing the focus of attention, can become **challenges for the subject's reflection**." (emphasis added) Such a consideration of selection forces, rejections, obstacles, and so on — most especially, obstacles that inhere or fail to inhere in the subject matter itself — are radically *inconsistent* with a pure social ontology for mathematics.

It is not possible to have both. Bauersfeld here seems to be wanting to both have his social constitutive idealist cake and yet to eat it too. How does he make good on the notion of "obstacle" or "subject's reflection" within a social idealism? If not such an idealism, then why, in what sense, is mathematics nothing more than a social practice?

Konold.

Konold suggests: "There seem to be at least three epistemological realms in which contrasts between social and psychological entities are being made by these authors, and misunderstandings are bound to arise from conflating them. These realms ... include a) objects of knowledge, b) sites of knowledge, and c) mechanisms of knowledge construction." I would agree, and would add for consideration, the relationships among them — that is, the emergence relationships among the various *sites* of knowledge, and the involvement in those emergence relationships of the *processes* of knowledge construction.

A Problematic for Social Idealism. Konold also introduces an interesting problematic for Gergen's conversational approach to education: "For example, in order to have classroom discussion in which students 'negotiate' mathematical meanings, students must overcome various conventions that shape ordinary conversation in our culture, in which disagreements and potential conflict are shunned (Stubbs, 1983). Also, given that methods and objectives of conversation vary among cultural subgroups (e.g., between men and women; Leet-Pellegrini, 1980), different styles of discussion are likely to place certain students at a disadvantage."

On one level, this is a practical complication — students do not bring equal resources to the process that Gergen advocates. More deeply, however, it points to the fact that individuals have to *learn* **as individuals *how*** to participate in whatever social processes they co-constitutively participate in. But, in order for any such learning problem to exist, the individuals must *exist* prior to their learning the conversational skills involved. This is a practical educational version of the general point that Gergen's model cannot acknowledge pre-linguistic infants — if all ontology is linguistic, then the notion of a non-linguistic ontology, an infant, doesn't make sense. Here, social idealism cannot handle individual differences in hermeneutic competences and orientations. Gergen's model has no way of addressing such persons. By default, he leaves all such issues to be dealt with by the students themselves, again presupposing knowledge and relevance as manifest. If it is not manifest, then there has to be something more than just locations in dialogic space.

Confrey.

Confrey's primary issue arises from an exploration of an inherent incompatibility between Piaget and Vygotsky, and the consequences of that incompatibility for investigating the problematics of the development of the person. At a rough slogan level, Vygotsky is concerned with social internalization, while Piaget is focused on the coordination of actions. Language is one among many examples of the semiotic function for Piaget, while mastering language, and internalizing the socialities thereby

encountered, is at the core of Vygotsky's model. The incompatibility is that, since language is inherently a *part or aspect* of Piaget's model of natural development, to insert that model into Vygotsky is to violate Vygotsky's core sociality; while to elevate language to the position it holds for Vygotsky is to violate the developmental process model of Piaget.

The problem that Confrey is struggling with here is that there are two notions of "person", of agent, involved: an epistemic agent for Piaget and von Glasersfeld, and a social agent for Vygotsky. Neither position can integrate the other, and they cannot be simply hybridized: To simply attach either to the other is to violate at least one of the central notions of agent involved. For von Glasersfeld, the self and relationships with others emerge within and are based upon the emergence of objects in general, while for Vygotsky the self emerges from self-other relationships. What is taken to be primary is reversed in these respects between the two approaches.

Framework for a Resolution? Confrey proposes two frameworks for a possible resolution of this conflict: Maturana's autopoesis and Kegan's specific notions concerning individuation and communion as a framework for the emergence of the self. At this point, I part with Confrey's account, since I do not accept her primary framework. In particular, as mentioned, Maturana has, in my judgment, fallen fully into the idealist position, and his framework does not seem to me to allow any possible way out. Kegan's position, on the other hand, I think is a very real one, and deeply important in contemporary culture. It has a great deal of validity for self development today.

But, Kegan's framework is a modern rendering of the historical tension between freedom and belongingness that was introduced in the Enlightenment. It is a tension that remains unresolved today, and plays its own important role in each individual's development in modern Western society. It is highly questionable, however, as an intrinsic characteristic of human beings. It is not at all clear what its validity is beyond the bounds of the Western cultures that inherit this tension from the Enlightenment.

Epistemic Agents and Social Agents. In alliance with Confrey, I suggest that some distinctions between differing sorts of agents are necessary in order to begin to address these issues. In particular, not distinguishing the epistemic agent from the social agent makes any model of their developmental relationship impossible. Social constructionism subsumes the epistemic into the social; Vygotsky ignores the epistemic agent; and von Glasersfeld reduces the social agent to the epistemic agent.

Emergence. A central barrier preventing any such differentiation and integration is the absence of notions of emergence in contemporary theorizing. There is no emergence in logical positivism, since the only ontology acknowledged is that of basic substances and facts in the world — emergence has the flavor of vitalism and other supernatural failures. With no emergence, there can be no emergence of a person. Instead, there is simply an epistemic agent who knows more and more, including more and more social facts as well as naturalistic facts. Such accumulation of pieces of knowledge does not yield emergence.

Similarly, there is no possibility of emergence in social constructionism. All ontology is reduced to language and social processes. Any purported emergence within such a framework would either be nugatory or would violate the idealism involved; any genuine emergence would be a source of genuine *resistance*, surprise, to the social processes — it would have some independence from the social ontology.

On How Learning Can Change the Epistemic Agent. So long as the epistemic agent merely accumulates pieces of knowledge, social development will not change the nature of that agent, but will only fill up the agent's storage banks. In the Piagetian and radical constructivist perspectives, however, epistemic agents do not merely accumulate pieces of knowledge. Knowledge is constituted as organizations of potential actions and interactions, and *the epistemic agent **is** that overall organization*.

This point is critical, since it implies that learning and development are not merely accumulations in the storage bank. It implies that development is, or at least can be, a progression of changes in the agent itself. That is the first requirement for any possibility of emergence: change. If those changes are such that some form of genuine emergence results, then we have the framework for accounting for developmental emergence.

Emergent Sociality. The basic logic of such developmental emergence would indicate that the social person will be emergent in the development of interactive knowledge of the social world. As the agent — e.g., the child — comes to be able to function progressively more competently in the social realm, the agent becomes more and more of a social agent. But this, then, introduces the problematics, among others, of the nature of such social realities — of their emergence and history in evolution.

The basic framework that I suggest, then, is in three parts: 1) an epistemic agent in which knowledge is constituted as organizations of potential interactions, 2) an account of the emergent nature of social reality within the biological and psychological world, and 3) a model of how and why individuals come to learn sociality so fully, thus becoming social beings and participatively co-constituting the same social reality. This is not the place to attempt to fill out this framework (see Bickhard, 1980, 1987, 1992a, 1992b, 1992c, 1992d). I suggest it, however, as an approach to integrating the concerns of epistemics and sociality.

Integrating the Epistemic and the Social. The problem of the integration of the epistemic agent and the social agent is a central facet of the organizing theme of the conference; it is the agent-focused perspective on the world-mirroring versus the world-making dilemma. Certainly, the problem of the integration of the epistemic agent and the social agent is critical to understanding and to improving the educational process as to no other. In this perspective too — this agent-focused perspective on the world-mirroring world-making dilemma — there's gotta be a better way.

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