Educational Crises and the Scramble for Usable Knowledge

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Abstract: Quality-control efforts in the field of applied developmental psychology are just beginning. In this paper I set these efforts in a larger context to frame their significance and guide their direction. I argue that the challenges arising in the current post-national constellation are best understood as educational crises. The task demands of the global problem space increasingly outstrip available human capabilities. This situation is leading to a scramble for usable knowledge about education—defined broadly as any process intentionally undertaken to promote human development. There is a growing demand for techniques and technologies that catalyze the transformation of human capabilities; and this demand exceeds available supplies. Education becomes a growth market as specific types of human capabilities come to be recognized as scarce but valuable resources. This pressing global demand for innovative educational solutions and approaches has the potential to systematically distort the production of relevant usable knowledge. I present a set of general quality-control challenges that face the field of applied developmental psychology as it strives to meet the demands of a globalized crisis-ridden educational marketplace. I argue that the field should overcome temptations to circumvent peer review processes by going directly to consumers. I suggest adopting a general stance of *epistemic humility* so that research and collaboration are promoted and argumentative strategies that insulate approaches from criticism are avoided. Finally, I argue that more careful attention should be paid to the normative dimensions of educational enterprises, as they involve the creation of new values and raise ethical questions about the shape of what life ought to be like.

Keywords: developmental psychology, education, post-modern global society, quality control, usable knowledge.

We Developmentalists

This paper is the third in a series of publications about applied developmental psychology (Stein, 2008; Stein & Heikkinen, 2009). In these publications my broad goal has been to start a serious discussion about the proper and improper uses of developmental metrics and models. Along the way I have had the good fortune to participate in exchanges about these issues with some of the greats, including: Ken Wilber, Susanne Cook-Greuter, Bill Torbert, Bob Kegan, Howard Gardner, Kurt Fischer, Michael Commons, and Theo Dawson. Now, with this special section in *Integral Review* my network of interlocutors has expanded once again. The responses to my efforts have made it clear to me that the quality control issues I have raised are important to many thoughtful people. Moreover, the tone of the discourse has made it clear to me that these are domestic disputes. We developmentalists are on the same team and want to find ways to work together to insure the knowledge we have gained gets put to use as ethically and efficaciously as possible. However, as I explain below, we need more than good intentions.

In his brief but insightful counterpoint Basseches (this issue) raises the specter of a "tyranny of measures" — a socio-political situation wherein psychological measures supplant respectful discourse and enable forms of institutionalized domination. I think that there is good reason to fear this as a possible future. As I have stated elsewhere (Stein, Dawson, & Fischer, in press) the majority of post-industrial societies have large educational systems dominated by complex standardized testing infrastructures. In some contexts the situation already resembles a kind of "tyranny of measures," where psychological measures alone determine the distribution of opportunities and rewards. At least since the publication of *The Tyranny of Testing* (Hoffman, 1962) many have leveled broad and incisive criticisms of the testing industry. But, despite clear evidence that the approach is flawed (e.g., National Research Council, 2001) there is continual political push towards expanding the existing testing infrastructure. These expansions will inevitably infiltrate higher education and human resource management in business and government.

It is clear to me that the push to expand testing infrastructures should be seen as an errant response to profound challenges that face large sectors of society. Below I argue that the current post-national constellation faces endemic *educational crises* (see Figure 1), wherein the problems we need to solve outstrip our capabilities. Thus, echoing Habermas (1984; 1987) and Wilber (1995), I argue that viable solutions must entail the promotion of *learning processes*. We must find ways to foster the development of individuals who are *capable* of navigating the complexity of this historical moment. The ever-expanding testing industry is one face of current technocratic responses to this problem. The other face is an ever-expanding branch of the biomedical technologies industry that focuses on the "enhancement" of psychological functioning (see, Stein, della Chiesa, Hinton, & Fischer, in press). There is a pressing need for usable knowledge about how to affect the transformation of human capabilities and a sprawling set of markets is springing up around this need. If market mechanisms dominate the available supply of educational options, we may face not just the tyranny of a standardized testing industrial complex but also a brave new world characterized by large-scale strategic alterations of the human nervous system.

It is my hope that we developmentalists might be in a position to affect the trajectory of our society's response to the educational crises it faces. This includes shaping the future of institutionalized applications of psychological measurement. It also involves engaging in research about how development is best fostered. And, I think, we also need to weigh in on the normative and philosophical issues at the heart of human development, clarifying which potentials are preferable and ethically vetting the means we are willing to employ to achieve them. But the complex context in which we make our efforts works against us.

Below, after clarifying the nature of the educational crises that constitute this context I discuss characteristics of our current knowledge production processes that might undermine our best intentions.

Educational Frontiers and Educational Crises

It has been suggested that with the closing of the American West early in the 20th Century education became the new frontier. Education came to be invested with the ameliorative and

utopian (and opportunistic and exploitative) energies that once characterized westward expansion (Karier, 1986). During the 19th Century the West exemplified the possibilities of American democracy. Its vast expanses and resources were understood as indispensable enablers of America's future as a land of opportunity, freedom, and equality. The "problems" of immigration and labor, of urban crime and poverty, of anomie and economic stagnation—these could all be solved by heading west, it was said, where the future of America was being forged, where everyone looked out toward an open horizon. Since the early 20th Century, so the argument goes, these same ideals and energies have been tied to the possibilities of education. Just as the West was once thought to make all things possible, so now education is saddled with the burdens of accomplishing democracy.

This is an important insight and one that is more significant today than when it was first expressed in the 1960s. But today an argument about the function of education needs to be more than a story about American nation building. It needs to shed light on the current post-national constellation. Familiar ideals—birthed in both Athens and Jerusalem—have catalyzed the global expansion of certain techno-economic conditions and moral-political orientations. The rule of law and democratic governance processes increasingly characterize societies worldwide. These are social changes typically accompanied by free market capitalism and industries built around scientific and technological innovation. As diverse and geographically distant markets and cultures have become irreversibly interconnected through increasingly complex communication networks, the most advanced nations in the world have come to share a common historical trajectory. Since the end of colonialism and the failure of the Soviet experiment there remain no alternatives to the dominant modes of political and economic organization (Habermas, 2001). This is just to say that major shifts in the trajectory of the total system, such as those needed to handle climate change and terrorism, are now possible only from within. In the context of this need for immanent self-transformation, it is education that saddles the burdens of accomplishing a just and sustainable global civilization. The educational frontier is trans-national.

Importantly, *education*, as I use the term and its variants here, signifies more than what happens in schools. Following Dewey (1916), Cremin (1976), and Habermas (1984; 1987), I think education is better understood as a broad socio-cultural function and form of human interaction. Dewey went so far as to say that all communication is educative, a view I have some sympathy with. But I will say instead that any intentional effort to promote human development is an educational effort. Or, put slightly differently, any initiative taken to affect a valued transformation of human capabilities is an educational initiative. So *schooling* is just one form of education—albeit a particularly important and powerful form. Coaching and psychotherapy would be educational initiatives according to this definition, as would professional development programs and most organizational consulting work. The publishing industry, television, film, and the Internet all have educational affordances and represent some of the most expansive possibilities on the current educational frontier.

So my argument is that education, thus broadly defined, serves a unique and powerful function in the emerging global civilization that surrounds us today. There are no major global challenges that do not have critical educational dimensions. Moreover, many key challenges are primarily educational in nature. This is just another way of saying that changing the trajectory of the total system requires changing how people think and act, which can only be done by finding

ways to affect valued and needed transformations of human capabilities. Human development is the elephant in the room when it comes to calls for systems level change.

This line of thought suggests that the climate crisis is actually a crisis of human decision-making, and that educational initiatives are as (if not more) primary and important than legal and industrial ones. A new generation of "green" voters and engineers must be fostered through educational initiatives; leaders must likewise come to think and act in more sophisticated ways. If the task demands of building sustainable systems and lifestyles are more complex than the capabilities of those asked to do so (which I think is the case, in fact) then no matter how much funding we throw at achieving sustainability, our efforts will fail. Building a "smarter planet" through technology (*a la* IBM) and policy (*a la* Al Gore) is necessary, but smart people are a prerequisite. Wilber (1995) suggested as much over a decade ago when he noted that the greatest threat to the biosphere is not industrial pollutants but rather the current low developmental level of human capability with regards to relevant decision-making domains.

This reading of the climate crisis displays what is actually a general trend in contemporary society, one noted by Wilber (1995), Kegan (1994), Habermas (1975), and Jaques (1970; 1976), among others. This is a trend toward educational crises of increasing prevalence and intensity. Figure 1 displays the general structure of an educational crisis. The displayed mismatch between demands and capabilities is ubiquitous in the post-industrial world, characterizing both the struggles of individuals and broad societal trends.

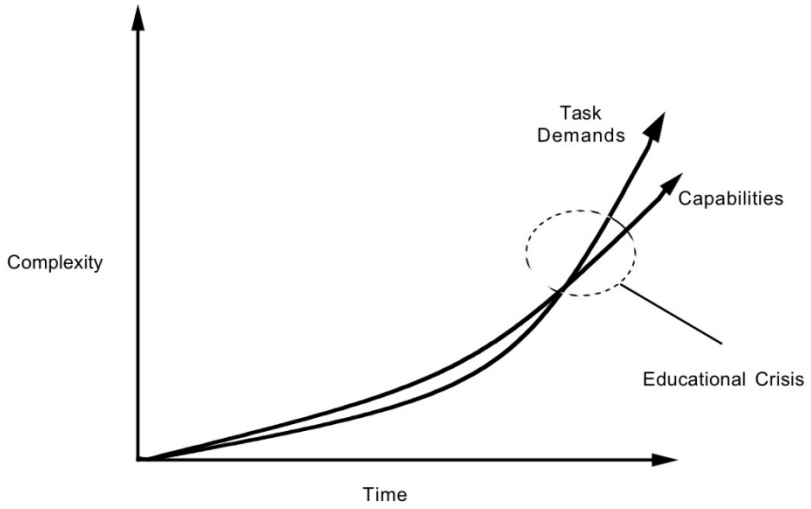

Figure 1: An educational crisis occurs when the complexity (diversity, quality) of task demands outstrips the available capabilities. This can happen to both individuals and societies. Based, with permission, on a comparable figure rendered by Carreira (2009).

The task demands of work and life outstrip individual capabilities on multiple fronts (Kegan, 1994). Rapid technology driven innovations and economic pressures shape the employment histories of individuals, disrupting stable patterns of competence and establishing the need for professional development and lifelong learning. Advances in biomedical technology and an increasingly unwieldy health care system put unprecedented decision-making demands on individuals and families, who must navigate ever shifting diagnostic categories, treatment

options, and the complexity of the insurance industries. Communication technologies enable expansive social networking opportunities that radically alter socialization patterns and identity formation. The construction of a continuous and coherent life-project is more demanding then it has ever been (Beck, 2001; Arnett, 2004).

Broad social trends also reflect educational crises (Habermas, 1975; 2001). The latest economic crisis is a case in point. Like the climate crisis it is perhaps best read as a crisis of decision-making. Debates in economics and politics have taken an epistemological turn, as many have come to question our very *ability* to understanding the global economy at all. This suggests that the task-demands of regulating massive trans-national markets outstrip the capabilities of those who seek to do so. Other fronts present comparable educational challenges. Executing an ecologically responsible redesign of energy systems requires accomplishing feats of engineering that are stunning in their scope and complexity. Global terrorism is, when viewed along these lines, a significant educational issue. Terrorist networks are, in fact, remarkably effective educational organizations. And the difficulties of inter-religious and cross-cultural conflict mediation and dialogue are primarily educational. If the task of constructing a just and stable world order demands more from us than we are capable of, then we must change the nature of our capabilities.

So education is a growth market—from self-help books, life coaches, and online universities, to Ritalin, the blogosphere, and Google. Large swaths of society are groping for ways to cope with the mounting complexities of the historical moment. But the demand for effective educational interventions far exceeds the supply of approaches that have proven effective. For example, snake oil salesmen already successfully broker so-called "brain-based" educational approaches to unsuspecting parents and teachers, making outlandish scientific-sounding claims about their products' effectiveness. The presumed educative benefit of emerging information technologies (e.g., the search-engine, Wiki, blog, or e-learning module) is questionable, given the sheer quantity, diversity, and ambiguous quality of the content. Informational environments are *not* always educational environments (although educational environments *are* always informational environments). Biomedical technologies built to improve attention, memory, or emotional self-regulation are likewise unreflectively endorsed as effective, while the impacts of long-term usage are totally unknown. Psychotherapy, executive coaching, and professional development programs of various shapes and sizes are proliferating and testing the limits of what the market will bear as far as what qualifies as a useful learning experience.

This is the context in which the field of applied developmental psychology finds itself. With over 100 years of cumulative theory and research—from Baldwin through Piaget and Kohlberg to Fischer, Kegan, and Wilber—the field is uniquely positioned to address the current need for broadly effective educational innovation. However, existing cultural trends and market dynamics work to counteract the value and validly of what the field has to offer. Basically, as was just suggested, because the need is so great, it is easy to sell just about anything. Moreover, powerful political and economic forces have shaped mainstream efforts toward the aforementioned technocratic solutions combining standardized testing with biomedical technologies. For the field of applied developmental psychology to gain traction we must respond to the demands of this globalized crisis-ridden educational marketplace with a unique and powerful *modus operandi*. My calls for quality control, and the ensuing discourse (in this journal and beyond), should be

understood as attempts to articulate just what this might look like. The broad idea of an *Institute for Applied Developmental Theory* focusing on quality control and fostering collaboration—first articulated by Ross (2008) and echoed by Stein and Heikkinen (2009)—remains one of the best options. Below I continue to sketch the contours of preferable knowledge production processes with the hope of further helping knowledge workers in the field to build such a common mission and vision.

Building Useable Knowledge in a Time of Crisis

In prior publications I have noted the need for researchers and practitioners to hold developmental metrics to more rigorous psychometric standards (Stein, 2008; Stein & Heikkinen, 2009). This is a critical point for a variety of reasons, as Dawson's sketch of basic concepts in psychometrics elucidates (Dawson, this issue). Make no mistake, if we do not handle these foundational psychometric considerations we will remain on the sidelines as large human resource management agencies, test manufactures, and governments work to build educational infrastructures around approaches that can (ostensibly) prove the scientific-quantitative validity and reliability of their instruments. Importantly, quantitative and qualitative methods are not mutually exclusive; both can be transcended and included in more comprehensive and rigorous approaches to psychological research (Habermas, 1988; Dawson, Fischer, & Stein, 2006). The pursuit of psychometric rigor is *not* in conflict with the goal of "disclosing interiors" or providing rich, broad, and useful descriptions of psychological phenomena. But the explicit pursuit of psychometric rigor *is* a necessary but not sufficient component of any approach that aims to have an impact on current trends toward the large-scale institutionalization of psychological measurement. If we opt out of this task we will be relegated to the fringes, unable to address the arguments of those espousing more overtly reductionist-technocratic approaches. So the call for psychometric rigor is critical.

But we have more than psychometrics to worry about. There are a host of other issues with the potential to undermine our efforts at collaboratively building usable knowledge in this time of educational crises. Here I select three such issues and briefly elaborate what is at stake. These issues reflect my experiences with the current discourse. They should be taken as part of the collective ongoing efforts to outline best practices for developmentalists exemplified by this issue of *Integral Review*.

In general, the interface of academic research and real world application is a dynamic and difficult place to build knowledge (President's Council of Advisors on Science and Technology, 2008). Balancing the demands of the market or problem-space with the demands of academic rigor can strain efforts, typically leading initiatives away from the academy and toward the marketplace. Moves away from standard academic methods of peer review often warrant the creation of independent quality-control agencies to monitor knowledge production—such as the FDA for the biotech industries. However, there are an increasing number of fields moving from the academy toward the market that have not established non-academic methods for quality control (e.g., educational/psychological technologies, nanotechnologies, information technologies, etc.). If market mechanisms dominate the production of knowledge the impact of commodity fetishism is epistemological, creating a false consciousness of what is possible and

preferable. If the pressure to find workable solutions overrides care and due diligence then the solutions adopted may create more problems than they solve.

Peer Review Processes

The first issue I want to address concerns how the field of applied developmental psychology engages *peer review processes*. For many of us the goal is not to publish in order to secure an academic position or advance knowledge; the goal is to build knowledge so it can be put to use. Success is thus not gauged in terms of standard academic acumen. Rather, success resides in the ability to execute effective applications and garner support for the methods and approach. Put crudely, success is measured by whether the approach sells. If the approach sells, why take time and energy to publish in peer-reviewed journals? Moreover, so the thinking goes, it sells because it works and it works because it is true (or accurate, valid, reliable, etc.). However, as Marx pointed out long ago, the value and popularity of a product on the market is typically not a reliable index of its actual worth. Market dynamics should not be understood as a proxy for peer review.

The market value of usable knowledge about human development is contingent on a variety of factors. Academic credibility is one factor. But the relation between the academic or scientific value of an approach and its market value is not straightforward. In knowledge intensive applied fields, end users—clients, customers, consumers—are typically not in a position to evaluate the validity of academic or scientific claims about the product; we must take the pharmaceutical companies at their word because we don't understand biochemistry well enough to determine the validity of their claims. Applied developmental psychology is no different. End users are typically not in a position to interrogate the claims made about the effectiveness of approaches or the reliability of metrics. This situation is not necessarily a problem. The FDA serves my interests as a consumer of pharmaceuticals by standing in place of peer review processes. But in fields where the market is growing and there are no comparable agencies exercising quality control in place of peer review, problems can arise. Situations occur where the *appearance* of academic credibility creates more market value than actual academic arguments and practices. This is, I think, where we are at as a field, mainly as a function of the fact the education is a growth market; we are simply scrambling to meet demands.

None of this is to say that the peer review process as it is usually practiced is flawless. There are major problems with many peer review practices (see Tipler, 2004). They are typically slow and can be contentious. They often simply enforce orthodoxy and squelch innovate thinking. So I am, in fact, not suggesting that we developmentalists go through standard channels. Many of these channels are closed in principle to the approaches we endorse. Or they are prohibitively difficult and time consuming for non-academics. I'm suggesting that we institute new channels. Facilitating peer review and collaboration could be an important function of the aforementioned proposed *Institute for Applied Developmental Theory*. For example, Heikkinen (personal communication) has suggested the construction of an information clearing-house for developmental approaches. Guided by a shared set of standards—co-constructed and revisable—a rigorously and collectively edited ever-expanding web resource for consumers and practitioners could serve as a place to vet research and development efforts while also increasing transparency between various stakeholders.

In any case, the idea that serious intellectual work needs to be looked at from a variety of perspectives by a community of those capable of assessing its value is critically important. The understandable rush to meet the demands of immanent educational crises should not lead us to embrace less rigorous forms of knowledge production. If anything, the historical moment should lead us toward new forms of collaborative knowledge building. Our inability to forge these collaborations, and the related tendencies to circumvent peer review, stem in part from a *lack of epistemic humility* that characterizes large sectors of the field. This is the second issue I want to discuss.

Lack of Epistemic Humility

It appears that when the extramural construction of useable knowledge is accompanied by success and acclaim we are prone to overgeneralizations concerning the implications of what has been achieved. Already a set of models and metrics (not to mention their makers) have taken on an almost mythical status, leading some to voice explicit concerns about a kind of crypto-religiosity that haunts the field. This is, of course, related in part to a lack of peer review practices. The tentative, exploratory, and experimental attitude that allows for scientific advance and collaboration is not a prerequisite for participation in the field, as it would be if rigorous and collegial peer review were standard practice. But this lack of epistemic humility is also a unique liability resulting from the subject matter of applied developmental psychology. Because these models and metrics can be used to hierarchically rank human capabilities and dispositions they are often taken to heart—they become enmeshed in how individuals regulate their self-esteem. Moreover, because of the erroneous belief that "higher is always better" (more on this below) those who take certain models to heart position themselves and their models "at the top."

This leads to curious argumentative strategies, strategies that insulate models from criticism (and thus improvement) and effectively cut off the possibility of collaborative and self-critical knowledge production. For example, I have encountered the following argument more than a few times. During a debate about aspects of a model, supporters of the model position the arguments of the critic (or the critic themselves) in terms of the hierarchy specified by the model being debated. The critic falls short of the level at which the model is claimed to have been built and is therefore deemed incapable of rendering meaningful arguments against it. In other words, arguments (or individuals) below a certain level—as specified by the model under discussion—are rendered second-class interlocutors, deemed intrinsically unable to offer cogent criticisms. I will call this an argumentative strategy that relies on *developmental disqualification.* It is a style of argument unique to this field and it insulates models from criticism by claiming that certain participants in the debate are developmentally disqualified from being taken seriously. This is reminiscent of the classic psychoanalytic quip that anyone who does not believe the basic tenets of psychoanalytic theory is simply resisting analysis. It is also similar to certain types of religious arguments that justify the faith by positing the delusory status of all of non-believers.

Arguments that rely on developmental disqualification commit the classic logical fallacy of *petitio principii*. They are question-begging arguments, presupposing what they set out to demonstrate. One cannot use an argument that assumes the validity of a model in defense of the validity of that model. These arguments also constitute an interesting sub-class of *ad hominem* arguments, and as such may be unethical as well. They convince only the ones making them and

leave those they are deployed against unconvinced at best, marginalized and silenced at worst. But regardless of their less then enviable logical qualities, they are simply unproductive. How can collaborative and self-critical knowledge production be advanced when certain types of contributions (or contributors) are systematically devalued?

Well over a century ago, C.S. Peirce (1869) argued that inquiry-oriented communication communities must have an open and inclusive structure predicated on trust, honesty, and reciprocity. Based on his extensive work as a scientist, logician, and philosopher, Peirce clarified the intersubjective conditions for the possibility of reliable knowledge production. Habermas (1990) and Apel (1996) have followed his lead, broadening the project so that it assumes the shape of a general *discourse ethics*. This lineage of theorizing clarifies the fact that systematically distorted forms of communication disfigure communities and undermine their efficacy. Developmentally disqualifying potential participants systematically distorts communication, creating an insular, self-congratulatory, and defensive in-group over against an out-group that has been deemed intrinsically unable to say things that matter.

But note the specifics. As mentioned above, I don't know enough about biochemistry to argue with drug manufactures about their research and development efforts. If I decided to voice an opinion anyway, say on their plan to target the metabolic pathways that lead to neurodegenerative disease, I would likely be misinformed or just plain wrong. This would reflect a lack of disciplinary expertise on my part. But, in this context, a lack of disciplinary expertise is not a disqualification; it just makes me more likely to be wrong or misinformed. Ideally, my argument would be heard, and then refuted, such that I would come to see my own arguments or knowledge base as inadequate. But to claim that someone is developmentally disqualified is to claim more than that they are misinformed, lack training, or are just plain wrong. It is to claim that they are intrinsically unable to produce arguments that count. This is a way of dismissing and silencing potential participants, as opposed to hearing them out and then addressing their arguments as arguments.

But arguments are arguments, regardless of the developmental level with which they are associated. Likewise, people are people. The systematically distorted forms of communication described above result from a lack of epistemic humility on the part of those who endorse certain developmental models. The idea that a privileged few possess some special knowledge is a perennial ideological motif. But wedding this ideological motif to usable knowledge in developmental psychology is a contemporary contrivance. Moreover, the dismissal of an argument, belief, or orientation solely because it is suspected to be the product of a certain developmental level reflects a profound *lack of clarity about the normative aspects of human development.* This is the third issue I want to discuss.

Lack of Clarity about the Normative Aspects of Human Development

J. M. Baldwin (1906) and Piaget (1970) theorized in an epistemological mood. Kohlberg (1981) was worried about the naturalistic fallacy. Harry Stack Sullivan (1964)—who Loevinger (1976) called the father of ego-development theory—understood the integrative powers of the self-system as ethically neutral, arguing against defining maturity in moral terms. The progenitors of our field did not assume that higher-level performances were necessarily more

valuable; they set out to test this belief, combining empirical and philosophical analyses. They limited their normative claims about development to well-specified areas of human capability, clarifying the developmental logic of certain specific learning sequences. And when they used prescriptive, normative, or ethical language, they did not draw it directly from the empirical substance of their models. Baldwin looked to Spinoza, Kant, and Schelling. Piaget looked to Kant and a host of modern formal logicians. Kohlberg looked to Kant, Dewey, and Rawls. Sullivan looked to G.H. Mead and Whitehead. This kind of division of labor between philosophy and psychology in the study of human development is important to maintain (Habermas, 1990), especially in the current context of educational crises.

Developmental models are made to describe and explain developmental processes (Stein & Heikkinen, 2009). However, as just discussed, some models have also come to serve an overtly normative function for many who use them. This means that conversations about what it means to be a good person, about human potentials that are admirable and worth striving for—conversations about the shape of a life that has not been misspent—have become conversions populated by terms from specific psychological models. Likewise, these same models provide the language we use to disapprove of beliefs and actions or to characterize others as unworthy of emulation. This is quite a burden to place on a psychological model, making it into a system that discloses the normative dimensions of personhood and facilities the ethical ranking of individuals. Again, concerns about the crypto-religiosity of the field are well taken.

As I have argued elsewhere (Stein, 2008), the use of models from developmental psychology to determine the distribution of admiration, respect, and responsibility is wrongheaded both methodologically and ethically. This is not the place to rehearse these arguments, which hinge on the canonical differentiation of facts from values and a preference for democracy over meritocracy. Suffice it to say, one of the greatest risks to the integrity of our efforts is the misuse of developmental models as broad evaluative frameworks, or what Rawls (1996) would call "comprehensive doctrines" concerning the nature of human life and value. Since Freud first drew the analogy between analysis and confession, psychologists have had to avoid positioning themselves as a new priestly caste. In cultural contexts where traditional worldviews have been thrown into question by the disenchanting gaze of scientific rationality, there is a vacuum where religious self-understandings used to reside. Charles Taylor (1989) has diagnosed this as a lack of *languages of strong evaluation*—a lack of shared categories and distinctions about what makes a human life successful.

Developmental psychology should not aim to offer these kinds of categories and distinctions (nor is this the province of philosophical meta-theory). Ambitions along these lines reflect both a profound misunderstanding of psychology as a discipline and a remarkable naïveté concerning the genesis and grounding of our most basic normative commitments. No doubt, new values must be created if we are to navigate the immanent educational crises discussed above. But the creation of new values—the birth of a new comprehensive doctrine—cannot be engineered by social scientists (Habermas, 1984). The emergence of new worldviews takes place in the heart of the lifeworld; where vulnerable identities are forged under the pressures of unprecedented conditions and leaders and symbols emerge that embody a shared trajectory garnering broad consent and motivational force.

Conclusion: Summing Up

Quality-control efforts in the field of applied developmental psychology are just beginning. In this paper I set these efforts in a larger context to frame their significance and guide their direction. I argued that the challenges arising in the current post-national constellation are best understood as educational crises. The task demands of the global problem space increasingly outstrip available human capabilities. This situation is leading to a scramble for usable knowledge about education, which I defined broadly as any process intentionally undertaken to promote human development. There is a growing demand for techniques and technologies that catalyze the transformation of human capabilities; and this demand exceeds available supplies. Education becomes a growth market as specific types of human capabilities come to be recognized as scarce but valuable resources. This pressing global demand for innovative educational solutions and approaches has the potential to systematically distort the production of relevant usable knowledge. I presented a set of general quality-control challenges that face the field of applied developmental psychology as it strives to meet the demands of a globalized crisis-ridden educational marketplace. I argued that the field should overcome temptations to circumvent peer review processes by going directly to consumers. I suggested adopting a general stance of *epistemic humility* so that research and collaboration are promoted and argumentative strategies that insulate approaches from criticism are avoided. Finally, I argued that more careful attention should be paid to the normative dimensions of the educational enterprises related to applied developmental psychology, as they involve the creation of new values and raise ethical questions about the shape of what life ought to be like.

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