A Response to the Responses

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ABSTRACT Key Words: connected and separate knowing, epistemological development, early and middle childhood, tacit knowledge, teaching connected knowing, subjectivism, knowledge construction, Michael Polanyi, Dale Cannon, Esther Meek, Zhenhua Yu.
This essay is a short response to comments made by Cannon, Meeks, and Yu to my articles "Beyond Subjectivism," published in this special edition of Tradition and Discovery *(34:1), and "Connected and Separate Knowing: A Marriage of Two Minds," published in* Knowledge, Difference, and Power*, edited by Nancy Goldberger, et al., focusing on convergences between my work and the ideas of Michael Polanyi.*

Response to Dale Cannon

1. Dale Cannon and I have been corresponding for several years, and his responses to my earlier work, which appear in this issue, helped to shape the thinking that appears in "Pursued by Polanyi." And so I feel, to some degree, that that essay is already a response to some parts of his response.

In re-reading my essays and Dale's response to them, however, I am struck by our near-exclusive focus on young adults in an academic setting, when, of course, epistemological development begins much earlier (and, sadly, often ends much earlier). In my own research, I would like to begin to apply a Polanyian perspective to development in early and middle childhood.

It is worth noting that there are losses as well as progress in development. Recall, for instance, Polanyi's suggestion that confidence in the face of uncertainty is a prerequisite to performing acts of discovery. Consider the behavior of John Holt's 17 month old niece:

> [S]he is a kind of scientist. She is always observing and experimenting. . . . Most of her waking time she is intensely and purposefully active, soaking up experience and trying to make sense of it, trying to find out how things around her behave. . . .
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> In the face of what looks like unbroken failure, she is so persistent. Most of her experiments, her efforts to predict and control her environment, don't work. But she goes right on, not the least daunted. Perhaps this is because there are no penalties attached to failure, except nature's. A baby does not react to failure as an adult does, or even a five-year-old, because she has not yet been made to feel that failure is shame (1964, 61-62).

If we want to produce citizens capable of acts of discovery, perhaps we need to think about our treatment of error from an early age.

2. One of the Polanyian concepts that I would like to begin to explore in relation to epistemological

development from early childhood into adulthood is his notion of "tacit knowledge." I have found Dale's essay, "Construing Polanyi's Tacit Knowing as Knowing by Acquaintance Rather Than Knowing by Representation," extremely difficult and utterly absorbing. Dale lists at least ten forms (some of them overlapping) of tacit knowing, many of which seem to me to raise issues of relevance to both epistemological development and to education. For instance, how can students and teachers become alert to instances of anticipatory foreknowledge, and how can they nurture them with patience, providing time for indwelling, rather than ignoring or dismissing them or insisting upon instantly converting them into rigid representations, and thus aborting their further development?

Response to Esther Meek

I found Esther Meek's response enormously engaging – lively, warm, smart, and stimulating – just as I found her book, which I have now re-read twice. But of course, being an academic, well trained in separate knowing, I must offer a couple of caveats, in hopes that we can come to a clearer, closer understanding.

1. I am no philosopher, as I say in my essay, and I often rely on philosophers to help me in considering the validity of various positions, theories, and points of view. But as a developmental psychologist, I do not make judgments concerning the quality of my participants' ideas. Philosophers, perhaps, judge from the outside in, while psychologists judge – or interpret – from the inside out. And a position that seems bad – unhealthy, perhaps – from a philosophical point of view may represent a healthy step forward from the developmentalist's point of view.

For instance, Esther, in her response to my two papers, clearly takes a dim view of subjectivism, the view that "everyone has a right to their own opinion and their own opinion is right for them," regarding it as "an unhealthy epistemological betrayal," a product of "the contemporary *Zeitgeist*." But for people who have been utterly dependent upon external authorities as sources of absolute truth, subjectivism can represent a healthy step forward towards becoming an autonomous knower. In *WWK* we tell the story of Inez, who, for most of her life, had been abused and exploited by powerful males, first her father and brothers, then her husband. She grew up believing that, as she put it, no woman could "think and be smart." Inez no longer pays any attention to external authorities; she is her own authority. "I can only know with my gut," she says. "I've got it tuned to a point where I think and feel all at the same time and I know what is right. My gut is my best friend – the one thing in the world that won't let me down or lie to me or back away from me." Of course we should try to help individuals like Inez move "beyond subjectivism" – the title of my paper – but not, I think by treating it a disease to be exterminated.

Subjectivism, often called multiplism, does appear to operate as a *Zeitgeist* in some cultures during certain periods. But a large body of evidence indicates that it is also a natural step in intellectual development, emerging from inside out as well as ingested from outside in. For instance, in the course of a 13 year longitudinal study, Annick Mansfield and I presented ten-year-old Emily with a story in which two protagonists disagree about whether an unfamiliar animal called a "juju" would make a good pet. Emily saw the issue as a matter of objective fact: "One has to be right and one has to be wrong, because if it . . . scratches up the furniture, it's bad, but if it finishes up its bowl and is housebroken, it's a good pet. To find out for sure, ask the zookeeper."

Two years later, Emily has changed her mind. "There is no right or wrong – no facts involved. It's just different tastes." Finally, by age 16, Emily had managed to integrate subjectivity and objectivity: "It's judging, will this pet be compatible?" Much epistemological thinking is domain specific; to the dismay of their teachers, many students take an objectivist stance toward science and a subjectivist stance toward literature. It is only through the integration of objectivity and subjectivity that students can achieve a notion of both scientific theories and sonnets as constructions of the human mind.

2. Esther claims that "children . . . naturally practice connected knowing." I'm not sure what age children she has in mind, but there is a huge body of evidence (which goes under the perhaps pretentious title of "theory of mind") indicating that even the simplest forms of connected knowing are unavailable to children much before age 4. Emotional contagion (e.g., crying when another person cries) certainly occurs quite early, but in early childhood connected knowing does not: Piagetian "egocentrism" prevails: one assumes that the other person knows what I know, sees what I see. Connected knowing is an intellectual achievement.

Response to Zhenhua Yu

1. I like Zhenhua Yu's restatement of Polanyi's point: "the personal participation of the knower is no mere imperfection that should be eliminated as much as possible, as objectivism argues, rather it is part and parcel to the shaping of scientific knowledge." The truth of this statement becomes obvious when one reads ethnographic accounts and observes science-in-the making – as it happens in scientific laboratories. The stories scientists tell in interviews are far more human than the flattened out versions reported in textbooks and scientific journals. (See, for example, Knorr-Cetina, 1981 and Mitroff, 1981.) The pedagogical moral seems clear: students who serve as apprentices – in the best Polyanyian sense of the term – to working scientists are much more likely to arrive at a conception of science as a living human construction, rather than an inert body of knowledge to be ingested and retained.

2. Zhenhua says that Polanyi's theory of personal knowledge, while rejecting the impersonal scientific detachment of objectivism, retains the notion of "mind-independence of the external reality" and the notion of "universal validity." Although I can accept this formulation – or nearly accept it – with respect to science, I wonder about its relevance to the humanities. Perhaps it is true that gravity, for instance, is "out there" and operates in the same way for everyone. But what about a poem? There is no single correct reading of a poem. Poems are not just out there: the meaning of the text is co-constructed, a product of a collaboration between a reader and a text. I think Polanyi would say – does say, maybe – that the personal contribution varies depending upon the nature of the object of knowing. That may be so, but I don't find it entirely satisfying.

3. Zhenhua writes that "Clinchy's effort to distance connected knowing from subjectivism parallels Polanyi's distinction between 'the subjective' and 'the personal.'" Zhenhua saw that before I did. Even though I had read Zhenhua's response before giving my talk at last year's Polanyi conference, I clearly hadn't got the point. It seeped into my unconscious, though, and, with the help of other respondents (formal and informal) it finally made its way into "Pursued by Polanyi."

My thanks to all of you.

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