

Tradition & Discovery

The Polanyi Society Periodical

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The Polanyi Society

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Preface

This is a special issue of *TAD* put together by guest editor Dale Cannon. Several years ago, Dale noticed the work of Blythe Clinchy and he began to talk about organizing an annual meeting session that brought Clinchy to the Polanyi Society and focused on the convergence of the ideas developed by Clinchy (and her colleagues) and Michael Polanyi. In November 2007, one session of the annual meeting was devoted to this topic. We posted a couple of interesting Clinchy essays and asked three members of the Polanyi Society to respond to these and there was a vigorous discussion in the session. This issue grew out of this annual meeting session, although the material here has changed somewhat from what was originally part of the session. Blythe Clinchy's three pieces as well as Dale's introduction and the response by Dale, Esther Meek and Zhenhua Yu fit together like hand and glove. This material should not only be interesting to Polanyi Society members but to anyone who has followed the kind of work that Clinchy and her colleagues have been doing.

This issue of *TAD* includes the call for papers for both the June 13-15, 2008 conference at Loyola University, Chicago, celebrating the fiftieth year of publication of *Personal Knowledge* (p. 5) and the June 26-28, 2008 Budapest Polanyi conference (pp. 7-8). Note (p. 6) that the Polanyi Society is again plugging its 2007-2008 membership drive because we need to raise some funds for the June 2008 Loyola conference. We will be following up to remind those tardy in paying dues and we again encourage you to make a generous tax deductible (for US citizens) contribution along with your 2007-2008 membership dues. The Polanyi Society is an incredibly efficient low-budget scholarly society and we must make a special appeal if we are to remain solvent when sponsoring a major conference like that upcoming in June 2008. Thanks to those who have already paid dues and made a contribution. Also you will find in this issue the program for the Polanyi Society annual meeting to be held in San Diego on November 16 and 17, 2007 (p. 4) as well as other notes of interest.

Phil Mullins

Tradition and Discovery is indexed selectively in *The Philosopher's Index* and *Religious and Theological Abstracts* and is included in the EBSCO online database of academic and research journals.

NEWS AND NOTES

Polanyi Society Travel Funds Available

For students and others requiring assistance to attend the Society's annual meeting in San Diego on November 16 and 17, 2007, limited funding is available. Some travel funds will also be available for the June 13-15, 2008 Polanyi Society conference at Loyola University, Chicago. Society members are urged to call the availability of this assistance to the attention of those whom they consider worthy candidates. Those interested in applying for this funding, as well as those able to assist in making this funding available, should contact Walter Mead (wmead@insightbb.com) and see the information on the Polanyi Society web site (<http://www.missouriwestern.edu/orgs/polanyi/>).

Additional Meeting of Polanyi Society on Nov. 15 in La Jolla

On Thursday, November 15, between 6 p.m. and 9 p.m., the San Diego Polanyi Study Group will host an additional meeting of the Polanyi Society in La Jolla, California at 1150 Torrey Pines Road in the main conference room. This meeting is in conjunction with the AAR conference and the annual meeting of the Polanyi Society, which will be meeting in San Diego on November 16 and 17; all Polanyi Society members and guests are cordially invited.

Presentations will be given by Polanyi Society Board member Esther Meek ("Covenant Epistemology: Blending the Insights of Michael Polanyi, John MacMurray and Others"), organizational consultant Will Stillwell (reflecting on Michael Polanyi's heuristic error as he led investigations in polymerization chemistry in the mid-1940s) and nursing man-

ager Barbara Bonnice with members of the staff of Sharp Hospital (reflecting on personal knowledge and the doctor-patient relationship).

La Jolla is 30 minutes from the downtown convention center: take route 5 north to La Jolla Village Drive—west to Torrey Pines Road—south to the dead end on Girard Street—west to Silverado, north to 1150 Silverado Street. Express bus #30 and non-express #34 will get you to Silverado and Girard. Jere Moorman will have his cell phone on and he can give traveler's aid (707-363-3394), and can take up to four people back to hotels after the meeting. He is confident that he can arrange rides for others also. Jere is willing to make airport pickups for anyone arriving at 4 p.m. or earlier. Wine and snacks will be provided.

Electronic Discussion List

The Polanyi Society supports an electronic discussion group that explores implications of the thought of Michael Polanyi. Anyone interested can join. To join yourself, go to the following address: http://groups.yahoo.com/group/polanyi_list/join. If you have difficulty, send an e-mail to Doug Masini (masini@etsu.edu) and someone will see that you are added to the list.

2007 Polanyi Society Annual Meeting Program

This year's annual meeting will be in San Diego, CA on November 16 and 17, 2007. Papers will be available for downloading on the Polanyi Society web page (<http://www.missouriwestern.edu/orgs/polanyi>) by late October. The Polanyi Society annual meeting will again this year will be an "Additional Meeting" held in conjunction with the annual meetings of the AAR and SBL. For information, go to the AAR/SBL web site: <http://www.aarweb.org/annualmeet/default.asp>. It is not necessary to register for the AAR/SBL meetings in order to attend the Polanyi Society annual meeting.

Friday, November 16, 2007--4:00 pm - 6:00 p.m.

Jere Moorman, Presiding

4:00 William Coulson, Center for Studies of the Person, San Diego
"On Having Misread Polanyi's Theory of Personal Knowledge"

Respondents:

Dale Cannon, Western Oregon University

Philip Rolnick, St Thomas University

5:15 William Kelleher, La Canada, CA
"Personal Knowledge as Pure Self-Reflection"

Respondents:

Phil Mullins, Western Missouri State University

Diane Yeager, Georgetown University

Saturday, November 17, 2007 9:00 am – 11:30 a.m.

Joint Session with North American Paul Tillich Society

9:00 Walter Gulick, MSU-Billings, Presiding

Theme: *How Tillich's Recently Retrieved Paper, "Participation and Knowledge: Problems of an Ontology of Cognition," Engages Polanyi's Thought*

Co-Presenters:

Durwood Foster, Pacific School of Religion

Richard Gelwick, Bangor Theological Seminary

Respondents:

Donald Musser, Stetson University

Robert Russell, Center for Theology and the Natural Sciences, GTU, Berkeley

11:15 Business Meeting:

Walter Mead, Illinois State University, Presiding

“Personal Knowledge at Fifty”

Call for Papers

June 13-15, 2008 the Polanyi Society is sponsoring a conference at Loyola University, Chicago on the theme “*Personal Knowledge At Fifty.*” *Personal Knowledge* was published in May, 1958 and this conference will celebrate this event as well as provide an opportunity to reappraise Michael Polanyi’s *magnum opus* and its philosophical agenda in terms of developments in philosophy, science and the globalization of culture.

The conference will be organized like the 1991 and 2001 Polanyi Society conferences at Kent State University and Loyola University, Chicago. There will be several plenary speakers as well as parallel sessions in which conference participants present and discuss papers with others interested in the session’s particular topic. Invitations for plenary speakers are presently pending. This will be a conference that builds in many opportunities for discussion as well as a trip for those interested to the archival Polanyi Papers at the Regenstein Library of the University of Chicago.

Proposals are invited for papers that discuss the themes or impact of *Personal Knowledge* and the importance of Polanyi’s philosophical ideas in the contemporary world. Below are a few suggested general categories within which papers might be grouped; these are intended merely to stimulate reflection. The final program will organize sessions in terms of rubrics fashioned in light of proposals submitted.

Personal Knowledge, Postcritical Philosophy and Postmodernism

Personal Knowledge As Fiduciary Philosophy and the the History of Philosophy

Personal Knowledge And William Poteat, Marjorie Grene, Wittgenstein, Phenomenology, etc.

Personal Knowledge and Contemporary Discussions of Emergence

Personal Knowledge On Religion

Personal Knowledge And Contemporary Philosophy of Science

Personal Knowledge And Political Philosophy

Personal Knowledge, Moral Inversion and Polanyi’s Criticism of Culture

Personal Knowledge and Polanyi’s Reformulations in Later Writing

Personal Knowledge: Shortcomings

Proposals for panel presentations on topics are invited.

Proposals will be blindly reviewed by a panel of jurors and should be no longer than 250 words. On the first page of the proposal, give your proposed paper title (or panel title), your name and your e-mail address. On the second page, repeat the title and provide an abstract. Mail proposals as e-mail attachments to Phil Mullins (mullins@missouriwestern.edu). Proposals will be reviewed in two or three batches. The initial deadline is Oct. 15, 2007 with projected response before December 1, 2007. Please forward proposals early in order to facilitate conference planning.

MEMBERSHIP RENEWAL/FUND DRIVE

On the previous page, there is a call for papers for the international Polanyi conference, set for June 10-13, 2008 at Loyola University, Chicago, which celebrates the publication of *Personal Knowledge*. Like the 2001 conference also at Loyola, this event is sponsored exclusively by the Polanyi Society. That is, the 2008 conference is not like the annual meeting held in conjunction with a larger professional society that considers the Society an affiliate and gives us space at a preferred rate. Nor is the upcoming Loyola conference like the 1991 conference at Kent State University that was generously subsidized by that university. Unfortunately, it is necessary for the Polanyi Society to cover all of the expenses of organizing the 2008 Loyola conference; we must also remain solvent enough to cover other annual operating expenses associated with the annual meeting and the publication of *TAD*. The Organizing Committee for the 2008 Loyola conference is investigating strategies modestly to improve the finances of the Society. We welcome any suggestions about possible funding sources for the Loyola conference. One necessary funding option--getting Society members to reach into their pockets to pay annual dues and make contributions--is outlined below.

Membership dues for the Polanyi Society are still only an unbelievable \$25/academic year. The first issue of a new *TAD* volume normally includes a flyer asking for dues payment. In the 2007-2008 academic year the Society will be more diligent about dues collection and we will remind you about the opportunity to support the Loyola conference. You may get a first and second payment notice reminding you that it is time to renew your membership. You are invited **now** to combine your dues payment with a contribution. If you have not paid your 2006-2007 dues, you may combine that with your 2007-2008 dues and contribution. In order to encourage you to "think generously," please review the chart below that sets forth some "rungs" on the contribution ladder. We hope you will reach as high as it is possible for you conveniently to stretch. Unlike the Public Broadcasting System and National Public Radio drives in the US, we do not have Polanyi Society coffee mugs, book bags and other memorabilia to distribute to those who are generous. But for those who do stretch (at least \$50), we can provide a copy of any of the following if you identify your preferences: (1) a remaindered copy of Andy Sanders' 1988 book, *Michael Polanyi's Post-Critical Epistemology: A Reconstruction of Some Aspects of "Tacit Knowing"* (offered in 2001 but there are about 20 copies left); (2) paper copies of any available old issues of *TAD* that you want (all those since 1991 are on the web site but the paper copies have not yet been discarded); (3) an audio CD of Polanyi's 1962 McEnerney Lectures (now also available for downloading from the web site).

Donation Range

\$20-50

\$51-\$100

\$101-\$500

\$500

Designation

Associate

Friend

Benefactor

Patron

Acknowledgment

1 year membership

1 year membership

1 year membership

3 year membership

All donors will be acknowledged in the program of the 2008 Loyola Conference. The Polanyi Society is a 501C3 tax deductible non profit organization; the Society sends (to those who pay US income tax) charitable donation letters for donations above \$25. Dues and donations can be sent by post, fax or e-mail to Phil Mullins. Credit cards donations are welcome. **Please recall that a similar notice was included in the July 2007 issue of *TAD*. If you have already paid 2007-2008 dues, you do not need to do so again.**

Call for Papers

Reconsidering Polanyi - 2008, June 26-28, Budapest

In such men the traditional forms for holding moral ideals had been shattered and their moral passions diverted into the only channels which a strictly mechanistic conception of man and society left open to them. We may describe this as a process of *moral inversion*. The morally inverted person has not merely performed a philosophic substitution of material purposes for moral aims; he is acting with the whole force of his homeless moral passions within a purely materialistic framework of purposes.

... a free society is one accepting the service of truth and justice, and ... totalitarianism is the outcome (by inversion) of a skepticism denying intrinsic force to the ideas of truth and justice...

Michael Polanyi

Polanyi, the philosopher, is mostly known as a theorist of knowledge. His philosophy proceeds from the analysis of knowing to address many important topics including ontology, social theory, theory of the person and the practical dimensions of science. His theory of knowledge rests on ethical, social and existential pillars beside his Gestalt-based theory of cognition.

On the 50th anniversary of the publication of his masterpiece, *Personal Knowledge*, the aim of the conference is the reappraisal of this perplexingly rich, highly original and refreshingly unconventional philosophy in the light of the current intellectual milieu as well as from historical perspectives.

The conference is open to contextual, historical, and analytical approaches including – but not limited to – the following list of topics:

- Personal knowledge in light of social and historical epistemology
- Tacit knowledge and the new results of cognitive psychology
- Reappraising Polanyi's *The Logic of Liberty*
- The cognitive functions of emotions
- Polanyi on the production and management of knowledge
- The postcritical and postmodern perspectives
- Embodiment and tacit knowing
- Polanyi and the concept of emergence
- Polanyi and understanding technology

Confirmed Speakers:

Richard Allen, Chairman and Editor of *Appraisal*, Nottingham

Bob Brownhill, (formerly:) University of Surrey, UK

Dale Cannon, Western Oregon University, Monmouth

Márta Fehér, University of Technology and Economics, Budapest

Walter Gulick, Montana State University, Billings

Chris Goodman, President of *Appraisal*
Karl Hall, Central European University, Budapest
Stefania Jha, Boston University, Boston
Tihamér Margitay, University of Technology and Economics, Budapest
Phil Mullins, Missouri Western State University, General Editor of *Tradition & Discovery*
Hans-Joerg Rheinberger, Max Planck Institute for the History of Science, Berlin
Otto Sibum, Max Planck Institute for the History of Science, Berlin
Yu Zhenhua, East China Normal University, Shanghai

Conference committee:

Tihamér Margitay (BUTE), chair, Department of Philosophy and History of Science
Márta Fehér, (BUTE) vice-president of the MPLPA, Editor of *Polanyiana*
Richard Allen, Chairman and Editor of *Appraisal*
Phil Mullins, Missouri Western State University, General Editor of *Tradition & Discovery*
Éva Gábor, (BUTE) President of the Michael Polanyi Liberal Philosophical Association
Benedek Láng, (BUTE), Department of Philosophy and History of Science

Practical details:

- **Conference language:** English
- **Registration fee:** 30 EUR
- **Deadline for abstract submission:** Oct. 15, 2007 via the following link: <http://www.polanyi.bme.hu>

The number of the participants is limited. Applicants will be informed about the outcome of their applications no later than the 30th October, 2007.

- **Accommodations** for conference participants will be available both on campus at the Budapest University of Technology and Economics and in nearby hotels

1) - on campus accommodation is available in the guesthouse of the University for approximately 55-65 EUR /night including breakfast

2) - Rooms in four-star hotels in 5-15 minutes walking distance from the conference venue:

(a) Danubius Hotel Gellért 80-120 EUR/night including breakfast, use of sauna, pool and historic steam bath: <http://www.danubiushotels.com/en/budapest-hotels/danubius-hotel-gellert-budapest/hotelrooms>

(b) Park Hotel Flamenco 90-110 EUR/night including breakfast, use of sauna, pool and fitness room: <http://www.danubiushotels.com/en/budapest-hotels/danubius-hotel-flamenco-budapest>

For more information visit [http:// www.polanyi.bme.hu](http://www.polanyi.bme.hu) or write to Benedek Láng: <http://www.conference@filozofia.bme.hu>

A Serendipitous Convergence: Blythe Clinchy and Michael Polanyi

Dale Cannon

ABSTRACT Key Words: Blythe Clinchy, Michael Polanyi, Women's Ways of Knowing, epistemology, feminist epistemology, connected knowing, separate knowing, tacit knowing.

This brief essay summarizes the content of the current issue of Tradition and Discovery which is devoted to a symposium on similarities between and relevance to each other of the work of Blythe Clinchy, one of the authors of Women's Ways of Knowing, and the work of Michael Polanyi. The background of Women's Ways of Knowing is sketched for readers without independent familiarity with it.

This issue of *Tradition and Discovery* is devoted to an encounter between the work of Michael Polanyi and the work of Blythe McVicker Clinchy, Professor Emerita of Developmental Psychology at Wellesley College and a principal author/researcher of the influential volume, *Women's Ways of Knowing* and its sequel, *Knowledge, Difference and Power*. Early versions of the articles contained in this issue were presented at a special session of the November 2006 meeting of the Polanyi Society in Washington, DC. Discussion at that symposium was lively, convivial, and full of interesting intimations of new lines of creative thought – fraught with an indeterminate range of future manifestations, as Polanyi would say, his characteristic criterion of reality, truth, and profound meaning. I think it is not an exaggeration to speak of the encounter as historic, for here was publicly taking place a confluence of two independent but profoundly convergent streams of significant contemporary thought, each discovering and beginning to explore the other, each fascinated with the realization that the other has been mining something of the same rich seam of gold from quite different passageways, and each enthused with the mutually fructifying possibilities of joining efforts. I predict that the encounter will have significant consequences for the legacies of both Clinchy and Polanyi. This issue of *Tradition and Discovery* will enable readers to witness the encounter, appropriate its significance, and carry on its impact, each in her or his own way.

I speak of the work of Blythe Clinchy, but it is misleading to speak of her work in independence from her research colleagues and co-authors responsible for *Women's Ways of Knowing* (1986, 1997): Mary Belenky, Nancy Goldberger, and Jill Tarule, and the many authors represented in *Knowledge, Difference, and Power* (1996), whose work has been inspired by the former volume. The first book is remarkable in itself as having been a joint project of the four authors from conception to finish and being itself an example at its best of the informal, commonsense ways of knowing grounded in convivial personal relationships¹ that they discovered among women. At an early stage of their work they called it “pajama-party model scholarship.” Given this history, it is not strange that Clinchy's work continues to speak out of, exemplify, and represent “women's ways of knowing” as a project, as a field of scholarship, and as a movement.

Beginning with a tacit, largely inchoate recognition that the informal procedures to which women appeared to resort spontaneously in coming to know and understand things somehow differed from the standard academic model of critical scholarship, the four authors of *Women's Ways of Knowing* constructed

an extensive qualitative research program to give an empirical basis for and a theoretical conception of just what it was that they had respectively intuited. Representatives of the standard model often characterized and caricatured it as expressions of uncritical subjectivity or subjectivism, but these four authors suspected there was something different going on. Their disciplinary background was primarily developmental psychology of the sort found in Jean Piaget, which involves significant overlap between psychology and philosophy, particularly Kantian philosophy. That tradition of research does not psychologize norms and criteria of critical judgment but seeks to trace their emergence in human development. Theoretically and methodologically, each had been strongly influenced by the work of Carol Gilligan (especially *In a Different Voice*, 1982), whose work especially in the field of moral development brought to realization how Lawrence Kohlberg's work on moral development (*The Philosophy of Moral Development*, 1981, and *The Psychology of Moral Development*, 1984) had left out of account the developmental experience of women and, in particular, the grounding of moral judgment among women, particularly, in relationships of personal caring. So also, each of these authors was strongly influenced by the work of (in some cases being graduate students under) William Perry at Harvard. Perry undertook a widely influential longitudinal study of the epistemological maturation of Harvard undergraduates (*Forms of Intellectual and Ethical Development in the College Years*, 1970). Similar to the weaknesses of Kohlberg's work, Perry's work generalizes from the developmental experience of undergraduate males (at Harvard, no less) in coming to learn, assimilate, and put into practice the dominant academic model of critical scholarship. The four authors of *Women's Ways of Knowing* appreciated the value and power of Perry's work, but became convinced that something else was going on in their observations of women in terms of women's reluctance simply to comply with the dominant model or paradigm of procedural knowing; another way of going about knowing was at work, no less reflectively critical (utilizing criteria-governed judgment), which the dominant model could not accommodate and for which the researchers had been given no prior theoretical conception. They came to call this way "connected knowing" in contrast to the "separate knowing" that is characteristic of the dominant paradigm, underscoring how it involved relationships of caring, intimacy, and empathy. In any case, following the precedent set by Perry's theory of stages of intellectual/epistemological development, *Women's Ways of Knowing*, sets out a progressive series of stages of women's intellectual/epistemological development to accommodate their empirical data: (1) silence, (2) received knowledge (listening to the voices of others), (3) subjective knowledge (the inner voice and the quest for self), (4) procedural knowledge (the voice of reason, and separate *and connected* knowing), and (5) constructed knowledge (integrating the voices).

I should say here that the four authors were not contending that women uniquely exhibit connected knowing, that men are uniquely drawn to separate knowing, that women never resort to separate knowing, or that men never resort to connected knowing. Rather, it became more and more obvious to them, at least in their research, that, as they develop intellectually, women tended spontaneously to resort to connected knowing, all the way through to the highest levels of cognitive achievement. The empirical data on women forced this recognition, whereas those, like Perry, who were primarily studying males had not noticed or had not taken into account what these researchers were coming to call connected knowing. It is not that connected knowing was not present; it was that it had somehow escaped notice and perhaps been overlooked because that research was looking for something else – namely, the emergence of traits characterizing the dominant model of knowing.

For readers familiar with Polanyi's work, it should be obvious – even without going further into explaining "connected knowing" – that something deeply resonant with Polanyi's understanding of tacit

knowing as indwelling in contrast with the objectivist paradigm of knowing is at work here. And this intuition of apparent resonance has proved true the more fully it has been explored.

I first discovered Blythe Clinchy's work about 7 years ago when I was looking for a possible supplement in feminist epistemology for a course in epistemology that I was then planning to teach. Upon reading her essay in *Knowledge, Difference, and Power*, "Connected and Separate Knowing: A Marriage of Two Minds," I was immediately struck with its deep resonance with many themes in Polanyi's writings. Not long afterwards I suggested to the Polanyi Society leadership that, in the interest of broadening awareness of and interest in Polanyi's work, we ought to invite someone involved in feminist epistemology such as Blythe Clinchy to meet with us and begin to explore possible convergences and complementarities. I also got in contact with her to inquire whether she knew of Polanyi's work and, if not, to suggest that she might find a deep commonality there. I have been happily surprised at her growing enthusiasm for Polanyi and for finding Polanyi articulating many of her own deep convictions.

We were happy to find Blythe interested and ultimately willing to make a presentation at the Polanyi Society and receive responses by three active members who knew Polanyi's work well. As I have already said, this issue of *Tradition and Discovery* is one principal result of that encounter.

To provide respondents and other persons attending the Polanyi Society meeting background in Blythe Clinchy's work, two of her articles were posted on the Polanyi website. One had already been published in *Knowledge, Difference, and Power*, the one I've already mentioned: "Connected and Separate Knowing: A Marriage of Two Minds." The other had not yet been published and, as things have turned out, is being for the first time published in this issue of *Tradition and Discovery*: "Beyond Subjectivism." Of the two, the former essay is the most fully elaborated in a theoretical way, explaining the nature of connected knowing and separate knowing, providing extensive anecdotal examples of each drawn from her research, and contending that they both belong, though she admits her hesitations about how well she has managed to "marry" them. For any reader who wishes to understand these matters at a deeper level, I particularly recommend this essay. (Readers will find that the three respondents rely heavily on that essay for a fuller theoretical understanding of connected knowing.)

"Beyond Subjectivism," the article immediately following this introduction, communicates clearly how Clinchy moves back and forth from consideration of empirical data – not numbers but anecdotal responses to interviews – to theoretical reflections. Here she argues that the ways of knowing to which undergraduate females spontaneously resort, while quite personal and personally involving, move beyond expressions of subjectivity to a serious, critical (i.e., criterion based), cognitive grappling with subject matter, first to understand it on its own terms, within its own context. While they do not conform to the dominant academic model of critical thinking – namely, "separate knowing" – they are misconceived if classified as expressions of subjectivism, i.e., uncritical expressions of subjective opinion, of which no one is more justified than another. On the contrary, Clinchy contends that they are wholly appropriate and legitimate procedures, "connected" procedures, of critical knowing (knowing governed by criteria, if only implicit),² complementary to and supplementing whatever procedures of "separate knowing" might be applied.

Subsequent to "Beyond Subjectivism" there follows three responses, one by myself, one by Esther Meek, and one by Zhenhua Yu, each of whose work is familiar to regular readers of this journal.

In my response, “How Clinchy’s Two Minds Might Become One Flesh,” I choose to approach the encounter between Blythe Clinchy’s work and that of Polanyi from two directions, each oriented by a specific question. First, I briefly venture an appreciation and interpretation of her work from a Polanyian perspective as I understand it. Behind it is my interest in the question, what relevance might Polanyi’s thought have to the project of *Women’s Ways of Knowing* and to Blythe’s work in particular? What, specifically, could a careful reading and appropriation of Polanyi’s post-critical philosophy contribute to furthering this project and this work? In particular, I suggest that any simple mapping of the distinction between connected and separate knowing onto Polanyi’s categories would be misleading, but that Polanyi’s post-critical, wholistic understanding of human knowing in its tacit and explicit dimensions affords a way of preserving the insights of *Women’s Ways of Knowing* and integrating them into a coherent comprehensive philosophical epistemology – indeed, that Clinchy’s theoretical probings have been seeking just such an understanding. Second, I briefly venture an interpretation of Polanyi’s work from the perspective opened up by Clinchy’s two essays, “Connected and Separate Knowing” and “Beyond Subjectivism.” Behind this venture is my interest in the question, what relevance have the project of *Women’s Ways of Knowing* and Clinchy’s work in particular to understanding Polanyi’s ideas? What, specifically, may her work have to contribute to Polanyi studies? Several lines of possible contributions are sketched. Among them I note that Clinchy’s work throws fresh light on the relevance of Polanyi’s understanding of human knowing to the full panoply of human relational knowing and to the transformations of the knowing self involved therein.

Esther Meek’s response, “Cultivating Connected Knowing in the Classroom,” similarly articulates an analysis and appreciation of the conception of connected knowing in relation to separate knowing from a deep grounding in Polanyi’s epistemology. While connected knowing parallels Polanyi’s tacit integrative knowing, separate knowing, Meek contends, corresponds to Polanyi’s account of destructive analysis. Both Clinchy and Polanyi together work to overcome the conceptual dichotomies that are “products of an overweening objectivist ideal.” Meek goes on at length to lay out a number of concrete suggestions regarding what teaching connected knowing looks like and what teaching in a connected way looks like, both matters of vital concern to Clinchy. In this connection Meek ventures a critical perspective on the conceptualization of “subjectivism” by Clinchy and her colleagues as not a fundamental, more or less context independent stage in the intellectual development of students, female or male, but as the product of the cultural dominance of, and reaction to, an objectivist, scientific theory of knowledge (what she calls the *Zeitgeist*). At the least, this poses an interesting issue to explore further.

Zhenhua Yu’s response, “Feminist Epistemology in Polanyian Perspective,” in a simple yet elegant way brings out the striking parallels that may be found between Clinchy’s understanding of human knowing and Polanyi’s understanding of human knowing, specifically under three themes: the contrast between detachment and attachment, the contrast between critical and uncritical, and the prospects for what he calls a “thick epistemology”—an insightful metaphoric allusion to Clifford Geertz’s proposal that field anthropologists undertake “thick descriptions” of the cultures they study—that takes into account tacit as well as explicit dimensions. More than a marriage of two minds, Yu contends that Polanyi rethinks the relationship between tacit and explicit knowing, bringing out the tacit dimension of explicit knowing (and the primacy of the former) and the dynamics of tacit and explicit knowing – countering the propositionally oriented epistemological tradition. In connection with the second theme, Yu makes a controversial proposal to Polanyi scholars that Polanyi’s category of “a-critical” be abandoned.

Following the three responses is Blythe Clinchy's reworking of her presentation to the Polanyi Society, "Pursued by Polanyi" (which there also followed the three responses), which again illustrates how grounded her thinking is in empathetic relationships with her interviewees. This differs from much of the sort of thing that appears in the pages of *Tradition and Discovery* for that very reason, but is a welcome anchoring in concrete experience of what tends often to be pretty abstract theory. It tells a delightful story of Clinchy's personal discovery and appropriation of Polanyi's insights, demonstrating again how powerfully relevant they are to the recovery of oneself as teacher, scholar, and intellectual in a post-critical intellectual ethos – yet with different nuances than readers may be familiar as she relates them to sorting through research issues in developmental psychology, applies them to the struggles of undergraduate students to assimilate course content, and uses them to illuminate creative intellectual work more broadly. You can follow how she attempts to correlate her conceptions of connected and separate knowing with Polanyi's conceptions of tacit knowing, explicit knowing, and personal knowing, and discovers that there is no simple correlation. But the non-fit leads not to frustration but a multiplication of insights into both the former and the latter, rendering her conceptions of connected and separate knowing much more complex, fruitfully complex, than they were before. Worth remarking is a possible criticism of Polanyi raised by Clinchy with regard to her own treatment of commitment, which itself has been developed through her progressive understanding of Polanyi's conception of commitment, but, as in a good dialectic, this difference leads her to further insight. Polanyi's discussion of commitment in *Personal Knowledge* at times makes it seem like all personal knowing involves some sort of unreserved commitment, particularly in its result, whereas she finds example after example of personal indwelling that is tentative, hesitant, and exploratory in its quest for understanding. That doesn't mean that there is no irreversible self-involvement at work, but it does mean that there are varieties of commitment, possibly several dimensions of commitment, and more insights into the evolution of commitment, in personal knowing that deserve acknowledgement. A second criticism Clinchy raises is of Polanyi's own conception of "what is subjective as opposed to what is personal": she sees the former as more fraught with positive potential to develop while Polanyi seems to regard it as merely negative. Another interesting question she raises pertains to the relative absence in Polanyi of an explicit discussion of *love* in connection with knowing, despite his strong reliance upon Augustine's theory of knowledge and his emphasis on passionate involvement in the knowing quest. Overall, I am left after reading "Pursued by Polanyi" with a rekindled love for *connected* teaching, as Clinchy puts it.

Concluding the symposium, the last word is given to Blythe by way of a response to the responses.

Endnotes

¹ What they describe of their work reminds me much of Drusilla Scott's account of Polanyi's philosophy in *Everyman Revived: The Common Sense of Michael Polanyi*.

² I have to acknowledge that Clinchy is uncomfortable with my post-critical use of "critical" here. I think she would prefer use of "reflective," or some alternative word or phrase that would imply deliberation, effort, and skill.

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Beyond Subjectivism

Blythe McVicker Clinchy

ABSTRACT Key Words: subjectivism, connected knowing, separate knowing, Women's Ways of Knowing, objectivity, critical epistemology, epistemology and gender

In this essay on epistemological development in college students, I argue that "subjectivism" (a.k.a. "multiplism;" often identified in female undergraduates) should be understood and treated not as a manifestation of a primitive, irrational notion of knowing that must be exterminated and replaced by the more impersonal, detached, objective procedures embodied in scientific method and critical thinking. Rather, it should be regarded as a point of departure for moving into more reflective modes of thought when approached via, and encouraged into, the more personal, empathic procedure made known in Women's Ways of Knowing as "connected knowing." Along the way, I develop further the difference between "connected knowing" and "separate knowing" (the latter being the dominant academic paradigm of knowing), bringing out how connected knowing is an important and at times indispensable complement to separate knowing in achieving an objectivity integrated with subjectivity.

In the course of a study of epistemological development at the highly selective, academically demanding liberal arts college for women where I taught for many years, I interviewed Kim,¹ an African American student in the midst of her first year. "It is said that the earth goes around the sun," Kim said. "I don't have any proof. It's written in books – sure. But the person who wrote it in books could have been misinformed." I asked the fifteen seniors in my seminar on Psychological Development in Adulthood to comment on Kim's statement. Some responded with a condescending smile, as if listening to the cute sayings of a young child, and several expressed astonishment that anyone admitted to this college could hold such preposterous views. I said to the students, "Pretend you are Kim's physics teacher. How might you deal with her?" All they could suggest (short of beaming her up into space) was that the professor reiterate and perhaps elaborate the astronomers' arguments in support of heliocentric theory.

In another interview, Sue, a first term white senior, asserted that, if a professor tells her a book is great, and she can't connect with it, then she's going to say it's a bad book: "If I think it sucks, it sucks. Even though I'm not an expert, it's my feelings." The seminar students were more sympathetic to Sue's position: "I know how she feels," they said. "So what if you were her English teacher?" I asked. "What would you do?" "Well," they said, "maybe he [*sic*] could talk about why the critics think it's a good book, what it is about the book that makes it good."

In terms of the epistemological positions my colleagues and I defined in *Women's Ways of Knowing* (WWK), Kim and Sue appear to operate as "subjectivists." Subjectivists rely on the authority of first hand experience; they are immune to the pronouncements of "so-called experts." The seminar members, taking the role of professor, seemed to respond from the position we called "separate knowing." They took an adversarial position, countering the students' concrete experiential views with arguments based on impersonal reason and supported by scientific and scholarly research. I believe my students were right in thinking this is the way most of us professors would respond. But I suspect they were wrong if they thought it would work.

Data collected by a number of investigators in a variety of settings indicates that subjectivism (also referred to as “multiplism”) is pervasive among undergraduates.² Although I had been teaching undergraduates for years, it was not until I began to interview them that I realized how common subjectivism was. Carol Gilligan once quoted an interviewee as asking, “Do you want to know what I think? Or what I really think?” In the relatively safe environment of the interview, students try to tell us what they really think; in class, they have learned to produce “acceptable lies” in the poet Adrienne Rich’s chilling phrase (Rich, 1979, 239). Anna, a first year student, said to her interviewer,

In my math course I’m having a hard time coming to grips with what these people think infinity is, and for the duration of the course I’ll go along with their right answer, and when it’s over I’ll go back to my idea. . . . Maybe some day I’ll see the light and their right will be right for me, but for now I have my own particular right, and I’ll just stick to it.

Anna had learned, as many do, to keep her academically inappropriate epistemological assumptions in the closet and out of the classroom. Once upon a time, I colluded in this enterprise, stamping out subjectivism whenever it reared its ugly head. Like the members of my seminar, responding to Kim and to Sue, I regarded this approach as a primitive way of knowing that should be exterminated, to be replaced by the more impersonal, detached, objective procedures embodied in scientific method and critical thinking. In the course of my research, however, I experienced a conversion. I still believe that subjectivists are not really thinking, and I still want to help them develop less reactive, more open-minded, thoughtful ways of knowing. But I no longer believe that the critical, impersonal procedures we academics have learned to cherish and to practice and to propagate are the only ways of really thinking.

In *WWK* we described an approach we claimed was equally powerful, a personal, empathic approach, relying on narrative rather than argument as the preferred mode of discourse. We called it “connected knowing,” in contrast to the more impersonal “separate knowing,” and we argued that educators should seek to cultivate both modes, instead of concentrating almost exclusively on separate knowing. In the years since the publication of *WWK*, we have learned more about the ways in which separate and connected knowing play out in practice,³ especially in higher education. As a result of these investigations, I have come to believe that connected knowing provides a smoother, more courteous route than separate knowing for guiding subjectivists into more reflective modes of thought. In order to acquire the procedures of separate knowing, subjectivists must abandon many of their epistemological predilections, whereas in connected knowing these same predilections can be preserved and developed. That is the argument I wish to make – or the story I wish to tell – in this essay.

Connected Knowing and Subjectivism: The Development of a Distinction

As I have recounted elsewhere, connected knowing was originally a serendipitous finding. Claire Zimmerman and I came upon it while searching for evidence of critical thinking, and at first we didn’t know what we’d found. Towards the beginning of a longitudinal study of epistemological development conducted at Wellesley, one of our interviewees made a spontaneous comment illustrating the adversarial aspect of the procedure we would now call separate knowing: “As soon as someone tells me his point of view, I immediately start arguing in my head the opposite point of view. When someone is saying something, I can’t help turning it upside down.”

The next year, we converted this response into a stimulus and asked our interviewees to respond to it. To our surprise – and, at the time, dismay – most of them said they didn’t much like that approach and they didn’t use it much. Grace, for instance, said that even when she disagreed with someone, she didn’t start arguing in her head; instead, she tried to imagine herself into the person’s situation. She said, “I sort of fit myself into it in my mind and then I say, ‘I see what you mean.’ There’s this initial point where I kind of go into the story, you know? And become like Alice in Wonderland falling down the rabbit hole.” Today, we might interpret this comment as an example of Jerome Bruner’s “narrative mode for construing reality,” a way in which “human beings make sense of the world by telling stories about it” (Bruner, 1996, 130). At the time, however, it seemed to us to express only a sort of naïve credulity, indicating not the presence of a distinctive way of thinking but the absence of any kind of thinking. Grace, we decided, was the sort of person who would fall for anything, one of those “overempathizers” that the psychologist Robert Hogan describes as “equivocating jellyfish” (Hogan, 1973, 224).

But although such a description might conceivably be applied to Grace, it could not be made to fit others of the women we interviewed, in the Wellesley and *WWK* studies and in subsequent research.⁴ Consider, for example, the undergraduate who said, “When I have an idea about something, and it differs from the way another person is thinking about it, I’ll usually try to look at it from that person’s point of view, see how they could say that, why they think that they’re right, why it makes sense.” Or one we call Cecily, who told us: “When I read a philosopher I try to think as the author does. It’s hard, but I try not to bias the train of thought with my own impressions. I try to just pretend that I’m the author. I try to really just put myself in that person’s place and feel why is it that they believe this way.” Or the college counselor, who said that in her work she tried “to look for pieces of the truth in what [the student’s] saying, sort of collaborate with them.”

Although the counselor described herself as “a bit of a chameleon,” she was clearly something more. All three of these women used the word “try”; Cecily used it four times in four sentences. Jellyfish and chameleons don’t need to try; they just do what comes naturally. Ultimately we came to see that these women were describing a genuine procedure for constructing knowledge, requiring deliberation, effort, and skill, a way of knowing that is uncritical, but not unthinking.

In contrast, subjectivists assert that whatever feels right is right for them. They operate according to what the psychologist David Perkins and his associates call a “makes-sense epistemology” (Perkins, Farady and Bushey, 1991, 99), accepting without question conclusions that seem to “make sense ‘at first blush’” (Baron, 1991, 177), usually those that accord with their own prior beliefs. Asked how she decided among competing interpretations of a poem being offered in class, a student replied,

I usually find that when ideas are being tossed around I’m more akin to one than another. I don’t know – my opinions are just sort of there. It’s almost more a matter of liking one more than another. I mean, I happen to agree with one or identify with it more.

Subjectivists may “listen” politely to their classmates’ views, but they do not attempt to explore these views, nor do they engage in active introspection; they simply, spontaneously, react. Although they acknowledge — indeed, insist — that other people’s opinions are “right for them,” they tend to dismiss them as irrelevant to themselves. In contrast, connected knowers suspend their own disbelief and deliberately “try. . . try. . . try” to enter into ideas that seem at first blush to make little sense to them, in order to see how they might make sense to others and even, perhaps, to themselves. As we wrote in *WWK*, “It is important to

distinguish between the effortless intuition of subjectivism . . . and the deliberate imaginative extension of one's understanding into positions that [may] initially feel wrong or remote" (Belenky et al., 1986, 121).

Separate and Connected Knowing

Both separate and connected knowing are procedures which transcend makes-sense epistemology and meet the criteria for Perkins's "critical epistemology." Both procedures contain the premise that "it is not enough for a particular story to match one's prominent prior beliefs," and "it is not enough for a particular story about a situation to hang together. One must consider what other, rather different stories might also hang together" (Perkins, Farady and Bushey, 1991, 99-100). Separate knowers,⁵ in the writer Peter Elbow's terms, "play the Doubting Game," searching for flaws even in positions that seem at first blush to make perfect sense, considering whether alternative interpretations of the evidence might apply, offering contrary evidence, and generating competing arguments. In contrast, connected knowers "play the Believing Game" (Elbow, 1973), entering into stories beyond the bounds of their own meager experience, and attempting to make meaning out of narratives that may seem at first blush to make little sense.

Subjectivists cannot play either game, nor do they seem to wish to do so. Sue defiantly described herself as perfectly satisfied with her makes-sense epistemology:

In something like English where I just don't see where anyone else is coming from, my train of thought is so different and I feel secure with my train of thought, then I stick with it. Because I know I can't see where they're coming from so why keep trying at it if it doesn't feel comfortable to you but you have your own thoughts that feel right?

Yet, the phrase "keep trying" suggests Sue had tried (and failed) to see how other people's stories might also hang together. And there are other indications in the interview that she wished for a more critical epistemology. For instance, when the interviewer asked, "How would you describe yourself as a thinker?" she replied: "I don't think. That's the problem, (laughing) I don't think at all." A teacher had told her that she must "learn to think." "She says all I'm concerned about is doing something, and I don't think about the process. I don't think about how I get there. I don't reflect." When the interviewer asked her to describe some things she liked about herself as a thinker or learner, "things that you wouldn't change," she could not think of any. "There's a lot of things I *would* change," she said. For instance, "I'm looking at something, but I'm not processing it. I can't make myself look at it from four different angles and really think about what it means, really analyze it all these different ways and really get in touch with it." Although the "procedure" she envisioned still had a magical intuitive quality ("you get this instant response to something and you really have a grasp of it"), Sue did seem to realize it might be useful to "reflect" rather than simply respond, and to examine a phenomenon from a variety of perspectives instead of "telling one story about the situation that weaves together the facts in one way, from one point of view" (Perkins, Farady and Bushey, 1991, 99).

Sue had no procedure for accomplishing this, but her remarks suggest that she might be open to a connected approach. Over and over, she expressed despair over her inability to understand other people's thinking and to make others understand hers. She could make no sense of her teachers' and classmates' thoughts ("I can't see where they're coming from"), nor could she express her own thoughts in a form that

made sense to them: “There’s no way that I can make them see my thought,” she said, “although I would love to. They’re just never going to see where I’m coming from.” Some variant of these phrases occurred ten times in a one hour interview, leading me to suspect Sue might be more interested in learning to think *with* other people than to think *against* them, more interested in believing than in doubting.

Aversion to Criticism

Subjectivists do not wish to criticize other people’s views or to subject their own views to criticism. If everyone’s views are equally valid, and everyone’s opinion is “right for them,” what’s the point of criticism? In any case, as one student said and many implied, arguments are merely empty rhetoric: “If you support an argument well, anything can be valid.” Connected knowers also eschew criticism, but for different reasons. For them, validity is not an issue; the question they ask is not, “Is it right?” but “What does it mean?” When, in playing the Believing Game I ask you, “Why do you think that?”, I am not demanding logical or empirical justification; rather, as Elbow says, I am asking, “What do you see? . . . Give me the vision in your head. You are having an experience I don’t have; help me to have it” (Elbow, 1973, 261). I’m not at all concerned with whether your thoughts “make sense” according to objective standards; clearly, they make subjective sense to you, and I want to share in that sense. My purpose is to achieve as full and accurate an understanding as I can, and evaluation interferes with – indeed, in the connected knower’s view, precludes – understanding.

In contrast, evaluation is at the heart of the Doubting Game. Mel, an MIT undergraduate, is perhaps the most zealous (and fairest) players of the game we have ever encountered. “If I could get a job shooting holes in other people’s [ideas],” he said, “I would enjoy my life immensely.” (I suggested to Mel that he consider a career in academia.) Mel described the game this way:

If somebody explains [their position] to me and I can . . . shoot holes in it, then I won’t tend to believe it, and if they can explain away every misgiving that I have about the [position], then I’ll tend to believe it. . . . [And] if they seriously believe in something which you think is very wrong, if you – if you shoot enough holes in what they’re saying, they’ll start doubting it themselves. It could happen to you, too. It happens the other way around.

At my college, members of the faculty often complain that it is difficult to entice students into debate; they yearn for a few more Mels in their classrooms. Sue was aware that “[this college] is supposed to make you open up and challenge other people’s ideas,” but she was unable to do it. In class, she said, she was “a mute.” Although members of the faculty saw too much “dancing around disagreement” among their students, Sue experienced the classroom climate as “extremely critical.”

If you open up and say something, there’s more people willing to contradict you than support you in what you say. And after a while – I mean you don’t want to get, like, shot down all the time. It’s not good. It makes you feel, you know, really small. So it makes you like tend to shut up, because you don’t . . . you don’t want to have your thoughts criticized. You just want to . . . when you want to say something, you just want to have it float out in the air and just, you know, stand. You don’t want to have it shot down. There’s so many things that I just want to say, you know? But I feel I’m better off if I just shut up, because I don’t want to . . . I don’t want to have my thoughts attacked.

In order to engage in classroom debate, instead of remaining “a mute,” Sue would have to acquire the art of separate knowing. So long as she has no idea where those verbal missiles are coming from, she is unable to dodge them, let alone intercept them with missiles of her own. In order to construct and contest arguments, she must learn the criteria for validity, the standards and conventions of the various disciplines as to what constitutes evidence for a claim, because this is where those missiles are coming from. But if her teachers were to try to turn her into a separate knower, they would meet with considerable resistance. To take two (admittedly extreme) exemplars of the contrasting positions, it would not be easy to transform Sue into Mel, to convert her deep-seated aversion to disagreement to his passionate zeal for debate, however desirable that might be as an ultimate goal.

Attachment and Detachment: Taking Things Personally

Why is it that students resist subjecting their ideas to criticism? There are, of course, many reasons. One popular diagnosis among professors is that students – especially, so it is said, women students – take their ideas “too personally.” If this is Sue’s “problem,” then perhaps the way to lure her into debate is to frame it, as Elbow (1973) suggests, as “only a game.” But Sue doesn’t want to play games. She does take her opinions personally, and she doesn’t see this as a problem. “I do not like to play the devil’s advocate,” she said. “I do not like to just take the opposite side just to start some sort of conflict, just to see what other people are going to say. If I think something’s right, I’m going to stick to my side, probably because I’ve got this intuition that it’s right.” Like many women we have interviewed (including more sophisticated ones) she values authenticity.

These women find it hard to play with ideas. They lack detachment, the capacity to stand aside from one’s beliefs and examine them objectively, which is at the heart of separate knowing. Ed, an MIT student who spent a summer as an intern working with distinguished scientists in a hospital laboratory on various projects, provided us with an eloquent account of the beauty of detachment. Each week, the interns met with the scientists to present their ideas, and each week the scientists proceeded to shoot them down. Although daunted at first, over the course of the summer Ed came to realize that the scientists were not being malicious: “They didn’t mean anything personal, when they shot you down right away. . . . I thought it was real neat. . . . They didn’t see ideas as *possessions*. They saw ideas as ideas.”

A few years ago, I observed a philosopher guiding a class of first year students through a discussion of the arguments made in Darwin’s time for and against the universe having been created by God. When the discussion showed signs of deteriorating into an exchange of personal beliefs, the teacher reminded the students: “Remember, we’re not talking about beliefs, here. We’re talking about arguments for beliefs.” Ed would have found that distinction “real neat;” I did too, and I hope that some day Sue may grow to appreciate it, but at the moment, she cannot. Subjectivists do see ideas as possessions; they “stick to” them.

Connected knowers are not so stubbornly attached to their own ideas as subjectivists are; they are willing to set them aside in order to consider how “other stories might also hang together.” But they continue to value their own subjectivity; in common with subjectivists, they take things personally, and they assume others do too. The respect that both connected knowers and subjectivists grant to other people’s views is based in part on their awareness that, as the anthropologist Clifford Geertz puts it, “there are people attached to those ideas” (Geertz, as quoted by Berreby, 1995, 4). For the subjectivist, this respect takes the form of a polite, aloof

tolerance, a promise not to intervene, on the grounds that “a person’s experience can’t be wrong.” Connected knowers go farther: they develop procedures for entering into the other’s personal experience and forming a personal attachment to it.

First Hand Experience as a Source of Knowledge

For both subjectivists and connected knowers, beliefs are based on personal experience: to understand a phenomenon means to experience it at first hand, to be “in touch” with it. Kim took a history course along with some students who were “into” chemistry and physics. “We were talking about slavery,” she said, and for them, “it just could not click why some black people are violent, frustrated with society. They could see why two positives would connect. I can’t see that force but I can see anger and emotions.” Sue recalled how a high school teacher enabled her to “see” physical laws by showing her how to experience them:

We’d be talking about some physical principle like vectoring or something. And he said, “The next time you’re in your car and the wind blows, you’ll see your car move a certain way, and that is a perfect example of this principle.” And he was right. I’d go driving and the wind would blow and I’d maneuver my car around and I’d totally understand at that moment. I could really get a grasp at that principle.

Both subjectivists and connected knowers are attuned to narratives of personal experience, rather than “impersonal” arguments. The writer Ursula LeGuin recounts a conversation among a group of women which began, but did not end, in the separate mode: “[We] were beginning to quarrel over theories in abstract, objective language — and I with my splendid Eastern-women’s-college training in the father tongue was in the thick of the fight and going for the kill.” Then Pauline Oliveros, a composer, cleared her throat and said, “Offer your experience as your truth.” The conversation shifted into a different key: “When we started talking again, we didn’t talk objectively, and we didn’t fight. We went back to feeling our way into ideas . . . , talking with one another, which involves listening. We tried to offer our experience to one another. Not claiming something: offering something” (LeGuin, 1990, 149).

In the Eastern women’s college where I taught, the father tongue still prevails. Indeed, the prejudice against first-hand experience runs deep throughout the academy, in spite of gestures toward “service learning” and the like. Courtney Cazden reports the observation of a Tlingit graduate student at Harvard, who noticed that in class when a student raised a question “based on what some authority says, Prof. X. says, ‘That’s a great question!’, expands on it, and incorporates it into her following comments. But when people like me talk from our personal experience, our ideas are not acknowledged. The professor may say, ‘Um-hm,’ and then proceed on as if we hadn’t been heard” (Cazden and Hymes, 1978, 22). We teach students to keep quiet about their experience or to preface their remarks with modest disclaimers: “This is just my experience,” or “I know it’s just anecdotal evidence.” (We professors often indulge in anecdote, of course, but we claim it is merely a device to liven up the lecture.) Students learn that narratives of personal experience are not considered real evidence.

In her classic work, *Literature as Exploration*, first published over fifty years ago and still very much alive today, Louise Rosenblatt asserts that the academic embargo on personal experience extends even to the study of literature, in spite of the fact that for most readers “the human experience that literature presents is primary” (Rosenblatt, 1938/1995, 7). Often, she has observed, “the instructor never even glimpses the student’s personal sense of the work discussed” (59), treating the literary work “as if it existed as an object,

like a machine, whose parts can be analyzed without reference to the reader” (226).

Rosenblatt, a pioneer in “reader response theory,” looks at literature from a constructivist perspective. She conceives of the literary work as “the product of creative activity carried on by the reader under the guidance of the text.” This being so, Rosenblatt says, it behooves the teacher of literature [and other subjects, too] to create an environment in which the students’ “experienced meanings” can be evoked (214). Teachers hesitate to do this, fearing that it amounts to “an invitation to irresponsible emotionalism and impressionism” (226). Some of these responses – “It sucks,” for instance – may be hard for teachers to hear and hard for them to work with. Even those of us who agree in principle with Rosenblatt that “even vigorous rejection is a more valid starting point for learning than are docile attempts to feel “what the teacher wants” (67) may find it hard to welcome such unappreciative and apparently mindless comments. Nonetheless, Rosenblatt insists, this is the place to begin:

The student’s primary experience of the work will have had meaning for him in these personal terms and no others. . . . Only on the basis of such direct emotional elements, immature though they may sometimes be, can he be helped to build any sounder understanding of the work. The nature of the student’s rudimentary response is, perforce, part of our teaching materials (50).

Regardless of the nature of the material under study, whether it be Dante’s *Inferno* or the nature of infinity or Social Darwinism or the Arab-Israeli conflict or heliocentric theory, I believe Rosenblatt’s dictum holds true. It is imperative to elicit these responses, not only to allow but to invite them to “float out and stand” long enough to be heard.

Gender and the Classroom Climate

According to the educational philosopher Kenneth Bruffee, this is unlikely to happen, for in most class discussions the adversarial model prevails. “If we look at what we do instead of what we say,” he writes, “we think of knowledge as something we acquire and wield as individuals relative to each other, not something we generate and maintain in company with and in dependency upon each other” (Bruffee, 1984, 645). If more women had been included in the “we” who designed the institutions of higher education, the situation might be different. Feminist scholars such as Adrienne Rich have repeatedly objected to the dominance of the “masculine adversary style of discourse” (Rich, 1979, 221) and women undergraduates at every level of epistemological development – not just subjectivists – have expressed a desire for a more communal classroom climate. Drawing on her longitudinal study of epistemological development among undergraduates at a prestigious liberal arts college, Marcia Baxter Magolda concluded that, in general, “men supported argument and debate in class and women supported meaningful participation without adversarial connotations” (Baxter Magolda, 1988, 535). These women would not have identified themselves with Bruffee’s “we;” implicit in their notion of “meaningful participation” was a conception of knowledge as “something we generate and maintain in company with and in dependency upon each other.” Similarly, Catherine Krupnick, in a study involving extensive videotaping of classes at Wheaton College in Massachusetts soon after the college began to admit men as well as women, found that male students, who made up one-tenth of the class, did a quarter of the speaking. When the women did speak up, they tried, more often than the men, to build on the ideas expressed by a classmate rather than to challenge them, although this connected approach received less reinforcement from teachers than the male’s more separate style (Fiske, 1990, B10).

Baxter Magolda's research revealed persistent gender differences throughout the college years, with men showing a "separate" pattern and women a "relational" pattern at every level of epistemological development. She concludes:

Traditional environments often reinforce debate and competition which affords greater validation to the male pattern than to the female pattern. . . . Being encouraged to express one's views in a setting that does not simultaneously jeopardize peer relations is necessary to encourage female pattern students to take these risks (Baxter Magolda, 1989, 20).

The danger of jeopardizing peer relations looms especially large in a classroom composed of strangers. As a young woman participating in Ana Aleman's research explained, "I'm sitting in classes with twenty other people and I don't know them You don't have any relationship with them outside of class. . . . You don't know them as a person, you don't know anything about them" (Aleman, 1998, 6). Concerned about how her comments might be interpreted and how she might be judged, she found it safer to remain silent. Outside class, in an atmosphere of "preestablished intimacy and trust," she and her friends freely engaged in intellectual activities their professors had tried in vain to elicit from them, including a version of devil's advocacy: "asking probing questions and suggesting alternative considerations in an effort to expand the friend's understanding and intellectual confidence" (7).

It was not until I served as evaluator of an experimental program instituted at my own college in the 1980s that I became aware of the impact personal relationships could have on student learning. Students who chose to participate in an interdisciplinary first year "Cluster" program lived together in the residence hall and shared a common curriculum organized around a common theme or period. In interviews conducted as part of the evaluation of the program, both the students and their instructors attested to the remarkably high quantity and quality of the students' participation in class. For instance, one student said, "I never talked in class [before]. But here we know each so well, and we know what we're all feeling. You get to know how people think. So we talk a lot about stuff." Faculty members agreed. As one teacher said, "the biggest difference was that the students were much more active."

There were a lot of days in this class when I had to ask them not to ask questions for awhile [laughs], and this is not the experience normally. You had to stop them from talking in class. It's such an inversion of the usual thing. There were these very speculative questions, very abstract discussions. That was the biggest difference, that these very interesting conceptual things tended to take over. Some nuts and bolts stuff were lost, but there was a great deal of intellectual engagement in these other things.

Cluster students reported that these kinds of conversations went on outside of class, too, and in the pages of their journals. "At first," a student said, "it was just personal stuff. When we first got here all we were talking about was men. Now, it's different. I was real surprised. We talk about school work a lot now, just about what we learned or something. Last week we were talking, and somebody said, 'Do you realize that we're talking about philosophy here?' For instance, she said, 'We talked in class about "Are we real?"' And then a couple of friends and I were saying, 'Are we really here, or are we imagining ourselves here?' And then I'm sitting there with my journal writing, 'Are we really here?' And I put, 'Well, we examined that today, and there was that lecture on Comte's views.' And I have two pages on that." For these students, the

“academic” had become “personal.”

Although separate and connected styles of knowing are by no means gender-exclusive, they may be gender-related, and certainly they reflect gender stereotypes. Might male students feel as uncomfortable in “connected” classes as women sometimes feel in those conducted on a “separate” model? To explore issues of gender and epistemological style in an educational setting, I turn now to two unusually thoughtful accounts of courses consciously designed to cultivate both separate and connected knowing among both male and female undergraduates.

Teaching Connected Knowing: Two Case Studies

Stephen Fishman, in collaboration with Lucille McCarthy, and Barry Kroll describe in detail what went on in their courses, and they explore in depth what they and the students learned from the experience. In Fishman’s introductory philosophy course and Kroll’s course on the history of the Vietnam war, students were presented with a variety of texts, some consisting of arguments based on objective evidence, some consisting of narratives of personal experience. In Kroll’s course, for instance, students read memoirs written by individuals who had suffered in the war as well as scholarly accounts of the conflict.

In both courses, students were encouraged to use both ways of knowing in class discussions. To illustrate, on one occasion the philosophy students were discussing whether children should turn in parents who were dealing drugs. “Vickie’s arguments,” Fishman reports, “were based on ‘disinterested reason’ and ‘detachment’ and “could have been voiced by anyone. . . . They do not appeal to any special circumstances in Vickie’s life. I call these ‘separate knowing arguments’ because they stand by themselves.” The assumption is that any reasonable person would assent to them, regardless of what they knew about Vickie. In contrast, Diana told of growing up in Columbia during the drug wars, hearing shooting in the streets and learning her relatives had been killed. She said that if she were doing drugs, she would want someone to stop her. “For Diana to be persuasive,” Fishman writes, “the class had to know Diana’s background, had to imagine how her childhood differed from theirs. Diana’s thinking asked the students to step closer, whereas Vickie’s asked them to step back” (McCarthy and Fishman, 1991, 437).

Both Kroll and Fishman had to work hard to elicit students’ personal responses to the subject matter of the course. Fishman:

It is not easy . . . for students to find connections between their personal and their academic languages. . . . Initially, when I ask what they think about an issue, they seem insulted, as if I’ve violated a rule. . . . My students want desperately to look things up, appeal to a book, keep *themselves* out of their work (McCarthy and Fishman, 1991, 434).

Fishman believes that the students “do not know how to work their opinions into school conversations, how to profit from close study of themselves;” “their inner voices,” he thinks, “are insufficiently provoked” (434).

To provoke the voices, the two instructors used various strategies designed to help the students “explore what was going on in their own hearts and heads” (Kroll 1992, 8). Members of Kroll’s class made

“regular, detailed, and thoughtful entries” in journals, handed them in weekly, and wrote a retrospective review at the end of the course, so that both students and instructor could trace their intellectual and emotional development. Fishman began each period with a ten minute “freewrite” (Elbow, 1991, 13ff). “Once we had time to tune to our own voices,” he says, “we could tune to the voices of others” (McCarthy and Fishman, 1991, 441). Reversing the usual practice, students spent more time discussing their classmates’ responses to the classical texts than they spent on the texts themselves. Different students recorded and distributed the “minutes” of each discussion, so that everyone could keep track of the knowledge that was evolving through collaboration among group members.

Both separate and connected knowers can acquire more objectivity when they become better acquainted with themselves, the ways in which their personal predilections can shape their interpretations of external events. In separate knowing, one minimizes personal bias through “weeding out the self” (Elbow, 1973, 149), while in connected knowing one *uses* the self as an instrument of understanding. As Rosenblatt points out, although subjectivity is a source of bias, it is only through our past experiences and present preoccupations that we can achieve any reading of a text (or any other object) in any discipline.

For Kroll’s students, the achievement of objectivity was not an easy task. Some – most of them women – so identified with the emotions expressed in a memoir that they were unable to stand back and examine the author’s conclusions with a critical eye. Others – mostly men – could not connect. For instance, in his journal, one man wrote, “I find it difficult to share the emotion of the subject matter and the somber tone of the class. I find it hard to believe that the stories I read for today were reality because I’m so far removed from them” (Kroll, 1992, 24). And another said, “Who am I to judge actions that I don’t really understand, and especially since I have never been in any kind of similar or even remotely similar situation?” (75).

“To understand a poem,” an undergraduate said, “You must let the poem pass into you and become part of yourself, rather than something you see outside yourself. There has to be some parallel between you and the poem.” For subjectivists, the parallel, the “click” of connection, is there or it isn’t; one cannot will it into being. Connected knowers, in contrast, learn to construct the parallels by conjuring up “metaphorical extensions, analogies, associations” (Elbow, 1973, 149). Kroll’s students rummaged through their memories in search of experiences which might be analogous to those undergone by, say, a soldier in combat. One man remembered how, during a Lacrosse game, he had “felt indestructible.”

I thought I was a badass. Also, I was very intent on inflicting pain. . . . I was swinging my stick as hard as I could. I was trying to hit the Purdue guy between the pads. . . . If combat is anything like that, . . . I can certainly understand how people become hooked.

Students also learned to use one another as partners in connected knowing. Recall that the women in Aleman’s study, anxious about how their comments would be interpreted by unfamiliar classmates, remained silent. In the early weeks of the philosophy course, Todd experienced the same trepidations, but instead of keeping quiet, he coped with his anxiety by presenting carefully constructed arguments designed to be impregnable. By the end of the term, however, the class had evolved into a community based on “trust and openness,” and Todd had learned to speak in a different voice. In a retrospective account, he wrote,

At the beginning you want to make a big bold impact. When the barriers of worrying about what people are going to think are broken, you mumble on and see if maybe somebody else

can pick out what you mean by what you're saying. So, the last few weeks I said, "Well, I just need to get it out." So I'd throw it out there, and sometimes I'd find myself fumbling a lot, and I'd say, I don't know what I mean, but someone might be able to help me. It was okay for people to see I wasn't polished (McCarthy and Fishman, 1991, 440).

Todd had broken through gender stereotypes, adopting a way of speaking more often attributed to women and sometimes described as "powerless speech." His new voice sounds much like the "epistolary voice" that Erika Scheurer found in examining Emily Dickinson's letters, suggesting "a mind thinking" rather than a mind "having thought," "unrevised thoughts in progress" (Scheurer, 1995, 99). These are the kinds of thoughts both Kroll and Fishman, in trying to "endorse uncertainty" (Kroll, 1992, 97), encouraged their students to "get out" in their journals and freewrites. "Unrevised thoughts in progress," as Scheurer says, invite response, "a reply to build on further" (Scheurer, 1995, 99). Todd provides a perfect description of the kind of knowledge building that occurs among connected knowers: "you mumble on and see if maybe somebody else can pick out what you mean by what you are saying." Todd's classmates, by "feeling their way" into his mind, like the women in LeGuin's group, collaborated with him in "making meaning" (Bruner, 1996, 130), helping him to articulate and develop his embryonic thoughts.

Meaning-Making in Everyday Life: Integrating Objectivity and Subjectivity

Those who do research on writing have noticed, as Fishman did, that "it is not easy for students to find connections between their personal and their academic languages." Andrea Lunsford reports that less "advanced" students do express their personal opinions in their papers; in fact, that is just about all they do. All the "basic writers" in Lunsford's study "focused primarily on themselves." They "merge with the topic; they cannot distance themselves in order to gain a variety of perspectives on the topic" (Lunsford, 1980, 281). These students sound like subjectivists: they see no need to consider alternative views; their own perspective is the only one that is real to them. In time, a substantial number of these students may learn to "distance themselves" from the topics of their essays, but at some cost. Lunsford observes, as have others, that "the basic writers' prose is more vital, more engaging and more true to the students' experiences than the impersonal, strangely disengaged prose often produced by our more skilled students." "The real challenge," she says, "lies in helping our students become more proficient at abstracting and conceptualizing and hence at producing acceptable academic discourse, without losing the directness many of them now possess" (287).

The "impersonal, strangely disengaged" tone of these papers should sound familiar to us, for it is characteristic of much of the academic literature we read and write. Christopher Jencks and David Riesman once drew a distinction between "academic arguments," the kind that fill our journals, and "intellectual" discussions. In "academic arguments" the protagonists, who make a living at this sort of thing, are expected to exhibit "professional detachment," untainted by personal feelings or values. "Intellectual questions," in contrast, "grow out of reflection on experience" and are pursued by "amateurs." Personal feelings are admissible in intellectual arguments, "since the outcome of their argument is expected to have personal as well as professional consequences" (Jencks and Riesman, 1962, 242-243). The disinterested academic arguments students learn to construct are of limited value in dealing with the "intellectual" personally relevant issues of everyday life. Rosenblatt writes:

It is comparatively easy for the student to think rationally about difficult human problems

when impersonal academic treatments make them abstract subjects of thought. Unfortunately, that kind of thinking is probably not very useful; it lacks the conflicting impulses or emotional perplexities out of which thinking usually grows in real life. Reason should arise in a matrix of feeling (Rosenblatt, 1938/1995, 216).

The academic disciplines are grounded largely in philosophical and scientific traditions dominated by what Bruner calls a “paradigmatic” mode of knowing, which focuses on the validity of knowledge, established through separate knowing procedures such as logical argument and empirical testing. In Bruner’s view we devote far too much pedagogical time to the paradigmatic mode, for “neither the empiricist’s tested knowledge nor the rationalist’s self-evident truths describe the ground on which ordinary people go about making sense of their experience” (Bruner, 1996, 130). In real life, outside the academy, we rely largely on “narrative” thinking, constructing possible stories to account for “how things are, how they might have come to be that way, and where they might be going, from what perspective, and so on.” The emphasis is on making meaning, as in the discussion among Todd and his classmates, rather than evaluating finished ideas. Impregnable arguments and definitive experiments are irrelevant to this enterprise; personal feelings are not.

Students trained only in the paradigmatic mode may be well prepared for solving the well-defined problems set by their instructors, but, lacking skill in narrative thinking, they are ill prepared for dealing with the “ill-structured” problems of everyday life, for which there is no single certain answer and no foolproof method for deciding among competing answers. King and Kitchener report that many of the college seniors in their sample, seemed to be “at a loss,” when presented with such problems, finally deciding they must be just “opinions” (King and Kitchener, 1994, 325). Based on her research with older adults as well as her sense of the culture at large, Deanna Kuhn believes that people “often remain multiplists for life” (Kuhn, 2000, 317). Even “choice of political candidates,” she says, “tends to be treated as a matter of personal taste and opinion” (Kuhn and Weinstock, 2002, 139). Of course, choice of a political candidate should involve personal opinion, but the opinion should be reflective rather than reactive.

In courses where narrative thinking is welcome, students are encouraged to develop procedures for constructing such opinions. In these classes Sue’s honest reaction to a book – “It sucks,” for instance – would be allowed to “float out;” no one would force her to defend it, but neither would it be allowed to “just stand.” She would be asked to reflect upon her response, in an attempt to understand what in the work and in herself produced that reaction. Once convinced that “narrative construal is not a zero-sum game” (Bruner, 1996, 96), she could begin to closely examine how “other rather different stories might also hang together,” and how they might provide opportunities for enriching and revising her own.

Rosenblatt’s “reflective thinking” and Bruner’s “narrative thinking,” as well as our “constructed knowing” (*WWK*) and Labouvie-Vief’s “wisdom” (Labouvie-Vief, 1990, 78) are related approaches, all of which involve the integration of emotion, and reason, attachment and detachment, subjectivity and objectivity. Each of our constructed knowers had developed her own distinctive version of the position, and each felt responsible for making and acting upon her judgments. We found few undergraduates who spoke from this position. Baxter Magolda found none. Her research participants did not achieve “self-authorship” until their mid- to late-twenties. It was not until then that their “internal voices” began to shape their lives, as they “acknowledged the inherent uncertainty of knowledge and took up the challenge of choosing what to believe,” and “attempted to live out their beliefs in their work and personal lives.” (Baxter Magolda, 2001, 119-120). It may be naïve, even pretentious, to expect young people to achieve wisdom prior to graduation from college,

but if we did less than is done now to inhibit its development, and more promote it, we could at least make a start.

Endnotes

¹ Unless otherwise indicated, quotations are from participants interviewed in various research projects, including those carried out by my students, and names are pseudonyms.

² For example, Baxter Magolda, 1992; King & Kitchener, 1994; Kuhn, 2000; Perry, 1970/1999.

³ See, e.g., Clinchy, 1996, 2002.

⁴ E.g., Clinchy, 1996.

⁵ In using the term “knower” as in “separate and connected knowers,” I do not mean to imply that the approaches are mutually exclusive or that individuals are limited to a single approach; research participants tell us they often vary their approach, depending upon the domain or type of inquiry; and measures of attitudes toward separate and connected knowing appear to be orthogonal (Galotti, Clinchy, Ainsworth, Lavin, and Mansfield, 1999).

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How Clinchy's Two Minds Might Become One Flesh: A Response to Blythe Clinchy's Essays

Dale Cannon

ABSTRACT Key Words: epistemology, developmental epistemology, Blythe Clinchy, Women's Ways of Knowing, Michael Polanyi, connected knowing, separate knowing, acquaintance knowing, tacit knowing, relational knowing, post-critical philosophy.

This essay explores the contribution that the thought of Michael Polanyi might make to the work in developmental epistemology of Blythe Clinchy and her colleagues in the Women's Ways of Knowing project. In turn, the potential contribution of Clinchy's work to Polanyi studies is explored. Both have much of value to share with the other. While Clinchy's conceptualization of "connected knowing" as a complement to "separate knowing" is insightful and rich in its implications, Polanyi's post-critical understanding of human knowing provides a fuller, indeed comprehensive, philosophical understanding of the nature, importance, and dynamics of the two, the priority of connected to separate knowing, even when it seems to be absent, and how the two fit together.

Polanyi's Relevance to Clinchy's Work and Women's Ways of Knowing (WWK).

On reading Blythe Clinchy's two essays, "Connected and Separate Knowing: Toward a Marriage of Two Minds"¹ and "Beyond Subjectivism,"² from the perspective afforded me by Polanyi's work, what I find is a discovery of some of the same features of human knowing uncovered by Polanyi: the priority of knowing as act and process to knowledge as result or thing; the personal participation of the knower in all aspects of knowing; indwelling, pouring oneself into a thing to be known and understood; the priority of acritical empathic believing in all knowing ventures; personal participation as positively contributing to an objective grasp of the object known, in contrast with uncritical subjective projection; knowing as a collaborative effort involving many persons and many uniquely distinct perspectives; comprehension as transformative of the self of the knower; etc.

While convergent in many ways, Clinchy's approach to human knowing is, however, not coincident with Polanyi. Clinchy comes at many of the same issues and insights that we find in Polanyi from a surprising angle – namely, from a study of how contemporary female Ivy League undergraduates reflect on how they go about knowing.³ Interestingly, it is the common features with Polanyi just mentioned that Clinchy and her associates discover to be typically characteristic (though not exclusively) of women's ways of knowing, in contrast with the dominant paradigm of how to go about knowing in the academy, with which male undergraduates seem to be more ready to identify.⁴ This dominant paradigm is clearly what is identified by Polanyi as modern critical, Enlightenment epistemology. In effect, Clinchy and her associates are distancing themselves from this dominant epistemology and moving toward what Polanyi calls a "post-critical epistemology" by bringing to light strategies of knowing in an academic context to which women tend spontaneously to resort.

Interestingly, I find in Clinchy's work (and that of the collaboration of which her work is a part) a kind of inductive process of doing epistemology – which is natural, given that her primary specialization is developmental psychology, but quite different from how Polanyi proceeds. (However, it must be said that Polanyi's basis for doing epistemology and philosophy of science being his own first hand experience and that of his colleagues in the natural sciences bears some analogy with this aspect of Clinchy's work.) With the aid of other researchers in this field (especially William Perry⁵), Clinchy inductively identifies different stages of epistemological development in the thinking of undergraduates and a different trajectory of typical development followed by women from that followed by the primarily male undergraduates studied by Perry. (I happen to think Polanyi would find Clinchy's account genuinely fascinating.) While Clinchy's work begins with observation and description (based on interviews), she moves quickly and seamlessly to critical appreciation and judgment regarding the cognitive moves made by her subjects, appealing to criteria employed in her subjects' knowing – i.e., from is to ought, from fact to norm – especially as she moves up the stages of development and maturity in knowing. This is remarkably similar to the way Polanyi speaks of the biological study of living organisms as critical, involving the assessment of how successfully they achieve the realization of principles inherent in their life processes, and to the way Polanyi speaks of the continuity of critical appreciation involved in the study of life processes from the most primitive forms of life to the most sophisticated of human achievements.⁶ (Polanyi calls this spectrum of gradually increasing personal participation and indwelling in the study of life “ultra-biology” in *PK*.⁷) So also and again like Polanyi, Clinchy's study culminates in a shared convivial submission to, and commitment to, the same firmament of values she finds in her subjects' cognitive efforts, especially those at higher levels of development.

Another remarkable thing in Clinchy's work from a Polanyian philosophical perspective is the way she relates to the undergraduate subjects of her study as not just going through changes in how they go about knowing, but as going through changes that are reflective and self-consciously induced – meta-changes in their knowing, as it were – thus changes that are essentially philosophical, hence epistemological, in nature. She studies them as they engage in philosophical reflection on their own and on each other's knowing – whether the classroom content be philosophy, science, sociology, or literature. She relates to her subjects not as objectified things at a distance, but in full respect as human beings in a person-to-person way. Moreover, her developing conception of “connected knowing” drawn from the comments of female subjects of the Women's *Ways of Knowing* (*WWK*) project itself provides justification for the empathic methodology she embodies in her practice. Each of these points is remarkable in itself and worthy of extended discussion; but I must move on.

Clinchy identifies two models or paradigms of knowing – “connected knowing” and “separate knowing.”⁸ This involves strategies of drawing near and collaboration and the other involving strategies of distance and disputation. These, according to Clinchy, are respectively manifested in the ways of knowing typified by more mature undergraduate women within the group being studied on the one hand and more mature undergraduate men on the other (within the group studied by William Perry), but not exclusively so. In any case, the features she finds characteristic of women's ways of knowing are the ones closest to features characteristic of tacit knowing in Polanyi's account. The features found characteristic of undergraduate men's ways of knowing (in Perry's research and in tangential anecdotes related in Clinchy's study) are ones one might identify with explicit knowing. But to put it this way would be misleading. One might think first of a correlation between Clinchy's distinction between connected knowing and separate knowing with Polanyi's distinction between explicit knowing and tacit knowing. I think a better and closer correlation would be with Polanyi's distinction between the paradigm of knowing characteristic of the modern critical movement (which

has pursued the ideal of total explicitness and remains dominant in our institutions of higher learning today) and that characteristic of the post-critical (or constructively post-modern) movement he sought to establish (which appreciates the tacit underpinnings of all of our knowing and grounds explicit knowing in a tacit, a-critical indwelling of things). But this correlation, while closer, is not exact either, for Polanyi's post-critical conception of personal knowing is not set directly in opposition to what Clinchy speaks of as separate knowing, as is connected knowing. Consequently, Polanyi's post-critical conception of personal knowing should not be identified as such with Clinchy's model of connected knowing, or vice versa.

Rather, Polanyi's post-critical conception of personal knowledge, at least in my understanding, is intended to transcend and overcome the opposition between connection and separation: to incorporate both methodological believing and methodological doubting, both tacit and explicit dimensions, both acquaintance knowledge and representative knowledge, both intuitive synthesis and destructive analysis, both sides of C. P. Snow's *Two Cultures*, etc. – though none of these pairs (which I do not take to be equivalent distinctions) in some kind of equal balance. Both Polanyi and Clinchy seek to overcome a false, destructive, oppositional understanding of the two paradigms of separate and connected knowing in what Clinchy proposes to call “a marriage of two minds” and in what she occasionally calls “constructed knowledge.” The latter is nowhere explained in these essays, but a fuller explanation of it can be found in *Women's Ways of Knowing*, which provides a context that she takes for granted in these essays.⁹ In any case, Clinchy, in these two essays, has not yet brought off the integration or synthesis she avowedly seeks; she has not yet shown how the two, as she describes them, can be happily married – indeed, tongue in cheek she calls her identification with both paradigms a somewhat embarrassing polygamy. From the perspective of her work, that integration needs yet to be accomplished. One value, then, for Polanyi's thought, of the work of Clinchy and WWK is setting out a clear basis for recognizing what is needed, a solution for one of the principal cultural problems which Polanyi is principally concerned to address. What Clinchy is seeking in these essays (or perhaps I should say, on the basis of these essays) is a post-critical epistemology – and it is recognition of certain prominent features of women's ways of knowing in contrast with the dominant paradigm of separate knowing that points the way and for which it provides one of the better clues.

How do the two – connected and separate knowing – fit together? Simply given the characterization of each as Clinchy presents them, it is hard to conceive how they might belong together. Part of the problem is that, viewed from a Polanyian perspective, as described by Clinchy both are to some extent partial and incomplete – as she herself admits. In a Polanyian perspective one might say that, rightly and maturely practiced, the one is never wholly without the other. Let me make the same point using somewhat different but related categories closer to Polanyi's own thought: tacit knowledge by acquaintance (which is close in meaning to Clinchy's connected human knowing but not an exact equivalent) is never without the possibility, if not the presence, of knowledge by representation (at least for human knowing). It is representation of what is tacitly known by acquaintance (e.g., in the form of a map) that makes possible reflection on that acquaintance knowledge at a distance – i.e., it is representation that makes possible separate knowing. Inversely, knowledge by representation is never without the active presence of knowledge by acquaintance, never without a tacit dimension – though of course the latter may be simply assumed, repressed, or ignored.

One of Polanyi's key strategies in *PK* and elsewhere is to document how the most strict and rigorous of the natural sciences and mathematics is rooted and grounded in tacit knowing. (This goes far beyond any of the claims made by Clinchy or her colleagues.) Similarly, it might help if some Polanyi-informed scholar were to write an account of the tacit dimension of *separate* knowing (noting its elements of connected knowing)

– i.e., the kind of adversarial, analytic mode of professional academic disputation that typifies separate knowing – both at its best and at its worst. Actually, considered in this way, “separate knowing” appears less an entire way of knowing unto itself than a phase of the knowing process presupposing there having come into play determinate representations or claims about the matters at hand, which of course would have to rely on tacit processes of coming up with promising representations involving more connected strategies of knowing. [By the way, there is room for new Polanyian work in ferreting out the tacit dimension of what is involved in the distinction between formal reasoning (or formal logic) and the context dependent nature of what has come to be called informal reasoning (or informal logic). The work of Stephen Toulmin among several others is relevant here.¹⁰]

As well it might help to develop an account of the explicit, representative dimension of connected knowing (involving such elements as the role of narratives mentioned by Clinchy), and how it (that dimension of connected knowing) is similar to and different from the explicit dimension of separate knowing. So also, it would help to identify, first, a range of example intellectual problems where strategies of connected knowing are indispensable and irreplaceable by strategies of separate knowing (e.g., in communicating between frames of reference that do not share the same presuppositions), second, a range of example problems where strategies of separate knowing are more directly relevant, and, third, a range of example problems where the two need to work together and/or alternate.

In sum, Polanyi’s understanding of human knowing does not dichotomize connected and separate knowing at all – except occasionally as parts or phases of a whole to which they belong (though not simply as two halves of one whole). In effect, their separation is an illusion. They are not meant to stand alone (which is not to say that specific social intellectual contexts might not conspire to restrict what is verbalized to one or the other). Part of the illusion of their separation from each other comes from abstractly juxtaposing strategies of knowing appropriate for two quite different subject matters, subject matters located at two very different points along the continuous spectrum of the study of living organisms (the spectrum Polanyi in *PK* calls ‘ultra-biology’¹¹). (Actually, this is partly evidenced by the different subject matter contexts from which illustrative quotes are taken in Clinchy’s account.) Thus, at one end of the spectrum, the non-living, inanimate end, there is relatively little personal participation called for on the part of the knower – so little that it can be explicitly ignored or simply left out of account without significant cost; here a strategy of separate knowing may be quite relevant. But at the other end, profound imaginative empathy and sympathy is called for by what is being investigated – e.g., simply to understand, say, the intention of a cultural gesture in its own context, let alone assess it in terms of some external criterion. Here personal narratives – both of the subjects being studied and, reflectively, of the person conducting the study – may need to be taken into account and generally strategies of connected knowing will be particularly relevant. My point is that different subject matters require different epistemological strategies. Problems, of course, arise where persons are not open to discovering hitherto unnoticed aspects of a given subject matter because they are stuck in the rut of considering it, usually reductively, from the perspective of one strategy only. Moreover, at the human end of the spectrum of ultra-biology, once connected strategies of knowing issue in determinate explicit claims, there may be a role for adversarial debate characteristic of separate knowing. In short, it may not pay to expend energy contrasting and contesting the respective relevance of connected and separate knowing in the abstract. For once they are applied to particular subject matters, the question of what is appropriate and what is not will very often resolve itself.

Were the WWK project and the legacy of its influence to acquire a Polanyian understanding of the

relations between what is called separate knowing and connected knowing, it would I think be relieved of having to play defense vis-à-vis the advocates of the dominant separate knowing paradigm and relieved of having to appeal to gender justice to legitimate strategies of connected knowing.

Does Polanyi help us understand how it is that separate and connected knowing have come to seem at odds, how they got “divorced” in the first place? Yes, I think so, through his accounts of (1) the dialectic of intuitive integration and destructive analysis – more on this from the response of Esther Meek to come; (2) the rise to dominance of the modern critical project (that continues to bias academic discussions of “critical thinking”), with its method of doubt and critical suspicion toward any elements of subjectivity; (3) the objectivist theory of scientific knowledge, and scientism; (4) and various movements that have sought to counteract this dominance in romanticism, vitalism, existentialism, empathic methodologies in historiography, phenomenology, and hermeneutics. It’s a long and involved story.

There are in Polanyi other, likely easily overlooked topics of relevance to some of the research of Clinchy and WWK than the ones I mention here. For example, I am thinking of what Polanyi has to say on behalf of decentralized control and spontaneous coordination of independent initiatives. He discusses these topics in connection with his sociological and economic studies. But to my mind they are relevant to epistemology too and specifically to women’s ways of knowing. I won’t take time to go into this here, however.

The Relevance of Clinchy’s Work and WWK to Polanyi.

So far I have been seeking to identify Polanyi’s relevance to WWK and to Clinchy’s work in particular. What about the reverse? On reconsidering Polanyi’s post-critical philosophy from the perspective of WWK and Clinchy’s work in particular, what might they (WWK and Clinchy) be able to contribute to Polanyi studies? What is WWK’s relevance to Polanyi? What have Polanyians to learn from Clinchy’s work? Not being an insider to the WWK movement, I am no doubt venturing to tread on thin ice. But I’d like to venture some possible insights into Polanyi that they could contribute.

First, among serious epistemologists, Polanyi seems to be remarkably non-sexist – despite his use of non-gender-neutral language. By non-sexist I mean not simply being free from overt and obvious gender biases. I mean, if we grant what feminist epistemologists have come to realize about the implicit gender biases implicit in Western conceptions of knowing and being (epistemology and metaphysics) starting back in ancient Greece, Polanyi’s thought is remarkably free of such biases. Why? Possibly because of its groundedness in relational personal knowing that is so characteristic of women’s ways of knowing. Also because he demonstrates the presence of connected knowing throughout human knowledge regardless of the sex of the knower – despite the fact, and ironically because of the fact, that he is/was a male physical scientist. It is amazing that here is someone who has really thoroughly thought through these issues in a systematic and comprehensive way precisely where connected knowing is (wrongly) supposed least likely to belong. WWK, in a way that no other intellectual movement is able to do, can bring to Polanyi studies an appreciation of how sound, complete, and balanced an understanding of human knowing is to be found in Polanyi, especially, but not only, in terms of how it relates to gender issues in epistemology.

Second, and in something of the same vein, Polanyi’s understanding of human knowing and the human condition as a whole embodies a remarkable balance of feminine and masculine elements: drawing near

and distancing, heart and head, right brain and left brain, tacit and explicit, emotion and reason, passion and precision, subjective and objective. WWK can help in making a public case for appreciating the wholeness of vision that characterizes Polanyi's thought, especially in relation to the lack of wholeness characteristic of modern critical thought.

Third, in connection with this, it is I think instructive to compare the kind of critical response and misunderstanding WWK has received from representatives of the dominant paradigm of knowing in the academy with the kind of critical response and misunderstanding that Polanyi has received. It strikes me that the two are remarkably similar in what they are accused of doing. Both have been, and to a large extent still are, marginalized by mainstream epistemological reflection in the discipline of philosophy, precisely because they challenge the hegemony of the separate knowing paradigm. Perhaps students of Polanyi's thought can learn some lessons from the experience of WWK in this respect.

Fourth, juxtaposing Clinchy's account of connected knowing to Polanyi's understanding of tacit knowing (and the tacit dimension of explicit knowing) highlights and underscores how Polanyi's understanding of knowing is fundamentally an embodied *relational* conception. To know is to relate oneself to what is known, to bring oneself into a relational rapport with things. Seen in relation to the mainstream of the Western tradition of epistemology, not just the modern Western tradition, Polanyi is proposing a radical reorientation. That mainstream has taken knowledge to be primarily representational (e.g., in the representative theory of perception and the notion that knowledge is primarily or properly propositional), while dismissing or repressing into obscurity all acquaintance knowledge as well as skill knowledge. On the contrary, Polanyi grounds and documents the dependency of *all* representative knowing in tacit acquaintance knowing.¹²

Fifth, Clinchy and WWK can bring to Polanyi studies a special emphasis upon the nature, varieties, and dynamics of empathy and empathic inquiry – which, while far from absent in Polanyi and Polanyi studies, has not received the attention in Polanyi studies that it deserves. I have in mind such things as a Polyanian approach to cultural anthropology and the comparative study of religion, but also a Polyanian approach to understanding art, music and literature.

Sixth, and related to this same point, Clinchy and WWK can bring to Polanyi studies a welcome self-conscious focus and reflection upon the impact Polanyi is having, and should be having, upon how we go about relating to one another as intellectuals in a post-critical intellectual ethos – i.e., more in a connected, collaborative way than in a separate, adversarial way. (E.g., Clinchy says connected knowers ask first not for justification but for clues to what the other is getting at: help at seeing what they see, and what has led them to this point of view, what reasons motivate them; look for what is 'right' or how it could make sense, even in positions that seem initially wrongheaded or strange.) What does it mean to relate to one another on a truly convivial basis, and to what extent should we be not seeking to carry forth and extend the practice of convivial intellectual exchange into other contexts, impacting the various academic ethoi in which we find ourselves and counteracting the otherwise adversarial interchange governed by the paradigm of separate knowing? How can we demonstrate how one can be personal (i.e., personally present) in our cognitive endeavors and yet transcend the distortions, biases, and reactive resentments of subjectivism? I think these questions can be answered on Polyanian grounds alone, but the work of Clinchy and WWK can facilitate addressing them.¹³ Something of what I have in mind is illustrated well by the reflections on teaching and pedagogy by Esther Meek's response in this issue of *TAD*.

Seventh, Clinchy and WWK may be able to help us reflect more on and develop further Polanyi's insight (than we have heretofore) into the nature, dynamics, and transformations of the self of the knower in cognitive endeavor – i.e., the self as instrument of knowing. There has been a lot of discussion, a good deal of it confused and confusing, in recent deconstructive post-modernist accounts. I think the work of Polanyi and other thinkers with affinities to Polanyi could insightfully and fruitfully be brought to bear on these matters with Clinchy and her colleagues' help.

Eighth, Clinchy has as her primary focus, at least in these two essays, an approach to construing education and understanding education as epistemological development. Reconsidering Polanyi in light of her work has begun to open up for me a glimpse of the important ramifications of Polanyi's thought for education to which I had been largely oblivious before. Some have already begun to explore these – e.g., Parker Palmer, Peter Elbow, Elizabeth Sargent, Sam Watson, and others. But there is much more that can be done here, much much more – not least in terms of challenge to and displacement of the hegemony enjoyed by the paradigm of separate knowing.¹⁴

Ninth and lastly, almost as an aside, I want to call attention to the prominent role of anecdotes to which Clinchy has called our attention in her account of connected knowing in women – indeed, within the entire research program of the WWK project. Anecdotes, as we have all been trained to think, are not supposed to be evidence, at least not 'hard' and 'trustworthy' evidence – certainly not within the perspective of quantitative research, where separate knowing tends to hold sway. But what value do they have qua evidence in what is sometimes called a perspective of qualitative research? I think that Polanyi's thought has some interesting implications for this particular topic, particularly when we begin to consider anecdotes as clues.

There are no doubt still other valuable contributions which Clinchy and WWK may make to Polanyi studies. I hope the ones I have sketched for you will have whetted your appetite.

Endnotes

¹ Blythe McVicker Clinchy, "Connected and Separate Knowing: A Marriage of Two Minds," in *Knowledge, Difference, and Power: Essays Inspired by Women's Ways of Knowing*, edited by Nancy Goldberger, Jill Tarule, Blythe Clinchy, and Mary Belenky, (New York: Basic Books, 1996), pp. 205-247.

² First published in this volume of *Tradition and Discovery: The Polanyi Society Periodical*, pp. 16-32.

³ The full report of the initial study by Mary Field Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule, including details of its methodology and field research, is given in the collaboratively authored *Women's Ways of Knowing: The Development of Self, Voice, and Mind* (New York: Basic Books, 1986/1997).

⁴ The study of which Clinchy's work is a part was almost exclusively of female undergraduates, not of gender differences in undergraduates. It was, however, largely in response to, and a complementary corrective to, the research of William Perry on male undergraduates (see endnote 5).

⁵ William G. Perry, *Forms of Intellectual and Ethical Development in the College Years* (New York: Hold, Rinehart & Winston, 1970/1999).

⁶ See Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago: U of Chicago Press, 1958), chapters 11 and 12.

⁷ *Ibid.*, p. 363.

⁸ Strictly speaking, the development of the distinction between “connected knowing” and “separate knowing” is a product of the collective work of the four authors of *Women’s Ways of Knowing*, not just Clinchy. See pp. 100ff. However, she claims she first came up with the idea of “connected knowing” working with Claire Zimmerman, according to “Beyond Subjectivism,” p. 3. My own first encounter with the concept was in Clinchy’s “Connected and Separate Knowing: A Marriage of Two Minds” (for reference, see endnote 1).

⁹ See *Women’s Ways of Knowing*, ch. 7, pp 131-152. There one will not find not a fully theoretically elaborated account of what “constructed knowledge” amounts to but a set of characteristics including the following: “*All knowledge is constructed, and the knower is an intimate part of the known;*” “To see . . . that truth is a matter of the context in which it is embedded;” a readiness to “move beyond systems, putting systems to their own service;” acceptance of “responsibility for evaluating and continually reevaluating their assumptions about knowledge;” “an emphasis on a never-ending quest for truth;” etc.

¹⁰ Stephen Toulmin, *Introduction to Reasoning* (Upper Saddle River, NJ: Prentice-Hall, 2nd edition 1997). See also Stephen Toulmin, *Return to Reason* (Cambridge, MA: Harvard U Press, 1991).

¹¹ See endnote 7, above.

¹² On this topic, see my essay, “Construing Polanyi’s Tacit Knowing as Knowing by Acquaintance Rather than Knowing by Representation: Some Implications,” *Tradition and Discovery: The Polanyi Society Periodical* 29:2 (2002-2003), 26-43.

¹³ See *Women’s Ways of Knowing*, Part II: Development in Context, and in particular, ch. 10: “Connected Teaching,” pp. 214-229. See also *Knowledge, Difference, and Power*, the entire book; e.g., Ann Stanton, “Reconfiguring Teaching and Knowing in the College Classroom,” essay 2, pp. 25-56. See my “Toward the Recovery of Common Sense in a Post Critical Intellectual Ethos,” *Tradition and Discovery: The Polanyi Society Periodical* 19:1 (1992-93), 5-15

¹⁴ See endnote 13, above.

WWW Polanyi Resources

The Polanyi Society has a World Wide Web site at <http://www.missouriwestern.edu/orgs/polanyi/>. In addition to information about Polanyi Society membership and meetings, the site contains the following: (1) digital archives containing all issues of *Tradition and Discovery* since 1991; (2) a comprehensive listing of *Tradition and Discovery* authors, reviews and reviewers; (3) the history of Polanyi Society publications, and information on locating early publications not in the archive; (4) information on *Appraisal* and *Polanyiana*, two sister journals with special interest in Polanyi’s thought; (5) the “Guide to the Papers of Michael Polanyi”, which provides an orientation to archival material housed in the Department of Special Collections of the University of Chicago Library; (6) photographs of Polanyi; (7) links to a number of essays by Polanyi as well as audio files for the McEnerney Lectures (1962) and Polanyi’s conversation with Carl Rogers (1966).

Cultivating Connected Knowing in the Classroom

Esther L. Meek

ABSTRACT Key Words: connected knowing, Blythe Clinchy, indwelling, Michael Polanyi, pedagogy, covenant epistemology, subjectivism, active listening, noticing regard, epistemic responsibility.

After briefly summarizing Blythe Clinchy's account of connected knowing as a knowing procedure distinguishable from separate knowing and subjectivism, I draw comparisons between it and certain features of Polanyi's epistemology. Connected knowing and Polanyi's indwelling have much in common. Polyanian destructive analysis compares favorably with separate knowing, and they concur in the detrimental restriction of knowledge to that procedure. Neither indwelling nor connected knowing should be gender-specific, though their de facto gender-specificity may be challenged along with all the other false dichotomies which are the fall-out of an overweening objectivist ideal. My own experience of drawing on Polanyi's insights to shape my own teaching practices confirm and help to elucidate the implications of revised epistemology for the classroom. Also, my own work developing covenant epistemology underscores and develops the idea of connected knowing. I give practical examples of personal classroom practices. Finally, I offer further comments in response to Clinchy's collection of quotations regarding the college classroom.

In her years of work as a developmental psychologist, Blythe Clinchy has developed the notion of connected knowing. Connected knowing is a knowing procedure that she believes ought to be distinguished from separate knowing on the one hand and subjectivism on the other, and affirmed as legitimate in its own right. Historically, she suggests, connected knowing has been dismissed as subjectivism, and associated with females.¹ Separate knowing has become institutionalized in academic structures: in particular, it has shaped the expectations of both teacher and student with regard to the classroom. In the context of her recent exchange with the Polanyi Society, this is something that Clinchy means to challenge.

Separate knowing focuses on propositions, and is concerned with the soundness of positions. It involves an adversarial stance. Its mode of discourse is argument. Clinchy quotes someone who describes it aptly as “patriot missile epistemology”—testing potential claims by suspecting them and attacking them. It plays a doubting game. It requires self-extrication (eliminating the self of the knower from the equation of knowing) in the name of objectivity. It distinguishes absolutely between thinking and feeling.

Connected knowing, in contrast, plays a believing game: the knower refrains from doubting. It focuses, not on propositions so much as on ways of seeing. It concerns itself with the meaningfulness of the position of the knower, not, at least at first, with the soundness of the position. It tries to become the author. It attends both to the said and to the unsaid. It involves feeling inextricably with knowing.

Connected knowing is the deliberate, imaginative, extension of one's understanding into positions that initially feel wrong or remote. Clinchy makes the very helpful point that as such connected knowing is neither easy nor natural. It involves a rummaging process, in search of a match for patterns evidenced.

Also immensely helpful is Clinchy's distinction between connected knowing and subjectivism. In contrast to the effort to listen to and understand the other, subjectivism actually silences the voice of the other.

It is only apparently respectful in maintaining that everyone's opinion is right for him or her. Clinchy makes the point that connected knowers do not necessarily, as a result of their empathetic listening to the other, finally agree with the other.

She addresses the fear of an aspiring connected knower, that connecting might lead to loss of self. I delighted in her response to this that characterized connected knowing as something like being pregnant with another person! Clinchy notes that connected knowing is a procedure aptly suited not merely to knowing persons but to knowing nonhuman objects of knowledge. As one source she cites argues, you have to "be the tumor"!

While women may historically be more adept at connected knowing, Clinchy notes that the difference between separate and connected knowing is not rooted in gender but in epistemology. She believes that both separate and connected knowing, as legitimate knowing procedures, should be employed. With regard to pedagogy, I take Blythe Clinchy's central injunction to be that we need to cultivate connected knowing in the classroom, and that this will involve us in revising epistemic and pedagogical practices which have discredited and discouraged it.²

The point of the Polanyi Society's recent symposium with Ms. Clinchy is to open what seems likely to be a mutually beneficial conversation between her work and that of Polanyi's. To that end, in this essay I offer my take on the correspondence between the two. Additionally I suggest some of the directions in which my own Polanyian epistemology is taking me, which further confirm the resonance between Clinchy's efforts and Polanyi's. Finally, I offer a few comments in response to Clinchy's research and its implications for the classroom.

Comparing Clinchy and Polanyi

Connected knowing, I believe, compares favorably with Polanyi's notion of indwelling. Indwelling involves getting inside what we are trying to understand. The term is appropriately applied to what the knower does with respect to the yet-to-be-known, as well as to what she/he does with respect to her/his own lived body as knowing mechanism, to the surrounding situation, and to any guiding maxims. Indwelling is how one embodies or relies on the potentially or actually subsidiary clues that anchor (as in a swamp—Drusilla Scott) a focal integrative pattern.

Polanyi never entertains that knowing could happen without indwelling. He does object to the objectivist model of knowledge (separate knowing?), and to the notion that this alone is what knowledge involves. Polanyi would not agree that separate knowing is a legitimate knowing procedure. Or perhaps it is better to say that in fact separate knowing, according to Polanyi, can never exist divorced from the connected knowing base in which it must be rooted. It is damaging, but ultimately impossible, to deny this. I call this the Polanyian trump card: no matter what you think you are doing when you know, what you are doing fundamentally confirms Polanyian epistemology. To use Clinchy's terminology: connected knowing is the necessary epistemic preface and context for separate knowing, and never vice versa.³ Separate knowing is ultimately a kind of connected knowing. While knowing for humans never has occurred in the absence of such indwelling, even when the knower misconstrued her/his own epistemic procedure as objectivist, such misconstrual dangerously hampers and distorts any epistemic effort.

I believe that Polanyi would identify the legitimate practice of separate knowing with what he calls destructive analysis. Destructive analysis involves the knower in a temporary, artificial, focal attending to what he/she normally indwells (focuses from or through) as subsidiary clues. The problem of objectivism is that it mistakenly identifies “knowledge” exclusively with destructive analysis, disregarding the inevitable undergirding presence of functionally or logically unspecifiable subsidiary knowledge. At least part of what Clinchy rightly objects to about separate knowing is the wrongheaded epistemology it presumes. Polanyi gives us insight into how it is wrongheaded, as well as offering a substantive account of how knowing works.

Like Clinchy, Polanyi emphasizes the active, creative, imaginative component of all acts of coming to know.⁴ The intuition sets to the knower a hidden yet-to-be-known. Being guided by focal awareness of this, and gauging progress in light of it, the knower subsidiarily “scrabbles” to come up with an arrangement that bridges the gap between knower and known and discloses the known. While this scrabbling can with consistency include artificial and articulate testing procedures, these never can be appropriately understood as totally separate knowing. Indeed, one may argue that separate knowing, in the sense of a disembodied analysis and critique of propositions, is only possible in the wake of a discovery. Polanyi is notorious for having said, as a young doctoral candidate, that he arrived at his conclusions before he figured out what the premises were.

In my mind, connected knowing just is attentive, careful, empathetic understanding. One never earns the right to anything more separate or critical before this; and when the separate and critical is engaged, it is for the purpose of furthering connected knowing. Separate critical knowing is often a systematic search for things that need fixing to make the product better—much as a house is inspected critically prior to its purchase. Connected, not separate knowing, is more representative, normative and paradigmatic.

Polanyi never entertained that indwelling, or its denial, was in any way gender specific or stereotypic. Nor have most Polanyians, I don’t believe: we learned indwelling, healthy epistemological practice, from a male—Polanyi himself; and most Polanyians are males.⁵ We see indwelling as human, and as healthy. I view the gender stereotyping in epistemology as a false polarization that accompanies all the other false polarizations Polanyians reject, between “reason” and “knowledge” a la the false objectivist ideal, and the personal, the responsible, the tacit, the religious, the artistic, the valuational, the bodily, and the emotional, to name the major ones. We should expect healthy knowing to reintegrate what our defective epistemological heritage has typically divorced. However, as with all the other polarizations, including the institutionalizing of separate knowing, so with the male-female polarization: we are still needing to challenge its *de facto* stranglehold on many people and many ways of relating and thinking. Hence, we may not merely dismiss the association between “reason,” and “male,” and think we can be done with it. Polanyians would insist that the most important way to challenge any of the polarizations is to practice epistemological therapy.

Polanyian Pedagogy

First let me say that I am convinced that “Polanyi helps”—my bumper-sticker mantra—pedagogy. For many years of my teaching, I have felt that understanding Polanyian epistemology frees me as a teacher and helps me be a better one. Here are some of Polanyian dimensions of teaching that I have noted.

The first is what I call “wearing a lecture.” Polanyi says that the student actually indwells the teacher in pursuit of understanding what the teacher is saying. My three-dimensional, embodied, proclamation invites

the student through indwelling to get an inside feel of the subsidiaries which breathe life into the sentences I utter. Rather than learning being about impersonal transfer of information, it is about modeling its embodied orientation. Truth, as Parker Palmer says, is lived.⁶ And what students remember, and ought to remember, is not what I said, but the passionate orientation that I am. Actually, it is not so much a remembering, but rather a becoming: good teaching's best consequence is personal transformation of the learner.

This is actually very freeing for me as a teacher. I am comforted by knowing that successful communication is neither necessarily nor sufficiently related to my words. I have always felt apologetic about my very flawed verbal performance! While I do make sure I say key phrases I feel that, if the student learns to repeat, will guide him or her into understanding, then I do not need to feel that I am failing as a communicator when my oral performance invariably falls so far short of perfection.

Further, it has helped me to realize that articulation serves not so much, or at least not exclusively, to convey impersonally information that then becomes the student's knowledge; it serves to evoke understanding, or precipitate it. And the sentences that evoke understanding are not working merely descriptively in that act. Just as the ballet teacher whose course I took (for the first time as a mother!) used sentences that made me feel what to do with my body, thus: "When you are balancing on your toes, pretend you are sucking yourself up through a straw..."! Even the most abstract subject matter needs such straw-sucking tips! Even when the sentences in question are as starkly explicit as a deductive proof, I feel that it is still proper to say that learning is evoked, not so much in the proof, as by means of it.

Another Polanyian insight that helps me is understanding that learning isn't linear. The "Oh I see it moment," as I call it,⁷ is retroactive, transformative, undeducible except in retrospect. It is sometimes triggered by an unlikely and unassuming factor. When you are teaching, you have to do your best to be linear in your presentation.⁸ But the learning isn't linear. And where a particular student catches on is unpredictable. There is a lag time, also. But when the moment comes, even if it is later in the semester (or after!) than you might have hoped, it is retroactive. The stumbling, half-understood efforts that predated the insight do not go to waste. This gives me tremendous hope and patience both with my students and with myself.

I have also come to appreciate the complex relationship between articulate and inarticulate understanding: the one stimulates the other. This makes it a good idea to rock rhythmically from one to the other. As a teacher, I depend on tests not to gauge learning but to prompt it. I have no qualms about telling a student that he or she can write a test well and only half-way understand what he or she wrote. I tell them that that is OK. I also tell them that the very act of articulating it will consolidate their understanding and move it forward.

I am confident, both in light of Polanyi's insights and in light of my experience, that what I the teacher bring to the learning equation is at most only half. The student's portion is utterly essential. The student must consent, submit, trust, engage, own, the learning. This means that in my pedagogy, fostering this response on the part of the student is a primary aim. What inspires them, I know, will never be my prowess! I know, instead, that it will probably be my own excitement. Also, I cherish the word, engagement. I'm okay with a messy class, one with loose ends of discussion and unanswered questions, when students have rolled up their sleeves and thought deeply with me and with each other. If what I am doing is not a discussion but a lecture, still I want to do in a way that cajoles them into engagement, bullies them or laughs them out of a stupor and into active listening. This comes back to wearing my words.

Another key ingredient in evoking student response is a precious thing I have come to call “noticing regard.” For many years, after learning Henri Nouen’s definition of hospitality as creating a warm and welcoming space into which the strange may enter and become a friend, I have thought of my teaching as a kind of hospitality. Once however, in a discussion about hospitality with a young friend, he suggested that letting someone use your house when you are out of town is hospitality. I emphatically and instinctively disagreed. That made me realize that for it to be an act of hospitality, the host has to be there. On the other hand, there are some, well-meaning, I’m sure, people who fail at hospitality because they communicate something like, “Oh we have lots of people over...”—kind of a bland, expansive, failure to notice the individual! What makes for a good act of hospitality? I feel that the key ingredient, practiced within the welcoming space, is noticing regard. It can’t be a scrutinizing noticing. But it has to be a gracious conferring of dignity.

Such an act can take just about any form. Last week I responded to the playful invitation of a student to hop on the back of his little red motor scooter and ride the one block from the Commons to Old Main. I made his day. (He made mine!). I sensed that he will henceforth hear everything I say, and it will perhaps even change how he thinks about himself and engages the world. If in pedagogy I am gambling for higher stakes than the communication of information—if I am gambling for hearts, for personal transformation—riding little red motor scooters count as pedagogical devices.

Noticing regard is like the burning match that starts the kerosene lamp’s steady inner glow. It takes the face, the gaze, of a person, to accomplish this. I need only ask you, to prove my point, to think: Who noticed you?

Connected Knowing and Covenant Epistemology

In my own work, I am formulating what I am calling covenant epistemology, an epistemological vision of knowing as paradigmatically an interpersonal, covenantally-shaped relationship. This vision takes its jumping off from Polanyi’s idea of reality as that which may yet manifest itself indeterminately. Reality responds to our self-binding overtures with its own gracious self-disclosure.

By *covenantal* I have in mind the things a knower must do in order to invite the real. These involve practicing an “epistemological etiquette”—in effect, the knower must compose and behave her- or himself. This involves love, respect, humility, patience, commitment to the existence and value of the as yet undiscovered reality, attentiveness, indwelling, listening beyond preconceived categories. It involves carefully and understandingly positioning ourselves to receive the anticipated disclosure. I feel confident that the way it is supposed to be is that this reciprocity, this dance of knower and known moving toward mutuality in understanding, will issue in an event that is mutually transforming and therapeutic.

I believe that covenant epistemology comports favorably with and further undergirds Clinchy’s connected knowing. This means that the discussion of connected knowing is not simply a professional exercise in isolating a hitherto overlooked curious epistemological phenomenon. It is about nothing less than engaging and understanding the world. It alone is the way forward. Separate knowing is at best a piece of the larger engagement, at worst a vicious and dangerous hindrance to it.

I heartily concur with Ms. Clinchy that understanding the fundamental status of connected knowing has huge implications for pedagogy. As teachers we must model covenantal inviting of the real. We must inspire it. And we must do so with the extra intentionality it takes to overcome the reigning, self-deluded paradigm of separate knowing. What is at stake is nothing less than the students, ourselves the teachers, and the world.

Additional Comments in Response to “Beyond Subjectivism”

Clinchy’s essay, *Beyond Subjectivism*,” primarily showcases a host of quotations from students and other commentators regarding learning in the classroom. I do not discern any evolution of Clinchy’s position beyond that published in 1996. I note also that a lot of her sources in this work predate 1996. One question I have is whether more current research indicates a shift in classroom experience. In my classes currently, women, not men, are comfortable both with connected and separate knowing, and men as well as women, left to themselves, can practice a default subjectivist thinking. I don’t know how much if any this has to do with the gender of the professor.

I feel that Clinchy’s theses would be helped by adding to her many quoted student comments the identification and analysis of an array of factors. For example, a couple things may be said helpfully about subjectivism. I believe that the practice of subjectivism is enforced from a moral maxim powerfully present in our prevailing zeitgeist: an individual is only entitled to his/her own opinion, and that opinion is valid only for that individual; to move beyond this is to invalidate others’ rights and inappropriately impose your opinions on another.⁹ Thus, in a college classroom—the setting Clinchy never stipulates but from which all her examples are drawn—teachers should expect that uninitiated students feel morally obligated to practice subjectivism toward the professor, toward the subject matter, and toward classmates. We should expect them to begin as subjectivists. If we want students to develop another approach, we have to address this specifically, seeking to reshape attitudes to something that stands up to the zeitgeist. In light of this, it may be a bit too grand to elevate subjectivism to a chosen knowing procedure; it’s a *Zeitgeist*-driven default setting.

I believe that subjectivist thinking itself displays an unhealthy epistemological betrayal and disillusionment, the sad fallout of our Western epistemological heritage. It does not characterize a young child, who is, by contrast, full of wonder and confidence that the world will reciprocate to respectfully exuberant explorations. Children, I think it can be said, naturally practice connected knowing. Subjectivism should never have come to be the default setting of these college students. We may thus view our efforts to reshape their knowing procedures as restoring to themselves and to the world.

A corollary implicit in the zeitgeist is that understanding someone else’s position mandates, or presupposes, agreeing with that position. It is often voiced that if you have not shared my experience, you can’t possibly understand. Or, if you don’t agree, you haven’t understood. Clinchy addressed this nicely in her first essay, distinguishing as she did between connected knowing and agreement. Personally, I believe that the confusion arises out of defective, sub-personal interpersonal relationship of emotional fusion, a personality propensity very common in our times.¹⁰ However, my point here is that it is important that the teacher not expect otherwise of academic initiates and specifically reshape this mistaken assumption of good pedagogy. Given the prevailing *Zeitgeist* default settings, connected knowing must be intentionally cultivated.

Another thing I think it would be helpful for us to identify and think about are relational

responsibilities in the context of which any knowing event occurs and which inevitably shape it; thus these also ought to shape our classroom pedagogy. Having recently worked through Lorraine Code's proposals concerning epistemic responsibility, I have in mind her formulations when I say that into the knowing event should be factored matters of responsibility—to the world, to oneself, and to the epistemic community.¹¹

One application pertains to cultivating connected knowing in the classroom. College students find discussion threatening, I think, because they rightly feel they are being asked to violate obligations to their classmates. This is partly because of the subjectivistic mandate just discussed; it is also because students in a classroom often haven't been introduced to each other or hitherto had the privilege of building natural social connection. From my teacher's perspective I tend to view them as a unit, but they are far from actually being a unit at that point. Teachers can forget that, just as guests in our home may be new to each other and need to be helped to get acquainted before good conversation can occur, students in a classroom require this. It is the teacher's obligation and privilege and good pedagogical practice to perform this service of human decency. Clinchy's variegated quotations implicitly indicate this: out-of-class friendship and interaction both enabled and generated confident and respectful disagreement and exploration toward a common understanding—what might look more like separate knowing.¹²

The practices of both separate knowing and of connected knowing are only appropriate once a context of epistemic community has been established and its participants feel comfortably oriented within it. In that context, even what might be termed "shooting down" a person's position can be taken as part of the fun of jointly exploring and establishing understanding. Apart from the context, "shooting down" is rude and disrespectful. Disagreement must always be respectful and with a view to understanding developing a community. Scholars practicing their profession understand this (—or ought to understand this!).¹³ Initial understanding of this should not be expected of novices in the college classroom. Teachers in that context need to understand that part of their job is to secure the learning environment and set and model the expectation of joint pursuit of deep understanding.

I think the discussion of separate and connected knowing and the classroom would be helped by distinguishing legitimate and illegitimate separate knowing. Illegitimate separate knowing should never be countenanced. Illegitimate separate knowing consists of criticism that shows disrespect for the proponent as a person, or that too quickly and disrespectfully dismisses the position rather than taking it seriously.¹⁴ I think people who fear separate knowing may have only known it in its abusive forms, or they fear it because they perceive it so out of their own insecurity. Here the ethical behavior implicit in connected knowing is truer to the mark of responsible human epistemic behavior. Just in general, because of our Western philosophical tradition, not to mention our propensity to selfishness, we all need the constant reminder that all ideas we consider and connect with and criticize are always somebody's: there is always a person or persons behind them, persons whose dignity is both priceless and fragile. This is a way that our zeitgeist has actually offered a healthy corrective to Western philosophy: all truth is somebody's truth.

Quotations from students that Clinchy records indicate another key factor that helpfully could be considered: the diversity of appropriate pedagogical situations. What is appropriate knowing in one situation would be inappropriate in another. In some situations, first-hand experience is always valuable and thus should be welcomed; in others, it would be entirely inappropriate. The radiology teacher would not be too interested in how I felt about x-rays, for example, until I have become proficient in reading them. Even then, he/she might reasonably be less interested in how x-rays impact my sense of my human worth. It would be a whole different story in my humanities discussion class. Artistic work invites the passionate participative response and

transformation of its viewers/hearers/readers. Even at that, literature professors, like radiologists, believe that their discipline requires its participants to be trained.

Another variation in pedagogical setting properly and critically characterizes the college experience: what is expected of first-years and what is expected of seniors should be dramatically different. There is a real sense in which I am not interested in the opinions and personal experience of the first-years; they need to practice active listening (connected knowing) as they learn the subject and its practices. The way I treat upper-class philosophy majors is by contrast much more egalitarian and interactive, for they have been learned the practice. They are also very comfortable both socially and professionally in a way that first-years cannot possibly be. I feel that the American *Zeitgeist* overly democratizes personal contribution to discussion. Personal contribution should not be considered a good without qualification. Every student's learning experience is helped, I believe, by prompting student engagement; I wish to dispute that discussion unqualifiedly is the sole means of achieving that engagement.

A little more about active listening: active listening, humbly seeking to hear a text, an author, a thinker, is a kind of connected knowing that I believe professors need to model for their students. If we require them prematurely to discuss or respond to a text, we never model the kind of patient attention that is comfortable with the discomfort of not knowing, of refusing to jump to pat conclusions and thereby blocking true understanding. This, I believe, is the proper stance of both scholar and student in long-suffering pursuit of the yet-to-be-known. Active listening, I believe, is just what Clinchy has in mind by connected knowing. It may take special courage on the part of both teacher and student in the classroom, to buck the conventions and practice listening.

Finally, reading between the lines of Clinchy's quotations from students, connected knowing requires something healthy of the self, an openness and self-disclosure that is qualitatively distinct from and superior to subjectivism. Employing the terminology of James Loder's Kierkegaardian account of humanness, it is not the two-dimensional self-reflection but the three-dimensional self-in-relation or the four-dimensional love in response to the Holy that equips the knower to invite and sustain connected knowing.¹⁵ Simply put, the learner is a better learner, if she or he is "okay" with her- or himself. It takes, we might say, subjective maturity to be truly objective in the way that connected knowing entails. This sort of thing is part of what I am getting at when in my own work I expound on the maturity in personhood requisite for healthy knowing. Teachers, and especially parents, have the nurture of this as their obligation and their privilege.

In sum: teachers teach both content and skill. They speak and they wear their words. Teachers shape and secure the setting and invite students into it. Where these have not been dealt into pedagogy, learning, which is primarily connected knowing to the end of proficiency in understanding and practice, is sadly thwarted. Students are warranted in fearing both connected and legitimate separate knowing where these are not occurring. And connected knowing, truthful as it is to knower and known, is something we must cultivate in the classroom even as we seek it continually in our own work.

Endnotes

¹ "Connected and Separate Knowing: Toward a Marriage of Two Minds," *Knowledge, Difference and Power: Essays Inspired by Women's Ways of Knowing*, by Nancy Goldberger, Jill Tarule, Blythe Clinchy, and Mary Belenky (New York: Basic Books, 1996). The following is my synopsis drawn from Clinchy's essay.

² I find Clinchy's examples on pages 17-18 of "Beyond Subjectivism" especially exemplary of the connected knowing procedure.

³ Others who would share this conviction include John MacMurray, *Persons in Relation* (London: Faber and Faber, 1961); Parker Palmer, *To Know As We Are Known: Education as a Spiritual Journey* (HarperSanFrancisco, 1993); and James Loder, *The Transforming Moment*, 2nd ed. (Colorado Springs: Helmers & Howard, 1989).

⁴ See his essay, "The Creative Imagination," *Chemical and Engineering News* 44 (April 1966), 85-93 (reprinted in *The Concept of Creativity in Science and Art*, edited by Dennis Dutton and Michael Krausz [The Hague: Martinus Nijhoff Publishers, 1981], 91-108).

⁵ Two comments here. First: the night of our discussion with Ms. Clinchy at the Polanyi Society, she and I were the only females in a room of thirty or so! Second: It has been suggested to me that Polanyi's more wholistic understanding of knowing can be associated with his Jewish heritage. I am not in a position to offer an historical justification of this continuity, nor an in-depth exegesis of the terms in the biblical text. However, "know," in the Hebrew Scriptures, is so intertwined with covenant love that it is used to refer to sexual intimacy—Adam *knew* his wife, Eve, and they conceived and gave birth to a child! There are so many stellar Jewish thinkers characterized by their more-than-conventional breaching of conventional categories and disciplines to speak profoundly: Heschel, Arendt, Weil, Riesmann...

⁶ Palmer, *To Know As We Are Known*, pp. 48ff.

⁷ Esther Lightcap Meek, *Longing to Know: The Philosophy of Knowledge for Ordinary People* (Brazos, 2003), Chapter 6.

⁸ Actually, I believe that a lecture or talk must both be linear and be something else. It must make the student feel what is being said; it must engage the student and evoke understanding; and it can also take liberties with linearity in order to prompt insight to occur earlier. See the discussion below.

⁹ This position has dubious logical integrity. But historically logical flaws have never seemed to prevent an idea from being culturally powerful; thus, it may not on these grounds be dismissed by those who want to listen and understand.

¹⁰ I will touch on this again a little later in this essay.

¹¹ Lorraine Code, *Epistemic Responsibility* (Providence, RI: Brown University Press, 1987).

¹² "Beyond Subjectivism," pp. 23f, 25f.

¹³ Given the dominance of the separate knowing paradigm, too often scholarly work has been viewed, not as communal pursuit of common understanding, but rather as something much more like patriot missile epistemology. Faculties often somewhat wistfully discuss the ideal of a community of learner and bemoan the fact that the ideal rarely is actualized. I suppose the point here is that teachers must themselves learn connected knowing—Physician, heal thyself!—especially if they mean to model it in the classroom!

¹⁴ There are of course other factors by which the level of engagement of an opponent's position must be gauged, such as amount of time available, relevance to the topic under discussion, professional expertise and personal calling within the epistemic community, and public and personal urgency of the subject matter.

¹⁵ Loder, *The Transforming Moment*, Chapter 4.

Feminist Epistemology in a Polanyian Perspective

Zhenhua Yu

ABSTRACT Key Words: connected knowing, personal knowledge, post-critical philosophy, tacit knowing
In her elaboration of the distinction between connected knowing and separate knowing, Professor Clinchy addresses some conceptual relations that are central to Polanyi's epistemology. I believe Polanyi would be happy to see the strong echoes of his thoughts in feminist epistemology, and the feminists will find substantial support from Polanyi's philosophy.

I read Professor Clinchy's two papers with great enthusiasm. I am amazed by the striking parallels between her project and Polanyi's epistemology. As a respondent, I would like to bring up the following three issues for discussion.

Detachment and Attachment

In her effort to clarify the distinction between connected knowing and separate knowing, Professor Clinchy employs various conceptual tools. One of them is detachment and attachment. Detachment and attachment refer to two different ways that the knower treats his experience, belief or knowledge. One can either connect or distance one's self to it. In the former case, we have attachment, and in the latter we have detachment. Epistemological reflections can proceed with either attitude. By centering on detachment, we might end up with a kind of epistemology without a knowing subject, as Karl Popper advocates, while by focusing on attachment, we might have something like a theory of personal knowledge as Michael Polanyi proposes.

According to Professor Clinchy, these two epistemic attitudes correspond respectively to two ways of knowing: while detachment is typical of separate knowing, attachment is essential to connected knowing. She claims:

While separate knowing requires "self-extrication," "weeding out the self," in Elbow's terms, connected knowing requiring "self-insertion" or "projection in the good sense" (Elbow, 1973, p.149), or to use a more feminine image, "receiving the other into [the] self"(Noddings, 1984, p.30).¹

Admittedly, detachment has been the predominant epistemic attitude in the academic world. Against this backdrop, the discovery of connected knowing, which features attachment by highlighting elements such as taking first-hand experience as a source of knowledge and taking self as the instrument, etc., signals the recognition of the role played by the self in the shaping of knowledge.

This is reminiscent of Polanyi's criticism of objectivism and his theory of personal knowledge. The central thesis of objectivism is the ideal of scientific detachment, which sets the goal of absolute, complete objectivity for science and characterizes science as impersonal knowledge. Since 17th century, this objective, impersonal ideal of scientific detachment has been ingrained into common sense and has become the dominant

view of science and knowledge. However, Polanyi takes the complete and absolute objectivity usually attributed to science as a delusion and rejects it ruthlessly as a false ideal. The substitute that he proposes for the ideal of scientific detachment is personal knowledge. In his view, 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.

However, to emphasize the importance of the attachment of the knower to his or her experience, belief and knowledge is by no means to subjectivize knowledge. Professor Clinchy takes pains to distinguish subjectivism and connected knowing in various ways. In my judgment, this is an important and necessary step to take if this line of thought is to be viewed as epistemologically fertile. Here I do not intend to go into all the details of the distinction between subjectivism and connected knowing brilliantly spelled out by Clinchy; rather I would like to highlight one aspect of subjectivism which is extremely important in an epistemological point of view. A subjectivist may happen to hold a set of beliefs and stick to it. It is valid only for him/her. Subjectivism thus understood is closely related to relativism or multiplism so long as one claims that all opinions are equally valid and everyone's opinion is right for him/her. "Subjectivists are unmitigated relativists."² In contrast, connected knowing does not imply relativism.

Clinchy's effort to distance connected knowing from subjectivism parallels Polanyi's distinction between "the subjective" and "the personal." In my view, this distinction constitutes the backbone of *Personal Knowledge* and is one of the great contributions made by Polanyi to the discussion of the problem of human knowledge. While what is subjective is defined as being private, idiosyncratic, that is, valid only for the subject himself/herself, personal participation "is a responsible act claiming universal validity. Such knowing is indeed objective in the sense of establishing contact with a hidden reality."³ That is to say, personal knowledge is a fusion of the personal and the universal, the objective. In order to cast Polanyi's position in sharp relief, it is worth noting that three conceptions of objectivity are involved here. Objectivity 1 denotes the mind-independence of the external reality, objectivity 2 refers to universal validity, objectivity 3 means scientific detachment, namely, the elimination of personal coefficients. Polanyi's theory of personal knowledge is against objectivity 3, something which he calls objectivism, but fully acknowledges objectivity 1 and 2. It retains the universal, objective dimension of science and shows an attempt to situate it in the context of personal involvement.

In arguing for the importance of personal participation in the shaping of knowledge, there is one more point that Polanyi, as a 20th century philosopher, had to come to terms with, namely, the logical-psychological distinction, which Professor Clinchy, as a psychologist, does not need to bother to address. And this is an occasion where the arrogance of philosophy can be easily detected. In opposition to psychologism which reduced everything, including mathematics and logic, to psychology, philosophers such as Frege, Husserl and some Neo-Kantians, argued in late 19th century for the difference in kind between the psychological and the logical. And it was the logical that was considered to be the proper object domain of philosophy. In the same vein, people might repudiate Polanyi by claiming that his discussion of personal coefficients in the shaping of knowledge is primarily a kind of psychological investigation, not a logical analysis of human knowledge. How to respond to this accusation? There can be various ways. One could be skeptical about the legitimacy of the distinction, an approach that Thomas Kuhn seems to take. Polanyi, however, accepts the distinction as a valid one and claims that his theory of personal knowledge is a kind of logical analysis. I would not go into the details of Polanyi's argument here; and it will suffice to have a quotation to support my point. Talking about intellectual passions in science, one of the important personal coefficients that Polanyi elaborates,

Polanyi claims: “Science is regarded as objectively established in spite of its passionate origins. It should be clear by this time that I dissent from that belief; and I have now come to the point at which I want to deal explicitly with passions *in* science. I want to show that scientific passions are no mere psychological by-product but have a logical function which contributes an indispensable element to science.”⁴ By the way, it is worth noting that, Polanyi’s discussion of intellectual passions is also quite relevant to Professor Clinchy’s elaboration on connected knowing in terms of “*Einfühlung* (empathy),” which is a combination of both the affective and the cognitive.

Critical and Uncritical

This is another conceptual relation that Professor Clinchy uses to differentiate separate knowing and connected knowing. Separate knowers are critical; they play the doubting game. Connected knowers play the believing game and tend to eschew criticism. This reminds us of one of Polanyi’s philosophical goals, namely, post-critical philosophy, as the subtitle of *Personal Knowledge* suggests. Post-critical philosophy intends to overcome critical philosophy. In the history of Western philosophy, the term “critical philosophy” is conventionally understood as denoting Kant’s philosophy. However, Polanyi uses it in a broader sense, so that it is not just confined to Kant’s philosophy, rather it applies to a whole philosophical trend in the West in modern times which exalted doubt and critical reason on the one hand, and denigrated the uncritical elements of knowing, such as belief, tradition and authority on the other hand. Polanyi fully acknowledges the historical significance of critical philosophy, but he argues that critical philosophy’s overestimation of critical reason and its blindness to the positive role played by the uncritical elements in the shaping and holding of knowledge is untenable.

The critical and uncritical relation is most clearly shown in the relation between doubt and belief. In modern critical philosophy, the principle of universal doubt was passionately heralded, while belief was completely discredited. However, in Polanyi’s view, this is a misunderstanding of the relation between doubt and belief. His post-critical philosophy attempts to straighten out this distorted conception of these two cognitive powers. His fiduciary programme not only rehabilitates belief as a legitimate cognitive faculty, but also, by disclosing the fiduciary root of doubt, argues for the priority of belief to doubt, and of the uncritical to the critical. “No intelligence, however critical and original, can operate outside such a fiduciary framework.”⁵ Clearly, Polanyi takes a stronger position than Clinchy with respect to the relationship between doubt and belief, the critical and the uncritical.

In order to clarify his post-critical philosophy, Polanyi coined a new term, namely, “a-critical,” in addition to the widely used expressions like “critical” and “uncritical.” I also find this term in Professor Clinchy’s text when she quotes Code.⁶ For Polanyi, this is an intentionally created term. The coinage of the term is closely related to the introduction of the tacit dimension into the discussion of the problem of human knowledge. Polanyi writes:

[S]ystematic forms of criticism can be applied only to articulate forms, which you can try out afresh again and again. We should not apply, therefore, the terms ‘critical’ or ‘uncritical’ to any process of tacit thought *by itself*; any more than we would speak of the critical or uncritical performance of a high-jump or a dance. Tacit acts are judged by other standards and are to be regarded accordingly as *a-critical*.⁷ [italics original]

Polanyi suggests here that we reserve the terms “critical” and “uncritical” to explicit, articulate knowledge. In order to highlight that tacit knowing is different in kind from explicit knowledge, he claims that tacit knowledge is “a-critical,” which amounts to saying that tacit knowing is beyond critical and uncritical.

Frankly, I have problem with the term “a-critical”. I would argue that this is an unnecessary coinage and that it should be dismissed. Here are the reasons for my claim. Firstly, the basic intuition behind the term “a-critical” is the recognition of the uncritical, fiduciary dimension of our act of knowing. Therefore, on many occasions, “a-critical” reads just “uncritical.” If we substitute “uncritical” for “a-critical” on those occasions, I dare say, we won’t lose much. Secondly, the term “a-critical” is misleading because it obscures the fact that tacit knowing/knowledge is also subject to examination, test, improvement, etc. What Polanyi really wants to say is that the way a piece of tacit knowledge is tested, examined, or improved is different from that of a piece of explicit knowledge. For instance, it can only be examined by action, and tested once upon a time and cannot be repeated many times, etc. Therefore, when Polanyi claims that tacit knowledge is a-critical to the effect that it is beyond critical and uncritical, he is actually creating conceptual confusion. Thirdly, Polanyi’s comments on **tacit doubt** give support to my reading. If tacit knowing/knowledge were really a-critical, namely, beyond critical and uncritical, the term “tacit doubt” would be self-contradictory. In my view, Polanyi’s discovery of tacit doubt is an important contribution to epistemology. Different from explicit doubt which applies to explicit statements, tacit doubt indicates the inherent dubiety, the inarticulate hesitancy built into all kinds of heuristic attempts. On these grounds, I would suggest that we might think of dismissing the term “a-critical.” If we use it, we might conceal something important, if we don’t use it, we won’t lose anything. With the conceptual pair of “critical” and “uncritical,” we are well equipped to fulfill the mission of post-critical philosophy.

The Prospect: A Thick Epistemology

After years of investigation on connected knowing, Professor Clinchy, a former separate-knowing oriented academic, now advocates a marriage of the two kinds of mind. From a Polanyian perspective, I suspect that we can probably claim more than this. We have seen that in many respects, feminist epistemology overlaps Polanyi’s epistemology. But it is worth noting that Professor Clinchy’s project falls short of one aspect which is central to Polanyi’s epistemology, namely, the tacit dimension of human knowledge. Admittedly, Polanyi’s theory of tacit knowing/knowledge is regarded as his most important contribution to philosophy. In my view, the notion of tacit knowing is rich in philosophical implications and its great theoretical potentials have not yet been fully explored. Many conceptual relations are involved in the notion of tacit knowing, I cannot cover all of them here, let me just focus on the most obvious one. Taken literally, the term tacit has to do with the articulation or expression of human knowledge. In this regard, the target of attack of the theory of tacit knowing is the propositionally oriented understanding of knowledge of traditional epistemology, or in Polanyi’s terminology, the ideal of wholly explicit knowledge. The theory of tacit knowing claims 1) the existence of tacit knowledge, 2) the primacy of the tacit over the explicit, 3) the dynamics of the tacit and the explicit. In this perspective, the inadequacy of the propositionally oriented conception of knowledge of traditional epistemology consists, among others, in its reluctance to recognize the legitimacy of tacit knowledge, in its failing to see the tacit root of explicit knowledge, and consequently in its blindness to the rich dynamics between the explicit and the tacit in human knowledge, thus it inevitably narrows down the scope of epistemology and meanwhile only scratches the surface of the problem of human knowledge. Inspired by Clifford Geertz and Gilbert Ryle, I suggest dubbing the traditional propositionally-oriented understanding

of knowledge a “thin” conception of knowledge and would argue that the theory of tacit knowing implies a “thick” conception of knowledge. If we appeal to the old metaphor of an iceberg, we might be justified to say that the traditional thin epistemology is primarily concerned with what is above the sea, while the thick epistemology must not only dive under the sea but also take the whole iceberg into account. No doubt, this is a more complicated and more challenging task, but I am sure that it will also prove to be a more fruitful approach. And I believe, a thick epistemology adumbrated above is the prospect envisioned by Polanyi.

Endnotes

¹ Blythe McVicker Clinchy, “Connected and Separate Knowing: Towards a Marriage of Two Minds,” in *Knowledge, Difference, and Power: Essays Inspired by Women’s Ways of Knowing*, edited by Nancy Goldberger, Jill Tarule, Blythe Clinchy, and Mary Belenky (New York: Basic Books, 1996), 205-247, p. 218.

² Clinchy, “Connected and Separate Knowing,” 215.

³ Polanyi, *Personal Knowledge*, (London: Routledge, 1958), vii.

⁴ Polanyi, *Personal Knowledge*, 134.

⁵ Polanyi, *Personal Knowledge*, 266.

⁶ Clinchy, “Connected and Separate Knowing,” 213.

⁷ Polanyi, *Personal Knowledge*, 264.

Submissions for Publication

Articles, meeting notices and notes likely to be of interest to persons interested in the thought of Michael Polanyi are welcomed. Review suggestions and book reviews should be sent to Walter Gulick (see addresses listed below). Manuscripts, notices and notes should be sent to Phil Mullins. Manuscripts should be double-spaced type with notes at the end; writers are encouraged to employ simple citations within the text when possible. MLA or APA style are preferred. Because the journal serves English writers across the world, we do not require anybody’s “standard English.” Abbreviate frequently cited book titles, particularly books by Polanyi (e.g., *Personal Knowledge* becomes *PK*). Shorter articles (10-15 pages) are preferred, although longer manuscripts (20-24 pages) will be considered. Consistency and clear writing are expected. Manuscripts normally will be sent out for blind review. Authors are expected to provide an electronic copy as an e-mail attachment.

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Pursued by Polanyi

Blythe McVicker Clinchy

ABSTRACT Key words: Michael Polanyi, Women's Ways of Knowing, intellectual development, uncertainty, apprenticeship, confidence, discovery, uncertainty, personal knowledge, commitment, belief, doubt, connected knowing, separate knowing, subjectivity, objectivity.

In the present essay, I explore some ways in which Polanyi's concepts can be applied to enrich our understanding of epistemological development and the educational practices that seem to facilitate or suppress it. Among the concepts discussed are Polanyi's notion of uncertainty, combined with confidence as driving intellectual activity; the role of conviviality in the collaborative construction of knowledge; the act of discovery as beginning with a problem that obsesses the thinker and proceeding through the integration of (often tacit) fragments into a coherent whole; the notion of personal knowledge and commitment as transcending the disjunction between subjective and objective; apprenticeship as a personal relationship between a learner and a more sophisticated master, and most important, the assertion that belief is prior to doubt. Thus, in terms of the concepts my colleagues and I have developed, "connected knowing" (a personal approach) is not simply equal to "separate knowing" (a detached, impersonal mode) as a procedure for arriving at knowledge, but is prior to it, "making meaning" being a necessary prerequisite to testing the validity of a position. Drawing on interview data and memoirs of academic experiences, I argue that because these priorities are often reversed in educational practice, students learn to delete their personal responses from their essays in order to meet what they perceive as the utterly objective standards of the academy. When educators "endorse" uncertainty, students are encouraged to engage in the collaborative making of meaning and the pursuit of problems of personal importance.

I have been pursued by Polanyi for years, although I didn't realize it until relatively recently, and my paper "Beyond Subjectivism," which appears in this issue, makes no mention of him.

I see now, though, that, unbeknownst to me, his ideas had from the beginning crept into the research on epistemological development that my colleagues and I were engaged in. My earliest work, a longitudinal study of epistemological development Claire Zimmerman and I conducted among students during their four years at a women's college (Clinchy & Zimmerman, 1982; 1985), was inspired by William Perry's (1970) study of intellectual and ethical development among (mostly male) Harvard undergraduates.

Polanyi's philosophy had influenced Perry's thinking, especially with respect to commitment, but we paid little attention to commitment, and none to Polanyi, and the same has been true of other research descended from Perry's (e.g., King & Kitchener, 1994; Baxter Magolda, 1992). The four highest positions on Perry's scale, tracing the evolution of commitment, seemed irrelevant to our concerns. Almost none of our participants had reached such heights, and what did commitment have to do with the development of notions about truth and knowledge, anyway?

Everything, as it turns out, but Polanyi had to teach me that. And so, even though my co-authors and I allude to Polanyi's notion of "passionate knowing" in our 1986/1997) book, *Women's Ways of Knowing* [WWK] (Belenky, Clinchy, Goldberger & Tarule), I began to explore his work only when Dale Cannon, having read a paper of mine on "Connected and Separate Knowing" (1996), suggested that I might find Polanyi's ideas

resonant with mine. He was right: I did, and I do.

David Rutledge, in an essay published in this journal, says that Polanyi “gives us a new axis or center around which to organize our understanding” (1998/99, 20), and this is precisely what he is doing for me, although I do not find him easy to read or to understand. I am no philosopher; I’m a developmental psychologist. That’s what I know, that’s what I do, that is my passion. I study cognitive development (especially epistemological development) from approximately womb to tomb, trying to see how notions of truth and knowledge evolve from early childhood into adulthood, and trying to identify experiences which seem to facilitate development and those which seem to inhibit it, both in and out of school. In the present essay, drawing largely, although not exclusively, on interviews with women, especially undergraduates, I explore some of the ways in which I am using Polanyi’s concepts (or my no doubt primitive constructions of his concepts) to help me think about these issues.

Uncertainty

I was taught, and for many years I taught my students, that cognitive conflict was the engine of development. According to this model, we undergo cognitive growth when, for example, someone criticizes our position (using the procedure we call “separate knowing”), pointing out flaws in our reasoning, or offering an alternative argument, causing us to doubt our position and modify it. Now, no one would deny that cognitive conflict can be an impetus to growth. But two psychologists, Acredelo and O’Connor, have suggested a different model, citing Polanyi’s (1960; 1966) view that, as they put it, “all new explicit knowledge must be preceded by a period in which there is only tacit foreknowledge, that is, a vague but rational hunch of the notion that is eventually constructed.” They argue that it is this “vague uncertainty,” rather than explicit cognitive conflict, that is the driving force in cognitive development, “the constant motivation for growth” (1991, 219).

I think Polanyi would take to this notion, but we developmental psychologists have not rushed to embrace it, partly, I think, because our methodology gets in the way. In our research we routinely force our participants to choose which of two conflicting answers to the problems we present is correct. For instance, in a classic Piagetian “conservation” experiment, after the child has agreed that two identical balls of clay contain equal amounts, the experimenter rolls one ball into the form of a snake, and asks if the two still are equal or if one now contains more clay than the other. The child is not invited or even permitted to express uncertainty. Acredelo and O’Connor and other researchers have found that when such experiments are redesigned, allowing children to express their uncertainties in a context that does not challenge them to “find the solution,” the uncertainties emerge, and children begin to think out loud. Barbara Rogoff reports that in an experiment conducted by Subbotskii (1987) in a Soviet kindergarten, when teachers acted “like peers with the children (avoiding use of authority and demonstrating uncertainty and errors), the children’s classroom activities became more creative and independent” (Rogoff, 1990, 175).

The uncertainty model of cognitive growth seems to fit the stories adult women tell in interviews concerning their educational experiences better than the conflict model does. For instance, in a project called “Education for Women’s Development,” which led to *WWK*, we asked each of the 135 women we interviewed (drawn from a broad range of educational institutions and social and economic backgrounds) to tell us about a powerful and positive educational experience. Only a handful mentioned an occasion upon which a teacher aggressively challenged their notions. They spoke instead of teachers who acted as midwives to their thinking. A college junior described her favorite teacher:

I felt that when she had something she wanted to get across, she *drew* it out of you. It's almost like the business of Plato and the little servant boy and the geometry problem. She sort of ultimately proves that you had it there inside of you, to discover it yourself, but it just needs that prompting.

In *WWK* we called this sort of pedagogical approach "connected teaching." Connected teachers use the approach we call "connected knowing," akin to Polanyi's "intellectual sympathy" which enables individuals to "listen sympathetically . . . to a doctrine they have not yet grasped" (1958, 151). They assume that the student's inchoate notions may make some sense. Apparently aware that their students "know more than they can tell" (to use a Polanyian phrase), they encourage them to articulate and develop their "tacit knowledge." The emphasis is on "making meaning" rather than assessing validity. Belief predominates over doubt.

Students cherish memories of classes like the one mentioned in "Beyond Subjectivism," in which the teacher, Barry Kroll tried to "endorse uncertainty" (1992, 97), to promote an environment of mutual trust, in Polanyi's terms a "convivial" setting in which students felt free to share the process rather than defend the products of their thinking. As Todd, one of Kroll's students says, "you mumble on and maybe somebody else can pick up what you mean by what you're saying. . . . It was okay for people to see I wasn't polished."

It is easier for students to express uncertainty (and for teachers to endorse it) when the material under study is vague, sparse, or ambiguous. In an interview, a student we call Marianne¹ tells us about a seminar on approaches to the study of art history she is taking during her senior year at a prestigious liberal arts college. She claims this is the first course she has taken in which "it's ever been presented" that there are no right answers. The teacher wants the students to emerge from the seminar "learning there is no right way to approach art," but committed to their own approaches: "If you were to approach art, how would you do it? You would have to make a decision and back it up with why."

We've all been discussing it and all of us have different opinions. But she's presented it so openly that the three ways that I think you should approach art and the three ways that she thinks she should approach art are quite different.

As in Kroll's course, the students engage in the collaborative construction of knowledge. The atmosphere is one of trust and acceptance, and the goal is understanding. Marianne says,

[Y]ou need discussion, because it's very vague. [It helps to] have people saying, "Well, do you mean . . .?", and somebody else saying, "No, I mean this . . ." It's clarifying. It's allowing everyone to voice things that they think are uncertain. It's allowing people to realize that they're not stupid for questioning things. It's okay to say, "Why" or "How" or "What." I think it's important to let everybody voice their uncertainties.

Dora, another member of the seminar, said that she had always felt contemptuous of "so-called discussion" in most of her courses. The students weren't talking with each other, she said; they were talking to the teachers, trying to show them how smart they were. (As one of our interviewees put it, "the purpose of class discussion is to show the teacher what we know.") But it was different in the art history seminar, Dora

says: “It was on Roman villas and they don’t have a lot of information on that, ‘cause most of the things have been destroyed. So talking was really important. That’s what made that class.” “Why was talking so important in that class?,” the interviewer asked. “Because there wasn’t really a lot of information that the teacher could say this is it. You just sort of — you built up your own ideas from what you read. And sort of, you know, battering it back and forth.”

There is danger that such a discussion could deteriorate into mindless subjectivism, with everyone spewing forth their unexamined, unsupported intuitions, and nobody listening to anybody else. But that does not seem to be what’s happening in the art history seminar. The students seem to be constructing knowledge: they speak of “backing up” their opinions, “building up” their ideas, “questioning things,” and “battering back and forth” – taking steps, perhaps, toward Polanyian “acts of discovery.”

Discovery

Polanyi describes the act of discovery as follows:

It starts with the solitary intimation of a problem, of bits and pieces here and there which seem to offer clues to something hidden. They look like fragments of a yet unknown coherent whole. This tentative vision must turn into a personal obsession, for a problem that does not worry us is no problem; there is no drive in it, it does not exist. Indeed the process by which it will be brought to light will be acknowledged as a discovery precisely because it could not have been achieved by any persistence in applying explicit rules to given facts (1966, 75).

In one of our studies we asked students nominated by their professors as “complex thinkers” to tell us how they went about writing essays. These students do not speak of “applying explicit rules to given facts.” The images they use are circular, rather than linear. Although (and in part because) their descriptions verge on the inarticulate, I think they sound remarkably like Polanyi’s portrayal of the act of discovery. For example, Amy:

You proceed out of confusion. . . . There’s just sort of a sense of a mixing bowl where you sort of let — where you are confused and you don’t have any solid or stable. . . . I think it’s sort of like a whirlpool or something like that. Where you’ve got a lot of ideas [“bits and pieces”] zooming around, and you haven’t yet affixed any of them to being right or wrong in your head yet or meshing with all the others. Things are still just sort of whirling around; then you start pulling them out and filtering things out and making sense out of them.

Similarly, Marie:

A lot of it has been lots of passive and then “Boom!” all of a sudden something comes and really sticks, and I’m very active, and [then] lots of passive again, and then “Boom!” again. It’s like I have to take in a whole lot and sift it all down. You know, put it all in a big sieve and sift it all down and the stuff that falls through I collect and start building with, and then “Wham!” – all of a sudden the right piece will fall into the sieve and something will be completed.

Claire Zimmerman asked students in her seminar on psychology and education to write papers about how they went about writing papers. One student described the process this way:

When I receive a written assignment, there is an initial floating period in which I continue my day-to-day affairs (other class work, taking showers, eating meals, etc.), while remotely playing with the paper's topic in my head. At this stage, there is no sense of organization or even of existence to my thought processes; if anyone asked about my paper, I might answer, "I haven't even thought about it yet." But of course, I have.

In time, this student moves into "an intense writing mood" which "is just a very abstract feeling of self-confidence and a sense that I am ready for sustained introspection and analysis." Notice that, like Polanyi, she speaks of "self-confidence," but not "certainty." She chooses to write in her own room, her own personal space, rather than in the library: "There's something about the stark barrenness of those plain wooden carrels that is just too empty; perhaps I need to be more aware of my own individuality." Throughout this process, the student struggles to resist. "The guilt which can occur when I compare my progress in an assignment with that of my classmates or my own expectations." The voice of the culture, ingrained in her own conscience, seems to urge her to abort this lengthy indwelling and get that something down on paper, but she resists. "It's my way of working," she says.

Personal Knowledge and the Suppression of Subjectivity

The "ways of working" all three of these students describe seem to me similar to Polanyi's notion of "personal knowing," involving, as Newman says, the "immersion of [their] whole persons in that which [they] are seeking to know" (2002-03, 63). In a passage of profound importance to me, Polanyi defines the personal as "neither subjective nor objective."

In so far as the personal submits to requirements acknowledged by itself as independent of itself, it is not subjective, but in so far as it is an action guided by individual passions, it is not objective either. It transcends the disjunction between subjective and objective. (1958/1964, 300)

I am enormously grateful to Polanyi for his distinction between the personal and the subjective, but I find his treatment of subjectivity occasionally unduly dismissive, as when he refers to "subjective states, in which we merely endure our feelings." I argue that some integration of subjectivity and objectivity is necessary as a basis for personal knowledge, that the suppression of either makes the development of personal knowledge difficult. In particular, I am concerned about the degree to which students report that they deliberately exclude all signs of subjectivity from their work. For instance, in an attempt to meet what they perceive as the utterly impersonal standards of the academy, they delete themselves from their essays, manufacturing arguments in favor of positions which they do not believe but can successfully defend against the doubts of authorities. A college sophomore told us, for instance, that in art history it was always easiest for her to write papers about paintings she "didn't like," because then she could be "objective" about them. She said, "I didn't ever abhor a painting that I did, because that would have been just as bad as doing one that I really liked. Just – just one that I wasn't particularly crazy about." In the course of her "education," this student has learned, as the philosopher Sara Ruddick did, to "think about things [she doesn't] care about."

Judy, an eighth grader participating in a project on girls' development directed by psychologist Carol Gilligan, had already concluded that the things you learn in school have nothing to do with believing. "You have to know about them," she says, "but you don't have to believe them to get a good education." "Feeling and knowing, she says, are two different things. . . . The knowing sort of comes from the brain, like your intelligence . . . Like your smartness, your brightness, your education part." Judy distinguishes between this brain, her "education part" and (pointing to her stomach) her "mind," which involves "a deeper sort of knowing" that is related to feeling and unrelated to education (Brown & Gilligan, 1992, 137).

Catherine, a sophomore, said to the interviewer, "When I write a paper I just think of one position that I can just totally stand by and give support and then write on that. It's not that I believe in it. It's not as if I believe in it or support the idea. It's just easier for me to write on." The interviewer asked Catherine what she would do if she disapproved of nuclear power and the company she worked for ordered her to write a report in favor of it. "No problem," she said. "I'd write the report. I figure I can always go to anti-nuclear rallies. If I've come to the decision that I'm against it, then just saying I'm in favor of it would never change my ideas."

I fear that I have often colluded with my students in their attempts to suppress subjectivity – (to listen to their "brains" and keep their stomachs out of it) by presenting them with problems which can be solved by "applying explicit rules to given facts" – problems which may or may not "worry" them and thus may or may not "exist" for them; more often than not, I suspect, they don't. Students leave messages on my answering machine: "I'm working on *your* paper . . ." "It says in *your* notes . . ." And, worst of all, "What do you want . . .?"

Two philosophers, Sara Ruddick and Alice Koller, have provided eloquent accounts of how, in the course of their years of formal education, culminating in PhD's from a highly prestigious institution, they learned, in Ruddick's words, to "avoid work done out of love." "My intellectual life," she says, "became increasingly critical, detached, and dispensable" (Ruddick, 1977, 136). "Academic custom dictated," Koller says, that she avoid the first person singular in her dissertation; instead, she was to say "We have seen that . . ." and "We must conclude that . . .," phrases which "conceal any hint of the scholar's individuality." In the thesis she played devil's advocate with herself, "thinking up the strongest possible arguments against my own position" (1990, 53). The idea was to construct an argument "so soundly based that anyone can retrace your steps and arrive at your very same conclusions. If your own personality were to intrude, the impartiality you're aiming for might be tainted. Your ability to persuade might be charged, not to the strength of your argument, but to the power of your big blue eyes" (56-57). I shall return to their story later in this essay.

Apprenticeship

Presumably, Ruddick and Koller underwent some sort of apprenticeship during their graduate studies, and both acknowledge the value of the traditional philosophical knowledge and skill they had acquired. But for them, something seems to have been missing. According to Polanyi, because "the methods of scientific enquiry cannot be explicitly formulated," they "can be transmitted only in the same way as an art, by the affiliation of apprentices to a master." While acknowledging that "the authority of science is essentially traditional," Polanyi insists that it is "an authority which cultivates originality" (1969, 66). Neither Ruddick nor Koller would claim "originality" for their graduate work, if originality includes the right to challenge the existing paradigm. Their training, heavily tilted toward separate

knowing, taught them to doubt, but did not help them to believe; it did not prepare them for committing “acts of discovery.” Their dissertations speak in utterly impersonal terms, and perhaps the relationship to their masters was also relatively impersonal. This is not Polanyi’s conception. For him, apprenticeship involves “close personal association with the intimate views and practice” of the master (Polanyi, 1946, 43).

Polanyi sometimes pictures apprenticeship as a relationship between a learner who possesses extraordinary gifts and a “distinguished” master (1946, 43), and David Rutledge seems to see the personal relationship between master and apprentice as “crucial” only at “higher levels of learning” (1998-99, 25). But a growing number of “cultural psychologists” portray cognitive development in ordinary children as taking place, in Rogoff’s words, through an “apprenticeship in thinking,” the title of her seminal book (1990). Learning a culture, as these psychologists describe it, is very like learning the premises and practices of a discipline, as Polanyi describes it. Children are seen as “active in their efforts to learn from observing and participating with peers and more skilled members of their society, developing skills to handle culturally defined problems with available tools, and building from those givens to construct new solutions (1990, 7).

Rogoff defines apprenticeship as “guided participation,” indicating that “both guidance and participation in culturally valued activities are essential,” and she is aware, as is Polanyi, that “guidance may be tacit or explicit” (1990, 8). Guided participation involves “intersubjectivity,” “a sharing of focus and purpose between children and their more skilled partners.” Like Polanyi, Rogoff perceives apprenticeship as a personal relationship “involving cognitive, social, and emotional interchange” (9). I share the view of Rogoff and other cultural psychologists that such a relationship is crucial to “lower” as well as “higher” levels of learning, that it is sharing the process of knowing “as it happens,” in Rutledge’s felicitous phrase, that “makes genuine knowledge possible” (1998-99, 25).

Given the criteria for promotion and tenure that prevail at many educational institutions, it takes a sort of Polanyian “confidence” for us teachers to exhibit our faltering efforts at “making meaning” in front of a class, to dare to share the process (as well as the products) of our thinking, to act on the assumption, as Todd puts it, that we “don’t always have to be polished.” Peter Elbow, a writer and teacher of writing, reports that it was only after years of effort (assisted, perhaps, by his reading of Polanyi) that he became “willing to dignify and take seriously the fecundity of the inarticulate, to trust that my grunting and my fishing around are in fact getting at something. Only when I do that, both for myself and for my students, do I sense that I am getting progress” (1988, 8).

According to Lev Vygotsky’s (1981) widely-accepted theory, cognitive development will occur only when apprentices participate in activities slightly beyond their current competence, within their “zone of proximal development” or “zpd.” The most appropriate tutor is someone at a slightly more advanced level than the tutee. It might be a four-year-old child or an illiterate peasant or, as in Polanyi’s illustration, a “distinguished master” directing an extremely “gifted” learner. Among our undergraduate interviewees, especially at Wellesley, the women’s residential college where I taught, these everyday apprenticeships often took the form of informal tutelage from a somewhat more sophisticated peer, usually a friend. Jill, a junior English major at Wellesley, tells a story that illustrates the process.

Asked to describe “a good paper” she had written, Jill recalled one she had done in her freshman year for an introductory art history course. It was five o’clock in the morning, she had just finished writing the paper,

it was due the next day, and a friend was typing it. Jill knew that it was “a shitty paper,” and the typist confirmed her opinion. Unable to see “how to get out of it,” Jill sought the help of a friend, Sonia, a sophomore planning to be an art history major who, she said, had been “mothering” her through the course. Sonia read the paper and burst out laughing. “So for about ten minutes,” Jill said, “I wanted to kill Sonia, and kill the girl at the typewriter, `cause it was clear that this whole thing was going to have to be rewritten.”

And together, Sonia sat down with me and talked it through – You know, “This is where you went wrong, you went off on this tangent,” and helped me write the things more tightly, and then it turned out it was a good – it was a very good paper.

Now, I look back on that experience – first of all that people would be willing to stay up with me that late to do something like that, and then the fact that then we went through it together – meant, not only meant a great deal to me from an emotional standpoint, but the fact that I – I was learning something, that it was a peer that was teaching me, and that we were taking time out to do it together.

That was one of the best experiences I’ve ever had, because *it was something that I had got on my own – well you know, or with a friend*, completely out of classes, completely out of the books.

For Jill, “getting it” with a friend is indistinguishable from getting it on one’s own. Rogoff would agree: knowledge, in her view, is always co-constructed: in thinking about cognition “we must suspend our assumption that the basic unit of analysis is the individual” (1990, 209). Although an increasing number of developmental psychologists share this view, the dominant model remains individualistic, both in psychological research and in educational practice. In evaluating students’ work, for instance, the basic unit of analysis is nearly always the individual. Since only Jill’s name appeared on her paper, the teacher no doubt assumed that it was “her own work,” which, of course, in Jill’s mind, it was. Jill herself doesn’t remember what grade she got, and she doesn’t care – she knows, by her own criteria, that “it was a very good paper” – but, two years later, she remembers the experience vividly, and she remembers the painting “inside out”: “It was *Bal á Bouganville*, by Renoir – the two dancers, and they have lilacs on the ground, and sort of wispy people in the back.”

Connected and Separate Knowing, Believing and Doubting

As I say in “Beyond Subjectivism,” the two procedures we called connected and separate knowing were built on Elbow’s (1973) notions of the Believing Game and the Doubting Game. In that essay I describe how Claire Zimmerman and I first encountered what we came to call connected knowing while looking for evidence of Perry’s Position 4, which involves critical thinking. Because at the time we equated “uncritical” with “unthinking,” it took us a while to see that when a student said that in reading a philosopher she tried to “think as the author does,” she might be really thinking. Elbow helped us to reinterpret such comments as indicating an active effortful attempt to understand, very like what Scott calls “imaginative sympathy,” which she sees as akin to Simone Weil’s “creative attention” (Scott, 1985, 73). As a way of “teaching” the procedures, my WWK co-authors and I have asked participants in our workshops to play each game, following “rules” we constructed for doubting a given position (e.g., “Look for flaws in the reasoning” and “Offer opposing views”) and for believing one (e.g., “Look for what’s right about it,” “Try to share the experience behind it”). In our

experience women frequently do conceive of doubting (separate knowing) as a game, and they are willing – if not always eager – to play it, but, as we said in *WWK*, “believing feels real to them, perhaps because it is founded on genuine care” (113), and they object to treating it as a game.

Elizabeth Sargent agrees, entitling her powerful essay “Believing Is Not a Game” (2002). Sargent takes Elbow to task for presenting belief and doubt as “a balance of opposites . . . equally important both necessary and balancing each other” (109). This is how we treated connected and separate knowing, but Polanyi has convinced Sargent, and he and she have convinced me (and also Elbow, I’ll bet) that, “belief is prior, is the root of all knowing, is the essential power of the mind” (Sargent, 2002, 108), that “while doubt has an essential role to play, it is always a subsidiary, dependent, secondary role. It can test what believing has made or discovered, but it can never make or discover anything on its own” (Sargent, 2002, 109). From this perspective, connected knowing is prior to separate knowing. It all seems so obvious now. How can you look for flaws in a position you have not yet grasped? Perhaps we were so determined to show that connected knowing was a respectable way of knowing, “as good as” separate knowing, that it never occurred to us to conceive of it as in any sense “better,” more important, “prior.”

So believing is not a game, and connected knowing is not just a game, and maybe – it now occurs to me – maybe it’s not a procedure, in the usual sense, in the sense that separate knowing can be. Designing rules for the Doubting Game was easy: “look for flaws in the argument” and “think of exceptions to the statement,” for example. But we found it very difficult to formulate specific rules for Believing. “What do you mean, ‘Share the experience’?,” our participants complained: “How?” Our rules for believing seemed to them more like goals than strategies for reaching a goal. I was reminded of my experience in teaching a course on “Research Methods in Developmental Psychology.” The textbook I assigned in that course spelled out clear instructions for ensuring and testing the validity of data collected in an experimental study. It had little to say about how to come up with a researchable problem of personal significance. As Esther Meek says, “Nobody seems to want to talk about *how* you form a tentative hypothesis” (2003, 63). We didn’t talk about it much in that course. We didn’t know how to, and anyway it would have taken too much time.

There is another sense, too, in which connected and separate knowing are not “balancing opposites.” Connected knowing, it seems to me now, is a more *complex*, more heterogeneous approach than separate knowing: it employs both thinking and feeling, both deliberate effort and, often, a kind of patient, relaxed, receptive attitude, relying on both tacit and explicit knowledge; it has a dual focus, oriented both inward and outward, searching the self as a source of “clues” for grasping the reality of the other – “projection in the good sense,” as Elbow puts it.

In these respects, as well as in its “believing” orientation, connected knowing bears some resemblance to Polanyi’s “personal knowledge.” I think there must be some relation between the two, but I don’t know how to define it, partly, I think, because I don’t fully understand Polanyi’s notion of personal knowledge. Sometimes, he seems to equate it with Commitment. For example, he says, “Personal knowledge is an intellectual commitment” (1958, vii), and “Such granting of one’s personal allegiance is – like an act of heuristic conjecture – a passionate pouring of oneself into untried forms of existence” (1958/1964, 208). The many humbler, transitory instances of connected knowing clearly do not, especially those involving the knower’s self-interest, as, for example, when a lawyer examines a potential juror in order to determine how he might interpret a defendant’s story. Indeed, few of the instances of connected knowing that we have recorded rise to the level of the sort of personal commitments to science that Polanyi describes and I. I. Rabi

experienced. For Rabi, science was nothing like a game. In an interview he said,

Some physicists say that physics is fun. I always hated the idea that it was “fun.” . . . I have always taken physics personally. . . . It’s my own physics, within my powers. It’s between me and nature. . . . You must feel the thing yourself – feel that it will change your outlook and your way of life (Bernstein, 1975, 53, 64, 108).

Sara Ruddick and Alice Koller also arrived at personal commitments, although not until they had escaped from the academy. Ruddick’s transformation came about through immersion – intensive indwelling – in the works of Virginia Woolf. This reading, unlike the dissertation work, began as a sort of “play.” Unlike the dissertation, it had no instrumental purpose; it was “completely divorced from public ambitions or expectations.”

Insofar as I brought problems to my reading, they were personal – connected with my sense of aging and death, with an interest in women and feminism, with my earliest love for my mother and fears for her death. Indeed, I was more than a little in love with Virginia Woolf herself (1977, 136).

Like a Polanyian act of discovery, Koller’s project, an essay on Plato’s *Euthyphro*, began with “an intellectual problem [which] had been nattering at me for years” and had become an obsession; “I had to resolve it.” The paper had no purpose “other than the sheer doing of it,” she says, and for the first time, she found herself “loving [her] work for the work’s sake” (1990, 102). These two women’s “discoveries” may seem paltry in comparison with Rabi’s – they will win no Nobel prizes – but, like his, they are transformative: “The change,” Polanyi says, “is irrevocable. . . . Having made a discovery, I shall never see the world again as before. My eyes have become different; I have made myself into a person seeing and thinking differently” (1958, 143). Through her immersion in the works of Woolf, Ruddick found herself learning to think and feel in new ways. “For the first time in years,” she writes, “my mind was truly alive, truly mine” (1977, 144). Once so careful to “avoid work done out of love,” she says, “I now care about my thinking and think about what I care about” (1984, 151). Koller’s experience in writing the *Euthyphro* paper was equally transformative. “Doing it, and completing it,” she says, “marked for me the turning point from which thereafter I thought of myself as a philosopher Finishing [it], I knew that I was a philosopher and would be one ever after” (1990, 54).

The stories Ruddick and Koller tell suggest that, while connected knowing is not synonymous with personal commitment, it can pave the way for it, may even be a prerequisite for achieving it. Through marriage and child rearing and her study of Woolf, Ruddick says, she learned “new ways of attending . . . to people, especially children. This kind of attending was intimately concerned with caring; then I found myself watching more carefully, listening with patience, absorbed by gestures, moods, and thoughts. The more I attended, the more deeply I cared” (1984, 151). Ruddick began to question the philosophical ideal of detached and abstract reason which had controlled her intellectual life for years. “Reason was failing me,” she writes, “as a lover, mother, and citizen. . . . I needed to act on passion and be responsible to love” (1989, 8). Still convinced of the value of reason, but rejecting the version she had been taught (signified by a capital “R”) she asks herself,

If I could not reject Reason, could I honor Reason differently? If I could no longer serve the Reason I had known, was it possible to reconceive a reason that strengthened passion rather

than opposing it, that refused to separate love and knowledge? (1989, 8).

Koller's first venture into connected knowing occurred with respect to a dog named Logos. She had adopted Logos as a means of protection, but, finding herself without need of protection, Logos "caught [her] attention as himself," and she found herself "trying to see the world from his point of view" rather than in terms of her own needs (1990, 49), "caring for Logos for his own sake, rather than repaying him for what he was doing for me" (101). In time, she began to do the same with people. Although earlier, she says, "comprehending another person's purposes was all but impossible for me, I now grasped with equal perspicacity the purposes of other persons" (102). Finally, "Loving my work for the work's sake, loving another person for the person's sake: each of these facets of my life germinated and flourished, starting with the seed that was my commitment to Logos" (1990, 102).

Writing the *Euthyphro* paper was the first time I had used my philosophical knowledge and skill to do something philosophical for its own sake. My unremitting absorption in it for all those days without being paid to do it, without even the promise that it would be published, gave me the exemplar for doing something for its own sake in my work, in my professional life. It matched the exemplar I already had at hand in my personal life" (1990, 54).

While Ruddick and Koller use the word "commitment" in describing their experience, more often – repeatedly, in fact – they speak of "love." (So far, I've found no references to love in Polanyi's work.) Could "love," be seen as a manifestation of personal knowledge, of commitment? Clearly, as these two women define it, love "transcends the disjunction between subjective and objective" (Polanyi, 1958/1964, 300). Are women more likely than men to conceive of commitment in terms of love? In "reconceiving reason," Ruddick asked herself, "were there alternative ideals of reason that might derive from women's work and experiences, ideals more appropriate to responsibility and love?" (1989, 9). She answered the question by developing the concept of "maternal thinking" (1989), a way of thinking that grows out of the "discipline" of maternal practice, but is relevant to issues well beyond child-rearing (See *Maternal Thinking*, 1989). Koller had no children, but her relation to Logos has a maternal sound to it: "taking-care-of" him turned into "caring-for" him, she writes, and loving one's work means "caring-for" work, as well as for pets and people (1990, 60).

I have paid little attention to the relation between gender and epistemology in this essay, although it is true that such a relationship exists, at least in some populations, with males being more oriented toward doubt, as represented by separate knowing, and females more oriented toward belief, as represented by connected knowing. This being so, it is possible that if women had had the power to reframe philosophy and reconstruct education, they might have assigned higher priority to belief than to doubt, and placed more emphasis on the making of meaning than the testing of validity. But, as both Polanyi and Perry demonstrate by the positions they take on these issues, it is clear that the two modes are not gender-exclusive.

In the early days of our research, as I confessed at the start of this essay, Claire Zimmerman and I largely ignored Perry's ideas about the development of Commitment. At the time we were narrowly focused on constructing specific criteria for coding our interview data in terms of epistemological position, and since none of our undergraduate participants seemed to have much conception of commitment, we didn't need to know how to code it. Today, I find this shocking. After all, we were teachers as well as researchers, and we both cared deeply about education. Why did we not ask ourselves *why* so few so few of our students had reached a position of commitment, what sorts of educational practices might facilitate its development? In a passage

near the end of his book, Perry offered a kind of answer, urging educators to supply “a certain openness – a visibility in their own thinking, groping, doubts and styles of Commitment,” and he “enjoin[ed]” on them “the duty of confirming the student in his community with them (a membership he achieves at the very least as an apprentice or colleague-to-be) through his own making of meaning, his daring to take risks, and his courage in committing himself.” Perry thought this was rare: “How usual, for example, is the student’s experience that his paper has been read with primary attention to his meaning and only secondary attention to establishing his grade?” (1970, 239).

I like to think that sometimes I (unwittingly) followed Perry’s advice during my teaching career, but I wish I had done so more frequently and more deliberately. One such missed moment comes to mind. Claire and I were team teaching an introductory psychology course which involved lecturing to some two hundred students in a large auditorium. Students rarely spoke up under these circumstances, but one day a brave student raised her hand in the midst of my lecture on Piaget to ask a question. “Mrs. Clinchy,” she said, “you do the lectures on Piaget and child development, and Miss Zimmerman, you do the ones on Freud and personality and all that. Why is that? I mean, does one of you just *like* Piaget and the other one just *like* Freud?” I remember being stunned by the student’s audacity in interrupting my lecture to ask such an inappropriately personal question, but I quickly recovered, shifting into researcher mode, smiling tolerantly to myself at the student’s epistemological innocence: she seemed to be a subjectivist, since she thought we might be choosing our areas of interest on the basis of sheer “liking.” I don’t remember what I said. I think I said that it wasn’t a matter of “liking,” and maybe I stuttered something about “reason,” but, as fast as I could, I hustled back to the security of my lecture notes.

If I could rewrite that episode today, I’d toss those lecture notes aside, and Claire and I would reminisce, mumbling along together as best we could, trying to reconstruct the evolution of our own (capital C) Commitments to the issues in human development and personality that “obsessed” us. I’d say to the students that although it wasn’t just a matter of “liking,” it wasn’t just “reason,” either – at least not the sort of impersonal reason Ruddick spells with a capital R. It was a form of reason that incorporated love. I’d confess to being “a little in love” with Piaget, and I’d talk about the ways in which my experiences as a mother had helped me to understand (and sometimes to challenge) his ideas, and I’d explain, with concrete examples, how his work had caused me to observe my children more carefully and respond to them more sensitively.

Claire and I might try to explain how the research in epistemological development that we were currently conducting grew out of the frustration we felt as teachers when our students had trouble understanding the material we were presenting. We might go on to describe that research, what we were trying to find out and why the answers mattered to us. (Some of our colleagues would no doubt find it shocking that we were revealing the nature and purposes and even the preliminary findings of our project to students who might well be presently participating in it and would no longer be “blind” to our hypotheses.)

Of course, developmental epistemological theory predicts that, if we were correct in assuming that most of the Psychology 101 students were still at a subjectivist level, they would be unable to fully grasp the stories we were trying to tell, Commitment being well beyond the capacity of their zpd’s. But I like to think that some bits of the experience might remain in their memories (as the actual event remained in mine), to be puzzled over from time to time, and one day drawn upon, perhaps, when issues of commitment loomed large in their lives. I hope so.

Endnotes

¹All research participants' names have been changed

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A Response to the Responses

Blythe McVicker Clinchy

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. . . .

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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