Musings on Ecological Validity (with a little help from my friends)

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This essay consists of a series of short cultural-philosophical meditations on psychology and its proper unit of study, an issue of great concern to the Laboratory of Comparative Human Cognition throughout its decades of work. The Lab’s claim that experimental cognitive psychology is ecologically invalid is juxtaposed to other LCHC conceptual challenges to psychology and the negative impact it has on people’s lives-as-lived, as well as challenges from Vygotsky and Wittgenstein.

What is under consideration is not the ontological state of affairs, but the ontological commitments of a discourse. What there is does not in general depend on one’s use of language, but what one says there is does. (Quine, 1961, p. 103)

I begin with the above quote from W. V. O. Quine, the late American logician and philosopher of language, to remind myself and readers to be wary of how seductive it can be to assume or infer ontological-epistemological correspondences.

At the end of Chapter 5 of *Polyphonic Autobiography: The Story of LCHC* (“Coming to Terms with Methods and Theories”), the authors note that the LCHC monograph “Ecological niche-picking: The ecological invalidity of experimental cognitive psychology,” devoted only a few paragraphs to Vygotsky, paragraphs that were, however, prescient. The authors conclude the chapter with some remarks on Vygotsky, including this quote from *Ecological Niche-picking*:

“To Vygotsky’s statement that “All higher functions originate as actual relations between human individuals” (1978, p. 57), we would add that under many different circumstances of everyday life, that is where they remain. People learn about themselves and about each other by the work they do constructing environments for acting on the world. And this is how we must come to know them as well.”

Vygotsky pointed us in the direction of creating an account of human thought processes that focused on how the “inner” and the “outer” are primally interwoven through culturally mediated and socially organized interpersonal interaction. In this respect, we were part of a broader intellectual movement seeking to overcome the intellectual-philosophical dualistic divide between the “inner” and “outer” in human psychological functioning. Former LCHC participants have continued to be inspired by his writings and to expand upon his methodological insights and empirical findings, not as abstract psychological concepts, but as applicable to current socio-cultural-political life conditions. (Laboratory of Comparative Human Cognition, no date, https://lchcautobio.ucsd.edu/polyphonic-autobiography/section-2/chapter-5/)

I am one of those folks. I live with Vygotsky every day. And with LCHC’s niche-picking activity—which I take to be an instantiation of the Lab’s posit that the proper unit of analysis for an ecologically valid psychology is not the individual but rather the “person-environment interface” or the “scene” (Hood, McDermott and Cole, 1980)—or the niche. Additionally, the way I practice the niche-picking activity is an expansion of Vygotsky’s “search for method” as “the tool and the result” of study (Vygotsky, 1978, p. 78). For if it is the case that people (including people who study people) come to know themselves and each other by the work they do constructing environments (niches) for acting on the world, then the constructing of environments and the coming to know are not consecutive or causal; they occur *simultaneously*. Both the person-environment interface and the “tool-result interface” (method as tool and result) need to be understood as relationships of dialectical unity in order to account for human learning and development. To my way of understanding and in my experience, method as the application of an instrumental tool (tool for result) fails at the task (Newman and Holzman, 2013).

In different words and from a different tradition, Miles Horton,founder of The Highlander School (now the Highlander Research and Education Center), expressed a similar sentiment:

**Instead of thinking that you have to put pieces together that will add up to a whole, I think you have to start with the premise that they’re already together and you try to keep from destroying life by segmenting it, over organizing it and dehumanizing it. (Horton, 1997, p. )**

When I stumbled upon Horton’s work building a grassroots school that played a major role developing organizers for the CIO and the civil rights movement, I was very moved by both what he accomplished and his “search for method” and articulation of it.

Throughout my career, I have written extensively about the work my colleagues and I have been doing in creating developmental environments, organizations and communities that address current socio-cultural-political life conditions in tool-and-result fashion. What this special issue of *Mind, Culture and Activity* affords me is the opportunity to look at its conceptual underpinnings in relation to the Lab’s insights on ecological validity and invalidity.

Dualistic divides drive ecologically invalid research methods and applied practice areas, and overcoming them has been a hallmark of the work of LCHC for decades. Much of the *Polyphonic Autobiography* tells stories of conceptual challenges and creative alternative research practices that expose how such dualisms produce distorted and invalid understandings of what it is to be human, understandings that underlie and perpetuate the daily violation of human rights, such as those our educational, health and mental health, and political systems are guilty of.

Dualism is built into not only cognitive psychology, but all areas of psychology and social science (including educational research). There is, of course, the person-environment dualism (making its appearance as, for example, nature-nurture, individual-group, inner-outer, etc.). This is the one that receives the most attention by the Lab and its story/history. We, must, I believe, equally address the dualism inherent in causality. The so-called human sciences are driven by the assumption that human behavior of all kinds (behavior itself being another of the dualistic conceptions doing violence to human beings) is to be understood and examined as a series (albeit, often quite complex) of causes and effects (Danziger, 1997; Newman and Holzman, 1996).

I often call upon Vygotsky for inspiration and direction, and find his comments about the danger of applying a causal and dualistic natural science model to human life especially impactful. He was, after all, a follower of much of the modern science approach of his day, and yet, he foreshadowed much of postmodern-critical psychology, as in the following:

A psychology with a natural science method contains an insoluble contradiction.  It is a natural science about unnatural things [and produces] a system of knowledge which is contrary to them.  (Vygotsky, 2004, p. 298)

My appreciation for the pitfalls of causality were greatly aided by studying Wittgenstein. Along with his brilliant deconstruction (demolishment) of the correspondence theory of meaning, he also took on causality and showed us how normal and pervasive it is to make causal connections, and then took apart the connection. Here is one of my favorite examples:

I saw this man years ago: now I have seen him again, I recognize him, I remember his name. And why does there have to be a cause of this remembering in my nervous system? Why must something or other, whatever it may be, be stored-up there in any form? Why must a trace have been left behind? Why should there not be a psychological regularity to which no physiological regularity corresponds? If this upsets our concepts of causality then it is high time they were upset**.** (Wittgenstein, 1967a, para. 610, p. 160)

Wittgenstein is not denying that neurological, [cognitive](http://www.psychologytoday.com/basics/cognition) and physiological processes are going on. They go on whenever we do anything, so of course they are going on when we recognize or remember. He asks, “And why does there have to be a cause of this remembering in my nervous system?” He is questioning our assumption that there is a causal connection or correspondence between these processes and what we are recognizing or remembering or, for that matter, a connection or correspondence to the *human activity of recognizing or remembering*. His is an offering to help philosophers escape “the fly bottle” (Wittgenstein, 1967a, para 309), and an invitation to all of us to see, feel, imagine and understand in new ways that are non-causal, non-reductionistic, non-system and –generalization generating, non-dualistic (Holzman, 2018; Newman and Holzman, 2013, 1996). In his exposing of how philosophical assumptions are embedded in our psychology, I take Wittgenstein to be a fellow engager in the niche- and nit-picking activity. He showed us how our language and ways of thinking can lead us down the ecological invalidity path and, like Vygotsky, he pointed the way to creating an ecologically valid psychology.

You can't depend on your eyes when your imagination is out of focus. (Twain, 1983, p. 309)

Like Quine, Horton, Vygotsky and Wittgenstein, the friends I quoted above, I also turn to the American humorist and novelist Mark Twain for inspiration. It is his quips that especially resonate for me. This one points to the dialectic of perception and imagination and, beyond that, to the unity of objective and subjective. I first encountered Twain not through Tom Sawyer or another of his novels, but through a posthumously published (in 1909) collection of essays entitled *Letters from the Earth* I came upon in my late teens. Most of the book consists of letters from Satan to Archangels Gabriel and Michael about what he observed about human beings on earth. Satan is incredulous at the heaven humans created, one that lacks everything Earth’s inhabitants love about life on earth. Clearly, he thought, the human imagination was out of focus when it came to heaven. The creating of a natural science based psychological theory and its perpetuation through its institutionalization is another example of our-of-focus imagination.

I was involved in the early LCHC work known as the Manhattan Country School (MCS) Project. Among the many insights to come from this research (including hundreds of hours of collective grappling with its many potential meanings), one stands out for me as a completion of sorts to my thinking regarding person-environment, tool-and-result, dualism, dialectical relationships, and ecological validity. It is the Lab’s understanding of “the lab.” We questioned the typical understanding that the experimental laboratory is merely a setting, location, space and/or place. We saw it as much more than that, as a perspective, a paradigm, a methodology. “What marks the laboratory [in contrast to everyday life] perspective at this level of contrast is an assumption that what is of interest in any scene can be defined *a priori* by the experimenter’s theoretical interests and the careful design and control of key variables” (Cole, Hood and McDermott,1979, p.119).

In the decades since that work, I have come to appreciate that this assumption doesn’t stay in the laboratory setting. It leaves the room along with the researchers to the extent that they do not recognize and take into account that what is research to them is everyday life to the “subjects” of their investigation! Thus, there is not one but (at least) two “person-environment interfaces” if the method is dualistically tool for result, if what is discovered is a result of applying a methodological tool rather than the method itself being a dialectical tool-and-result discovery.

Perhaps all I am saying here is that what we do is not separate from how we see and understand what we do. What might we see if we look back on the impressive body of work produced by LCHC without the experimenters’ lens? When I do so, I often see things hinted at but not taken very far in the articulations of what was done. With the MCS Project, for example, we saw the social work children do to solve cognitive tasks we researchers set up for them in cooking and nature clubs outside of the school setting. At that time, we discussed this primarily in terms of open and closed systems, i.e., in experimental laboratory terms. What this overlooks is that while we might have set up the club environment, it was they and we who together created the countless niches in which new ways of acting on the world and new ways of relating to self and other were possible. I can see this social tool-and-result activity of creating new possibilities in the Lab’s other projects, the Fifth Dimension and Playworlds being two examples.

Sometimes poets say it best. For me, the best of saying it best are often political poets, those who’ve fought for something their whole lives, many who spent time in prison and whose poetry was composed in a jail cell. One of them is the Turkish poet and political activist Nazim Hikmet. The excerpt below from his poem “On Living” is, for me, a simple, humorous and beautiful reminder that what matters is human life-as-lived, even while studying it in the laboratory).

Living is no laughing matter:

you must live with great seriousness

like a squirrel, for example—

I mean without looking for something beyond and above living,

I mean living must be your whole occupation.

Living is no laughing matter:

you must take it seriously,

so much so and to such a degree

that, for example, your hands tied behind your back,

your back to the wall,

or else in a laboratory

in your white coat and safety glasses,

you can die for people—

even for people whose faces you’ve never seen,

even though you know living

is the most real, the most beautiful thing.

I mean, you must take living so seriously

that even at seventy, for example, you’ll plant olive trees—

and not for your children, either,

but because although you fear death you don’t believe it,

because living, I mean, weighs heavier. (Hikmet, 2002, p. 132)

I formally left LCHC over four decades ago and have been guided by its principles and supporting its mission ever since, albeit in a different niche. I have been building with many hundreds of others a life and community that supports being an activist-scholar who leaves the lab in the lab. Together we have generated modest recognition for our approach to engaging poverty through the All Stars Project’s youth development programs (allstatrs.org), to a non-diagnostic group psychotherapy, to the developmental, community building, hope- and possibility-generating value of play and performance throughout the lifespan and in some of the most violent and repressive locations, to the human capacity to build ensembles everywhere, and to an ecologically valid psychology being one that embraces all people as cultural-historical beings who are who we are and who we are not (who we are becoming) at the same time and, thereby, have the capacity to change everything.

I end these musing with words from an extraordinary activist-scholar who I had the privilege to work with and share a profound friendship, the Serbian psychologist, Vygotskian and life-time revolutionary, Vesna Ognjenovic: *“*People become aware of their potential and what they really did because they DID IT! And appreciate what they created. And appreciate the group with whom they created. And it is inseparable.” <http://www.performingtheworld.org/past-conferences/2007-2/video-ptw-2007>

References

Cole, M. Hood, L. and McDermott, R. (1979). *Ecological niche-picking: Ecological invalidity as an axiom of experimental cognitive psychology*.

Danziger, K. (1997). *Naming the mind: How psychology found its language*. London: Sage.

Hikmet, N. (2002). *Poems of Nazim Hikmet*. NY: Persea Books.

Hood, L., McDermott, R. and Cole, M. (1980). “Let's try to make it a good day”—some not so simple ways. *Discourse Processes*, *3*(2), 155-168.

Holzman, L. (2018). *The overweight brain: How our obsession with knowing keeps us from getting smart enough to make a better world*. CreateSpace.

Horton, M. (1997). *The long haul: An autobiogr*aphy. NY: Teachers College Press.

Newman, F. and Holzman, L. (2013). *Lev Vygotsky: Revolutionary scientist* (Classic edition). London: Routledge.

Newman, F. and Holzman, L. (2006). *Unscientific psychology: A cultural-performatory approach to understanding human life*. iUniverse. Originally published 1996, CT: Greenwood Press.

Ognjenovic, V. (2007). Performing the World 2007. <http://www.performingtheworld.org/past-conferences/2007-2/video-ptw-2007>

Quine, W.V.O. (1961). *From a logical point of view.* NY: Harper Torchbooks.

Twain, M. (1983). *A Connecticut yankee in King Arthur’s court* (Bantam Classics). NY: Bantam.

Vygotsky, L. S. (2004). The collective as a factor in the development of the abnormal child. In R.W. Rieber and D. K. Robinson (Eds.), *The essential Vygotsky* [pp. 201-219]. NY: Kluwer Academic/Plenum Publishers.

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Wittgenstein, L. (1967a). *Zettel*. [G. E. M. Anscombe](http://en.wikipedia.org/wiki/G._E._M._Anscombe) and [Georg Henrik von Wright](http://en.wikipedia.org/wiki/Georg_Henrik_von_Wright) (eds.). Oxford: Blackwell.

Wittgenstein, L. (1967b). *Philosophical investigations*. London: Blackwell.