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Musings on ecological validity (with a little help from my friends)

Lois Holzman

East Side Institute, NY NY USA

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 (LCHC) 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 *The Story of LCHC: A Polyphonic Autobiography* ("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' (Vygotsky, [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

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concepts, but as applicable to current socio-cultural-political life conditions. (Laboratory of Comparative Human Cognition, [n.d.](#), “Beginning to Appropriate Cultural-Historical Theory,” para. 11)

I am one of those folks. I live with Vygotsky every day. And I live 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, & 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 & Holzman, [2013](#)).

In different words and from a different tradition, Myles Horton, founder of the Highlander Folk 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. 130)

When I stumbled upon Horton’s work of building a grassroots school that played a major role in developing organizers for the CIO (Congress of Industrial Organizations) 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 with respect to 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* offers to me is the opportunity to look at our work’s conceptual underpinnings from the perspective that the Lab’s insights on ecological validity and invalidity afford.

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

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dualisms produce distorted and invalid understandings of what it is to be human. Those same dualist understandings underlie and perpetuate the daily violation of human rights, including those that our educational, health and mental health, and political systems inflict.

Dualism is built not only into cognitive psychology, but also into all of the 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 & Holzman, [1996](#)).

I often call upon Vygotsky for inspiration and direction and find his comments about the danger of applying a causal and dualistic model of scientific inquiry to study 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 was 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. (Anscombe & von Wright, [1967](#), p. 160)

Wittgenstein is not denying that neurological, cognitive, 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”

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(Wittgenstein, [1967](#), p. 103) 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 non-generalization generating, non-dualistic (Holzman, [2018](#); Newman & Holzman, [1996](#), [2013](#)). 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 I do with 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 with me. There is one in particular that 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*, which I came upon in my late teens. Most of the book consists of letters from Satan to archangels Gabriel and Michael about what he had observed about human beings on Earth. Satan was incredulous at the heaven humans had 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 creation of a psychological theory based on a dualistic natural science, and the perpetuation of this theory through its institutionalization, are another example of out-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, & McDermott, [1978](#), p. 119).

In the decades since that work, I have come to appreciate that this assumption does not 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!

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Thus, there are not one but (at least) two “person-environment interfaces” when the method involves a dualistic approach of tool for a result, that is, 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 separated 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 that we researchers had 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, that is, 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 at saying it best are often political poets, those who have 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,

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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 work and approach, including our approach to engaging poverty through the All Stars Project's youth development programs ([allstars.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 musings with words from an extraordinary activist-scholar with whom I had the privilege to work and share a profound friendship, the Serbian psychologist, Vygotskian, and lifetime 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" (Spirito, [2009](#))

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