

# A Regional Emergent Ontology of Critical Reflection

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**Abstract:** Drawing on the philosophical resources of Critical Realism, this paper takes first steps towards developing a regional emergent ontology of critical reflection. Understanding critical reflection as an emergent property and power of human individuals, identifying the neurological structures that enable humans to have the power of critical reflection, and tracing the evolutionary, developmental and learning interactions that give rise to these powers can place adult educators in a much better position to assess the ways critical reflection can support learning that can enhance capacities for individual and collective transformative social agency.

## The Metaphysical Emergent and Stratified Ontology of Critical Realism

The metaphysical ontology of Critical Realism (Bhaskar, 2008) provides a powerful basis upon which to develop a specific account of the nature, emergence, and causal powers of critical reflection. Drawing on the philosophical resources of Critical Realism, this paper takes the first steps towards developing a regional emergent ontology of critical reflection.

The philosophical ontology of Critical Realism holds that reality is comprised of a hierarchy of entities each of which is composed of other entities that are their parts (Bhaskar, 2008). These smaller entities, in turn, are composed of still smaller parts, and so on, all of the way down in the hierarchy to the most basic constituents of our universe. The emergence of new entities from parts occurs when parts are organized or related in specific ways that give rise to powers and potentials that the parts themselves do not possess (Collier, 1994).

Thus, while Critical Realism provides a basis for understanding the emergence of new entities from parts, it insists that emergent entities cannot be reduced to their parts (Sayer, 2000). For example, a human heart is composed of a multitude of different muscle cells arrayed together in a specific pattern that enables the heart to develop the emergent power of being able to pump blood. While it is very helpful to understand the function of the parts of the heart, understanding these parts alone cannot fully illuminate the emergent properties of the heart.

The metaphysical ontology described by Critical Realism has operated strongly in the physical sciences. For example, scientists widely accept that atomic particles are the parts of atoms, which are the parts of molecules, which are the parts of materials, and so on. In the social sciences, however, the stratified and emergent ontology described by Critical Realism is far less prevalent (Sayer, 2000, 2010).

One of the most important reasons for the resistance in the social sciences to an emergentist ontology is the prevailing view that the essence of the human, be it our minds, spirits, or souls, are not composed of parts, especially material parts (the meat of our bodies). Instead, we view ourselves as unified spirits, somehow above and independent of our material selves. From this perspective, any effort to understand our human powers as emerging from the material parts of our bodies is reductive and debasing (Elder-Vass, 2007).

What is so often missed in this perspective is the transcendent character of entities and properties that can emerge from interrelated parts (Sayer, 2000). Investigating the ways our most important human powers emerge from the very complex and specific interrelations between the parts of our neurological systems is thus not reductive. As Critical Realist, Dave Elder-Vass, makes clear, exploring the mechanisms through which parts give rise to entities and their properties helps explain the emergence of these entities and properties, but it “cannot explain them away” (Elder-Vass, 2011).

Another complication that makes the ontology of Critical Realism less acceptable in the social sciences is the foggy causal relations that exist between human beings and social structures. Thus, although it seems clear that social structures are produced by human beings, it is also clear that social structures have great power to shape the dispositions of human beings. Faced with teasing out the complicated patterns of causation (do people cause structures or do structures cause people?), social scientists/theorists tend to adopt what the Critical Realists call a “flat ontology,” whereby causal powers are one-sidedly located in a single entity (Joseph, 1998, p. 85).

Critical Theorist, Margaret Archer, uses the term “conflation” to characterize the error made by social scientists/theorists who adopt a flat ontology. She identifies three main variants of conflation. In the first, “upward conflation,” social scientists overemphasize the power of individuals to shape themselves and society (Archer, 2001, p. 5). A good example of this is the Rational Choice Theory of people like Milton Friedman (2002). According to this theory, people are always and fundamentally free to choose their own path through life. Social structures might exist as barriers to circumvent, but they do not disrupt the underlying capacity of people to think rationally to achieve their goals.

Interestingly, very much the same nostalgically inflated view of an individual’s power to rationally control her or his own life persists in adult education. Whether it is explicitly stated or not, an unproblematic notion of adult “self-direction” remains a broadly-held perspective in adult education (Knowles, 1970; Long, 1992).

Archer identifies a second variant of conflation: “downwards conflation” (Archer, 2001, p. 5). In this instance, social scientists overemphasize the power of social structures to determine the lives of humans. For many, our sense of ourselves as capable of rational action is illusory. We are embedded in material and cultural structures to such a point that we have little individual power to shape our lives. Archer identifies Pierre Bourdieu’s (1992, p. 53) notion of the *habitus* as a prime example of downwards conflation (Archer, 2007). Bourdieu argues that, instead of being capable of free rational action, human beings are so deeply conditioned by socialization and enculturation that we rarely act in unfettered ways.

In recent years, adult education has been broadly influenced by downwards conflationists. While Bourdieu has had some influence, in our field, Michel Foucault and his exploration of the ways social power, especially its subtly intrusive pastoral forms, has been particularly influential (Edwards, 2010). Poststructuralists like Foucault have deeply disturbed the easy complacency adult educators had with the individualistic, over-rationalistic, and implausible imaginings of earlier liberal forms of adult education. Intriguingly, despite their rather dismal claims about the

power of society to condition thought and action, all but very few of these later adult educators present themselves as somehow immune to these determinations.

Archer identifies a third, slightly more sophisticated although ultimately flawed form of conflation: “central conflation” (Archer, 2001, p. 5). Instead of flattening reality in either an upwards or downwards fashion, the central conflationists flatten it towards the middle and contend that neither individuals nor society possesses unique or independent powers but instead possess one mutual power that simultaneously constitutes them both. Although British social theorist, Anthony Giddens (1986), articulates this position most clearly, similar central conflationist views pervade contemporary social theorizing. Perhaps one of the prime examples of central conflationism in adult education is the notion of “communities of practice” in which both the powers of social structure and the human agent get melded together in an obscure process of mutual constitution (Wenger, 1999).

Whatever its variant, conflationism has the same overall effect on social science research: it posits reality as established and ongoing rather than unfolding and becoming. Conflationary theorists explain causality in terms of the interactions of existing entities, but they seldom account for the origins or nature of entities or their powers.

This is true for the notion of critical reflection in adult education. Despite its pride of place in our field, adult educators actually know very little about the workings of this important phenomenon. Because it is posited as a taken-for-granted human capacity, very few questions are ever asked about what critical reflection is, where it comes from, how it develops, or what it can actually do?

Things become very different if we approach the phenomenon of critical reflection with a stratified and emergent ontology in mind. Suddenly, a host of important but rarely (if ever) asked questions come to mind. For example, is critical reflection, itself, an entity, a property of an entity, or simply an event that occurs when entities interact? If critical reflection is an entity (and I will suggest that it is not), what are its parts? What makes up critical reflection? If critical reflection is a property of an entity (this is what I will argue), what is the nature of the entity that has this power? What are the parts of the entity that has the power of critical reflection? How are these parts interrelated? What are the mechanisms that give rise to this particular configuration of parts with its power for critical reflection? What powers are at play in the emergence developmental becoming of critical reflection (Archer (2001) uses the term “morphogenesis” to describe the mechanisms involved in a phenomenon’s evolution or developmental becoming)? Is there only one path towards the morphogenesis of critical reflection or are there many paths and perhaps many variants of critical reflection? In what way do different social structures like norm groups, cultural meshworks, discourses, organizations, global economic networks, and cultural/social power structures play a role in the development of the properties of critical reflection? Does critical reflection play a role in the development of these varied social structures? How does it do this? How does critical reflection affect human agency? And, importantly to us in adult education, how does critical reflection (richly theorized as an emergent property) impact human learning (also richly theorized as an emergent property)?

All of these are extremely complex questions for which, as yet, we have very few answers. In the view of many Critical Realists, the social sciences have only taken the first steps towards developing an adequate theory of humans and their social structures. According to Dave Elder-Vass (2010), however, a productive way forward is for social scientists to adopt the broad metaphysical ontology of Critical Realism and then to deploy methods for developing what he calls regional emergent ontologies (small and limited empirical accounts) of entities and their powers that make up the broader and stratified hierarchy of our world. Working up and down the varied strata of a regional hierarchy, identifying mechanisms underlying the emergence of entities from parts on a more basic strata, and tracking the ways different entities act to produce specific worldly events can contribute much to what we know about our social reality, including the nature of human thought and action.

### **Towards A Regional Emergent Ontology of Critical Reflection**

Researchers in adult education can play an important part in developing social scientific knowledge about entities and powers most at play in the realms touched by our theories and practices. Although a comprehensive exploration of critical reflection is clearly beyond the scope of this paper, I would like, in the following, to show how a series of methodological steps identified by Elder-Vass (2010) have great potential to guide an investigation of critical reflection. A good part of the reason for this, I suggest, is that his steps encourage us to greatly expand the parameters of our normal realms of inquiry. Spurred by Elder-Vass, I will identify a range of important research enterprises that have potential to deepen our understanding of the nature of critical reflection.

#### *Entity, Property or Event*

The first step in developing a regional emergent ontology is to sort out the types of phenomenon encountered in the region under consideration. In adult education, the phenomenon of critical reflection is nestled in amongst a range of different phenomena that are only weakly differentiated. So the first question, “what is critical reflection?” is not as straightforward as it might seem. According to Elder-Vass (2010), based on what we know of the nature of an emergent reality, there are a few criteria we can apply to sort out if a phenomenon is an entity, a property or an event. An entity is a phenomenon that is comprised of interrelated composite parts. Although it might be possible to construe critical reflection as having parts, this is not obvious. In fact, critical reflection seems more likely to be the expression of an emergent property or causal power of an entity, rather than an entity itself. What, we might next ask, is the entity that possesses the emergent power for critical reflection? Even though there might be some basis for arguing that a small social group joined together in dialogue is engaging in critical reflection, this characterization is not entirely satisfactory. Many people have had the experience of critical reflection in their own minds outside of their participation in a group. So, despite the dialogical quality of critical reflection, it is the individual person and not the social group that possesses this emergent power.

#### *The Parts of Human Beings*

According to the metaphysical emergent ontology described by Critical Realism, all entities are composed of parts brought together in a particular set of relationships that enable the emergence of the entity’s properties and causal powers. As I discussed earlier, human’s are material beings comprised of a vast and intricately interwoven assemblage of biological parts that support the

emergence of our complex properties and powers. It is becoming increasingly clear that a much deeper understanding of the varied neurological parts of human beings is very important if we are to understand the emergence of the range of human cognitive powers. Fortunately, rapid progress in the neurosciences is providing a far deeper understanding of the ways the human brain supports the emergence of human cognition.

### *The Mechanisms of Critical Reflection*

Exciting accounts of the function of the brain by neuroscientists like Antonio Damasio (2012) and Sebastian Seung (2013) provide a basis for understanding how the brain provides a sense of our consciousness and self-consciousness. Neuroscience research like theirs also provides cognitive psychologists like Alain Morin (2005) and Daniel Kahneman (2013) with a way to explain the emergence of higher cognitive functions, like thinking and critical reflection from the interconnected workings of the human brain.

According to Kahneman (2013), recent neurological research is revealing that, whereas our experience of the world feels like it is emanating from a unified consciousness, in actuality, our brains do not work in a singular fashion. Kahneman identifies two very different cognitive systems constantly at work in our brains: a fast, automatic and largely unconscious system (he calls it System 1) that handles most of the minute and everyday perceptions and actions that flow through our senses and that activate our bodies; and a much slower, deliberative, and conscious system (System 2) which kicks into play when we solve problems. According to Kahneman, although we invariably privilege our System 2 capacities, most of the cognitive load of our lives is carried by System 1. Neurologically, most of these speedy functions take place in fast neurological pathways located in our parietal and temporal lobes and midbrain structures. Most of the System 2 functions are located in the recently evolved forebrain structures. According to Morin (2005), even though complex cognitive functions invariably involve neural pathways connecting structures throughout the entire brain, higher order processes like self-awareness and, especially, inner speech, largely take place in the frontal lobes. Whereas we once might have assumed that it would be impossible to locate or understand the neurological parts that give rise to our emergent powers for critical reflection, recent brain research seems to be coming close to offering us a much clearer sense of the mechanisms that generate this emergent power.

### *The Morphogenetic Causes of Critical Reflection*

It is not enough to identify the mechanisms that support the emergence of critical reflection. Providing a thorough regional emergent ontology also requires us to account for the morphogenesis of entities capable of critical reflection. According to primatologist and cognitive scientist, Michael Tomasello (1999), a full understanding of human cognition requires that we explain how these capacities evolved in ancient humans.

Tomasello's own research is especially consistent with the emergentist ontology of Critical Realism. Extensive research he has conducted into the similarities and differences of human cognition and the cognition of our closest living relatives, the great apes, has revealed that, in addition to possessing the vast capacities of our primate relatives for understanding the intentions of other members of our species, human beings can form collaborative bonds that enable them to take the perspectives of our conspecifics and join with them in joint enterprises. According to Tomasello, our emergent cognitive capacities for sharing intentions with others has resulted in

the emergence of our ability to produce culture, including meaningful artifacts, language, transmittable skills, and so on. It has also opened a window through which, for the first time, we see ourselves as if through the eyes of others. As a result of participating with others in shared cultural contexts, where humans are embroiled in taking the perspective of others in order to understand their concerns, humans begin to develop the capacity for self-awareness. In Kahneman's terms, humans begin to acquire the capacity for separating themselves from the automatic and unconscious flows of System 1 existence and begin to deliberate more consciously on aspects of themselves and their existence. According to Morin, our capacities for inner speech play a key part in our powers for critical reflexivity.

Margaret Archer (2012) adds additional layers to our understanding of the morphogenesis of critical reflection. Rather than being a unitary power, she contends that the emergence and development of human reflexivity is variously shaped by people's socialization. Critical reflection, in her view, can develop in four distinct modes. Communicative reflexivity, autonomous reflexivity, meta-reflexivity, and fractured reflexivity develop in different contexts and provide people with different powers for shaping their world. For Archer, while reflection is not the only factor that shapes the lives of people, it is a substantial human power.

### **The Power of Critical Reflection**

As the previous paragraphs hopefully attest, even the briefest move towards developing a regional ontology of critical reflection provides an enticing new view of this important cognitive power. The next step in the process of developing this concept is to explore the power of critical reflection to shape human individual and collective social action. Despite Kahneman's warning not to overestimate the power of System 2 thinking, there is real reason to believe that critical reflection is a veritable human causal power. Of course, given that all events in our world are shaped by multiple generative powers, and given the massive determining power of vast social structures that currently transfigure our world, the capacities of human critical reflexivity to bring about meaningful social changes remains a question to be thoughtfully investigated. It is very likely, however, that, even in this task, the emergent ontology of Critical Realism and its methodological precepts remain a useful resource for adult education researchers.

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