

Moral Rationality

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ABSTRACT Key Words: rationality, objectivity, virtue, moral development, knowledge, epistemology, indigenous thinking.

Although objectivity is generally considered a result of Western science and civilization, Michael Polanyi and John Macmurray offer some insights into how the received view of objectivity as impersonal and unemotional entails a deep misunderstanding of what knowledge truly is. My contention is that ancestral indigenous thinking (small-band hunter gatherers) represents truer knowledge and rationality and aligns more with Polanyi and Macmurray. I integrate these ideas with modern cognitive and neuroscience and briefly apply these expanded notions to the realm of virtue.

Objectivity is generally associated with Western traditions of science and rationality and both are associated with civilized humanity. Michael Polanyi and John Macmurray offer some insights into how these concepts and their practice are misunderstood. Indigenous thinking aligns more with Polanyi and Macmurray than the received views about objectivity and rationality. I integrate their suggestions with modern cognitive and neuroscience and apply these expanded notions to the realm of virtue.

Objectivity and Rationality

The notion of objectivity has shifted through the history of science (Daston & Galison, 2007). In tracking the history of image science, Daston and Galison point out that initially the goal was to be “true to nature” in one’s observations of natural objects. This entailed representing the *idea* of the thing, an image that didn’t represent any one specimen but the type as a whole. The great variability in how different scholars sketched the same “type” led to a desire for a more systematic representation, less mediated by varied human experience. Seeking a systematic approach, British physicist Arthur Worthington spent years in the mid-nineteenth century illustrating with a machine he invented the perfect symmetry of a droplet in various stages of flow. He watched each stage during a millisecond flash of light and created a visual taxonomy of the major outcomes. Nearly twenty years after he started, he finally was able to use a camera to make a photograph of the splash. Contrary to his extensive illustrations of symmetry from watching with the naked eye, on film every drop at every stage was imperfect. Daston and Galison conclude that Worthington exhibited a common trait seen throughout science:

over the long course of making systematic study of myriad scientific domains, the choice of the perfect over the imperfect had become profoundly entrenched... idealization had long been the governing order...What had been a supremely admirable aspiration for so long, the stripping away of the accidental to find the essential, became a scientific vice (Daston & Galison, 2007, pp. 15-16).

Worthington (as described in Daston & Galison) determined that tracking the ideal form was due to a human psychological flaw, a perceptual deficiency that biased him towards seeing symmetry. Worthington suggested that efforts to track ideal forms be rejected and replaced with a mechanical “objective view,” one where the

complexity, individuality and asymmetry of the world would be recorded, uncontaminated by human perceptual inadequacies.

The notion of objectivity evolved further to its common definition today. “To be objective is to aspire to knowledge that bears no trace of the knower—knowledge unmarked by prejudice or skill, fantasy or judgment, wishing or striving . . . objectivity is blind sight, seeing without inference, interpretation or intelligence” (Daston & Galison, 2007, p. 17). The practice of objectivity in its fullest sense today fuses together emotional detachment, quantification, “automatic procedures for registering data,” and “belief in a bedrock reality independent of human observers” (ibid, p. 29).

The ability to perform this kind of objectivity we now know is an impossibility because human perception is constructed by prior experience. Prior experience fills the mind with interpretive frameworks and automatic inferences, driving perception and action, so much so that what a scientist believes is important to study and how to study it is influenced by experience. However, many scientists still present themselves and their work as “objective,” as if there were no bias or mediation in the shaping of the question, the experimental design, the findings or the interpretation. Let’s presume it is only because they are unaware of additional learned filters and framings that shape what they see, interpret and conclude.¹

In scientific objectivity, emotions are to be quarantined, as if this too were possible. For centuries, it has been common to believe in the West that emotion and cognition are separable and that good thinkers keep their reasoning uncontaminated by emotion or passion (remember Kant). However, at the neurobiological level the systems are indistinguishable (Lewis, 2005). A brain system is only labeled as representing cognition or emotion based on the goal of the researcher. That is, when a particular system is activated during an experimenter’s thinking task, it is called cognition, and when the same system is activated during an experimenter’s ‘feeling’ task, it is called emotion. The framing changes, but not the neurobiology. We are taught to parse our reactions into emotions and cognitions (thoughts) but this may be an artifice as they are highly interdependent.

It’s not only the impossibility of the task that should concern us about the desire to be objective as described. We should also be concerned about the nature of knowledge that is apprehended under these conditions and how useful that knowledge is. In a way science’s aim to “establish a strictly detached, objective knowledge” demonstrates a lack of understanding of what knowledge truly is (Polanyi, 1966/2009, p. 20). Dissecting the world into particular, isolated fragments does not lead towards true knowledge but away from it. “The belief that, since particulars are more tangible, their knowledge offers a true conception of things is fundamentally mistaken” (Polanyi, 1966/2009, p. 19). Our schooling and achievement testing are based on the assumption that such detailed knowledge “makes the man.” But this is a thin superficial type of knowledge that does not necessarily lead to a good life. Instead, as Polanyi (1958) contends, true knowledge necessarily lies in our ability to use it. Knowledge is primarily personal, primarily tacit. Personal knowledge is imbued with intelligence, experience and perspective—the opposite of scientific objectivity’s goals. To eliminate the personal elements of knowledge is to destroy knowledge itself (Polanyi, 1958).

Macmurray (1962/1992) offers a more holistic understanding of objectivity that aligns with Polanyi’s perspective. According to Macmurray, ‘reasoning is primarily an affair of emotion’ and “none of our activities, not even the activities of thinking, can express our reason unless the emotions that produce and sustain them are rational emotions” (1962/1992, pp. 10-11). Macmurray points out that when we suppress and ignore emotion and emotional development, we necessarily stay in egocentric thought and cannot know the world as

it is—we cannot know reality. Instead we live in a subjective world, misunderstanding objectivity. Instead of objectivity as detached provable knowledge, objectivity means knowing *and feeling* a thing in itself, outside of an egocentric interpretation or use for it. He uses the example of love which can be subjective and irrational when it is focused on feelings of pleasure, or objective and rational when it is focused on loving the person for whom he or she is. Objectivity means apprehending something without an agenda, and in my terms, with full emotional presence. Moreover, true thoughts are those that refer properly to reality which is necessarily tied to meaning. “Objective emotion is not a mere reaction to a stimulus . . . it is an immediate appreciation of the value and significance of real things . . . emotional reason is our capacity to apprehend objective values” (ibid, p. 15). Macmurray expands Polanyi’s view of personal knowledge to include not only intellectual commitment but *emotional* commitment.

Intellectual knowledge tells us about the world. It gives us knowledge *about* things, not knowledge *of* them. It does not reveal the world as it is. Only emotional knowledge can do that . . . One cannot really know about anything unless one first knows it. Intellectual awareness is egocentric (1962/1992, p. 22).

Perhaps the distinction to be made between these two contrasting perspectives of knowledge and objectivity—the scientific received view and the correctives from Polanyi and Macmurray pointing to the personal—has to do with mental orientation. Bringing in cognitive neuroscience, humans have two orientations corresponding to the left and right brain hemispheres.² (For a recent review of research on left and right brain, see McGilchrist, 2009). We can label the received view of scientific objectivity a *left-brain objectivity*. The left brain processes information by categorizing, dissecting and separating. It cannot attend to the gestalt and prefers static or lifeless things. This form of processing information represents the most respected methods of science (emotionally-detached, control and isolation of elements—through randomized, controlled experimentation). In modern developed societies, left-brain objectivity has the highest status. “Objectivism has totally falsified our conception of truth, by exalting what we can know and prove, while covering up with ambiguous utterances all that we know and *cannot* prove, even though the latter knowledge underlies, and must ultimately set its seal to, all that we *can* prove” (Polanyi, 1958, p. 286).

The emphasis on proved knowledge and skepticism towards unproven knowledge is so strong in the Western world that Mander (1978) pointed out some time ago, that many people don’t believe that human breastmilk, evolved over millions of years with thousands of ingredients, is better than scientifically-derived infant formulas that have a few dozen, manufactured ingredients—experiments must provide proof. Research studies that cannot prove that breast milk is better for some outcome (usually over the short term), are deemed inconclusive about whether breast milk is any better for babies than formula. How is it that humanity has come to disbelieve anything that has not been proved through the scientific method? Research shows that the left brain is where language and consciousness reside for most brains and consequently seems necessarily to dominate human self-understanding of rationality. The left brain denigrates what it cannot perceive—all the tacit knowledge that is mostly subconscious and accessed by the right brain. The left brain in isolation is divorced from meaning and living things.

The second type of objectivity, *right-brain objectivity*, reflects a different mindset that Westerners seem to have a difficult time acknowledging. Right brain processing attends to the holistic, gestalt perception that embraces context and relationships within a setting. It is primarily tacit knowledge, as verbal and conscious knowledge resides primarily in the left brain. Enlisting a right-brain orientation or apprehension of the world

requires a calmness of mind and an emotional presence. The right brain attunes to the energy and life in all things. This was well described by the neuroscientist, Jill Bolke Taylor (2008), when she had a stroke on the left side of her brain, gradually losing her ability to talk and think linearly, but at the same time she felt more and more in tune with the deep meaning of things. The right-brain approach better represents indigenous thought (Jacobs, 1998) which assumes meaning, morality and spirituality in all experience. Subjectivity is assumed in all animals and even objects, not just in human beings. The interconnectedness of all life is understood and so great care is taken in decision making and action.

Perhaps the need now is to support the development of right-brain objectivity, representing tacit knowledge and emotional rationality. But how does rationality develop generally?

The Development of Rationality

Rationality is founded “in the action of biological drives, body states, and emotions.” These form “the neural edifice” of human reason (Damasio, 1994, p. 200). Greenspan and Shanker point out that from the beginning of life, emotions “give birth” to the ability to think and invent symbols; “sensory and subjective experiences... are the basis for creative and logical reflection” (Greenspan & Shanker, 2004, p. 2). Among all animals, including humans, emotions are “psychobehavioral potentials” (Panksepp, 1998) that lead to greater adaptation, a form of intelligence (Piaget, 1936/1963). In developing symbolic thinking, humans learn to transform situated basic emotions into increasingly complex emotional signaling, which eventually allows the separation of an image or desire from immediate action: hence, the birth of ideas.

Emotions, emotion systems and emotion regulation are shaped by early experience. Although some emotion systems are available at birth (e.g., fear, panic), these emotions like others are shaped by early experience when the brain is developing rapidly. At full-term birth, only 25% of the brain is developed. Thereafter brain system structure, wiring and connectivity are deeply influenced by parental care. Emotions and their ‘rationality’ are shaped by early experience beginning with events surrounding birth and patterns of experience during early life.

As with all of basic cognitive development, eventual understanding is founded on the physical experience of interaction with the environment through the “interiorization of action” (Chapman, 1988, p. 9). That is, understanding develops from initial reflexes toward more differentiated conceptual structures, moving from implicit to verbalizable understanding (Gelman & Baillargeon, 1983). But none of these are separable from the emotion systems that guide action and thinking. From repeated experience, emotions are associated with particular events and form the worldview that a person carries lifelong, particularly for social relations (Tomkins, 1965).

The understanding that tacit knowledge is predominant is finally a widespread view in psychological science. Most of what we know we cannot put into words (Keil & Wilson, 1999). Implicit or tacit knowledge systems—all sorts of them—operate on a nonverbal level most of the time (Reber, 1993). Developmentally, explicit knowledge emerges from tacit knowledge built from experience. Such tacit understanding and skill “is continuous with the inarticulate faculties of animals” (Polanyi, 1958, p. 90). Even in infants we can see develop a basic explanatory set of preverbal conceptual schemas (Keil & Wilson, 1999; Mandler, 2004). There are nearly infinite bits of constructed “common sense” tacit knowledge that underlie everyday functioning.

Indeed, implicit knowledge can never fully be verbalized. Verbalization is a subset of what is expressible (also included would be sounds and movements that express emotion and understanding). Although rationality is not equivalent to personal emotion, rationality is built from this complex personal knowledge. And most of this is tacit, as Polanyi noted. “Our mute abilities keep growing in the very exercise of our articulate powers our formal upbringing evokes in us an elaborate set of emotional responses operating within an articulate cultural framework” (Polanyi, 1958, p. 70).

In everyday life, true rationality combines both intellect (detached thinking) and emotion. We come to reason well when we have full life experience with our senses, our emotions, our bodies. Emotion and intellect develop together, function together and guide action. Both underlie our tacit knowledge and well-educated intuitions. Thus dichotomies between reason and intuition and reason and emotion are false dichotomies.

Under ancestral conditions of childrearing which fosters optimal development (Narvaez et al., in press), right-brain objectivity develops naturally as part of human nature.³ When early care is optimal (Narvaez et al., in press), one has emotional rationality available to see things as they are and flexibly respond. If early experience is traumatic or relationally non-responsive and rejecting, emotional systems become predominantly oriented to self-protection (what I call a safety ethic when applied to the socio-moral aspects of life), undermining much of the emotional intelligence that otherwise develops under good care. Unable to truly apprehend reality, one learns to use self-centered filters for self-protective purposes and “left brain” detachment.

The Practice of Rationality

Polanyi criticizes scientific objectivity for its detachment and third-person point of view. Science’s attempt to standardize, sort and categorize experience is often lauded as civilized and progressive. Asymmetry is the deep bone of natural objects and everything in nature, including every human brain/mind, is unique. Each orange, each popped corn kernel tastes different. Nature is not a factory. Only human-built machines create things that are replicas. Science seems to be seeking reality as replicas. So how do or should rational beings approach such uniqueness? *Not* through objectifying, sorting and categorizing. Standardizing, sorting and categorizing takes away from understanding the uniqueness of each thing. Indigenous peoples understand this and often refuse to cooperate in research studies that focus on hypotheticals of things that are irrelevant to their experience (Luria, 1976). Their knowledge is personal knowledge that they use every day to survive and thrive.

Real knowledge requires a first person point of view. Objectivity emerges from the experience of indwelling. “Indwelling in objects” means understanding reality from the object’s point of view. “The method is not that of *detachment* but rather that of *involvement* . . . in order to understand living things, we must dwell in our subjects of knowledge more deeply. . . we can succeed here only by a completely reflexive indwelling—a full conviviality with our subject” (Polanyi & Prosch, 1975, p. 63). The first person point of view also emerges with tool use when the tool user extends self agency through the tool in that we “pour ourselves out into them and assimilate them as parts of our own existence” (Polanyi, 1958, p. 59).

Rationality also entails the ability to take a second person point of view, what Macmurray calls seeing the “thing as it is” with full feeling and intellect. Again this is primarily tacit knowledge, not third-person detached understanding. This point of view abandons egocentric purposes and approaches the object with

openminded but also openhearted attitudes. Indigenous thinking encompasses these perspectives, offering subjectivity to all things, using a tacit seeing that comes from our animal nature. Indigenous knowledge of the surroundings involves taking the time to know an object, a setting, a situation, allowing tacit knowledge to develop and emerge.

It is my contention that the third-person, detached, left-brain objectivity is ultimately irrational. It only seems rational in the individualistic West, fostered by schooling and a harsh early life, which shut down emotion development. Although hegemonic in contemporary modern societies, left brain objectivity represents a minority perspective among peoples in the history of the world. The evolution of the Western “objective” mind has increasingly detached itself from relationships, from nature, from emotion, to emphasize reasoning, individual autonomy and control. With roots in ancient Greek thought, but also in Abrahamic religions and their inherent violence towards children (punish, circumcise, obey), the Western cultures undermine capacities for the holistic right brain objectivity described by Macmurray. As Macmurray points out, ignoring emotions and their proper development has plagued the Western world for centuries. In my view, left-brain objectivity is proving to be environmentally and socially destructive as attention is drawn away from emotional and ecological intelligence. The push to left-brain objectivity leads to extreme individualism, a plethora of psychopathologies and degradation of the natural world. (See McGilchrist, 2009 for historical review.)

Moral Understanding and a Science of Virtue

Like all vital knowledge, moral understanding is primarily tacit. It begins implicitly in the interactions with caregivers in early life. A mutually-responsive relationship builds a sensorimotor understanding of reciprocity (Lerner, 2002) and facilitates empathy (Kochanska, 2002). Good caring fosters the development of prosocial emotions systems and their connectivity to higher order centers (Schore, 1994). Our ancestral environment provided the evolved caregiving practices that facilitated the development of natural virtue through lived experience (Narvaez, in preparation; Narvaez & Gleason, in press; Narvaez et al., in press).

Natural virtue develops from tacit knowledge constructed from life experience. Moral understanding (virtue) is applied in the moment and is primarily tacit, embodied knowledge (knowing how). Virtuous behavior occurs between organisms, dynamic systems that are uniquely interfaced at any given moment. Virtue is about taking the right action at the right time in the right way. Emerging from practice and experience, “true knowledge lies in our ability to use it” (Polanyi, 1966/2009, p. 17).

Moral virtue is about living well. Piaget (1932/1965) contended that morality is the logic of action. Locke too saw moral ideals as maxims of prudence. We can see this among those who live in our longstanding ancestral lifestyle, small-band foragers (representing over 95% of human existence). In that environment, virtue developed naturally, as a continuously nurturing environment and community solidarity fostered virtue as well as survival. Virtue evolved to be rational, although these days it has become mixed up with irrationality and divorced from survival.

Moral learning often takes place through negative behavior such as one’s mistakes (Oser, 1996). When one takes an action that unforeseeably causes harm to another, it offers a chance to learn to be more sensitive in the future. We can expand this notion of learning from negative experiences to include personal experiences of discrimination and injustice. Indeed, when one is shunned or mistreated, one has the opportunity to dwell in the realm of injustice, and feel how it feels to receive unjust treatment. Social indwelling provides the insights

that lead to greater empathy. Personal experiences can expand one's imagination. Consider losing a parent. There is minimal comprehension from the outside (pre-loss). But from the inside (post-loss), one learns great empathy for others who have suffered the same kind of permanent personal loss.

Most human complex societies have moved away from natural virtue. I believe it is because of the abandonment of ancestral parenting practices concomitant with an emphasis on left-brain thinking, cultural divorce from the body and emotion, and the hierarchical structures that coerce young children to suppress their emotions, instead of encouraging full sensory development. Instead, children (and adults) are punished for their natural inclinations (e.g., instead of close physical affection, extensive separation is enforced day and night). This suppression of evolved propensities, the closing off of emotion systems and emotional intelligence, leads to the rampant and increasing ill health and psychopathology in Western cultures that is unknown in ancestral environments.

The differences between Western and ancestral upbringings are well described by the anthropologist, Colin Turnbull (1963). Turnbull contrasts his own British upbringing by nannies, emotionally distant parents and boarding school with that of the Mbuti. Whereas the Mbuti child is encouraged to develop all senses to their fullest capacities, the British child's spirit was squelched, punished, and traumatized, arriving at adolescence with an internal emptiness that is filled by the adult's prescriptions, rules and beliefs. Such is not the way to *natural* virtue.

When natural development is thwarted, natural virtue is undermined. Instead, the West has necessarily emphasized an *adopted* virtue. Adopted virtue assumes an external morality—rules designed by someone else, imposed through coercion. It is a left-brain approach that seems logical and rational by people whose natural virtue development was thwarted. It is not known tacitly but through explicit memorization, conditioning and association. Thus, people can talk about it, even though they may not know it, or know how to practice it. This type of inert, memorized semantic knowledge is “learned” without a tacit base, but few would argue that it represents true understanding.⁴

Adopted virtue lends itself to scientific experiment because it is not real virtue and is the subject of most experiments. Science lives in static, controllable variables but natural virtue does not. As science is currently configured, isolating and controlling variables, it cannot analyze natural virtue. Virtuous action cannot be randomly assigned. Virtue is about the right manner for the moment. Science does not deal with manner or moments. The gleam in the mother's eye at the moment of a child's behavior is not replicable by experiment (controlled conditions). Virtue may be part of our unprovable knowledge referred to by Polanyi (1958).

When children don't get what they need to build all brain and body systems that underlie their prosociality, they necessarily develop self-centered brains that move between threat sensitivity and emotional detachment, what I call for moral functioning a *safety ethic* and a *personal imagination ethic* respectively (Narvaez, 2008; in preparation). But there can be much psychopathology supporting these particular ethics. The undermining of natural virtue may underlie what Polanyi noted as “moral inversion,” when “skepticism drives men's moral sentiments underground, whence they emerge, combined with sadism, as a creed of salvation by violence” (1975, p. 28). Moral inversion can flourish when self doubt and cynicism are rampant, again from the undermining of natural virtue, and are channeled into a support for unfettered power. Adopted virtue can be an ideology so strong that it leads to vicious imagination (Narvaez, in preparation) and evil felt as a duty (Weil, 1947/1952).

Morality is a whole-brain phenomenon—it takes contextual awareness as well as abstraction from the present moment to think about possibility (what I call communal imagination). We need the full capacities of right-brain thinking coordinated by left-brain thinking, a type of mindful morality. Anything less, and we betray our human heritage.

Conclusion

If we are going to be good scientists or scholars of any type, we need the personal knowledge of our subject. To obtain personal knowledge we need to be unburdened by misdirecting experiences. But individuals must develop their emotions and sensibilities optimally so they can trust their tacit knowledge instead of feeling the need to rely on outside proof of what is real.⁵ For the moral life, this immersed experience needs to be in real social life, not in books or other mediated experiences (although these can expand existing intuitions).

As long as science emphasizes “left-brain thinking,” with its decontextualization of features, separation of components from the whole, ignoring data that does not fit the model, virtue will remain a mystery. Virtue cannot be measured with left brain emotionally-detached analysis. However, with the employment of indwelling and right-brain understanding, virtue may be understood and lived.

Endnotes

¹For example, only Western-educated people believe that individuals can make choices that don’t affect others. Psychologists and their subjects often take this view and study individual decision making, then draw conclusions about selfish human nature.

²These comments about left and right brain differences come from studies of patients whose left and right brains were severed to prevent epileptic seizures. See McGilchrist, 2009, for a recent review of the research.

³Our human ancestral parenting practices in early life, revisions of social mammalian practices that evolved more than 30 million years ago, include natural childbirth (no interference with time, no separation of baby from mother), breastfeeding 2-5 years, constant touch, responsiveness to the needs of the child (no crying), multiple adult caregivers, free play in nature. We are studying these in my research laboratory and finding effects of each on moral development (e.g., empathy, conscience, self-regulation).

⁴Although often described as intuition, true tacit knowledge must be distinguished from false and naïve intuitions. Tacit knowledge represents well-educated intuitions built from immersed experience in a good or “kind” environment (one that gives appropriate feedback for what we are learning). Naïve intuitions, guesses based on other knowledge, often head us in the wrong direction because we do not have enough appropriate experience in a domain. Intuitions can also be misleading if we just adopt them from others, as children often do from parents or peers, or group members do about non-group members. These are false intuitions, focusing on approach/avoidance rather than the intricate knowledge of the expert. They are not our own intuitions at all. They do not form tacit knowledge but sloganeering semantic associations.

⁵Science itself needs to be more humble about describing reality, especially if it remains stuck in left-brain thinking. Understanding Polanyi’s advice would be a good start. “Owing to the ultimately tacit character of all our knowledge, we remain ever unable to say all that we know, so also, in view of the tacit character of meaning, we can never quite know what is implied in what we say” (1958, p. 95).

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