

# Varieties of Knowing in Science and Religion

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## PHILOSOPHICAL ANTHROPOLOGY, ETHICS, AND LOVE: TOWARD A NEW RELIGION AND SCIENCE DIALOGUE

by Christian Early

*Abstract.* Religion and science dialogues that orbit around rational method, knowledge, and truth are often, though not always, contentious. In this article, I suggest a different cluster of gravitational points around which religion and science dialogues might usefully travel: philosophical anthropology, ethics, and love. I propose seeing morality as a natural outgrowth of the human desire to establish and maintain social bonds so as not to experience the condition of being alone. Humans, of all animals, need to feel loved—defined as a compassionate present-with in dynamic dyadic relation such that one experiences the sense of mattering—but that need has an equally natural tendency to be met by creating biased us-and-them distinctions. A "critical" natural ethics, then, is one in which we become aware of and work to undermine our tendency to reify in-group distinctions between "us" and "them." Religious communities that work intentionally on this can be seen, to some extent, as laboratories of love—or as sites for co-creating knowledge in perilous times.

*Keywords:* attachment; Charles Darwin; emotion; ethics; David Hume; love; morality; philosophical anthropology

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This article explores the possibility of a new religion and science conversation around three loci: philosophical anthropology, love, and (meta?) ethics. Philosophical anthropology, and in particular the significance

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of love to human beings—or, maybe better, the significance of love to being a thriving human—seems promising as a topic of constructive scientific and religious conversation. Many science and religion dialogue topics are contentious—I am thinking here especially of the longstanding and often agonistic cluster of epistemological conversations regarding rational method, knowledge, and truth (see below)—so the ones that promise a more collaborative dialogue are surely worth pursuing.

From there, the discussion will proceed to David Hume. The choice of Hume may strike some as surprising, but Hume is relevant in this context for two reasons. First, Hume supposedly made a very sharp distinction between facts and values, and therefore any ethics that would explore the implications of a philosophical anthropology would eventually need to deal with Hume's concerns regarding arguments that move from an understanding of human nature to a set of prescriptions (Hume [1740]2007). As it turns out, *pace* G. E. Moore, Hume may not have distinguished quite as sharply between facts and values as is often thought (Moore [1903]1993). Second, Hume identifies a subtle social sentiment or feeling in human beings which underlies our distinctions between right and wrong and which over the course of a life motivates and directs moral behavior—he calls it the “moral sentiment” (Hume [1740]2007; [1751]1998). He thought that while our moral sentiment was too subtle and too implicit to serve as a full and content-rich foundation for ethics, its presence was nevertheless significant and it allowed for a positive analysis of morality rooted in the internal affective life of human beings to get off the ground, so to speak. (In this he was pushing back against Scottish Reformed understandings of the sinfulness of human nature, particularly manifest in our inner affective life, which was wholly unsuitable as a foundation for ethics.) In a surprising reversal of standard twentieth-century philosophical doctrine, then, Hume's positive psychological line of investigation in ethical reasoning, which focuses on the moral sentiment and on the affective life of the human being, seems promisingly suggestive in constructing a new “natural” ethics from the bottom up.

Hume would, of course, immediately want to caution any such endeavor because (unlike Aristotle) he did not think that emotions, moral or otherwise, were under our direct cognitive control. As things turned out, the interest in studying emotions empirically disappeared anyway until quite recently. (Darwin is a notable exception to that rule.) In the last twenty years, however, there has been an explosion of research into emotions. Antonio Damasio, one of the pioneers of the research, sometimes talks of an “emotion revolution” having occurred as evidenced by the almost exponentially increased number of scholarly discussions in journals, books, symposia, and conferences devoted to the study of emotions (Damasio 1994; 1999; 2003).

Provisionally, then, Hume may yet serve as a useful point of departure for a new philosophical ethics grounded in moral psychology—one that takes emotions seriously, that is sensitive to the problems of projecting a current cultural way of being (often the targets are gender roles, social hierarchies, and sexual orientations) onto “nature,” and that acknowledges the difficulty in subjecting emotions to cognitive control. Such an ethic would need to go beyond Hume in order to take on board recent insights provided by emotion and motivation research, in particular, as well as insights gained from evolutionary theory, in general.

As mentioned, emotions were an interest of Charles Darwin. In his *Expression of Emotions*, Darwin gives us an exquisitely sensitive account of the rich emotional life of animals and humans, paying particular attention to their social quality (Darwin [1896]1998). As with Hume, Darwin thought that (what he called) the “social instincts”—here he includes, in particular, the parental and filial affections—and sympathy provide a start for morality. We might therefore draw an imaginary line of investigation running from David Hume through Charles Darwin and to present work in attachment research (i.e., parental and filial affections), affective neuroscience, and early anthropology that would explore the ethical significance of social bonding and emotions in human lives. If anything can be concluded from that research, it is that human beings are profoundly *social* animals. We are deeply motivated to stay connected to others and we are persistently curious about what goes on inside for them (Lieberman 2013). The questions then arise: how significant is that for behavior and what can be said ethically as a result?

As the discussion progresses, *love* will emerge as a central anthropological theme in its relationship to human (social and psychological) well-being and functioning. I therefore owe the reader a working, and thus provisional and revisable, definition of love (we do not know enough about love yet to have a more precise definition). By love, I mean an improvisational and dynamic, reciprocal back-and-forth “conversation” between two parties—involving dyadic moves such as call-and-response, rupture-and-repair, withdraw-and-pursue, question-and-answer—such that the conversational partners experience themselves at an implicit, felt, unconscious level as *mattering* and that they are *not alone* in the world. When humans experience themselves in that way, they feel safe and free to divert resources to long-term health rather than the ready-response mechanisms that are needed when their systems are on alert while experiencing a sense of panic. Understood in this way, love is central to human health and thriving as it answers to what is perhaps our deepest need—that we matter and that someone is there for us (Goldstein 1983, 189–90).

At the same time, our need to feel loved opens us up to particular vulnerabilities that are inescapably (and unsurprisingly) also human: not feeling loved. Consequently (and tragically), we often launch defensive

measures to protect ourselves against it. Love and our defensive measures against not feeling loved constantly modulate the character of our felt social experience—including our religious experience. As John Teske notes, “vulnerability to pain and shame is the cost of being unarmored, the cost of being open to loving. Such emotional dynamics are central to our relationality; our religious yearnings are deeply driven by them” (Teske 2008, 330).

In light of these considerations, then, it is the purpose of this article to explore the possibilities of a collaborative religion and science conversation around three loci: philosophical anthropology, ethics, and love. The emphasis is on exploration, for it is beyond the reach of a single essay (and beyond my capacities) to do much more than an initial philosophical exploration. The essay, therefore, should be read as an open invitation for more voices subsequently to join in.

#### TURNING TO THE HUMAN: FROM EPISTEMOLOGY TO ANTHROPOLOGY

My initial work in religion and science dialogues focused on issues of epistemology in philosophy of science and philosophy of religion. I compared scientific and religious rationalities using Alasdair MacIntyre’s conception of tradition-constituted rationality, which I then applied to the “faith and/or reason” debates in philosophy of religion of the early 1990s.<sup>1</sup> It seemed clear to me that Michael Polanyi, Thomas Kuhn, and Imre Lakatos had demonstrated that every claim to knowledge, every paradigm, and every research programme, whether scientific or religious, had elements of both subjective “faith” and objective “reason.” Said differently, commitment to a point of view (whether religious or scientific) is compatible with discovery, investigation, and criticism—and, importantly, these epistemological activities even depend on commitment to a point of view for their grip on the world. But after that has been acknowledged, epistemology provides little helpful guidance when trying to solve the problem of theory choice. Thus, relativism loomed as a specter in the background of those discussions—most often in religious contexts. MacIntyre, I argued, provides us with epistemological resources to move the debate “beyond” faith and reason without resorting either to insular relativism or to naïve objectivism in a world with many religious traditions (Lakatos 1978; Early 2001; Kuhn [1962]2012).<sup>2</sup>

Alongside epistemology, I gained a growing interest in John Bowlby’s attachment theory (Bowlby [1969]1999). I began to see connections and implications between the scientific anthropology that was emerging in the attachment literature and particular theological commitments that I had with respect to understanding God *as* a God of love. To my surprise, love was showing up as a legitimate research topic on the scientific side of the

conversation. The discussion gave concrete content and specificity to love, grounding love in human lived experience, rather than imagining it to circulate without friction in a floating metaphysical trinity. It also opened up a space for thinking new thoughts about what it means to be human, which seemed to be supported by critical lines in political theory (Marcuse 1987) as well as human behavioral and ethology (Eibl-Eibesfeldt 1972).

The attachment literature brought issues of philosophical anthropology into sharp focus, which was already happening broadly in the religion and science discussions of the 1990s concerning issues of mind–body relations. By contrast, however, the attachment discussion was much less concerned with mind–body ontology (dualism, physicalism, or nonreductive physicalism) and much more concerned with psychology and ethics—particularly motivation theory. Psychologists were not the only ones interested in philosophical anthropology and motivation theory. Michel Foucault, for example, argued that the tradition of philosophical liberalism combined political theory and economic theory to produce a new philosophical anthropology, *Homo economicus*, which presupposes that human beings are fundamentally motivated by rational self-interest (1973; 1977; 2008).

This understanding of what it means to be human—that we are rationally self-interested—has been remarkably successful. Recent studies in the fields of behavioral economics and experimental psychology, however, show that human beings are *not* simply self-interestedly motivated. For example, performance does not follow incentives linearly, at least not for complex tasks, and we are often generous to strangers (sometimes at great cost and risk to ourselves). These facts, and other facts like them, are collectively known as the “problem” or “puzzle” of altruism. Awareness of the problem *as* a problem dates all the way back to Darwin but Edward O. Wilson called specific attention to it in the mid-1970s (1975). If to be self-interested is to be rational, then, as Dan Ariely puts it, human beings are predictably irrational (2008). Those studies taken together put the fundamental anthropology of *Homo economicus*, on which (if Foucault’s account is right) our entire political, economic, and increasingly educational system is built, into question.

Is there an available alternative philosophical anthropology that would explain these puzzling data points? There may be! Half a century ago, Harry Harlow had discovered in monkeys the same motivational puzzle that Ariely discovered in humans (Harlow 1958; 1978). He noted that monkeys were endlessly motivated by curiosity to solve puzzles. When Harlow introduced raisins as a reward for solving puzzles, however, performance went down and monkeys gradually lost interest (Blum 2002).

Through the kind of serendipitous accident that often leads to breakthroughs in science, Harlow discovered that the monkeys were most curious about lab workers. This eventually turned his attention to love: thus the wire-mother/cloth-mother experiment. Love, he argued, was a basic

motivation for behavior, more basic than food, which was a radical statement in the high water mark days of punish/reward behaviorism. If you knew a particular monkey's love story—what Harlow called the monkey's *chain of love*—then you could predict something fundamentally important about its social and environmental behavior (engaged/disengaged, curious/noncurious, thriving/nonthriving, and so on) upon which other behaviors depended (such as puzzle-solving performance and social success).

If you accept the analogy that in this motivational respect monkeys are like humans, which recent behavioral economics studies by Ariely and others indicate, then the inferred conclusion from Harlow's research is that love (understood in his terms as a dynamically responsive connection first with a caregiver and then with friends) may somehow also be fundamental to human beings and behavior. Harlow's research suggests, in short, that instead of being *Homo economicus* (the rationally self-interested human), we may be *Homo caritas*—or, in the words of Jonathan Lear, “finite, erotic creatures” who reach out longingly with curiosity for connection and understanding (Lear 2006).<sup>3</sup>

#### RETURNING TO HUME: THE MORAL SIGNIFICANCE OF EMOTIONS

Would anything of significance follow if we made this shift in anthropology? How far is it possible to go in terms of a “science of ethics” with an anthropology of *Homo caritas*—understanding human beings as finite, erotic creatures reaching out longingly for connection to others and to their environment? This question leads directly to the so-called naturalistic fallacy and to the “Hume gap,” because any such move will inevitably attempt to travel across the infamous divide between is and ought or fact and value (see Moore [1903]1993).

There are at least two ways to travel across Hume's gap. The first is Aristotelian teleology: if you know what a watch is for (telling time), then you also know what a good watch is (a good watch tells time accurately). The second is Quinean holism: If you reject the analytic/synthetic distinction on the theoretical grounds that the distinction cannot be maintained when you need it the most, then it follows that data are theory-laden and facts are value “entangled,” to use Hilary Putnam's phrase (Quine 1951; Putnam 2004).

After teaching Hume's *Enquiry Concerning Human Understanding* and *Enquiry Concerning the Principles of Morals* for ten years, however, I had started to wonder why Hume, who is supposed to think that facts of human nature have no bearing on ethics, would so persistently parade those very facts in his enquiry: his writings are littered with observations of animals, children, and the way our perceptual systems shape how experience shows up as mental phenomena (Hume [1751]1998). Upon reading the relevant

passage in the *Treatise of Human Nature*, I discovered to my surprise that Hume did *not* seem to argue for a necessary divide between is and ought.

Here is what Hume says:

In every system of morality, which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but is, however, of the last consequence. For as this ought, or ought not, expresses some new relation or affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to the reader; and am perswaded, that this small attention wou'd subvert all the vulgar systems of morality, and let us see, that the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceiv'd by reason. (Hume [1740]2007, 302)

What Hume argues here is that when ethicists in his day move *from* the usual list of doctrines about God and/or observances concerning the current ordering of society *to* ethical prescription, they do so *without explicitly articulating their warrant*. The problem is not that the move, *de jure*, is illegitimate as such; the problem is that the move, *de facto*, is made without an explicit warrant. Moreover, if readers were to notice the absence of explicit warrants in systems of morality, it would have great consequences because attempts to supply the warrant would expose the vulgarity of the system. It would eventually allow us to see that the distinction between virtue and vice cannot rest *merely* on relations of objects (descriptions of a state of affairs) nor on deductive reason—that distinction must also involve considerations from somewhere else. This does not mean that there can be no connections at all between is and ought, only that the connections deployed in the systems of morality that Hume has come across are unconvincing (on his analysis).

Hume goes on to argue that judgments of morality are tied to a moral sentiment—a calm, persistent approval of, say, just acts. Hume calls it “an immediate feeling and [a] finer internal sense” (Hume [1751]1998). This moral sentiment is very limited in its action-producing power; it is like a felt sense of ease or dis-ease that arises by contemplating or experiencing an event. It manifests itself primarily in sympathy (what we would call empathy)—the mechanism of experiencing for ourselves what someone else is experiencing producing an ease or a dis-ease. This sense of ease or dis-ease is the source of moral judgment and passions. So in his discussion of justice, Hume argues that while justice is grounded in an “interested

affection,” particular rules of justice are “artificial” in the sense that they arise from human social convention. This does not make them arbitrary, but it does make them subject to revision in response to their effects. The upshot at any rate is that the moral sentiment, the fine internal sense, is the point of contact in the nature of human beings between “is” and “ought.”

There are three things to say at this point. First, I am not the first to read Hume as a “naturalist.” Alasdair MacIntyre argued nearly sixty years ago that we have been taught to misread Hume as a Kantian whereas he is instead actually in the Hellenic tradition for whom passions are data for morality and ethics (MacIntyre 1959). There is something to be said for this reading: it has the great advantage of making better sense of the *Treatise of Human Nature* as a whole. The *Treatise* is organized as a collection of three books: Book 1—the mind and epistemology, Book 2—the passions, and Book 3—morality. The standard reading that Hume makes a sharp divide between is and ought creates a puzzle in terms of the outline and organization of the work. If Hume really believed that facts of human nature had nothing at all of significance to say to morality, why would he include a book on the subject of morality in an overall work investigating human nature and its relevance for human thinking, feeling, and doing? Contrary to received philosophical dogma, it is much more plausible that David Hume is an ethicist for whom facts of human nature, particularly passions (emotions), are very significant—they may in fact be *the whole game*.

Second, if Hume is right about moral sentiments and sympathetic passions being able to bridge from is to ought, then the significant question becomes whether, when, and what we feel for others—or, to put it prescriptively, what ought we to feel for others? What if we do not care for someone and what if we consequently feel nothing when injustices are done to them? Hume thought that we could not work on our emotions because their mechanisms were below the register of conscious operation. Since reason, for Hume, does not have a purchase on passions, are there noncognitive ways in which we can work on our emotions in such a way that others (in particular, strangers and enemies) can come to be included in our moral circle? This is not an obscure theoretical discussion regarding reading Hume; it relates directly to ethical conversations that we are having today, as is evidenced in the controversy surrounding the Black Lives Matter movement. (There is evidence that we can work on our emotions to broaden our moral circle, and I will explore that briefly below.)

Third, attention to the passions could locate Hume in the territory of virtue ethics. Hume does have a list of virtues, but Hume cannot be a virtue theorist in the traditional sense because for him passions and emotions are below the register of what we can consciously and rationally work on. We can consciously change our beliefs about things but we cannot consciously change our feelings about things. Consequently, Hume does not have a



theory of an ideal moral end or anything like an Aristotelian *megalopsychos* to which all human beings ought to aspire.

This gives Hume's ethics an advantage because it leaves it teleologically open, and therefore he can avoid a persistent problem of naturalistic ethics. "Natural" ethics can (almost always) be deconstructed to reveal a particular community's interested and motivated picture of what life is officially supposed to be like. The community, sometimes consciously and sometimes unconsciously, projects onto the order of the universe (*cosmos*) and the order of society (*polis*) the natural order of things to which society ought to conform (*cosmopolis*)—often, the targets of practices judged to be "unnatural" are sexual, and many in same-gender relationships have suffered tremendously. Natural ethics performed in this way is, of course, *exactly* what Hume would warn us is an unwarranted movement from "is" to "ought." It therefore seems fair to say that Hume provides us with an alternative that invites us to examine the emotions without the need for them necessarily to align with or conform to determined patterns of what counts as "natural." The advantage of Hume's morally incomplete and a-teleological position is that it is open to empirical science, to evolutionary biology and psychology, and to critiquing current conventions of justice in light of experience and discovery.

Focusing on the role of social instincts—long-established habits that come from experience—and the sympathetic emotions that bind us together (parental and filial affections) also seems to be the route that Darwin intuitively takes. Morality is not based, he says in the *Descent of Man*, on a *narrow* utilitarian calculation (the "selfishness principle") nor is it based on a *broader* utilitarian calculation (the "greatest happiness principle")—rather, morality is based on social instincts and on sympathy (Darwin 1889).

Darwin says this in the concluding remarks to the section in his *Descent of Man* on the sense of morality that we share with other animals—and it is worth quoting him at length here:

It was assumed formerly by philosophers of the derivative school of morals that the foundation of morality lay in a form of Selfishness; but more recently the "Greatest happiness principle" has been brought prominently forward. It is, however, more correct to speak of the latter principle as the standard, and not as the motive of conduct. Nevertheless, all the authors whose works I have consulted, with a few exceptions, write as if there must be a distinct motive for every action, and that this must be associated with some pleasure or displeasure. But man seems often to act impulsively, that is from instinct or long habit, without any consciousness of pleasure, in the same manner as does probably a bee or ant, when it blindly follows its instincts. Under circumstances of extreme peril, as during a fire, when a man endeavors to save a fellow-creature without a moment's hesitation, he can hardly feel pleasure; and still less has he time to reflect on the dissatisfaction which he might subsequently experience if he did not make the attempt. Should he

afterwards reflect over his own conduct, he would feel that there lies within him an impulsive power widely different from a search after pleasure or happiness; and this seems to be the deeply planted social instinct.

In the case of the lower animals it seems much more appropriate to speak of their social instincts, as having been developed for the general good rather than for the general happiness of the species. The term, general good, may be defined as the rearing of the greatest number of individuals in full vigor and health, with all their faculties perfect, under the conditions to which they are subjected. As the social instincts both of man and the lower animals have no doubt been developed by nearly the same steps, it would be advisable, if found practicable, to use the same definition in both cases, and to take as the standard of morality, the general good or welfare of the community, rather than the general happiness; but this definition would perhaps require some limitation on account of political ethics. (Darwin 1889, 120–21)

Morality, for Darwin then, is not based on selfish or self-interested utilitarian grounds. The motivation for moral behavior comes from an “impulsive power,” namely, the “deeply planted social instinct.” These social instincts have most likely developed for “the general good or welfare” of the community as a thriving population.

Notice that in this passage, Darwin thinks of the good of the community positively, not comparatively. In a passage close by, he mentions that an advancement in the standard of morality will give an “immense advantage to one tribe over another,” but the origin and ground of morality is not the advantage that it gives a group relative to other groups—that advantage comes afterwards and therefore cannot be the motivation of the action but would explain why morality as a behavioral trait and maintaining standards of morality are still around (it is good for the thriving of the community). Rather, motivationally speaking, morality is grounded in the social instincts.<sup>4</sup> Consequently, he does not think (at least not here) that the key to morality, and by extension the solution to the puzzle of altruism, is group selection. It would require, instead, an evolutionary account of the social instincts: What are the origins of the social instincts?

To sum up so far, I have suggested that a religion and science conversation focusing on philosophical anthropology, love, and ethics, based on attachment research by John Bowlby and Harry Harlow, offers a site for a rich encounter. In exploring a possible viable alternative philosophical anthropology of *Homo caritas* and wondering of its ethical consequences, I have pointed to an interpretation of Hume that would open up an intriguing possibility for revitalizing the discipline of moral psychology using social emotions as a focus of study for bridging is and ought, or fact–value entanglement.

I understand this to be an alternative to Aristotelianism, Kantianism, and utilitarianism, which are the three major ethical traditions currently in use and being taught. I also understand it to be the position to which Darwin was drawn. Incidentally, it seems to me that if we take the science

on love seriously, to the point of rethinking our anthropology, then the problem of altruism, which has lately been a major focus for impressive scholarly activity, simply disappears. You no longer have to show contorted long genetic calculations for why in the world animals and particularly humans are so kind. You have effectively moved altruism from the status of an anomaly to something entirely predictable, which means that it satisfies the criterion for a viable alternative philosophical anthropology.

#### RECENT RESEARCH ON SOCIAL EMOTIONS, LOVE, AND THE MORAL SENTIMENT

There have been several recent book-length critical discussions on attachment. Two are worth mentioning because of their claim that attachment is not generalizable to human beings as such: one argues that attachment was a culture-specific concept due to its exclusive focus on the mother–infant dyad, which is not the norm in human experience outside the West, and the other argues that attachment was a time-specific concept, which emerged out of post-WWII England and America (Vicedo 2013; Quinn and Mageo 2013). Neither of these criticisms, however, have been able to challenge the broad biological (mammalian) and cultural anthropological support for attachment theory. What has emerged, instead, is the general recognition that early human hunter-gatherer communities had attachment models that were spread out over a much wider social network than is common in contemporary Western societies, and that the wider network attachment model is the norm throughout human history (Otto and Keller 2014).

What does that imply with respect to emotion and love? Jaak Panksepp has studied human emotion since the days of behaviorism and, like Harlow, has come to the conclusion that there is more to the interior life of an animal than stimulus-response behavior by studying primary emotion systems (Panksepp 1998; Panksepp and Biven 2012). He has identified seven fundamental primary-process emotional and motivational systems. They are: SEEKING, RAGE, FEAR, LUST, CARE, PANIC/GRIEF, and PLAY. Knowing the importance of attachment, Panksepp turned his attention to discover the relation between primary-process emotional systems and attachment. He found that separation from a mother or caregiver triggers the PANIC/GRIEF system (not the FEAR system) and that reconnection with mother or caregiver calms the system down. He also found that a neurochemical opiate (a narcotic) performs the same function.

This raises an interesting question with respect to what fundamentally motivates humans to form, cultivate, and reestablish social connections—initially of course the mother–infant bond, but we can include developmentally later bonds of friendship and pair bonds. Panksepp speculates that while CARE is obviously involved in parental attachment, and LUST

is obviously involved in pair bonding, PANIC appears to have the basic function of motivating us to establish lasting social connections and to protect those social connections from loss. Said differently, PANIC modulates our experience of love.<sup>5</sup>

Earlier in this article, I defined love as an improvisational relational conversation between partners with the consequence that they experience themselves as not alone in the world. I also suggested that we might use Jonathan Lear's conception of human beings as finite, erotic creatures—or what I would call *Homo caritas* as a philosophical anthropology. Panksepp's research into primary process systems puts me in a position to suggest that underneath the instinct to form social bonds, as a primary motivating emotional system, is avoiding the felt PANIC of being alone.

There is a question here about how fundamentally to understand the human predicament: from the point of view of the already socially connected (holistically) or from the point of view of the detached individual (atomistically). There may be a way to get at that question. James Coan researches handholding (Coan 2013). He places subjects in a functional magnetic resonance imaging (fMRI) device and measures brain activity in response to a stress cue (he basically scares the brain). He does this with subjects in three conditions: alone, with a stranger, and with a partner. What he and his team found is that brain activity in response to a stress cue—particularly in two regions: the anterior cingulate cortex, which is sometime colloquially called the “oh-shit” monitor, and the prefrontal cortex, which is involved in emotion regulation and imagining alternative scenarios such as telling ourselves “this isn't happening” or “it'll all be over soon” and other useful fictions—decreases with the quality of the social connection.

This finding was expected due to what is called the “downregulation” model. On this model, the brain responds the same way in each of the three conditions, but social connection adds a “downregulation” mechanism—a bit like stepping on the accelerator and the brake at the same time while driving a car. The problem was that Coan could not find the activity of the braking mechanism anywhere (there was less activity, not more; and, since “braking” is strictly speaking an activity, it should show up somewhere). It dawned on him that perhaps he had been in the grip of a figure-ground grouping. Instead of assuming the individual, disconnected individual, as the baseline, showing brain activity decreasing with social connection, perhaps the socially connected subject is the baseline, showing brain activity increasing the more disconnected the subject's condition. He calls this “social baseline theory.”

Social baseline theory states that the socially connected human is the normal condition of the human embodied brain. When you are socially connected, receiving a stress cue is not cause for great alarm; but if you are alone in the world, a stress cue triggers intense activity. This is very costly

to the system because the body's resources are not invested in long-term health and are spent instead on rapid-response mechanisms that are needed in times of danger. This leaves the body stressed and vulnerable. According to social baseline theory, then, human beings function better when we are socially connected. (We can add an insight here from Panksepp's research and say that PANIC/GRIEF is evolutionarily there to make sure that the alone condition is rarely experienced).

Coan discovered something more that relates directly to our question concerning the human predicament. In the partner condition, if the stress cue is directed not toward the subject in the fMRI but instead toward the person whose hand the subject is holding, the subject's brain responds in precisely the same way *as if* the stress cue was directed toward the subject. This implies that the socially connected brain does not distinguish between individuals—a threat to you is treated as if it is a threat to me because, from the perspective of the socially connected brain, you are me and I am you. Social bonding, consequently, has the effect of extending our sense of self beyond the boundary of our skin, which is something that the brain and the primary process emotional systems are highly motivated to do (Clarke 2010).

There is a shadow side to social connection. Coan found that it triggered little cause for alarm when the threat cue was directed toward the stranger. In other words, the brain makes a rather sharp distinction between those inside and those outside our circle (Berreby 2008). The social instinct may also be the unconscious source of implicit bias. But standards of bias (like justice, Hume might point out) are artificial even if largely unconscious, which means that they may be subject to change. Some of the research on implicit bias suggests that this is correct: it is possible to make changes in implicit bias by using the brain's plasticity in its map of the body.

Roughly twenty years ago, psychologists and neuroscientists discovered that it was possible to tinker with the brain's map of the body. In his studies on subjects with phantom limbs, Vilayanur Ramachandran found that, using a mirror box, it was possible to convince a subject's brain to see a mirrored image of their intact arm as a resurrected limb (Ramachandran, Rogers-Ramachandran, and Cobb 1995). Several subjects reported feeling touch in the phantom limb as the intact arm was touched while viewing the mirrored reflection. Picking up on Ramachandran's findings, researchers in Pittsburgh found that it was possible to convince the brain to accept a rubber hand as belonging to the body (self-attribution) and subjects reported feeling touch in the alien limb. In the experiment, subjects were seated with their left arm resting on a table and a standing screen was positioned beside the arm to hide it from view. A life-size rubber arm and hand was placed directly in view and two small paint brushes were used to brush the two left hands simultaneously, synchronizing the brushing as closely as possible. After about ten minutes of

brushing, subjects reported feeling sensation in the rubber arm when only it was brushed (Botvinick and Cohen 1998).

Recently, a revised version of the experiment in which the rubber hand is a different color of skin than the subject's own, was conducted in combination with an implicit bias test. After the brain accepts the rubber hand as belonging to the body, which occurs roughly after ten minutes of brushing, the subject's implicit bias score was measurably reduced (Maister et al. 2013). This finding is significant because it provides suggestive evidence of the important ethical role of creating circumstances in which our natural desire to bond, our social and sympathetic instincts, can establish connections *across* differences such that "I am you and you are me" does not reinforce bigotry, but rather undermines it to include the other in our moral circle. This, it seems to me, is a place that religion might explore.

Research on babies suggests that moral sentiments show up very early in human development. In his *Just Babies: The Origins of Good and Evil*, Paul Bloom argues that moral preferences show up within the first year of life, but so does bias (Bloom 2013). At this point, it is of course speculation, but it may be that Darwin was right that the social instinct is the source of morality, that it registers as Hume would suggest as "feels good" ease or "does not feel good" dis-ease, and that there is a shadow side to the social instinct and human bonding, which is the equally natural development of bias and bigotry. Moral systems favor the in-group, but we can work to broaden the circle—a task religions have actively been engaged in for centuries, and thus a task about which they have much to contribute in conversation with the new science of love and ethics. Communities, often religious but not exclusively, that intentionally aim to do this work may then be seen as moral laboratories investigating love—as sites for co-creating knowledge in perilous times.

## CONCLUSION

Frans de Waal famously argues that morality is based on empathy and fairness (de Waal 2009), but before and underneath that we might find Hume's moral sentiment, Darwin's social instinct, and Panksepp's PANIC. Perhaps it is the deep, unconscious need not to feel alone in the world and thus to form affectionate bonds. For Harry Harlow, love included both mother–infant bonds and friend bonds, but we can add romantic bonds to his "chain of love," recognizing it as a developmental chain. According to Bowlby, love is the most critical ingredient in human development and thriving. Perhaps it is possible to connect the lines of research by saying that empathy and fairness, which is to say our moral capacities, grow out of the ground of love in the sense that they are essential to social maintenance and that love is, to use a musical metaphor, the felt vibration of the moral sentiment and at the core of who we are and what we need to thrive.

If the Harvard longitudinal study on men is right, love is the most significant contributor to human happiness (Vaillant 2012). This is not so curious, I think, if you believe that God is a God of love and that over time in the improvisational conversation between God and life in the universe, love would emerge—that, more than anything else, invites us to explore who we are as humans and how we ought to live together as a family sharing the resources of our planet.

## NOTES

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1. See Phillip Cary’s contribution (2017) in this volume.
2. The analysis that MacIntyre brings to the role of the epistemological crisis in opening up the real possibility of having a tradition fail by its own standards, to the ability of adherents of learning the resources of another tradition as a “second-first language,” and the ability of “bilingual” practitioners to creatively eliminate areas of untranslatability are all crucial elements in overcoming theoretical relativism without adopting a commitment to universal rationality.
3. It seems to me that the shared fountain from which both religion and science flow can be found in humans as finite, erotic creatures reaching out longingly with curiosity for connection and understanding. It would also explain why we are social animals.
4. For a careful discussion concerning Darwin’s views on group selection, see Elliot Sober (2010) and, for an older but still relevant discussion, see Michael Ruse (1980).
5. I am indebted to my friend and colleague Paul Davies for this point.

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