

# *Religion and Embodied Cognition*

with Fraser Watts, “Embodied Cognition and Religion”; John A. Teske, “From Embodied to Extended Cognition”; Daniel H. Weiss, “Embodied Cognition in Classical Rabbinic Literature”; Léon Turner, “Individuality in Theological Anthropology and Theories of Embodied Cognition”; and Warren S. Brown and Kevin S. Reimer, “Embodied Cognition, Character Formation, and Virtue.”

## INDIVIDUALITY IN THEOLOGICAL ANTHROPOLOGY AND THEORIES OF EMBODIED COGNITION

by Léon Turner

*Abstract.* Contemporary theological anthropology is now almost united in its opposition toward concepts of the abstract individual. Instead there is a strong preference for concrete concepts, which locate individual human being in historically and socioculturally contingent contexts. In this paper I identify, and discuss in detail, three key themes that structure recent theological opposition to abstract concepts of the individual: (1) the idea that individual human beings are *constituted* in part by their relations with their environments, with other human beings, and with God; (2) the idea that individual human beings are unique entities; (3) the idea that individual human beings cannot be conceptualized in atemporal terms. Subsequently, I seek to demonstrate that theories of embodied cognition offer broad, if not unconditional, support for the concept of the concrete individual. As such, I suggest, theories of embodied cognition provide a valuable resource for dialogue between contemporary science and theological anthropology.

*Keywords:* culture; embodied cognition; identity; individual; narrative; person; relationality; uniqueness

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The question of what it means to be a human person is of perennial interest to a wide range of theologians, scientists, and philosophers, but it has always been famously difficult to answer.<sup>1</sup> As the philosopher of science Rom Harré observes, “The question ‘what is it to be a human being?’ belongs in a great many disciplines, and it would be a happy outcome if they could be found to converge on some common answer—or even on a view as to what sort of question this is: anthropological, biological, grammatical or what?”

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(1998, 2). Given the profoundly different emphases of the many discourses in which the concept of the person participates, a universal consensus is surely too much to hope for, but we should perhaps be cautious not to overstate the extent of the discordance between different theorists and different disciplines. My focus in this essay is upon one particular issue of enormous significance to our understanding of personhood, about which there appears to be increasing agreement between natural and human scientists and Christian theologians; namely, the inadequacy of abstract concepts of the individual human being.

The essay is divided into two distinct parts. First, I will argue that, as far as contemporary Christian theology is concerned, a number of common intersecting themes can be identified, which collectively structure opposition to concepts of the abstract individual. Further exploration of these themes reveals a number of interrelated claims about how individual human being ought to be conceptualized, which coalesce in various theological accounts of relational personhood. These include claims about the distinctiveness or particularity of individual human beings and the distinctiveness of the human species, about their absolute dependence upon God, and their codependence with each other, and about the ways in which individuals are shaped by their personal histories in complex historically contingent socio-cultural environments. In the second part of this essay I will argue that most of these claims can also be identified in the work of a number of cognitive scientists, psychologists and philosophers who have begun to revolutionize our understanding of the relationship between body, mind, and the environment. This revolution has been driven by so-called “theories of embodied cognition,” the central theoretical commitments of which are captured succinctly by Varela et al. in their seminal work *The Embodied Mind* (1991). These are, “first, that cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context” (Varela et al. 1991, 173).<sup>2</sup> John Teske (this issue) shows very clearly how these commitments are already solidly supported by an extensive body of empirical evidence, which is still expanding rapidly. As Raymond Gibbs noted in 2005, the evidence includes data collected from “controlled laboratory studies, naturalistic field observations, neuropsychological case studies, linguistic research, artificial intelligence (and artificial life) modeling, and various phenomenological studies and reports” (2005, 10).

My intention, overall, is to demonstrate the extent to which Christian theological anthropology and contemporary research in cognitive neuroscience converge in their mutual rejection of concepts of the abstract individual, and their embrace of the idea that human being cannot be conceptualized in isolation from its concrete contingent environments. Whereas theories of embodied cognition have already extended their

influence into various branches of the humanities and social sciences, including social anthropology, psychology, sociology, and even religious studies, they have had little impact upon Christian theological anthropology so far.<sup>3</sup> Of course, many of the ideas with which we will be concerned here have been repeatedly addressed in the field of science and religion more generally (including questions about how the mind relates to the body, is personhood relational, and what distinguishes human beings from other animals). Typically, however, they have been addressed independently of one another in a manner befitting the natural sciences, which, as Michael Arbib (1999) observes, seek “to reduce the world into analyzable parts in order to understand these parts, and ideally to be able to reconstruct them and thus understand the whole” (81). One of the great virtues of theories of embodied cognition, I will suggest here, and perhaps their chief virtue as far as the particular interests of theological anthropology are concerned, is their determination to understand human being in a broad array of its mental, physical, and sociocultural contexts simultaneously.

#### THE PROBLEM OF THE ABSTRACT INDIVIDUAL

I begin this analysis with the simple observation that the very large majority of contemporary theologians would agree about the unsustainability of abstract concepts of the individual human being as autonomous, self-sufficient centres of consciousness, each of which manifests certain more-or-less universal properties, attributes, qualities, and capacities regardless of when and where they live. These are the kinds of concepts that are often supposed to underpin the “toxic” forms of individualism identified as the source of so much social unrest and existential anxiety in the modern world.<sup>4</sup> Although hostility toward such ideas may have been building for a very long time, the topic received a surge of specifically theological interest toward the end of the twentieth century in conjunction with the resurgence of the notion of relationality as a central theological anthropological theme.<sup>5</sup>

Recent theological discourses of relationality, though they have much in common with each other, are often motivated by quite different concerns. John Zizioulas (1985, 1991), Catherine LaCugna (1990), Christoph Schwöbel (1991b), Colin Gunton (1993), and Stanley Grenz (2001), for example, all ground their discussions in social trinitarianism, holding that the relationality of human being, “rooted in the relationship of the triune God to humanity” (Schwöbel 1991b, 142), is a central tenet of Christian theological anthropology.<sup>6</sup> Although each of these authors is clearly engaged with a range of philosophical and social debates (a concern with Western personalism in its various forms is particularly apparent), they are primarily engaged in a common hermeneutical theological enterprise. Others, whose primary motivations remain nonetheless theological, have taken

a broader multidisciplinary approach to understanding relational personhood. Wolfhart Pannenberg (1985), Alastair McFadyen (1990), LeRon Shults (2003, and with Steven Sandage 2006), and David Kelsey (2009) each make extensive use of exegetical research, philosophical theology, and a wide range of natural and human scientific theories and models.

At the heart of these so-called “relational” anthropologies, though they differ in many important respects in the ways they formulate the concept of the person, remains a profound concern with the notion of individuality. After all, as David Kelsey recognizes, the concept of the individual is simply inescapable when talking about human beings. It is only the abstract concept of the individual, he says, encouraged by “the modernist intellectual tradition from the early enlightenment onwards” (2009, 401), which is problematic for Christian theological anthropology, not individualism *per se*.<sup>7</sup> The preoccupation of recent theological anthropology, then, has not been to dissolve the idea of the person in a sea of relationality, but rather to portray personhood as a “system of social relations as well as an individual entity” (Proudfoot 1976, 25). Here, I will argue that the notion of individuality that underpins these concepts is structured by three key intersecting themes—the same themes about which opposition to abstract concepts of personhood is typically structured. These are (1) the idea that individual human beings are *constituted* in part by their relations with their environments, with other human beings, and with God; (2) the idea that individual human beings are unique entities; (3) the idea that individual human beings cannot be conceptualized in atemporal terms.

Before proceeding to discuss these themes in detail, however, let me be quite clear about the theoretical parameters of this essay. Although, unquestionably, the primary subject matter of relational theological anthropologies is the God-human relationship, my aim here is only to explore the ways in which ideas about the relationality, uniqueness, and temporality of human being structure discourse about individuals in what Kelsey (2009) calls their “proximate” social, cultural, and physical contexts (338).<sup>8</sup> The question I want to address concerns the extent to which a particular theological concept of the individual finds support in a particular body of contemporary secular scientific theory. Since secular neuroscience has nothing to say explicitly about the ways in which God relates to human beings, the subject is simply not addressed by this essay. The proximate contexts of human existence, which are addressed here, are perhaps of secondary theological importance, but they are far from irrelevant to the broader theological anthropological enterprise of understanding human being in all its complexity. With this qualification in mind, we turn now to examine more closely the issue of relationality in recent theological anthropology, and its role in the development of recent theological opposition to concepts of the abstract individual.

## CONSTITUTIVE RELATIONALITY

The Anglican theologian Vernon White writes, “We are formed as individual persons, at least in part, by our conscious and unconscious relationship with the past and with other persons and social realities in the present. This is a massive consensus verdict of both sociological and psychological anthropology” (1996, 59). It is undoubtedly true that psychologists, anthropologists, theologians, and almost everyone else acknowledge that certain aspects of individual human beings—their memories, characters, and physical bodies, for example—are shaped in important ways through relations with others and their physical environments. But it would be a mistake, as Kelsey observes, to suggest that this principle is inconsistent with the idea of the abstract individual, the features of which “are simply given as properties of a center of consciousness that is independent of its social, cultural, and historical contexts” (2009, 400). There is, he rightly says, nothing to prevent “inherent sociality” being included among the attributes of an abstractly defined entity. Indeed, it seems most unlikely that the idea of the abstract individual would have survived the emergence of the human and social sciences in the twentieth century if it flatly denied the obvious fact that people participate in relations with the wider physical and social world. For Kelsey, it is not strictly the concept of the relational individual that stands in opposition to concepts of the abstract individual, but rather the concrete individual, which “seeks to conceptualize individual human being in its concrete social, cultural, and historical locatedness rather than by abstracting it from its locatedness” (2009, 400). According to this conception, the individual’s “instincts, faculties, needs, desires, rights, interests, purposes, and so on, are, in varying degrees, modified, shaped, or even *constituted* by the structures and dynamics of its social, cultural, and historical contexts” (400, my emphasis). In this passage, the word “constituted” takes on great significance. The idea that individual human beings are constituted by their relations is, of course, quite different to the idea that they participate in relations, but exist prior to and independently of their relations. Rather, it implies that relations themselves are integral to individual human being. That is, individual human being cannot be conceived in isolation from concrete relationships. For Kelsey, then, the difference between abstract and concrete concepts of the individual is “a difference in view, not about whether human individuals are both individual and in some way relational, but about in what way they are at once individual and relational” (400, original emphasis).

This constitutional understanding of relationality is clearly crucial to the concept of the individual about which there is near consensus in recent theological anthropology.<sup>9</sup> Obviously it is central to Kelsey’s own project, but it is also what the Anglican theologian Vernon White has in mind when he cites the political philosopher John Gray with approval for his

recognition that “human individuals are not natural data . . . but artefacts of social life, cultural and historical achievements . . . exfoliations of the common life. Without common forms of life, there are no individuals” (Gray 1993, 136–37).<sup>10</sup> McFadyen too is in full agreement when he writes, “it is impossible to think of individuality as isolated, for the existence of one and other is inextricably linked . . . Individuals are not linked through an abstract metaphysical principle but through concrete relations” (1990, 74). In fact, affirmations of the inseparability of individual human beings from their relations are almost a hallmark of recent Christian anthropological thought.

Theologians are not alone in the contemporary academy in their concern with the idea of constitutive relationality. Indeed it is an idea that has preoccupied many who share recent theology’s objection to modern concepts of the person. Its roots are very old indeed, but it has received great attention recently as a result of the spread of social constructionist thought throughout the humanities and social sciences. It is, for example, a key theme of the psychologist Kenneth Gergen’s book *Realities and Relationships* (1994), in which he chastises a range of accounts of human interaction for their continuing embrace of what he describes as “the view of the individual self working outward towards relatedness” (215). For Gergen, this represents a “contextual,” as opposed to “constitutive” understanding of relationality, and it characterizes both the modern concept of the person as an autonomous centre of consciousness, and traditional cognitive science’s disembodied, asocial, and ahistorical account of cognition, in explicit opposition to which Gergen has developed his own brand of social constructionist psychology over the last thirty years. Until relatively recently, the idea that people are constituted, at least in part, by their relations with others has made little impact upon the natural sciences. With the advent of theories of embodied cognition, as we shall see below, that is beginning to change.

#### INDIVIDUALITY AND UNIQUENESS

Kelsey’s distinction between concrete and abstract concepts of the individual brings a second major theme of recent theological anthropology into focus—its concern with the idea of uniqueness. The need to defend the principle that individual human beings are necessarily unique particular entities is widely felt among theologians. Perhaps the best known, and arguably the most influential discussion of this issue in contemporary Christian thought can be found in the work of the orthodox theologian John Zizioulas. For Zizioulas, “Personhood is not about qualities or capacities of any kind: biological, social or moral. Personhood is about hypostasis, i.e. the claim to *uniqueness* in the absolute sense of the term” (1991, 45). Zizioulas, as I mentioned above, grounds his account of personhood in a

form of social trinitarianism, which is derived from his reading of the Cappadocian fathers. Whereas various aspects of his anthropology have been strongly criticized over the years, his unwavering belief in the theological importance of the idea that persons are utterly unique is almost universally shared.<sup>11</sup>

How, precisely, is the notion of uniqueness drawn into discussions of the inadequacy of the “modern” concept of the person? Quite simply, the idea of uniqueness, at least as Zizioulas understands it, or Kelsey, who equates uniqueness with the idea of “absolute unsubstitutability” (2009, 388), is deemed incompatible with the concept of the abstract individual. Consequently, it is supposed, concepts of the abstract individual cannot be theologically acceptable. This may seem a curious argument given that all concepts of individual human being, including abstract concepts, are concerned in some basic sense with what distinguishes human beings from one another. However, there is considerable variation between them in how the distinction is made. This is important; mere “individuality” does not necessarily imply “uniqueness.” To clarify this issue, it may be helpful to explore a distinction that is commonly made between accounts of “what” people are and accounts of “who” people are.<sup>12</sup> The former might be seen as characteristic of concepts of the abstract individual, whereas at least some sorts of the latter are characteristic of concepts of the concrete individual as described by Kelsey.

Accounts of “what” people are take many different forms depending on the disciplinary contexts in which they arise, but typically include descriptions of various attributes and capacities that both characterize all human beings at all times and all places, and perhaps even distinguish them from other animals. In a secular context, these have included self-consciousness, a sense of self-identity, rationality, free will, the ability to use complex symbolic language, a distinctively human body determined by a distinctive genetic structure, and so on and so forth.<sup>13</sup> Now, some notion of individuality is at least implicit in all these descriptions of “what” people are, for the simple reason, if no other, that no two human beings can share the same body. But individuality, in this basic sense, refers only to the numerical distinctness of particular examples of a single species—to tokens of a human type. When conceived in this way, individual human beings are not unique. Quite to the contrary, from this perspective, the many qualitative differences between individual human beings are irrelevant to their individuality. This is the notion of individuality that apparently underpins the abstract “modern” concept of the person as a discrete centre of consciousness. In Steven Lukes’s words, it suggests a concept of the individual as “merely the bearer of those features, which determine his behavior, and specify his interests, needs and rights” (2006[1973], 73).<sup>14</sup>

Accounts of “who” individual human beings are can also take many different forms. But at least some of these—at least some possible answers



to the questions “who is she” or “who am I?”—reference certain unique biographical details in addition to descriptions of particular physical traits and other attributes that may be shared by many others. These are the many contingent features of our personal lives, including those distinctive historical experiences, current desires and future aspirations, which we believe distinguish us from all other human beings. Here, a very different concept of individuality emerges. These accounts identify individual human beings not as centers of consciousness bearing particular universal properties, or as specific constellations of particular attributes shared by certain groups of people, but as utterly unique entities. From this perspective, a human being is not an individual simply by virtue of being spatially individuated (though this is undeniably an important aspect of individual being), but because he or she is shaped in unique ways through participation in distinctive, socioculturally, geographically, and historically contingent relationships and environmental contexts. It is this understanding that characterizes Kelsey’s, Zizioulas’s, and many others’ conceptions of the individual human being.

There can be little doubt about the theological importance ascribed to the notion of individual uniqueness, over and above the notion of numerical distinctness. Above all, of course, in the Christian tradition it is as unique noninterchangeable individuals that we are called into being by, and stand in relation to, God.<sup>15</sup> But uniqueness is also central to the distinctively Christian understanding of a vast array of crucial anthropological concepts, including love, sin, and responsibility. Each of these concepts depends upon the notion that individual human beings cannot be substituted for one another. This is uncontroversial. As Vernon White observes, there is “a compelling connection between the perception of uniqueness, irreplaceability and mattering” (1996, 32). This is not to say, however, that theological anthropology, in its concern with the concept of uniqueness, is blind to those things that all humans have in common. From a theological perspective, answers to the questions “what am I?” and “who am I?” need not be seen as mutually exclusive—they are both crucial to our understanding of ourselves as individual human beings. This is precisely Michael Welker’s point when he writes, “. . . key anthropological concepts (the individual, the I, the subject) *mediate between the individual as a ‘unique one’ and the individual as ‘an example or representative of the species’*” (2000, 96, original italics). In fact, we might even see recent theological anthropology’s opposition toward modern concepts of the person partly as a consequence of their failure to acknowledge the proper tension between uniqueness and representativeness, rather than simply an objection to the attempt to describe “what” human beings are in abstract terms. As we shall see, below, the way that theories of embodied cognition maintain this tension is part of what makes the embodied perspective so amenable to recent theological anthropology.



## TEMPORALITY

The final major theme that we will consider, which, like the themes of relationality and uniqueness, plays an important role in structuring recent theological opposition to abstract concepts of the individual, addresses various ideas about the temporal dimension of human being. Just as a concern with the relationality and uniqueness of the individual differentiates concrete from abstract conceptions, so does a concern with temporality. Concrete conceptions of the individual, in their understanding of people as unique rather than simply numerically distinct entities, incorporate a temporal dimension into the concept of individual human being that is absent from abstract conceptions.<sup>16</sup> After all, what truly differentiates all individual humans from each other in absolute terms, are their unique *histories of interactive* experience with other people and the wider physical world, and, most importantly from a theological perspective, with God. It is a point made especially forcefully by Paul Ricoeur (1992), for whom personal uniqueness can *only* be properly articulated in the temporal dimension.

The primary vehicle for this idea in recent theological anthropology has been a particular understanding of personal identity. For Kelsey, this is the human creature's "singular way of conducting his life—that is, in his singular ensemble of ways of acting, interacting, and interpreting or acknowledging what befalls him across time" (2009, 379). Kelsey, specifically, elaborates the concept of personal identity in narrative terms in a way that closely parallels Paul Ricoeur's concept of *ipse* identity (as opposed to "*idem* identity"), which captures the notion of continuity through qualitative transformations of selfhood over time. Similar accounts of narrative identity are discernible in the works of many other theologians who concern themselves explicitly with answering the question of "who" individual persons are.<sup>17</sup> Each shares the belief that personal identity cannot be conceived as incidental to human being—as merely a possession of some unchanging atemporal essence. Rather, they suggest that some notion of personal identity is integral to our very concepts of the individual person. And many others who do not appeal explicitly to the concept of narrative, are nevertheless equally concerned to demonstrate, through the development of other concepts of personal identity, the theological significance of the idea that individual human beings develop in relational contexts over time.<sup>18</sup>

Most frequently, perhaps, a theological concern with the temporality of individual human being is revealed in discussions of the idea that persons are continuous beings. Such discussions are frequently framed by the perceived need to counter the twin philosophical threats of the atemporal "modern" concept of personhood, and the dissolution of individual personhood into a series of discontinuous "snap-shots" that characterizes

some postmodern critiques—what Zygmunt Bauman (2001) describes as the “palimpsest identity,” characterized by an endless stream of “. . . new beginnings . . . painted one over the other” (83).<sup>19</sup> But the desire to explain personal continuity is also partly a simple consequence of the need to explain the bare facts of our day-to-day self-experiences. After all, as McFadyen (1990) notes, “what is sensed is that ‘I’ am one and self-same, a unity of consciousness, experience and communication. It is sensed that it is the same ‘I’ who eats the apple, knows ‘I’ am eating it and knows that ‘I’ know that ‘I’ am eating it; the same ‘I’ who eats the apple as bought a newspaper in a different town yesterday” (97). Again, it is an almost universal consensus of contemporary theological anthropology that to be a person is to have a sense both of one’s own history and one’s existence in the present, as well as an implicit belief that life will extend into the future: “Selfhood discovers its identity and personhood within a larger purposeful narrative which allows room for agency, responsibility and hope” (Thiselton 1995, ix).

However, a concern with temporality is also evident in other aspects of recent theological anthropology, especially in its understanding of how individuals are shaped by their historically contingent social environments. For many theologians, this principle is exceedingly significant. Since personal experience always takes place within particular sociocultural contexts that are themselves the continuously evolving products of human history, the particular nature of our experience at any given moment is, to a greater or lesser extent depending on the experience considered, historically contingent. This is an idea that is built into the concept of narrative identity employed by Kelsey and others, according to which, personal identities are constructed according to particular rules, or traditions of story-telling, which are themselves the products of complex sociocultural histories.<sup>20</sup>

Theologically, the idea that our personal identities are partly shaped by particular sociohistorical forces beyond our immediate control has been put to work in various ways. Most significant in recent theological anthropology, perhaps, is the suggestion that the modernist intellectual tradition has encouraged us to perceive ourselves, quite inappropriately, as isolated individual beings. From this perspective, the concept of the abstract individual is existentially damaging as well as theoretically inadequate. McFadyen (1990), for example, describes the social structures that are rooted in our collective sociocultural history, and which stand behind our fallen selves, distorting both our self-understanding and the patterns of interpersonal communication that underlie relations with others. In a similar vein, Thiselton (1995), in reflecting upon the existential challenges of modern life, describes the culture of suspicion that attends the construction of identity in the contemporary world, and the inevitability of self-alienation in such a context. Both declare the embrace of Christian teachings to be the only solution to our predicament. Michael Welker (2000), on the other

hand, describes the historical formation of the modern concept of the person, which has “distanced us from the corporeal, sensual person and from the culturally and socially conditioned person.” Recognizing the destructive consequences of the extreme subjectivity that attends contemporary self-understanding, Welker suggests that the development of a distinctively Christian alternative—an understanding of the person as constituted by faith—is a pressing concern for contemporary theology. Colin Gunton (1993) shares that ambition, recognizing the ways our own identities are shaped by sociocultural currents when he asserts the need to transform our understanding of our place in the world through a revised theoretical doctrine of relationality, grounded firmly in Christian trinitarian theology.

So, in concluding this first half of the essay, let me summarize the discussion so far. In the relational anthropologies that dominate contemporary theology, the themes of constitutional relationality, uniqueness, and the temporal construction of identity are almost ubiquitous. These themes collectively structure theological opposition to the abstractness of the modern concept of the person, and intersect in the concept of the concrete individual—a concept that diverges from the abstract concept of the individual first and foremost in its conception of how each human being is “at once individual and relational.” Here, the ideas that each individual human is unique and yet representative of the human species are held in tension. This uniqueness is not to be confused with the numerical distinctness implied by abstract concepts of the individual, however, but is rather the “absolute uniqueness” entailed by a particular understanding of personal identity as a history of relational experience with God, other people and the physical and social environment. At the same time, everyone agrees that each human individual participates in a common sociocultural, as well as evolutionary, biological history, which in turn shapes the particular contexts in which concrete individual being is located. Collectively, these are the principles that underlie the “theologically acceptable” concept of the concrete individual human being. They also effectively represent a set of demands that must be met by any secular scientific account of individual human being if it is to be deemed compatible with theological concerns. In what follows, we will explore (what I believe to be) a particularly promising candidate in this regard.

#### EMBODIED COGNITION AND INDIVIDUAL PERSONHOOD

What I hope to show below, through a discussion of a representative sample of contemporary neuroscientific and psychological studies, is that those same themes which structure recent theological concepts of the concrete individual can also be clearly discerned in the multifaceted research program that I will refer to generally as “theories of embodied cognition.” In this body of research, it will become apparent, the idea of relationality

is of fundamental importance, as is an understanding of human cognition as embedded in complex ways in historically contingent sociocultural and physical environments. Whereas theories of embodied cognition are not themselves concerned with the idea that human beings are unique entities, I will argue, many psychologists and philosophers who are explicitly concerned with the role of the physical body in the construction of personal identity offer implicit support for this principle. Consequently, I will suggest, theories of embodied cognition in general offer strong empirically grounded scientific support for a concept of the individual human being that fits well, if not quite perfectly, with recent theological anthropology.

We begin by returning to the idea that individual human beings are “modified, shaped, or even constituted by the structures and dynamics of its social, cultural, and historical contexts” (Kelsey 2009, 400). Psychologists (and everyone else for that matter) have known for a long time that we are formed in important ways by our interactions with other people and our broader physical and social environments. Absolutely no one in any branch of the natural or social sciences would disagree with this principle. As I have tried to explain above, however, the mere recognition of that fact does not lead inexorably to the concept of the concrete individual described by Kelsey and others.

For many theorists, interactions between people, and between people and physical objects, are interactions between entirely separate things. A particular interaction may be the ultimate cause of certain physical and cognitive states and processes in an individual’s brain, but that does not mean that the interacting entities are connected to each other in any profound sense. This is certainly the case as far as traditional cognitive science is concerned, where mental life is treated as formal, disembodied computational processes, governed by universal natural rules of various kinds. From this perspective, everything that is external to the brain, including the rest of the physical body, is relevant to mental activity only as the source of “raw material” for symbolic computational processing. Unfortunately, as Fuchs (2009), quoting Thompson (2007, 36), points out, the drawing of a firm distinction between what is inside and outside the brain, “has yielded ‘abstract and reified models of the mind as a disembodied and cultureless physical symbol system’ in the brain of a solitary individual.” What is lost by making this distinction, Fuchs continues, “is the human person which essentially means a living being, an embodied subject. The person is neither pure subjectivity experienced from within, nor a complex physiological system observed from without” (222).

The embodied perspective, however, is quite different. For the embodied cognition theorists, what is external to the brain, including the body, other people, and elements of our physical and cultural environments can all be considered partly constitutive of an individual’s mental life. Let us look first at how this idea lends support to the theologically central notion that

interpersonal relations can be considered constituents of individual human beings. Building upon early work in the field by Francisco Varela, Evan Thompson, Eleanor Rosch, George Lakoff, and Mark Johnson, the last ten years have witnessed the emergence of a very extensive literature exploring the various ways in which theories of embodied cognition transform our understanding of social cognition. They share a common focus on how the body, through particular behaviors, facial expressions, movements, and gestures among other things, influences, and is influenced by, the mind. Fundamental to these studies is the notion that social cognition is not merely a matter of disembodied information processing. Bodies are not just the input/output mechanisms for cognitive systems, but rather are integral to interpersonal communication in all its forms. One particular group of studies, concerned with the neurological correlates of embodied social interaction, is especially germane to our current concerns.

Thomas Fuchs (2009) and others have claimed that “human subjectivity requires not only the interaction of brain and body, and body and environment, but above all the interaction with others” (225). Evidence for this idea is drawn from several different areas. Developmental psychologists, for example, Meltzoff and Brooks (2001), have suggested that the infant’s capacity to understand others and the capacity to understand herself as a distinct individual entity are facilitated by, perhaps even critically dependent upon, her spontaneous ability to imitate others. Vittorio Gallese (2006, 2009), in his work on embodied simulation in child development, similarly suggests that infants learn to use their proprioceptive and emotional self-awareness to understand others’ facial expressions. He writes, “when observing other acting individuals, and facing their full range of expressive power (the way they act, the emotions and feelings they display), a meaningful embodied interpersonal link is automatically established” (2009, 520).

Gallese’s account of infant development depends upon recent studies of “mirror neurons,” the discovery of which has been the source of considerable recent excitement in many different areas of neuroscience.<sup>21</sup> There is now a very significant body of evidence supporting the idea that when people watch others perform particular actions (such as kicking a football or grasping an object) those same neurons are activated, which would be activated if they were performing the actions themselves.<sup>22</sup> In a social context, for Gallese, the mirror neuron system generates instances of “embodied simulation,” which reduce the gap between self and other, and create what he calls a “we-centric” space (2009, 520). Gallese further extends his model into the sphere of intentional social action by positing a notion of “intentional attunement,” through which we achieve social identification. Here, he suggests, observing the behavior of an actor evokes internal representations of body states associated with the actions, emotions and sensations in the observer herself. Through such a process, he claims, “the ‘objectual

other' becomes 'another self,' a like-me, who nevertheless preserves his or her alterior character" (2009, 527). From this perspective, the behavior of others is meaningful because it enables a direct link to our own situated lived experience of the same behaviors.

Evan Thompson (2001) implicates similar neurological evidence in his discussion of empathy, in which he goes so far as to suggest that such mechanisms are necessary for any experience of the world at all. Following Edmund Husserl, he ultimately suggests that "the very meaning or sense of my perceptual experience refer to the perceptions of possible others. Thus first-person perceptual experience is essentially *intersubjectively open*" (2001, 15). Teske (2011) explains the implications clearly: "What the existence of mirror neurons implies is that there is not an initial distinction between you and not-you; you have to learn to separate what is you and what is somebody else, and it is that learning that makes it possible for you to start producing what we might call more representational consciousness" (192). For Thompson, empathy is a fundamentally embodied phenomenon. It is enabled by the embeddedness of our sensorimotor capacities in the wider sociocultural environment, and essential to our own self-understanding: "my sense of self-identity in the world . . . is inseparable from recognition by another and from the ability to grasp that recognition empathically" (Thompson 2005, 268).

Recent research within the field of embodied social cognition, then, strongly suggests that our experiences of others truly can be said to be at least partly constitutive of our selves. That is to say, the relations in which we engage with others, mediated through universal neurological systems, really are constituent components of our social cognitive processes—they are parts of the cognitive processes themselves not merely the causes of them. This is in stark contrast to the perspective taken by traditional cognitive science, and also by much of social psychology, where interpersonal relations are not presumed to be constitutive of individual human beings, but are rather viewed as certain sorts of activity that are incidental to their existence as individuals.<sup>23</sup> A first, and vitally important, point of contact with the notion of the concrete individual of recent theological anthropology thus appears to have been established. But *interpersonal* relationality is only one element of theological discourses of the concrete relational individual. Equally important is the notion that individual human being should not be conceived in isolation from its wider physical and cultural contexts. Here too, as we shall see, we find theories of embodied cognition are broadly in agreement with the theological perspectives outlined above, as a result of research demonstrating that our cognitive processes depend in profound ways upon embodied interaction with our sociocultural environments.

A very strong (albeit still controversial) account of the ways in which various aspects of our cultural environments might be considered constitutive

of cognition is provided by the thesis of the “extended mind,” according to which, various cultural artifacts that bear information in some way, like notebooks or computer hard-drives, may be considered as central to our cognitive machinery as anything within the head. Mark Rowlands explains the essential logic behind this claim: “The thesis of the extended mind is a thesis of constitution, not dependence. At least some mental processes are literally constituted, in part, by the manipulation, exploitation, and transformation of appropriate environmental structures; that is, some mental processes contain these operations as constituents” (2009, 630). The idea of the extended mind, as Rowlands also notes, makes similar, but much stronger claims, to the less controversial idea of the “embedded mind.” This is the idea that “some mental processes function, and indeed have been designed to function, only in tandem with certain environmental structures . . . Thus, some mental processes are dependent, perhaps essentially dependent, for their operation on the wider environment” (2009, 630). Closely related to the concept of embedded mind is the idea that the mind is scaffolded by external structures.<sup>24</sup> Andy Clark, whose support for the extended mind thesis as described by Rowlands is ambiguous in some respects, appeals to the idea of mental scaffolding when he describes the way in which performance at tasks such as complex multiplication problems is radically enhanced by using pen and paper to assist with the manipulation of “external symbols”—in this case, numerical inscriptions (2008, 349). In other places, however, notably his famous discussion of whether a notebook might legitimately be considered to play “the role usually played by a biological memory” (2008, 227), Clark is more vociferous in his support for the idea that cultural artifacts of various sorts really are constituents of cognitive processes. For Clark, at the very least “recognizing the complex ways in which human thought and reason exploit the presence of external symbols and problem-solving resources, and unraveling the ways in which biological brains couple themselves with these very special kinds of ecological objects, is surely one of the most exciting tasks confronting the science of embodied cognition” (2008, 349).

The strength of the case for what Lawrence Shapiro (2011) calls “the constitution hypothesis” in the thesis of the extended mind is disputed. The debate hinges, Shapiro argues, upon an inherently blurry distinction between what we consider to be constituents of cognitive processes, and what are mere “causes” of those processes. For Shapiro, the debate often comes down to simple intuitions regarding what we deem to be more or less central to particular processes (159), though he still recognizes the reality of the distinction. As regards our current purposes, which explicitly concern the support that theories of embodied cognition might lend to the concept of the concrete individual as inextricable from its social and cultural contexts, we might simply note that the thesis of the extended mind offers much firmer support than the weaker conception of the embedded mind.



We need not leave the matter there, however. There are still further ways in which embodied cognition theorists have demonstrated the indissoluble connection between our understanding of the individual human being and its broader environmental contexts. Another increasingly influential area of research, for neuroscientists, psychologists, and anthropologists alike, concerns the ways in which culture is itself physically embodied.

Much of culture, Dov Cohen and Angela Leung (2009) argue, “is encoded in the body and perpetuated that way—hidden in plain sight by ways of talking, walking, standing, sitting, eating, and so on that often come to seem ‘natural’ to us. These ‘natural’ ways of being in the world are often not consciously reflected on, but they push us invisibly (and without argument) toward certain psychological mindsets and a certain outlook on the world” (1279). They reason that our cognitive states are constituted in part by bodily compartments that are themselves encouraged and reinforced by certain “cultural artifacts, etiquette, models, and scripts.” Since many of our bodily actions are themselves constituted by cultural influences, then, and because our cognitive states depend in important ways upon what we do with our bodies, Cohen and Leung’s work suggests that cognitive states themselves can be seen as culturally constituted in some respects. Fuchs (2009, 226) offers an even stronger account of how culture might be seen literally as embodied: “From birth on, our mind, as well as its correlated brain structures, are essentially formed by social and cultural influences. We may speak of an ‘embodied socialization,’ for specific human faculties can only develop through mutual cooperation and are thus imprinted on the organic growth processes of the brain. Culture in this encompassing sense is not only a cognitive system of signs and meanings, but rather implies that all formation processes of the individual and her faculties are engrained into her brain structures. By this, the human brain becomes an essentially social and biographical organ.”

Once more, therefore, recent research in embodied cognition appears to offer strong support for the notion of the concrete relational individual—a very wide range of studies and theories suggest that our embodied cognitive processes simply cannot be extricated from the social, cultural and physical environments in which human beings live and act. The particular forms of cognition that mark us as human beings do not just *depend* upon our development within particular sociocultural contexts, they are constituted, at least in part, by particular features of those contexts.<sup>25</sup> It is a radically different view of individual human beings and their relations to that offered by traditional cognitivism, and much of current social psychology, but it is consonant with the view of the concrete relational individual offered by recent theological anthropology.

So far so good, but what of the other key themes of theological anthropology identified above? What about the notion of uniqueness? Unsurprisingly, the notion that individual human beings are absolutely unique,

nonsubstitutable entities, is not an issue that has much concerned cognitive neuroscientists, psychologists, anthropologists or others engaged in developing the embodied cognition research program. Personal uniqueness, after all, is a concept much more at home in philosophy and theology than the natural, social, or human sciences. There is no reason, however, to suppose that theories of embodied cognition should contradict this notion in any way. Indeed, precisely the opposite should be presumed. What is clear is that a number of theorists from different fields who share an interest in the same notion of narrative identity that has been so influential in recent theological anthropology are also deeply concerned with the role played by the body in its construction. In each case, the bodily basis of narrative is emphasized in explicit opposition to the idea that it is simply a product of pregiven psychological capacities.

From a psychological perspective, this is exemplified in the work of Rom Harré, particularly his book *The Singular Self* (1998). Harré has a long-standing interest in debunking the idea that the self is some sort of entity or essence of personhood. Since his main psychological interests have always centered upon discursive psychology, he shares the antipathy shown by various embodied cognition theorists to the idea that cognition can be understood solely in classical computational terms. In *The Singular Self*, he is primarily concerned to present an alternative account of what he takes to be a universal feature of human consciousness—the sense of being a singular continuous entity. Central to his project is the claim that the phrase “sense of self” actually refers to three distinct yet interrelated phenomena (4). For Harré, just one of these senses of self is mostly responsible for the sense of individuality. This is the sense we each have of ourselves as singular embodied beings—“a sense of one’s point of view, at any moment a location in space from which one perceives and acts upon the world, including that part that lies within one’s own skin.”<sup>26</sup> Harré appeals to the idea of narrative identity to account for the “sense one has of one’s life as a unity in time” (8), but personal uniqueness is ultimately guaranteed by the simple fact that individual persons occupy unique positions in space-time at every moment of their lives.

In a similar vein, Richard Menary (2008) offers an account of narrative identity, which is structured by sequentially ordered physical sensations, perceptions and actions. Arguing that to be a person is first and foremost to be a subject of bodily experiences, Menary suggests, “It is not narratives that shape experiences but, rather, experiences that structure narratives. Experiences are the sequence of events that give structure and content to narratives. There may be additions and elaborations to this embodied sequence at a later time, after reflection, but the temporal ordering, the structure is already there in our lived, bodily experience” (79). Antonio Damasio, too, in *The Feeling of What Happens* (2000) describes the neurocognitive basis of autobiographical memory, which he suggests

is the foundation of what he calls “the autobiographical self”—a concept that bears a very strong relation to the concept of narrative identity. For Damasio, like Harré, the sense of singularity, the sense of being a unique individual entity over time, is derived from the fact that each person has a singular body and so a unique perspective upon the world. The philosopher Calvin Schrag (1997), who is as critical of mechanistic mindless concepts of the body as he is of concepts of disembodied selves, similarly argues, “the body as lived is not an external indicator of an ‘I’ or a ‘me’ residing somewhere within it. The body as lived is veritably *who* I am . . . the self-identity that one articulates in one’s story-telling is always entwined with a self-identity of bodily intentionality and motility” (54). For each of these theorists, it is plain to see, physical bodies are absolutely crucial to the construction of identity. And despite the fact that the idea of absolute personal uniqueness as it is typically understood by theologians is not a central concern of any of these authors, the concept of the narrative identity each describes is essentially the same as that which underpins many recent theological concepts of uniqueness.

As for the third of the major theological themes I identified above, it should by now be clear that a concern with temporality suffuses all areas of embodied cognition research. In their embodied accounts of perception, and interpersonal relationships, and in theories of the embodiment of culture, the thesis of the extended mind, and explanations of the bodily basis of the sense of personal continuity, embodied cognition theorists all acknowledge a range of historically contingent physical and sociocultural constituents of cognition.<sup>27</sup> Some cognitive states and processes, as Watts and Teske (this issue) both contend, may be less embodied than others, but many cannot be adequately described or explained in isolation from their wider bodily and environmental contexts. From the embodied cognition perspective, then, the concept of the abstract, atemporal individual simply does not make sense. How could it when so much evidence suggests that individual human beings are, in large part, the products of concrete, historically contingent processes? Whether or not theories of embodied cognition have anything to say explicitly about the uniqueness of individual human beings, it is certain they embrace the idea that individuals develop physically and psychologically over time and are, so as to speak, products *of* their time. For many embodied cognition theorists, even the acquisition of a basic sense of individuality is a product of a temporally constrained process of relating to and differentiating oneself from other people. In short, the agreement between theories of embodied cognition and recent theological anthropology as regards the temporal dimension of human being could not be more clear.

Finally, then, let us briefly turn to one last key component of the “theologically acceptable” notion of individuality identified above—the notion that our concepts of the human being should preserve a tension between

the uniqueness of the individual and its representativeness of the human species. By emphasizing the role of the body in at least some forms of cognitive activity, which are nevertheless embedded in concrete temporally constrained relational contexts, the embodied perspective recognizes both the numerical and qualitative distinctness of individual human beings, and the fact that we are all at least partly shaped by physical processes that are common to all members of our species. In extending the concept of the individual into the cultural environment, on the other hand, theories of embodied cognition acknowledge the fact that idiosyncratic individual identities are constituted in part by the distinctive products of our common, human social history. Once again, it appears, the concept of the individual that emerges from theories of embodied cognition does not diverge from the concepts that pervade recent theological anthropology. Indeed, the preservation of these tensions at the heart of the concept of the individual marks a crucial distinction between theories of embodied cognition and more traditional cognitive science, which has done so much to perpetuate the abstract concept of the individual.<sup>28</sup>

#### CONCLUSION: EMBODIED COGNITION AND THEOLOGICAL ANTHROPOLOGY

To summarize, theories of embodied cognition certainly seem strongly to support a concept of the individual human being that is at once concrete, particular, and yet inherently relational. As such, it ought to provide a useful platform for further dialogue about concepts of personhood between science and Christian theology. Although recent theological anthropology and theories of embodied cognition apparently share some important interests and ideas, however, they are not perfectly aligned. Most significant, perhaps, is the fact that the notion of personal uniqueness is neither a central concern of the embodied perspective, nor strictly necessary to its account of individuality. Far from contradicting theologians on this point, though, there are good reasons to suppose that theories of embodied cognition offer at least implicit support for their ideas. Nevertheless, it is a significant difference in perspective, at least, and ought not to be swept under the carpet simply because there is very significant interdisciplinary agreement in so many other areas of mutual interest.

I want to make two final points. First, in explaining the virtues of the embodied cognition approach, I do not mean to suggest that it should or could replace all of theology's other scientific dialogue partners in the pursuit of a deeper understanding of human personhood. This is despite the fact that I have frequently set embodied cognition in explicit opposition to traditional cognitivism and other specifically psychological accounts of various aspects of human being. Theories of embodied cognition we must remember, do not offer a comprehensive account of cognition, never

mind human personhood. Although the embodied cognition perspective is widely assumed to correct some of the mistakes of traditional cognitivism and those other accounts of the individual mind that isolate it from its environment, few, as Shapiro (2011) notes, actually make the stronger claim that these theories demonstrate the falsity of traditional cognitivism. Theories of embodied cognition do not usually, then, seek to replace other accounts of the mind, but to supplement them in various important ways. They should, I would like to suggest, adopt a similar role in dialogue with Christian theology.

Second, we must acknowledge that, for the time being, the potential of theories of embodied cognition to transform our understanding of human being and, with it, the dialogue between science and religious thought in this area, is merely that: *potential*. Certainly, many of the fundamental principles of the embodied approach seem to converge with theological anthropological ideas, but the success of any putative dialogue will ultimately hinge upon continued empirical and theoretical support for theories of embodied cognition. There are still many who are exceedingly critical of various aspects of this field of research, particularly its stronger, more exciting claims (especially the thesis of the extended mind). Nonetheless, many, including John Teske (this issue), seem confident that empirical support is mounting up. Theories of embodied cognition may eventually present Christian theologians with an unparalleled opportunity to engage with contemporary science, not just in reinforcing their own opposition to abstract concepts of the individual person, but in constructively developing plausible alternatives.

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#### NOTES

1. Cf. Gregersen 2000; Harré 1998; Olson 1999; Schwöbel 1991a.
2. The term “embodied cognition” is used here to cover a range of closely related approaches to the reconceptualization of the mind-body relationship. Although there are major differences between various theorists as regards the extent to which the mind might be considered to be “embodied,” “embedded,” “enacted,” and “extended,” there is also considerable theoretical overlap. Cf. Anderson 2003; Clark 1999; Gallagher 2008; Noë 2009; Rowlands 2010; Shapiro 2011; Wilson 2002.
3. Works by John Teske (2011) and Warren Brown and Brad Strawn (2012) represent perhaps the most significant contributions to this field to date.

4. Assaults on abstract ideas of the individual person have, of course, been launched from all sorts of directions throughout modernity (cf. Seigel 2005; Sorabji 2006; Taylor 1992). Although a number of Christian theologians have recently been extremely vocal in their opposition to such abstract concepts, Christian theology cannot be considered blameless in their evolution. As LeRon Shults notes, “The Christian tradition has not always carefully attended to the social, cultural, and physical dimensions of humanity in its formulations of anthropological doctrine. The focus has often been on the abstract nature of the individual and the intellectual and volitional powers of one’s soul” (2003, 2). Shults is certainly not alone in identifying this historical problem (also see, e.g., Grenz 2001; Gunton 1993; Kelsey 2009), and the desire to redress it underpins many contemporary works in this field.

5. The relationality of personhood may have inspired a great deal of interest in the final decades of the twentieth century, but it is hardly a new philosophical or theological theme. Theological concern with relationality, which Stanley Grenz (2001, 10) traces to the years immediately after World War I, arguably accelerated throughout the twentieth century, enabling Ted Peters to observe in 1993 that the relationality of personhood seemed to be “nearly universally assumed” (37). For some, the idea of relational personhood is an invention of patristic thought. Orthodox theologian John Zizioulas (1985, 1991), for example, famously grounds his own relational anthropology in the Cappadocian Fathers. Others suggest, however, as Lucian Turcescu (2002, 535) also notes, that our specifically contemporary understanding of relational personhood has much more recent origins, properly taking shape only in the eighteenth and nineteenth centuries.

6. As Stanley Grenz (2001) wrote a decade ago, this “opened the door for the doctrine of God, understood now as the delineation of the relationality of the trinitarian persons, to take its rightful role within anthropology, which role it had abdicated to the human sciences” (16).

7. That there are many different types of individualism is shown very clearly in Steven Lukes’s extremely influential *Individualism* (2006 [1973]).

8. Kelsey (2009) contrasts the notion of “proximate context” with the “ultimate context” of human existence, which refers explicitly to the God-human relationship. For Kelsey, in fact, the very term “person” should be restricted to this specifically theological context.

9. Whereas Kelsey is critical of the notion that the relational individual is the solution to the problem of the abstract individual, he does not go so far as to suggest that his contemporaries have mistakenly endorsed an inappropriate understanding of relationality. Rather, his objection appears to be focused more upon the rhetoric that polarizes individuality and relationality (2009, 399).

10. Cited by White (1996, 60).

11. For criticisms of Zizioulas’s theology of personhood, see Gregersen 2000; Grenz 2001; LaCugna 1990; Russell 2003; Turcescu 2002.

12. The importance of the question “who am I?” to theological anthropology over and against the question of “what am I?” has often been raised in discussions of relationality, particularity and identity in recent years (see, e.g., Grenz 2001; Gunton 1993; Russell 2003; Thiselton 1995; Welker 2000; White 1996; Zizioulas 1985, 1991). Kelsey (2009) makes a closely related distinction when he contrasts the notion of individuality with the notion of uniqueness. It is, of course, a distinction that has preoccupied various strands of philosophy on both sides of the Atlantic for a very long time (cf. Kelsey 2009; Seigel 2005; Sorabji 2006; Taylor 1992).

13. Such attempts to define “what” people are, might enable us to differentiate between things that definitely are persons and things that definitely are not—it might, as Harré suggests, enable “a set of necessary and sufficient conditions for picking them out from the diversity of the world” (1998, 47). The possibility of there being borderline cases about which we cannot be certain is debated. Harré (1998), for example, differs strongly from Kelsey (2006, 2009) in this regard as a result of Kelsey’s idiosyncratic usage of the term “person.”

14. Cited by Kelsey (2009, 398). Descriptions in these terms of the “modern” concept of the abstract individual by contemporary theologians are not difficult to find. Ted Peters, for example, captures all the key themes succinctly when he writes, “We understand person to be a unique individual who is a self-initiating and self-determining subject. Each person is a distinct seat of subjectivity and, hence, independent of other persons and things. One’s personhood signals one’s autonomy” (Peters 1993, 35). Similarly, Alistair McFadyen, in criticizing liberalism for its “individualistic conception of personal essence as that which is asocial and indeterminate,” writes, “The person is a universal social abstraction remaining constant within changing social

formations. That which is constant is the inner nature or self, the realm of pure individual freedom which remains a source of autonomy no matter what the character of external circumstances" (1990, 307).

15. Cf. Kelsey 2009; McFadyen 1990.
16. Cf. Proudfoot 1976.
17. See, for example, Thiselton 1995, Grenz 2001.
18. See, for example, Gunton 1993; McFadyen 1990; Pannenberg 1985; Shults and Sandage 2006; Zizioulas 1991.
19. Cf. Gergen 1991, Turner 2007.
20. Cf. Gergen 1994, 189–99; Polkinghorne 1988, 153.
21. For a concise review of research, see Gallese et al. 2004; Rizzolatti and Craighero 2004.
22. Cf. Gallese 2006; Rizzolatti and Craighero 2004; Teske (this issue).
23. There are, perhaps, some noteworthy exceptions. Social constructionism is one, of course, and it is joined by object relations theory in resisting the “contextual” understanding of relationality. However, despite some attempts to identify shared assumptions with cognitive science, it has been notoriously difficult to translate into nonpsychodynamic terms, and continues to be regarded with suspicion by much of the nonpsychodynamic psychological community. Attachment theory is also profoundly concerned with the interpersonal basis of individual cognition, but even attachment theory, which emphasizes the mental representation of relationships in terms of “inner working models,” may be compatible with an abstract understanding of individuality.
24. Cf. Anderson 2003; Williams et al. 2009. “Scaffolding” is an increasingly influential concept in other areas of cognitive science, especially at the interface between cognitive science and anthropology (see, e.g., Barrett 2010).
25. Mark Rowlands is at pains to emphasize the importance of the qualifier, “in part.” He writes, “as if it needed saying (and if my jaunts around the conference circuit in recent years are anything to go by, it does need saying), the thesis of the extended mind does not claim that *all* mental processes are partly constituted by processes of environmental manipulation; it claims only that *some* of them are” (2009, 631).
26. The second sense of self in Harré’s typology is the perception we each have of ourselves as incorporating a set of distinct attributes “which, though they change, remain as a whole distinctive of just the one person.” And finally, “self” also refers to “the impression of his or her personal characteristics that one person makes on another” (1998, 4).
27. This is not to deny, however, that some cognitive states can be conceived in abstract terms as unrelated to any particular concrete environmental context, as Rowlands (2009) makes clear, nor to deny that cognition depends in important respects on physical and psychological attributes that are themselves pre-given in a sense, independently of any particular context.
28. The tension is even more apparent in theories of embodied cognition than in social constructionist accounts of the individual, which, though they recognize the construction of individuality in social space, often fail to offer a coherent account of why the sense of individuality appears to be universal (cf. Turner 2012).

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