



## Communication

*In the Image of God: Exploring Links with Cognitive Psychology*



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In his intriguing analysis of Psalm 8 entitled *The Majesty of Man*, Ronald Allen directs our gaze to the lofty picture of humans this passage paints.<sup>1</sup> A portion of the Psalm reads as follows:

O Lord, our Lord,  
How majestic is your name in all the earth!  
What is man that you are mindful of him,  
The son of man that you care for him?  
You made him a little lower than the heavenly beings,  
And crowned him with glory and honor.  
You made him ruler over the works of your hands;  
You put everything under his feet.  
O Lord, our Lord,  
How majestic is your name in all the earth!<sup>2</sup>

This passage echoes the Genesis account in which humans, while firmly rooted in the created order, also stand apart from the rest of God’s creation, uniquely fashioned in his image. Phrases such as “crowned with glory and honor” and “ruler over the works of your hands” affirm humankind’s distinctive status as responsible overseers of creation. Yet the frame around this picture is of crucial importance: it is the majesty of HIS name. Cognitive psychology, with its focus on “higher mental processes,” appropriately

explores complex cognitive capacities such as memory, problem solving, and decision making. However, the picture it presents needs to be placed in proper context. Otherwise, our perspective on humankind can all too readily become distorted.

## Cognitive Psychology and Scripture

Ulric Neisser, arguably the founder of the cognitive psychology movement, grounded this approach in the metaphor of humans as processors of information.<sup>3</sup> For him, cognitive psychology deals with the information we take in from our surroundings and the ways in which we engage with it and act upon it. Many of its models are drawn from computer analogies, and the entire movement is characterized by a commitment to rigorous experimental investigation.

The “creation mandate” is articulated in Gen. 2:15: “The Lord God took the man and put him in the Garden of Eden to work it and take care of it.” This directive is echoed in Psalm 8. Both passages presuppose the presence of sufficiently advanced cognitive capacities to make fulfillment of the assigned tasks of management and care feasible. To expect accountable stewardship of creation’s resources without the provision of the necessary intellectual resources would certainly seem incongruous.

Furthermore, the biblical text contains numerous allusions to our mental capabilities.<sup>4</sup> Relatively unexplored, however, is the fundamental compatibility between cogni-

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tive psychology's basic approach and a biblical view of persons as bearers of the divine image. Commenting on discussions at the interface between Christian faith and psychology, Bonnidell Clouse notes, "The most recognized cognitive psychologists are absent from the integration literature."<sup>5</sup> How does the vision of persons implicit in the cognitive psychology perspective mesh with the biblical concept of the *imago Dei*?

## Created in the Divine Image

There are surprisingly few biblical references to the image of God in humans.<sup>6</sup> Nevertheless, in his ambitious *Man: The Image of God*, G. C. Berkouwer devotes more than 350 pages to the topic. He links this concept with both our role of having dominion over creation and our inter-relatedness—being made male and female. However, he stops short of identifying either feature with the *imago Dei*. He also resists equating the divine image with any of the various dimensions of the human person, whether self-consciousness, capacity for understanding, or spiritual sensitivity. He rather insists that it reflects the whole person. For Berkouwer, the clearest sense of its meaning resides in our inescapable relatedness to God.<sup>7</sup>

In her recent reflections, Noreen Herzfeld explores three quite different (though potentially overlapping) views offered by scholars through the centuries.<sup>8</sup> The first and oldest view—*reason*—affirms that the image consists of a trait or group of traits unique to humans within creation, yet shared with God. Despite the support lent by several church fathers, Herzfeld finds this position inadequate, partly because of its strong individualistic emphasis. To the second view—a more functional one—Herzfeld attaches the label *regency*. According to this view, the image of God is less an attribute we possess and more a title of esteem with which we have been honored. It speaks to our role as stewards, entrusted with the task of exercising unselfish rule on God's behalf. As Herzfeld succinctly affirms, "Human beings image God when they function in God's stead."<sup>9</sup> As a third and final way of characterizing the divine image, Herzfeld offers a perspective focused on *relationship*. This view is grounded both in the doctrine of the triune God who reaches out to us, and in the biblical description of humans created male and female. It thus emphasizes both vertical and horizontal relationships as essential to the *imago Dei*.

To summarize, in attempting to unpack the phrase "made in the image of God," we find consensus that this expression points to humanity's unique status within creation. Gregory Peterson notes that human distinctiveness has long been assumed, and that cognitive features have typically been included and frequently highlighted.<sup>10</sup> Thus, our rationality has been consistently understood as part of the way we humans image our Creator, though not necessarily the only, or even the most important way.

## The Image of God and Cognitive Psychology: Sounds of Discord

Having reflected on theological insights related to our nature as image bearers, we now consider two of the ways in which those who pursue a cognitive approach in psychology may encounter tensions with the vision implicit in the *imago Dei* concept. The seriousness of these discordant sounds is open to debate.

**Note one: Reductionism.** In her exploration of the "cognitive revival," Mary Van Leeuwen warns of a pair of lurking dangers. She identifies the first as reductionism—the assertion that nothing of substance remains of human experience beyond the fundamental neurological mechanisms guiding our thoughts, emotions, and activities.<sup>11</sup>

The computational model of the mind—viewing humans as information processors—provides a useful working analogy for cognitive psychologists. After all, access to stored information is essential for the execution of any and all cognitive tasks. Despite the complexity of such models, however, their mechanical, deterministic flavor persists.<sup>12</sup> Thus, the danger of reductionism is real.

Malcomb Jeeves has consistently maintained that biblical and scientific accounts of human experience are complementary, not conflicting. A neurobiologist more than a cognitive psychologist, Jeeves understands the biblical account of humans as emphasizing our wholeness rather than our divisibility into distinct components such as mind, body, and spirit. For Jeeves, this unity is fully compatible with cognitive and brain research which he interprets as confirming the ever-tightening links between mind and brain. The two are intimately related, yet mind is never reducible to purely physical processes. While endorsing cognitive perspectives, Jeeves explicitly rejects a reductionist stance.<sup>13</sup> Cognitive researchers need to do likewise by freely acknowledging that the explanations they can provide are always incomplete.

**Note two: Self-deification.** Van Leeuwen points to a second and opposite error that may be latent in this approach—the tendency toward self-deification.<sup>14</sup> As she colorfully warns, "We are constantly in danger of being seduced by our own metaphors,"<sup>15</sup> even those that provide valuable insights. In other words, the cognitive approach may create tensions for Christians specifically because it prompts us to "think more highly of ourselves than we ought to think."<sup>16</sup>

One might argue that it is in the applications of cognitive research to the creation of nonhuman intelligent systems that we face the greatest dangers in this regard. Herzfeld points out that in this endeavor, humans attempt to create machines in their own image.<sup>17</sup> In their exploration of the challenges arising from the development of artificially intelligent systems, Alan Emerson and Cheryl



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Forbes contend that the greatest danger lies in the fact that this enterprise may change the way we view ourselves.<sup>18</sup> Such changes could include the inclination to ignore our creaturely limitations—to lose sight of the frame around the picture.<sup>19</sup>

Van Leeuwen also makes the case that what we typically tout as intellectual brilliance overlaps only marginally with biblical wisdom. In western society, we have a fixation with formal operational thought—the type easily mimicked by computers, yet one of only limited importance in some cultures. By contrast, biblical wisdom is marked by two main features: the fear of God and the willing acknowledgment of our limitations.<sup>20</sup> Whenever we forget that we are dust, the danger of self-deification is at hand.

## The Image of God and Cognitive Psychology: Toward Harmonious Music

Cognitive psychologists devote their attention to capacities through which we mirror the divine image. Thus we should expect that insights derived from theological and cognitive viewpoints will be compatible and even mutually illuminating. We now turn to these considerations.

**Chord one: The gift of reason.** In light of biblical teachings, there can be no disputing that humans are unique, and that the *imago Dei* is bound up in this distinctiveness. Human qualities constituting our uniqueness are often identified as cognitive ones—capacities that hinge on our expansive powers of reason and understanding. It has further been suggested that these aspects have been consistently claimed because of their moral and ethical implications: if humans possess superior mental capacities, they also merit preferential ethical consideration.<sup>21</sup> While reason does not comprise the whole package, it clearly represents a crucial piece of the *imago Dei*.

In psychology, only the cognitive approach regards our capacity to deal rationally with the information we encounter as *central* in its exploration of humans. And central it must be. God, who created us to reflect his nature and to exercise a stewardship role in managing what he has made, has equipped us with the capacity to under-

stand his creation and to respond to him.<sup>22</sup> While our abilities are but pale reflections of his, they are nonetheless worth exploring. Indeed, the remarkable achievements manifest by artificially intelligent systems which showcase our God-given mental powers should inspire worship of the Creator who graciously bestows these capacities on us.

**Chord two: Active agents.** That humans are active participants in their interactions with the surrounding world is another clear emphasis of the cognitive perspective. Unlike views emphasizing strong biological, social, unconscious, or environmental determinism, a cognitive approach presupposes that we engage with our environment as we take in, store, organize, and act on the information it supplies. Neisser's notion of a perceptual schema nicely captures the interactive nature of sensory processing.<sup>23</sup> We thus come face to face with the vital human characteristic of agency.

Are we agents who freely choose our paths, or pawns caught in a web of causal influences? Are we objects or agents? In his critique of a cognitive perspective, Clarence Joldersma expresses concerns at this point. He sees no satisfactory way to transition from a computational view in which the governing function is based on algorithms to an approach that can realistically incorporate agency.<sup>24</sup>

Peterson also recognizes this tension with basic physiological drives. However, he notes that "our very nature as cognitive, thinking beings makes us subtle, complex and free in a way that other organisms are not."<sup>25</sup> Thus he sees room for agency in the midst of powerful biological influences, partly because of the immense complexity of the human mind. For Peterson, cognitive psychology does reserve a legitimate place for agency.

Stan Jones has observed that at least some cognitive psychologists assume humans are agents capable of originating action. He argues that while human choice and agency is real, it is also bounded and constrained.<sup>26</sup> In his view, causative influence and human agency are both real—a perspective whose validity is confirmed by the uncomfortable fact that social scientists are much better at predicting group behaviors than individual responses.<sup>27</sup>

**Chord three: Relationships grounded in cognition.**

Several thinkers have emphasized our capacity for relationships with our Creator and with one another as an essential component of the *imago Dei*. In her discussions, Anne Foerst strongly supports such an interpretation, suggesting that this characteristic is rooted in God's intention to build relationships with us.<sup>28</sup> Likewise, Jay Brand argues that human minds exist not simply to facilitate survival, but also to enable communication with God.<sup>29</sup> There can be little doubt that relationships are intrinsic and essential to our humanness. But what exactly is the link between cognitive capacities and interpersonal relatedness?

Warren Brown traces this link, highlighting the potential for a mutually beneficial interaction between insights from cognitive psychology and the *imago Dei* concept. Brown's essential argument is this: the fact that we are "souls" implies a capacity for interrelationships—which in turn rests on the presence of numerous cognitive abilities.<sup>30</sup> Two of these are of particular salience here—a theory of mind and episodic memory.

Peterson points to the connection between the concepts of self-consciousness and *theory of mind*, noting that both of them presuppose our awareness of self and others. More specifically, he defines theory of mind as the ability to infer the mental states and intentions of other organisms.<sup>31</sup> Peterson suggests that while rudimentary forms of this ability are present in some primates, full-orbed manifestations are unique to humans.<sup>32</sup>

Of particular interest for this discussion is the fact that human capacities such as empathy are dependent on the presence of a theory of mind. For Brown, these are part of our meta-cognitive capabilities—those abilities which enable us to reflect on our own mental states. He points out that as children mature, part of what enriches their social interactions is a growing capacity to appreciate what others are experiencing.<sup>33</sup> Brown further suggests that the severe communicative and interpersonal limitations characteristic of childhood autism may be attributable to deficits in this capacity. If so, we have compelling evidence of just how significant such cognitive capacities are for the nurturing of meaningful relationships.<sup>34</sup>

A second capacity essential for interpersonal relationships is *episodic or autobiographical memory*. This aspect of memory functioning is activated when we recollect time- and space-specific events from our past. Clearly, interpersonal relationships are enriched through memories of shared experience. It is also noteworthy that as distinct from semantic (general knowledge) and procedural (motor skill) memory, episodic memories are typically most damaged in the event of brain injury and are usually impacted first in the normal aging process. In both these situations, relationships become increasingly constrained.<sup>35</sup>

It can be argued, then, that without several well-developed cognitive abilities, the forging and maintaining of meaningful, satisfying relationships is seriously curtailed, perhaps even precluded. While this fact may be clearest when relationships with other people are at issue, similar patterns apply in our relationships with ourselves and with God. God is a person; our capacity to remember past encounters with him and to rehearse his faithful deeds serves to enrich and deepen our relationships with him.<sup>36</sup> With respect to our own sense of self, as Brown notes, episodic memory likewise figures prominently in our enduring sense of identity.<sup>37</sup>

As some have argued, the core meaning of the *imago Dei* resides not in our intellectual abilities but in our capacity for relationships. Granting that, it is clear that such relationships are possible only when supported by complex cognitive capacities. Thus, a fuller understanding of these human abilities can help to deepen our appreciation for the biblical teaching on the *imago Dei*.

## Concluding Reflections: Of Wonder and Worship

Constructive, ongoing conversations between cognitive psychologists and theologians are both possible and valuable. Indeed, these two fields need each other as they pursue a balanced understanding of the most complex portion of God's creation—ourselves. Reasons for cooperation include the significant ways in which our cognitive capacities reflect those of our Creator, the rational nature of the theological enterprise, and the corrective reminders biblical theology provides concerning our creaturely status in God's world.

May we be drawn into worship of the Creator as we pursue a growing understanding of humans, his image-bearers. In the words of the Psalmist, "O Lord, our Lord, how majestic is your name in all the earth!"<sup>38</sup> \*  
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### Notes

<sup>1</sup>Ronald B. Allen, *The Majesty of Man* (Portland, OR: Multnomah Press, 1984).

<sup>2</sup>Psalm 8:1, 4–6, 9 (New International Version).

<sup>3</sup>Ulric Neisser, *Cognitive Psychology* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1967). In this classic volume, Neisser gathered together existing research and sketched his vision for the new movement.

<sup>4</sup>There are literally dozens of such references in scripture, a few of which include the following: Acts 17:2; Acts 18:19; Isa. 1:18; Ps. 119:97; Ps. 1:2; Luke 22:60, 61; 1 Cor. 1:18, 19; James 3:15–18.

<sup>5</sup>Bonnidell Clouse, "Can Two Walk Together Except They Be Agreed? Psychology and Theology—A Journey Together or Paths Apart?" *Journal of Psychology and Theology* 25, no. 1 (1997): 44. There is a lengthy history of dialogue between theologians and psychologists, though very little of it deals with a cognitive perspective.

<sup>6</sup>There are only nine passages incorporating this phrase or one very similar to it. Six of them are generic, while the last three refer explicitly to Christ (Gen. 1:26, 27; Gen. 5:1; Gen. 9:6; 1 Cor. 11:7; Eph. 4:24; Col. 3:10; 2 Cor. 4:4; Col. 1:15; Heb. 1:3).

- <sup>7</sup>G. C. Berkouwer, *Man: The Image of God* (Grand Rapids, MI: William B. Eerdmans Publishing Co., 1962). This volume is considered by many to be the classic theological treatment of the *imago Dei*.
- <sup>8</sup>Noreen Herzfeld, *In Our Image: Artificial Intelligence and the Human Spirit* (Minneapolis, MN: Fortress Press, 2002), 7.
- <sup>9</sup>*Ibid.*, 21.
- <sup>10</sup>Gregory Peterson, *Minding God: Theology and the Cognitive Sciences* (Minneapolis, MN: Fortress Press, 2003), 147–8.
- <sup>11</sup>Mary Van Leeuwen, *The Person in Psychology: A Contemporary Christian Appraisal* (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1985), 143.
- <sup>12</sup>Clarence Joldersma, “The Missing Subject of Mind: Toward an Inner Reformation of Cognitive Science,” in S. W. Vanderstoep, ed., *Science and the Soul: Christian Faith and Psychological Research* (Lanham, MD: University Press of America, 2003), 117–43.
- <sup>13</sup>Malcomb Jeeves, *Human Nature at the Millennium* (Grand Rapids, MI: Baker Book House, 1997), 55–8.
- <sup>14</sup>Van Leeuwen, *The Person in Psychology*, 143.
- <sup>15</sup>*Ibid.*, 139.
- <sup>16</sup>Romans 12:3 (New International Version).
- <sup>17</sup>Herzfeld, *In Our Image*, 5.
- <sup>18</sup>Alan Emerson and Cheryl Forbes, *The Invasion of the Computer Culture* (Downers Grove, IL: Intervarsity Press, 1989), 152–64. Herzfeld also echoes a similar concern.
- <sup>19</sup>In Psalm 8 cited earlier, the opening and closing verses are identical—“O Lord, our Lord, how majestic is your name in all the earth”—forming a frame around the lofty picture of humankind painted in the intervening verses.
- <sup>20</sup>Van Leeuwen, *The Person in Psychology*, 174.
- <sup>21</sup>Peterson, *Minding God*, 147, 148.
- <sup>22</sup>See, for example, Isa. 1:18 and Josh. 24:15.
- <sup>23</sup>Ulric Neisser, *Cognition and Reality: Principles and Implications of Cognitive Psychology* (San Francisco, CA: W. H. Freeman and Company, 1976), 20–4.
- <sup>24</sup>Joldersma, *Science and the Soul*, 135–8.
- <sup>25</sup>Peterson, *Minding God*, 175.
- <sup>26</sup>Stan Jones, “The Meaning of Agency and Responsibility in Light of Social Science Research,” in R. C. Roberts and M. R. Talbot, eds., *Limning the Psyche: Explorations in Christian Psychology* (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1997), 186–205.
- <sup>27</sup>Though we can forecast typical or average responses with reasonable accuracy, predicting what a specific individual will do in advance—as, for example, what a dangerous criminal’s next move will be—is rarely possible.
- <sup>28</sup>Anne Foerst, “Cog, a Humanoid Robot, and the Question of the Image of God,” *Zygon* 33, no.1 (1998): 106.
- <sup>29</sup>Jay Brand, “Challenges for a Christian Psychology from Cognitive Science,” *Journal of Psychology and Christianity* 16, no.3 (1997): 234.
- <sup>30</sup>Warren Brown, “Cognitive Contributions to the Soul,” in W. S. Brown, N. Murphy and H. N. Malony, eds., *Whatever Happened to the Soul? Scientific and Theological Portraits of Human Nature* (Minneapolis, MN: Fortress Press, 1998), 99–125.
- <sup>31</sup>As a simple illustration of this concept, when I pause to think that my wife will be delighted if I take the afternoon off and go shopping with her, I give evidence of a functioning theory of mind.
- <sup>32</sup>Peterson, *Minding God*, 135–6.
- <sup>33</sup>Brown, *Whatever Happened to the Soul?* 109.
- <sup>34</sup>I do not wish to imply that either autistic children or other persons with reduced cognitive capacities cannot participate in interpersonal relationships. It does appear, however, that when such relationships exist and thrive, it is because the other party contributes more than normal to the building of these relationships.
- <sup>35</sup>Among several groups of persons— young children, those suffering with many forms of autism, those with severe brain damage, and elderly persons with dementia— there runs an intriguing parallel between their limited cognitive capacities and their shrunken interpersonal relationships.
- <sup>36</sup>Two of many examples are found in Ps. 105:5 and Ps. 103:2, 3.
- <sup>37</sup>Brown, *Whatever Happened to the Soul?* 112.
- <sup>38</sup>Psalm 8:1, 9.