

# Pyramid Power: A Reply to Commentaries

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## Abstract

Four thoughtful commentaries identify important issues and insights pertaining to the pyramid of needs presented by Kenrick, Griskevicius, Neuberg, and Schaller (2010, this issue). Here, we offer additional thoughts on some of these issues and insights, with an emphasis on the logical implications that result from an evolutionary analysis of fundamental human needs.

## Keywords

evolution, meaning, motivation, parenting, pyramid of needs

People love a pyramid. Collectively, the four very thoughtful commentaries on our renovation of Maslow's famous pyramid of needs (Kenrick, Griskevicius, Neuberg, & Schaller, 2010, this issue) concur with our impression that his pyramid is more than just an iconic artifact of humanistic psychology. The pyramid can still have a prominent place in the psychological sciences for a very simple reason: By identifying a hierarchy of fundamental human needs, we can more fully understand human nature.

The commentaries echo our belief that any scientifically sensible pyramid of needs must be built on an evolutionary foundation. This is not to say that the commentaries are simply nodding their heads, slapping us on the back, and congratulating us on a job well done—far from it. These commentaries identify a variety of issues, questions, and thoughtful disagreements. But these issues and questions and disagreements pertain primarily to the finer details of our analysis; there is no disagreement about the fundamental value of a serious evolutionary analysis of human motivation. The commentaries show how an evolutionary analysis can probe even more deeply into the connections between different kinds of goal states (e.g., how the renovated hierarchy provides insights into how goal conflicts are resolved, and how the hierarchy, when integrated with the concept of “scaffolding,” generates specific and novel predictions about how related goals are likely to influence the operation and consequences of one another; Ackerman & Bargh, 2010, this issue). The commentaries reveal how an evolutionary analysis can be used to address additional scientific questions that arise from our revised pyramid (e.g., the “parenthood paradox”; Lyubomirsky & Boehm, 2010, this issue). And so on. We are especially heartened by the fact that one of the sharpest criticisms of our revised pyramid—the complaint that

it is mammal-centric rather than human-centric (Kesebir, Graham, & Oishi, 2010, this issue)—results not from any disavowal of the role of evolution in human affairs, but instead from the assertion that our analysis is actually insufficiently attentive to the most recent epoch of human evolution. If these commentaries accurately represent the perspectives of contemporary psychological scientists, it would appear the field is moving away from dispiriting rhetorical battles about whether evolution is relevant to human psychology and moving toward the more progressive and productive pursuit of figuring out exactly how. This is wonderful.

So exactly how might a Maslovian pyramid be most sensibly reconstructed in light of what we know about human evolution? There is no simple answer to that question. Therefore, it is no surprise that our article—and the reformulated pyramid that appears in it—stimulated such a variety of thoughtful quibbles and questions. We will offer a few additional thoughts on several of these issues.

## Pyramid Plasticity and Constraint

Maslow created a single pyramid and allowed it to represent many things. We do not have that luxury. Logically, the hierarchical organization of fundamental human needs may differ depending on whether the pyramid represents a functional hierarchy, a developmental trajectory, or a cognitive prioritization. The evolutionary logic that informs our analysis suggests that

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these hierarchies are also likely to differ somewhat as a result of other fitness-relevant variables too, including sex, age, and immediate ecological context (including culture). From an evolutionary perspective, the specific contents of the pyramid must be applicable to all people everywhere, but the specific prioritization of those contents (their actual position in the pyramid) is expected to vary in predictable ways across both persons and situations. This implied plasticity poses a graphic design problem (see Ackerman & Bargh). But it also highlights the fact that an evolutionary approach to human motivation—even though it necessarily emphasizes those elements of motivational systems that are universal across all peoples in all places—is entirely compatible with alternative metatheoretical approaches that emphasize motivational variability across persons, situations, and cultures.

At the same time, however, evolutionary logic imposes strict constraints on that plasticity. The human genotype produces individual persons who are infinitely variable at the surface level, but every normally developing human being still conforms to a single prototypical template for basic phenotypic design. Analogously, an evolutionary approach to motivation produces a pyramid defined by some plasticity in the prioritization of needs, but one that is also defined by a strictly limited, and logically constrained, set of fundamental fitness-relevant needs. It also implies a default prioritization of those needs. (The satisfaction of immediate physiological needs must typically take priority over other needs, for example, and mate acquisition must typically be satisfied prior to parenting.)

### **The Vanishing Self, the Selfish Gene, and the Purpose of Parenting**

By employing an evolutionary analysis to construct a pyramid of needs, we cannot just add something to the pyramid because it conforms to common sense, or because it pleases us to see it there. The structure must be consistent with the logical implications of an evolutionary analysis. Among those logical implications are these: (a) Any fundamental need represented in the pyramid must have been clearly linked to reproductive fitness throughout some substantial chunk of human evolutionary history, and (b) a strong case must exist for its universal relevance to all human beings. Judged against these criteria, some of our favorite desires and aspirations have no place in the pyramid. Most notably, despite its iconic appeal (see Peterson & Park, 2010, this issue), self-actualization just does not make the cut.

Although self-actualization may have a lot going for it, a clean conceptual definition is not one of those things. There is nothing in its fuzzy conceptualization that links in any obvious way to reproductive fitness. Nor is there any strong case to be made that a need for self-actualization is universal across all human populations (see Kesebir et al.). To the contrary, the concept of self-actualization (like self-esteem, self-enhancement, and many other self-ish goals) may well have a peculiar intellectual appeal only within modern Westernized individualistic societies. Hence, self-actualization has no logical place in a pyramid of fundamental human motives.

Although many self-gratifying aspirations (such as self-actualization) are logically excluded from our hierarchy of fundamental needs, the pinnacle of our pyramid is occupied by something that often is experienced as both self-gratifying and something closer to its opposite: parenting. The fact that parenting is at the pinnacle highlights a fundamental distinction between a pyramid informed by a highly personal perspective on human health and happiness (as Maslow's was), and a pyramid informed by the rigorous logic of genetic evolution (as ours is). From an evolutionary perspective, people do not matter, *per se*. Rather, people are essentially vehicles for genes, and they are designed by genes to do the kinds of things that facilitate the replication of those genes. This gene-centric objective is not satisfied simply by the production of viable offspring; it is satisfied more fully when those offspring are sufficiently mature and capable of producing viable offspring themselves. The satisfaction of a fundamental need does not operate in the service of self-gratification, but in the service of the replication of our genes into our children's children.

Fulfillment of these needs may still be psychologically pleasing, of course. A reward system—the production of positive affective experiences—is an integral part of the suite of psychological adaptations that promote behaviors facilitating genetic replication. So it is perfectly sensible that the satisfaction of a fundamental need is associated with happiness (see Lyubomirsky & Boehm).

However, this does not mean that people will actually feel happy when attempting to satisfy that need. It is not a lot of fun to peel a pile of potatoes, or to anxiously primp in preparation for a blind date, even though those actions can promote the satisfaction of fundamental physiological and mate acquisition needs. The same principle applies to parenthood, even though the actual satisfaction of the parenting need (successfully raising one's offspring to an age at which they are capable of producing offspring themselves) requires a considerably greater commitment over a necessarily longer stretch of time. Therefore, it is perfectly sensible (and not a paradox at all) that people are not always so happy when they are doing the sorts of things that parents have to do. Instead, the affective reward comes as we make progress toward the underlying evolutionary objective—when the peeled potatoes temporarily sate the need for nutrition, when the primped appearance impresses a potential mate, or when the child scampers off the school bus and proudly produces a remarkable report card.

### **Human Evolution, Human Uniqueness, and the Meaning of Life**

The parenting need is not unique to human beings, but there are many uniquely human aspects to the manner in which that parenting need is fulfilled. In comparison with other animals (including the other primates most closely related to *Homo sapiens*), humans devote a more substantial chunk of their adult lives to protecting and nurturing their offspring. This is necessary because, from a developmental perspective, human babies are exceptionally immature at birth. This immaturity is a

product of recent events in human evolution, including the spectacular increase in adult brain size that has evolved over the last several hundred thousand years. The exact circumstances that precipitated the evolution of big brains are uniquely human and pertain to the kinds of things that are integral to human culture (an emerging capacity for language, complex organization of large social groups, etc.). The emergence of culture (and big brains) in our species is further associated with the emergence of cognitive capacities that are also unique to humans, and they exert a pervasive influence on everything we do.

There are, therefore, many uniquely human goals that reflect unique aspects of human cognition and human culture. Chimpanzees do not aspire to buy fancy cars, marry neurosurgeons, or publish more articles than their colleagues down the hall. People do. There is no evidence that chimpanzees concern themselves with self-actualization. People (at least some of them) sometimes do. Nor is there any evidence that chimpanzees have the capacity to reflect deeply on their own mortality. People do, and this existential self-reflection stimulates a uniquely human form of goal-directed behavior. The list goes on and on. There are an enormous number of goal states experienced by an enormous number of human beings—powerful desires for a variety of outcomes both mundane and transcendent (the desire for a jewel-encrusted iPhone, for the feeling of self-actualization, or for everlasting happiness in the sweet hereafter). At a phenomenological level of analysis, these goal states may be experienced much more powerfully than, say, the need for status or mate retention or parenting.

But that does not mean that these goal states are evolutionarily fundamental. An evolutionarily sensible pyramid cannot be a mere list of phenomenologically salient motivational states. Rather, it must offer a logically deduced (and biologically principled) hierarchical mapping of the small set of truly fundamental needs that actually are served by the vast variety of human motivational states.

Still, as suggested by our commentators (e.g., Kesebir et al.; Peterson & Park), perhaps it is worth thinking a bit more deeply about motivations associated with meaning and wisdom. There is no doubt that, as a result of relatively recent historical circumstances within which human culture and human cognition coevolved, people uniquely attach symbolic meaning to a dazzling array of ideas and artifacts. There is also no doubt that people seek meaning and wisdom. But in these regards, people are probably not unique. Chimpanzees (and many other mammals too) surely attach meaning to lots of things and are also motivated to perceive their world in a way that makes sense. The bigger question, then, is whether the needs for meaning and wisdom have unique implications for reproductive fitness and thus qualify for a place in our pyramid.

We suggest that the needs for meaning and wisdom do not have conceptually unique implications for reproductive fitness but that they rather operate in service to each of the other fundamental human needs. To identify and then satisfy any fundamental need, an individual must be able to make sense of his or her world. To the extent that an individual's perceptual or ecological context appears inconsistent, incoherent, or senseless—to the extent it appears meaningless or unknown—the satisfaction of any fundamental need is that much more difficult. Young children are no less motivated than philosophers are to understand their worlds—to comprehend the connections between colors and shapes and textures, to grasp the meanings of spoken words and logical arguments, and to figure out exactly when and why mommy gives a cookie at certain times and not at others. Teenagers ponder many of the great mysteries of social psychology as they attempt to negotiate friendships, status hierarchies, and dating relationships. Meaning and wisdom matter, but they have no particular place in the pyramid; rather, they are implicated throughout.

And, of course, from an evolutionary perspective, meaning and wisdom matter not because people aspire for meaning or for wisdom, but because these psychological desires for meaning and wisdom, as with so many other human aspirations and goals, offer a means to facilitate our survival and reproductive fitness, and thus the reproduction of our genes in our children, and in our children's children, too. Thus, our pyramid.

### Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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