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## **Integration in Personality Research: Evolution is the Missing Catalyst**

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### **Abstract**

The target article makes a compelling case for integration in personality research, but falls short of presenting a convincing program for achieving it. I argue that evolution is the “missing catalyst” of integration, and that the field is destined to remain fragmented until it fully embraces the evolutionary paradigm. I illustrate the heuristic and integrative power of an evolutionary approach by focusing on the central issue of motivation; recasting motivational processes in a modern biological perspective affords a wealth of integrative insights that cut across process, development, and structure.

In the target article, Baumert and colleagues (2017) review three domains of personality research—structure, process, and development—and make a compelling case that the discipline needs to make a major step toward integration. Despite the authors' remarkable effort, the research program that emerges from the paper is unconvincing; the proposed directions are largely methodological, and it is hard to see how they would lead to an integrated understanding of personality rather than just more of the same. Reading the paper felt like watching a chemical experiment where something critical is missing. The authors do a great job of laying down the components and mixing them together; but as much as they keep stirring and shaking, the elements fail to react and combine as expected.

I surmise that evolution is the missing catalyst of integration. While the authors do not dismiss the biological aspects of personality, in practice they treat them as optional—something that can be added at a later time to complete the picture. But what if evolutionary concepts are foundational rather than peripheral? The structure of personality traits, their development, and the underlying cognitive/motivational processes are all products of our species' history, and have been shaped and refined by millions of years of selection across countless generations. If this is the case, successful integration may only be achieved within a broader evolutionary framework—a metatheory that enables a truly functional understanding of personality and behavior (Durrant & Ellis, 2003; Tooby & Cosmides, 2015). In a recent chapter, I showed how such an integrative approach can be applied to personality development (Del Giudice, *in press*). For broader surveys see the volumes by Buss and Hawley (2011) and Carere and Maestripieri (2013). To readers unfamiliar with evolutionary psychology, I recommend the introduction by Tooby and Cosmides (2015), which also touches on issues of motivation, emotion, and individual differences.

In the remainder I illustrate the potential of this approach by focusing on motivation, one of the key topics of the target article. The authors define motivation generically as selective approach/avoidance, and distinguish between “biological drives” such as hunger and “socialized motivations” such as status seeking. Recasting motivational processes in a modern evolutionary perspective affords a wealth of integrative insights that cut across process, development, and structure. The mechanisms that underlie motivation are best understood as specialized goal-directed systems with access to both innate and learned knowledge (Cosmides & Tooby, 2013; Del Giudice, *in press*; Tooby & Cosmides, 2015). While approach and avoidance are important, motivational regulation involves much more—from context-sensitive switching between alternative goals and strategies, to coordination of multiple cognitive and physiological processes through emotions (e.g., Al-Shawaf, Conroy-Beam, Asao, & Buss, 2016).

Crucially, evolutionary theory illuminates the deep hierarchical structure of motivational goals. Genetic replication (achieved either by reproducing directly or by favoring related individuals) is the ultimate, overarching function of all living organisms. Life history theory shows how this meta-goal can be decomposed into a number of broad tasks—including survival, growth, learning and body maintenance, mating, and parenting—and how the balance between competing tasks is adjusted depending on the characteristics of the individual and its environment (see Del Giudice, Kaplan, & Gangestad, 2015). On a finer scale, life history tasks are accomplished by a large number of overlapping but functionally specialized mechanisms that deal with specific problems, from choosing food and avoiding pathogens to finding and

attracting mates, maintaining beneficial cooperative relationships, increasing one's status and social influence, acquiring and transmitting knowledge, and so forth. All these motivations are equally "biological" and linked to reproductive fitness within the ecological niche of our species. The resulting model of motivation is remarkably rich, and—in contrast with abstract functionalist models that do not consider the fitness costs and benefits of behavior—implies a complex but non-arbitrary structure of partially conflicting goals (e.g., Aunger & Curtis, 2013; Del Giudice, in press; Kenrick, Griskevicius, Neuberg, & Schaller, 2010).

This approach helps with the daunting task of identifying which of the potentially infinite dimensions of the environment are most likely to be relevant to a given individual, and gives deeper meaning to the phrase "the mind has the structure it has because the world has the structure it has" (Anderson, 1991). While the authors limit their analysis to the regularities of the present environment as experienced by a single individual, an evolutionary perspective suggests that the present structure of the mind also embodies the regularities of the *ancestral* environment and its statistical structure across multiple generations (Tooby & Cosmides, 2015). If so, understanding the nature of our ancestral environment is a precondition for understanding the structure of personality. Of course, evolved developmental programs interact with present ecological conditions; for example, there is fascinating evidence that recent increases in the complexity of human societies may have lessened the strength of trait covariation, leading to higher differentiation of individual personalities (Lukaszewski, Gurven, von Rueden, & Schmitt, 2017).

The preceding paragraphs barely scratch the surface. While there is no room to present them even cursorily, other exciting contributions include the concept of *internal regulatory variables* as sources of behavioral covariation and coherence across multiple systems (Cosmides & Tooby, 2013); life history models that track the emergence and change of motivational priorities across the life span (e.g., Del Giudice, in press; Kenrick et al., 2010); and novel insights into the nature of developmental plasticity, sensitive periods, and transitions between the major life stages (e.g., Del Giudice, 2014a, 2014b; Frankenhuis & Fraley, in press; Frankenhuis, Panchanathan, & Nettle, 2016). Besides reframing and integrating existing knowledge, evolutionary models can reveal phenomena that are invisible from other perspectives. For example, *parent-offspring conflict theory* (Trivers, 1974; see Schlomer, Del Giudice, & Ellis, 2011) shows that parental influences are only partially in the biological interest of children, and may explain why family experiences have surprisingly little systematic effects on adult personality (Del Giudice, 2009, in press). Keeping personality research insulated from the broader evolutionary paradigm can only delay integration further, and prevent the discipline from achieving its full potential.

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