8 Completing the Psychobiological Architecture of Human Personality Development: Temperament, Character, and Coherence

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Abstract
Three models of personality and its development are described in terms of their psychobiological mechanisms. Personality is the organization within the individual of the psychobiological processes by which we adapt to experience. Personality as temperament involves individual differences in heritable traits that influence the salience of stimuli to which we attend selectively. Temperament is superseded by a model of self that includes temperament and character. The organization of self is described by three character dimensions, which correspond to executive, legislative, and judicial functions. The development of these higher cortical functions is experience-dependent and influenced by social and cultural learning. Temperament and character together can account for some of the self-organizing characteristics of personality development but are incomplete models of human personality and intellectual development. They cannot explain uniquely human characteristics, such as creativity, freedom of will, or spirituality, which involve individual differences in personality coherence. Personality coherence refers to mind as a complex adaptive system functioning as a unified whole, much like the quantum coherence of superfluids. This hierarchy of models is discussed in relation to Baltes’s (1997) hypothesis about the incompleteness of human ontogeny when limited to its first two levels.

Paul Baltes (1997) has observed that genetic and social-cultural influences on human intellectual development do not complete the task of maintaining a positive balance of gains over losses across the lifespan. As we age, gene-environment interactions cause decreased flexibility, plasticity, and learning efficiency, as well as problems in the
brain mechanics of basic information processing that cannot be effectively overcome by greater social-cultural compensation. Many people become intellectually impaired, forgetful, or even demented, and everyone eventually dies.

Baltes has carefully distinguished between two main components of intellectual function—the fluid mechanics and the crystallized pragmatics. The fluid cognitive mechanics refers to the basic “hardware” or brain mechanisms that are largely content-free, universal, biological, and susceptible to genetic differences in inheritance and development. The crystallized pragmatics are largely content-rich, culture-dependent, and experience-based “software” by which the hardware is directed and organized.

Accordingly, Baltes’s dual-process model of intellectual development is directly comparable to my own work on personality development in which I have distinguished between temperament and character. I have defined temperament in terms of heritable individual differences in basic information processing of emotional responses to simple stimuli, which is comparable to fluid mechanics of intelligence. Differences in temperament are heritable, developmentally stable throughout life, and little influenced by social and cultural influences. In contrast, character is what individuals make of themselves intentionally in terms of goals and values. Character development is experience-dependent, influenced by social and cultural influences, and can initially increase with age, particularly from puberty to early adulthood and little thereafter under commonplace conditions (Cloninger et al., 1993, 1997). Hence temperament and character are comparable to fluid and crystallized intelligence, respectively. This suggestion is supported by the work of Staudinger and Pasupathi (2000) to extend the dual-process model of intelligence to understand wisdom by incorporating information about personality, emotion, and motivation as well as experiential contexts.

The incompleteness of character is revealed in the difficulty of treating patients with character disorders. Despite strenuous efforts with pharmacological and psychotherapeutic interventions, the results of therapy for character disorders often show little benefit. This underscores the incompleteness of the theory underlying cognitive-behavioral therapy because it shows that cognitive schemas are rarely changed in therapy in a fundamental way. Individual differences in character can also be described as individual differences in the schemas or initial perspectives by which we organize our responses to experience. Most therapy for personality disorders does not efficiently change measures of character traits or cognitive schemas. Patients are usually left to struggle throughout their lifespan in an effort to balance emotional conflicts in such a way that personal and social gains will exceed losses (Beck, 1996).

Recent experimental and clinical findings regarding the importance of intuitive aspects of cognitive function suggest that this incompleteness is a consequence of limiting awareness only to temperament and character. Specifically, in the domain in which intellect and personality merge, Baltes and his colleagues (Baltes, 1997; Baltes & Smith, 1990) have studied measures of wisdom and have found that Baltes’s measures do not increase with age. However, Baltes has measured wisdom as an advanced form of crystallized intelligence within his dual-process model. As a consequence,