

[Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area)]
Interdisciplinary Area



Title of Project : Science of personalized value development through adolescence: integration of brain, real-world, and life-course approaches

Kiyoto Kasai
(The University of Tokyo, Department of Neuropsychiatry,
Professor)

Research Project Number : 16H06395 Researcher Number : 80322056

【Purpose of the Research Project】

Our project aims at establishing an interdisciplinary science which focuses on the development of "personalized value" through adolescence by integrating brain, real-world, and life-course approaches.

Human adolescence is far longer than those in non-human primates and is the life stage in which cerebral neocortex matures. While the childhood is associated with trans-generational incorporation of parent's value, the adolescence is characterized by social interactions with peers. Through such influences, a person's value is internalized and personalized to become "personalized value".

【Content of the Research Project】

A01 aims at uncovering the brain basis of the personalized value. Here, the value development can be modeled as the psychological process in which adolescents acquire the ability to control the conflict between value memory and actual behavior by using self-regulation including meta-cognition and language (inner-speech).

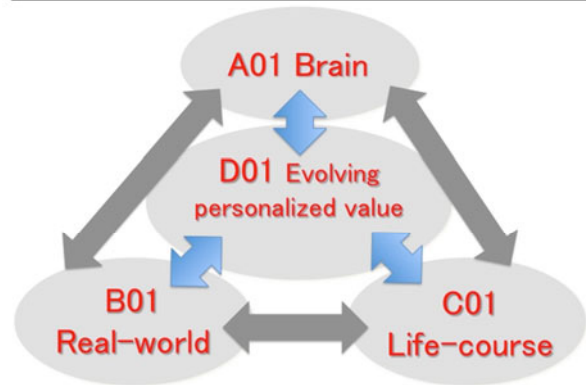
B01 considers "real-world" as a modulatory factor in the neural basis of value development. Here we propose a spiral model where active interaction with real-world influences the value development, which then shapes the action pattern in life, in turn inducing the plasticity in the brain circuit.

C01 will use life-course epidemiology to how the personalized value is developed in adolescence and how it influences later life. The Tokyo TEEN Cohort will be the main panel.

By integrating brain (A01), real-world (B01), and life-course (C01) approaches, D01 will deepen the conceptual framework of personalized value. Then, we will develop psychosocial intervention

strategy to evolve the personalized value.

Evolving personalized value through adolescence:
Integrating brain, real-world, & life-course approaches



【Expected Research Achievements and Scientific Significance】

Our project will propose a new interdisciplinary science of "action brain", where we clarify how the brain evolves personalized value through adolescence to actively make influence upon the social environment and pursue subjective well-being. Our findings will ultimately contribute to policy making of education and health promotion in adolescence.

【Key Words】

Adolescence: developmental stage from onset of puberty through maturation of neocortex.
Personalized value: a person's inner driver for long-term action, which will be internalized and personalized through adolescence.

【Term of Project】 FY2016-2020

【Budget Allocation】 1,112,800 Thousand Yen

【Homepage Address and Other Contact Information】

<http://value.umin.jp>