



Innovative personality – abstract for a research project - December 2008.

By Petteri Niitamo, PhD., Professor, (adj.) on Competencies and Knowledge Management at Helsinki University of Technology.
Correspondence: petteri.niitamo@wopi.net, +358408364505. See also website: www.wopi.net

This research sets out to compile the functional processes of “innovative personality”. The goal is to organize together a set of motivational, thinking and attitude processes that have shown in previous research to be connected to or, serve as drivers of creative, innovative performance across different domains and occupations. The present research is continuance to classical studies on creative personality conducted during several decades at the Institute of Personality and Social Research (IPSR, formerly IPAR) of the University of California at Berkeley where the present author served as a staff assessor and PhD student in 1986-89. Through sets of highly diverse measures, the IPSR studies have shown impressive generality for personality factors in distinguishing highly creative architects (MacKinnon, 1962), business leaders (Barron & Egan, 1968) and art students (Barron 1972) among other occupational groups. For example, the finding that particular aesthetic preference can distinguish creative accomplishers across such diverse occupations attests to the ingenious, yet less recognized potential of the tradition begun at IPSR.

The present research takes a step further by organizing a set of well-validated creativity-innovation measures along the basic functional processes of personality: motivation (what the person wants), thinking (how the person thinks) and attitudes (the person’s outlook). Instead of using disparate measures, the functional grouping allows to view the whole person as unit of study. The second, more ambitious goal involves a deeper viewing to innovative personality. This is realized by exploring whether and how such “intra-head” factors transform into domain/occupation specific innovative performance. For example, how does aesthetic preference (complexity over simplicity, implicitness over explicitness, dissonance over consonance, etc.) “become” innovative performance - in industrial R&D as well as in classical ballet? Do technological or product innovations connect more to kineasthetic than visual imagery? What role does motivation play in innovation? The clue in the research is to treat psychological processes as prototypes or analogies for domain specific innovation. The second goal ends with opening a higher level perspective on innovation, by looking at innovation as a script, that is, a process composed of consecutive phases and a context.

The research focuses on innovation in business, technology and art. The research launched in January 2008 with a pilot sample of 50 individuals beginning in a 1,5 year degree program in service product development. The students work on their individual product development projects which are evaluated at the end of the training period. Self, peer, teacher and committee ratings are used as criteria of innovativeness. In addition to educational groups, real-world samples are sought that employ such criteria as supervisor and portfolio ratings, accomplishment records, patents as well as the market response. Innovation is defined as end user utility, technological advancement, commercial innovation, etc. All personality (predictor) measures can be performed online (via internet), allowing subjects to fill out the measures at their convenience.

List of main measures on innovative personality:

Motivation	- WOPI, PISE, WDCT
Thinking	- Orientation/interest - WOPI, BWAS - Perception/conceptualization - WOPI, PSE - Processing/Imagery - WOPI, BVIS - Decision making - WOPI
Attitudes & context	- WOPI, OCP
Scripts	- PISE

MEASURES IN MORE DETAIL and CORE RESEARCH QUESTIONS

WOPI – Work Personality Inventory; standardized self-report questionnaire (224 question items). Measures 14 dimensions of motives, ways of thinking and attitudes that “drive” behavior and competence at work. **Core question: can common motivational, thinking and attitude drivers of work behavior be organized as drivers of innovation?**

BWAS – Barron-Welsh Art Scale; measures aesthetic preference of non-representational line drawings. Indicates interest towards ill-structured/asymmetrical vs. well-structured/symmetrical world. High scores have shown to correlate with creative and exceptional achievement across wide array of occupations, from art to business (c.f., Berkeley-IPSR studies).

Core question: is innovation related to aesthetic preference?

BVIS – Bett’s Vividness of Imagery Scales; measures vividness of imagery across eight sensory modalities, e.g., visual, auditory, etc. The test has subjects rate their imagery vividness across a set of exercises. Research includes a finding that kinesthetic imagery is correlated with innovative performance in business. **Core question: Is innovation linked to general vs. sensory-specific imagery vividness?**

WDCT – Wartegg Drawing Completion Test; a standardized, semi-structured drawing test where subjects complete initial line figures into complete drawings. Several research findings in the Berkeley-IPSR tradition show that size of drawings is related to performance in the arts. **Core question: can innovative processes be detected better at the psychomotor-pictorial rather than verbal level?**

PSE – Picture-Story-Exercise (TAT); in writing imaginative innovation stories to vague stimulus pictures, individuals project their own (innovative) tendencies to the stories (McClelland). Present research focuses on both motivational variables (achievement and power motives) and script variables (schemas, episodes). Four stimulus pictures: (1) Boy looking at a violin (person facing a creative challenge), (2) Four men conversing around a table (group planning to create) (3) “Marie Curie” with test tube (actual creation process alone), (4) Two women in lab (actual creation process with another person). **Core questions: (1) are “deeper”, implicit motives (PSE) stronger drivers of innovation than the more “surface-like”, explicit motives (WOPI) , (2) Can innovation be patterned as a process or script?**

OCP – Organizational Culture Profile; One of the most widely researched methods to measure organizational culture devised by O’Reilly et al..from Stanford University. Utilizes Q-sort methodology to scaling of culture values. Used e.g., in Berkeley-IPSR studies on high potential MBA’s. Present research focuses on ideal culture, that is, potential innovators are asked to describe their ideal organizational values. **Core question: what are the contextual-cultural conditions of innovation?**