

Towards an Evolutionary Psychological Perspective on a Taxonomic Model of Individual Differences Correlating with the Five-Factor Model

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Introduction

This preview comprises a short introduction on our novel theory for an evolutionary psychological motivation-based, categorized explanation of individual differences. Based on our findings we constructed an evolutionary taxonomy of motivation (EToM) that we correlated with the traits of the five factor model (FFM). EToM is not just a useful tool for categorizing individual differences but also functions to understand explain and predict individual behavior. This makes it a useful explanatory tool for FFM. One of the reasons for developing our theoretical approach is that evolutionary psychology (EP) currently lacks its own frame work for identifying and explaining individual differences. That is why a growing number of evolutionary psychologists use trait models like the five-factor model. The FFM, however, is a descriptive model based on a lexical inventory and self-report and lacks a theoretical framework [1,2]. Hence it would benefit from a correlation with EToM and at the same time, provide a framework for the FFM.

Another reason for developing an evolutionary theoretical framework and model is the importance of individual differences with regard to sexual selection and individual fitness [3]. Cross-species comparisons [4,5] and the increasing recognition and appreciation of the important contribution of genetic factors to heritable behavior and health [6-8] demonstrate the value of partner selection from an evolutionary perspective.

Individual Differences and Motivation

People are notably different from one another. Individual differences are not caused by natural selection, however, which is a random process producing important adaptations that have evolved over evolution to benefit survival. Individual differences as based on sexual selection are essential for creating and maintaining heritable variants [3,9].

EP maintains that individual differences are the outcome of interaction between an individual's genes and his environment. Genetic inheritance is an important factor in the individual's

relatively stable behavior over lifetime. Nonetheless, as there is a variety of possible outcomes, what determines the prevailing behavior?

A clue as to how to approach the question of an individual stable behavior is what we call 'fundamental adaptations'. From an evolutionary perspective, motivation is linked to three different fundamental adaptations for achieving inclusive fitness:

- 1) Forming and maintaining meaningful relationships,
- 2) cooperating successfully and
- 3) Intrasexual competition for obtaining mates and resources [3,9]. These adaptations develop separately, follow a different neural path and are memorized differently.

However, through the gene-environment interaction (GxE), the individual – usually before or around its 3rd or 4th year – by necessity prioritizes one of the three adaptations. Optimal behavior for all contexts does not exist: we are Jacks of all trades, but masters of none: that is why we have to prioritize one of the three fundamental motivations. This prioritization depends on a non-conscious mental process through deontic reasoning [10] based on GxE interaction. It does not mean that the individual is incapable of a mental link to the two other adaptations, but his stable individual motivation – his motivation profile - will guide his social strategy. This motivation is expressed through signals displaying the fitness that warrants the quality of the phenotype [11,12].

Twelve Motivational Profiles

People do things for a reason, they are motivated by the long-term goals they set with the ultimate goal of inclusive fitness. Their manifest behavior is the product of underlying psychological mechanisms and decision rules that process external and internal information. People's signal display provides information about the individual's mental indicators of fitness [11-13].

It has been demonstrated that humans and other social primates use strategies and calculate their actions and those of others to influence the behavior of others [14]. To be able to do this they display (visual, auditory, tactile) signals working on the sense organs of others [15]. The methods humans deploy to influence the behavior of others is the result of their fundamental social motivation that guides their social strategy. Based on the three different fundamental adaptations, we found three different profiles for each gender. We then added the fast-slow life history continuum and found the three features that covary with each other bringing the total of different individuals to a total of six for each gender. Adding signal display to the fundamental motivation allowed us to construct our model consisting of six different profiles for each gender bringing the total up to twelve different individuals.

Combining our evolutionary model with the Empathizing-Systemizing System (ESS) of Baron-Cohen [16,17] we constructed the EToM model, differentiating between male and female features. For expressing the unique characteristics of each difference we designated names to each of the adaptations that individuals have prioritized. The highly competitive individuals occupy the Hierarchy position. Those individuals aiming for cooperation occupy a position we have named Coalition. Those individuals that concentrate on individual, lasting relationships are labeled Empathy. The position of each of the individual differences is allocated to a different position on a rectangle whereby the 'fast' extreme on the life history continuum is placed on the left hand side ('Risk seeking') and the 'slow' extreme on the right hand side ('Risk aversion').

An Example

By comparing EToM with the FFM [18] we found for instance that 'Extraversion' of FFM correlates with Risk seeking on our Hierarchy position. Those that are Risk seeking, for example, typically engage in short-term activities and relationships, are ambitious, self-centered, seek status, actively look for access to resources, act sociable, are good systemizers and good at pattern recognition, manipulative and dominant. They are usually conservative, not open to new ideas but talented at technical systems, ICT, financial jobs, the army and police work. And although the signal display may seem different, the underlying Hierarchy-based motivation is guiding Extraversion of the FFM, the facets of which covary with Consciousness. This applies to the correlation with the other FFM traits as well.

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