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DEVELOPING SELF-COUNSELLING THEORY OF “GRAVITATION”

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Theory: 1. A formal set of ideas that is intended to explain why something happens or exists;
2. The principles on which a particular subject is based.



SELF COUNSELLING (*not counselling!*)

*concept of “Gravitation” is developed based on **meta-research findings** of behavioural genetics from different genetic research studies based on quantitative as well as molecular genetic methods and mechanisms which estimates:*

- a) heritability (h^2),
- b) shared (c^2) and c) non-shared (e^2) environmental influences and suggests how **epigenetic** factors may operate and include **endophenotype** representing **intelligence** at a level **closer to the genotype**, provided through **families**, **twins** and **adoption** (Plomin et al., 2008).

As well as

Career designing theories such as RIASEC (J. Holland), Career Construction (M. Savickas), Circumscription and Compromise (L. Gottfredson), Chaos Theory (Pryor and Bright), theory of rational vocational decision making (S. Fukuyama) as well as others

Epigeneses – how from structure less mass develops and progressively differentiates new structures, nascent organs.

Endophenotype – any hereditary characteristic that is normally associated with some condition, but is not direct symptom of that condition.



For example, researches **Lee Anne Thompson and Jeremy Oehlert** (“The Etiology of Giftedness” // *Learning and Individual Differences*, vol. 20, 2010, p.299), stated:

“By 1981 a paper published by **Bouchard and McGue** summarised findings from *thousands of relative pairs* taken from *extant family, adoption* and *twin studies* on *General intelligence* and *conclusively established* that *genes* and *shared family environment* both contribute to individual variation in *g*. In 1990, **Chipuer, Rovine and Plomin**, applied more sophisticated structural equation modeling analyses to the data presented in the paper of Bouchard and McGue (1981) and arrived at *a heritability estimate of 50%* (“*a priori*” – *my remark, K.P.*) with another *10-20% of the variance accounted for by shared environmental* influences leaving the last *30-40% to non-shared environment* and *error*.”



“When this finding was *first* reported, it seemed intuitively *incorrect* since people accumulate experience over the time and it would be expected that the *environment* would become increasingly *salient*; however *behavioural genetic research* has repeatedly shown that environments are not experienced *at random*. Often, environments are *correlated with genotypes*. (p. 299). Active *genotype-environment correlation* (Scar and McCartney, 1984) implies that people *will seek out* environments that are *compatible with their genotypes* <...>. One *potential explanation* for the *decrease in fraternal twin similarity* may be each twin seeking out an environment *that fits* his or her *genotype*” (Lee Anne Thompson, Jeremy Oehlert, 2010, p. 299).



“We propose that development is indeed the result of *nature and nurture* but the genes drive experience. Genes are components in a system that organizes the organism to experience its world” (Sandra Scar, Kathleen McCartney, 1983. *How People Make Their Own Environments: A Theory of Genotype - Environment Effects* // *Child development*, vol. 54, p.p. 424-435).

“Like Chomsky and Fodor (1980), we propose that *the genotype is the driving force behind development*, because, we argue, it is the discriminator of what environments are actually experienced. <...> Rather, *we stress the role of the genotype in determining which environments are actually experienced* and *what effects* they have on the developing person. <...> We distinguish here *between* environments to which a person *is exposed* and environments that are actively experienced or “grasped” by the person ” (Sandra Scar, Kathleen McCartney, 1984, p. 425).



Conclusions could be drawn: We are *genetically determined* (for example, let take J. Holland RIASEC hexagon of interests) *to some types of activities*.

Manifestation of this genetic determination is *inclination* of human being *to some specific activities* or what Linda S. Gottfredson named as “*genetic compass*”: “our *genetic compasses* are made manifest by what we *resonate* to and what *repels* us, perhaps especially when their signals conflict with the expectations of family or friends” (L.S. Gottfredson, 2005, p. 76)

This *inclination* to some activities could be named as a “*gravitation*” or in old terms – “*calling*”. The bigger power of “*gravitation*” – the more obvious of person’s *inclination* to appropriate activities (“getting food”).

Calling (following Aristotle's hylomorphic philosophy) we understand as the *inclination* of human being to some professional activity (outside “*attractor*”) *residing inside* (not outside!) of human being



Therefore,

Inclination could be understood as *inside* human being factor (“*feeling*”) expressed with appropriate extent of *power* forcing person to *gravitate* towards appropriate *attractor(s)*.

Inclination could *be authentic (valid)* and *non-authentic (invalid)*.

Attractor we understand as an **object** *inside or outside* of human being which *pull* person *to itself* with appropriate *power*.

Interaction is *meeting* of inclination with attractor.

Gravitation is measure of interaction.

The bigger power of *gravitation*, the *more obvious* manifestation *of interaction* between inclination and attractor.

Interaction as well as *gravitation* could be *authentic (valid)* and *non-authentic (invalid)*.



Strength of *interaction* could be estimated by power of gravitation between *inclination* and *attractor*.

Quality of interaction depends on quality of *vocational education and training* (taking it in a broad sense).

Quality of **VET** could be measured

Using behavioural genetics' language we could state that "*Self*" as an "**agent**" in the stage of "a priori" in fact is our *genotype* (discriminator) which we are getting from our parents.

Genotype as an "**agent**" or "genetic compass" navigate ("incline") us to appropriate *vocational activities* (or "food"), *which reside* in surrounding environment and in the best way *respond* to the *structure* ("*programme*", "*genetic code*") of *genotype* enabling epigeneses of "*Self*" as an "**agent**" towards "*Self*" as an "**object**" or vocational identity (phenotype)



Phenotype later undergo continuous development according inserted “instructions“ (or “programme”, “code”) in genotype interacting appropriately with specific prototypes of vocational activities residing in environment.

Or, as stated *Sandra Scar* and *Kathleen McCartney* (1983) “Also clouded by an endless regress of *intermediate phenotypes* would be the idea that the correlation *or transaction* between *phenotype and environment* is determined by *development changes in the genotype* (p. 426)

Therefore, we are not free yet to escape from our destiny - “*calling*” (or influence of our genotype).



Concepts of “**gravitation**” and “**inclination**” as manifestation of that “**gravitation**” lead us to conclusion that development of “Self” *is guided* by “*a priori*” (*genotype*), but *not by* “*a posteriori*” (experience). “*A posteriori*” (experience) *is just a “food”* for development of *genotype* (“Self” as an “agent”) to new qualities or *phenotype* (“Self” as an “object”).

Findings of *behavioural genetics* gives *new light* explaining mechanisms of “**Self**” development. Hence, some corrections in our already developed career designing theories should be made.

Conclusions:

1. People are *selective* in choosing environment to experience since our genotype *navigate* us to select *specific activities fitting* best for development of genotype (“Self” as “agent”) towards phenotype (“Self” as an “object”) or *vocational identity*.
2. Influence of genotype manifest itself via *inclination(s)* which push person towards specific *attractor(s)*. This *interaction* between inclination (manifestation of genotype) and attractor (manifestation of prototype of vocational activity in environment) we name “**gravitation**”.
3. Environment are proposing “*menu*” of prototypes of all vocational activities (“cognitive propositions”, Guichard, 2005), but person is ready for *the best* “cognitive response” *selectively* just to those which fit to structure of genotype in the concrete phase of his or her career path.



Two types of inclination could be distinguished: *valid (authentic)* and *invalid (non-authentic)* (the last we could name as “*peripheral interests*”). Both of them has distinctive *external* and *internal* features.

Invalid inclination happens when some “*peripheral interests*” (status or prestige of profession, possibility to earn “big money” or to become popular and wide known, to serve to somebody wishes, etc.) are accepted as “valid”.

Such type of *interests* usually perform role of “*hum*” or “*interference*” and *decline act of navigation of genotype* towards *invalid* attractor (specific activity) which don't respond to *genotype* and is important for authentic development of “Self” (genotype – phenotype transaction).

To avoid “*choke up*” of *valid inclination* by “*peripheral interests*” two dimensional *taxonomy of inclinations* could be used:

- a) *external or psychomotor* (criterion - *efficiency of performance* of vocational activity, *objectively measured*) and
- b) *internal or affective* (criterion - *emotional* acceptability of the process of vocational activity to person, *subjectively measured*).



External features of inclination are **results of performance** which could be *objectively measured*.

Internal features of inclination are **reflected emotions** during the process of performance of activity which could be *measured subjectively* by performer of activity on its own.

Valid inclination for activity is usually **expressed** by **performance results** that are **above average** (objectively measured) to compare to concrete population in a same career phase and by **positive emotions** subjectively experienced when participating in the process of concrete activity.

Individual's performance results **are the signs** of **validity of inclination** which are important to the surrounding environment and people. However, when making vocational choice, an individual **should focus on subjectively experienced emotions** in the process of vocational activity **rather his/her performance results** (*The latter can be continuously improved with intensive practice in a specific vocational activity*).



At least *four levels* of subjectively experienced *emotions* and objectively achieved *performance results* can be distinguished *in the process of vocational activity* when person subjectively experiences :

- a) *positive emotions* and his/her *performance results* objectively are *above average* in the same career phase compare to others;
- b) *positive emotions* but his/her *performance results* objectively are *similar* or *even lower* than average in the same career phase compare to others;
- c) *negative emotions* and his/her *performance results objectively* are *lower* than average in the same career phase compare to others;
- d) *negative emotions and* his/her *performance results* objectively are *higher* than average in the same career phase compare to others.



The most ideal variant would be **a)** when *subjective person's emotions* in the process of vocational activity *are positive* and *performance results* are *higher* in the same career phase compare to others. This is a situation when *person's aptitudes* situated in the genotype are clearly *expressed* (“treasure” on the “surface of the land”).

In the case of **b)** it can be seen that person's aptitudes might be: **b1)** “buried” somewhere “deep in the ground” so that even if a person is highly motivated with positive emotions of acting and persistently tries to achieve *higher than average performance results*, he/she cannot achieve them for quite a long period of time.

However, when he/she finally later on “finds the treasure”, others are surprised with high and rather unexpected performance results;



b2) the source of *positive emotions* is *misleading* since person is satisfied not with the *process itself* but rather with the *status or results* vocational activity gives. In such a case motivation to act gradually decreases since *performance results* do not reach the *required level*. It can be noted that a person “*was looking (digging) for his treasure (talent) in the wrong place*” as he/she could not *properly distinguish* between “*positive emotions*” experienced because *of the status or results* that a particular vocational activity gives and *positive emotions* experienced because vocational activity *itself*.

In the case of **c)**, it is almost safely to say that a person has *neither subjective* nor *objective* preconditions to perform particular vocational activity. Therefore person should look for possibilities to try *other vocational activities*.



In the case of **d)** it is important to look for reasons why a person experiences negative emotions. It can be related to the so-called:

d1) phenomenon of “*negativity*” when a person experiences *negative emotions* not because of the vocational activity itself but rather because of people who cultivate this vocational activity and he or she has negative attitude to those people. Choosing the same occupation would mean recognition of those people what is unacceptable for person;

d2) clearly manifested *values conflict* between person’s aptitudes and his/her experienced education (usually within family) related with *negative attitude* of important people for person to this vocational activity, i.e. the *status* of vocational activity in the eyes of those people (short-term activity results; do not guarantee expected living standards; vocational activity by important people to person do not treat it as respectful, etc.) *are treated as low*. *Assessment* of the vocational activity itself that are received from the *closest and most important environment* becomes more important to person than *performance results* achieved in vocational activity. Such cases are often met *as conflicts* between parents and children when *making decisions* in a family regarding children’s *vocational future* (“what to study?”). In such cases, *negative emotions* experienced in a vocational activity are rather *external* than *internal* by their nature.



This *taxonomy* could be applied for development of *tool* for “*recollections of inclinations*” using modified *ER* (early recollections) technique (M. Savickas, 2012) invented by the French psychologist *Henri in 1894* and developed by Adlerian school of individual psychologist later on.

This *taxonomy* also could be applied for *self-counselling purposes* of any person, who got appropriate *career education*. It could make this taxonomy and *theory behind* simple and quite *universal* since every person is able *to measure* his or her *subjective emotions* to concrete professional activity as well as *measure objectively performance results* in this vocational activity.