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The SUPER-Z (Scheme for Ulterior Processing and Emotive Regulation of Zest) model – on the conflict between pleasure and gratification in personal development.
A proposal for a new theoretical model

Schemat Ukrytych Przekonań, Emotywny i Regulacyjno-Zachowaniowy (SUPER-Z) – o konflikcie na osi przyjemność-gratyfikacja w procesie rozwojowym.
Propozycja nowego modelu teoretycznego

Abstrakt:

W pracy artykule tym zaproponowano nowy model opisujący współoddziałanie elementów wartościowej struktury hierarchii potrzeb, prowadzące do podejmowania decyzji i dokonywania wyborów. W szczególności, zastosowany jest on do zagadnienia rozwoju kompetencji dzieci szkolnych i koncentruje się na słabo dotychczas opisanym od strony teoretycznej konflikcie dążenia do przyjemności fizjologicznej (w warstwie popędów) i dążenia do osiągnięcia gratyfikacji, to jest satysfakcji intelektualnej. Ta ostatnia jest głównym motorem wszelkiej samodzielności w procesie zdobywania wiedzy, umiejętności życiowych i etosu pracy u ucznia. Tymczasem łatwość, intensywność i częstość dostępu do przyjemności na poziomie somatycznym (autoerotyzm, prosta rozrywka) stanowi czynnik uzależniający młodą osobę behawioralnie od rozwiązań, nakierowanych na emocje i na unikanie wysiłku i odpowiedzialności.

Słowa kluczowe: Uzależnienie behawioralne – edukacja seksualna – rozwój poznawczy – hierarchia potrzeb

Abstract:

The present work introduces a new model, aimed at description and graphical display of motivation-emotive processes which regulate one's behaviour. It concentrates on the ulterior processes which take place between the two observables: adversity (situation, opportunity) and the outgoing consequence (behavioural and/or emotive response). The author hopes that it may prove beneficial to counseling and psychotherapy clients. Apart from its compact and educational form, or its qualitative dimension, it also has a quantitative dimension, which encompasses a simple operation allowing for calculation and prediction of one's behaviour and thus helping in an assessment of a given response when decision-making is considered.

Author's intention was to develop a proper tool to describe and research the reality of mutually exclusive processes of pursuing physiological pleasure and cognitive satisfaction (gratification) with regard to the cognitive development of schoolchildren. It also explores the danger of behavioural addiction, as a result of immersing oneself in addictive activities of autoerotism and entertainment. It is crucial not only for the well-being of an individual, but also has a wider, social scope.

Key words: Behavioural addiction – sexual education – cognitive development – hierarchy of needs

I. Introduction

1. Necessity is the mother of invention

The need for transcendence, situated at the apex of the hierarchy of needs by Maslow (1971) and also constituting one of the cardinal virtues, according to Peterson & Seligman (2005), has accompanied the humanity since our ascendance above the animal world. There is an amassing evidence that it played a pivotal role in the foundation of human civilization and our social development.

Archaeological discoveries made by prof. Klaus Schmidt since 1994 (Curry, 2008) at Göbekli Tepe (South-eastern Turkey) has shed new light on the system of needs and motivations of mankind since the beginning of a social man. In the times when the knowledge of writing, of solid tools, sewing clothes, and even food cultivation were still beyond the grasp of our ancestors, circa 11,000 years beyond present, hundreds of them have undertaken an enormous collaborative effort to build a spacious, cunningly arranged and elegantly adorned sanctuary in the middle of nowhere – a temple consisting of solid stone walls and giant monoliths. Lack of technology or food storage facilities at disposal of the founders, makes the size and complexity of this building even more astonishing. From the perspective of human primal drives to consume and procreate, it was purely wasteful and counterproductive. Yet, the temple's foundation inspired a wide pilgrimage movement from around a 150 km radius, and predated the discovery of growing fields, which followed in its vicinity later on, as well as construction of solid huts and houses around it. 'First came the temple, then the city', as prof. Schmidt phrased it. Thus, the previously widely accepted theory of an Australian Marxist archaeologist, Childe (1936, "Man Makes Himself"), which suggested that the civilization had developed due to satisfying basic needs, such as need for growing food to eat, was ultimately shattered.

It has been shown that the higher need for transcendence, or spirituality, was responsible for erection of the centerpiece of a further settlement which followed, and all the subsequent discoveries of a settled down culture.

2. Social cognition

A social cognition of a person, built on implicit personality theories, is not limited to a knowledge about other people and relations with the society, which is encompassed by heuristics of social perception. It also includes an individual style of one's attitude towards a given person or social construct, awareness of authority, and general likeliness of conforming to, or cooperating with, significant persons. These concepts are at the core of the current work. The foundation for these were laid by such researchers as Bandura (1999) or Kofta & Doliński (2000), in whose works the social-cognitive aspect of personality and of the

process of learning and one's development is strongly emphasized.

In the world of psychological studies (Freud through Rogers) there persists a very strong implicit assumption which nowadays originates from the Neomarxist *critical theory* by Horkheimer (1967), challenging and questioning the role of a family, social structure and of authorities. It suggests that the whole adult development of a person remains somehow imprinted and encoded in a child, readily waiting to manifest itself, and it is not necessary to be conferred upon him, granted and painstakingly taught, rather than just be given the opportunity to exhibit itself (and therefore, it suffices when a school only *grows* graduates, instead of *forming* them). The value of an independent exploration and self-motivation of a youngster tends to be overstated. A psychological definition of stages of development would like to see them as inevitable, autonomic and automatic (eg., Erikson, 1997).

This evident error is due to a fact that in the field of research of the humanist and positive psychologies, there are always some outstanding and prominent specimens in their focus, whose traits interest the researchers and which are already fully developed. The scholars would then strive to understand the reason for those above the average development traits to have emerged and what circumstances stimulated and enabled their appearance. In case of psychological experiments or questionnaires, test subjects by default are fully grown-up persons, whose adult traits are already well developed and exhibited by the whole test group, and thus easily overlooked and neglected. It is only one step from there to assume that those traits should be taken for granted and that they appear naturally and automatically.

Meanwhile (Karoń, 2018), on an exemplary field of speech ability, the decisive evidence is provided by research of 'wild children' - ones pathologically deprived of any form of interactions with civilization and society - profoundly, 13-year-old Genie from California (PBS, 1997) and also so called 'Koluchova Twins' from Czech (British Medical Journal, 1976). Linguist Eric Lenneberg in his highly-acclaimed book "Biological Foundations of Language" (1967), propounds a thesis of a 'critical period', or a time threshold beyond which a person is unable to master the ability to speak in his primary language. Regardless of one's physical and mental growth, even being surrounded by best teachers at one's disposal and opportunities to sample and pick up a language, one is unable to develop the ability to communicate in this, or any, language, just like poor Genie.

Examples of children neglected by their alcoholic or otherwise pathological parents and who start to speak considerably later than their counterparts, and even in their adult lives they experience deficits of fluency of speech and narrowed range of vocabulary as well as difficulties in correctly expressing emotions (Hegedus et al., 1984), are well known to counselors and therapists.

With much confidence we can conclude that the development of one's speech is owed solely to the presence of people who already have mastered this ability (it cannot be obtained or invented gradually by those who do not possess it - 'the evolutionary paradox'), and in

such an early age when a child does not yet have access to Piaget's mental operations necessary to grasp the higher concepts of the language (grammatical, semantic, cultural) in their complexity. The whole development is solely dependent on training under a certain age and the supervision of competent teachers who mastered the language structure, and the first of whom are naturally parents.

If, in the course of learning, discouragement takes upper hand and practice is discontinued, the effort spent that far is wasted and does not bring a lasting impact (the forgetting curve, Ebbinghaus, 1885). Edward Nęcka (2002) shows the crucial role of persistence in a creative thought process. During the period of idea incubation, which does not differ from a failure in its apparent form, it is the upload of the subconscious mind with pertinent material which allows for a breakthrough to come, and for one to reach the state of illumination, or sudden realization of a solution.

Before a student learns the taste of delayed gratification connected with mastering certain skills and being able to employ them to his advantage and to gain recognition, esteem and approval (an inner motivation), someone has to ensure that the student keeps making a continuous effort, so that he will not abandon the task early. This role – enforcing *compulsion*, which has nothing to do with violence, but assumes gaining trust and authority by an adult – is devolved to teachers (intellectual competences) and coaches or trainers (procedural competences). They appeal to the energy and time aspects of a student's temperament, particularly Endurance (Wytrzymałość, Strelau 1969) and, exclusively, Perseverance (Perseweratywność, ibid). The competences fall into two beams of traits, with respective competences strongly correlated within either, ie., agency (sprawczość; Wojciszke, 2010) and communion (współnotowość; ibid). On a side note, the peer judges tend to evaluate communion much higher over agency, and not the ability of others to serve myself, but quite contrary, of myself being capable of helping the others.

A teacher, from being an 'overseer' and 'taskmaster', becomes a 'promoter' and 'advisor', only when his student has reached a satisfactory potential of his own inner motivation, so that neither laziness and discouragement, nor inadaptive fundamental beliefs from one's infancy (Ellis, 1956) are decisive in one's range of choices. Two processes are constitutive: one being the development of a habit to learn and grasping the specific mechanism and rhythm of an educational process, and the other being the awareness of benefits of learning (at least in the form of being 'left in peace' and of emotional comfort in view of upcoming exams). Self-motivation is a strong moderator of progress in learning (Zimmerman et al., 1992; Sansone & Harackiewicz, 2000).

3. Emotions' impact on motivation

Emotions play central and vital role in one's life, they define and arrange our self-narrative, as well as provoke our actions (Oatley & Jenkins, 2003). A life without emotions, as we well perceive, would be aimless, dull, and devoid of dynamics. Seligman (2005) proposes to visualise one's positive emotions as a sail of a boat which propels it and sets it in motion, whereas negative emotions constitute its keel and steer to keep it in a vertical position and on correct course.

Apart from their role in the approach-avoidance process (as in the theory of Kurt Lewin – Elliot & Covington, 2001), inherited from the animal world, human emotions grow complex and sophisticated, accompanying a wide range of cognitive processes (Smith & Lazarus, 1990), which include:

- Memorizing and recalling content;
- Learning – transferring content from the Working Memory into the Long-Term Memory;
- Associating facts and memories, strengthening associative pathways;
- Playing an informational role as to one's state (including an information provided to self);
- Regulation of one's behaviour;
- Motivation and strategic planning.

One should realise a set of important differences between basic (simple) emotions and their complex (social) counterparts. The former are associated with basic drives, and as such, they tend to be very strong and primeval. A human being acquaints himself with those very early in his infancy. They may emerge and fade suddenly – along with a volatile effect which they accompany. Physiologic pleasure, as a somatic component of joy, falls into this category and encompasses such situations as:

- Satisfying hunger, soothing fear, eliminating a threat or a rival;
- Quenching a desire, releasing sexual tension;
- A somatic rest state (the domain of the parasympathetic nervous system);
- Enjoying and entertaining oneself.

Quite differently, long-term results, such as instrumental coping, problem-solving (while not entirely devoid of auxiliary coping directed at emotions; Gruszczynska, 2007) are, by their nature, associated with complex emotions. Those social emotions, which are developed in specific social situations and pertain to such, include: shame, guilt, disappointment, envy, pride, admiration, compassion, a sense of vocation, etc.

A specific beam of social emotions which can be identified as intellectual satisfaction, or gratification, promotes planning ahead and exercising patience and persistence. This

gratification can appear as a result of:

- Transgression – reaching beyond oneself and one's limitations (Kozielecki, 1987), in accord with Carl Rogers' self-actualization concept; it is also typical of a religious perception of life (de Mello, 2009);
- Gratification proper – performing an activity not directly useful, but compliant with one's identity, which focuses the 'self', confirms and develops it (Seligman, 2005);
- Hubristic motivation – reaching an outcome with one's own effort, looking to one's laurels where others failed, emerging as a winner of a competition (Strzałek, 2001);
- Gaining respect, approval and commendation from an authority – a parent, teacher, educator, master; passing a male initiation by an elder man (Eldredge, 2010);
- Gaining fame and respect among peers and society;
- Gaining new knowledge or a skill, a new point of view (positive reevaluation), or a new strategy of coping.

Pleasure, unlike gratification, does not evolve and neither does it involve increasing one's capacities, as it is generally experienced at the same level, until it fades with time, due to habituation (Sitkowska, 2000). It is opposite with gratification, which is rarely experienced by repeating the same action over again. It demands development, reaching higher and accomplishing better. An Olympic medal may not be awarded for the same score, a teacher's commendation will not be issued for solving repeatedly the same science problem, and a good engineering solution or patent must be constantly refit and upgraded in order to remain competitive and up to date.

What we are trying to emphasize here is a well known fact from the psychology of emotion and motivation, which covers the difference between pleasure and unrest. A person in the former state tends to just maintain and preserve it, whereas a person in the latter state is inspired to take action and to promote change (*ibid*). A change orientation grows weaker with increased complacency with the situation and resulting release of the tension, as well as broadening the field of attention (therefore losing its focus). In the terms of Julius Kuhl's action control theory (Strelau, 2004), this definitive difference is covered by state orientation vs. action orientation.

4. Psychical addiction mechanisms, behavioural addiction

Groundbreaking research on the dynamics of addiction is a merit of physician E.M. Jellinek, who in (1952) published his work, "Phases of alcohol addiction" (the concept of alcoholism as a disease). Even though he concentrated solely on the therapy of alcoholism, the same set of symptoms and the very mental mechanism he described may be applied to any addiction process in general. This is exemplified in the new 5th edition of DSM classification of 2013 by American Psychiatry Association (APA, 2013), which introduced a new nosological entity, 'Gambling Disorder', or an addictive disorder of the behaviour of

gambling. Due to insufficient research data, an introduction of other behavioural disorder units, eg., the internet addiction (see Marciniak & Przybyszewska, 2017) was postponed to the future release of the catalog.

The psychological addiction theory has its robust cognitive interpretation by J. Mellibruda (1997), who defines the term of emotional states and shows the importance of their positive balance in one's mental health. However, when one finds a way to improve this balance in an artificial way – ie., one that does not really improve his situation – so that he experiences more positive states over the negative ones, the mechanism of *addictive regulation of emotions* takes place (*ibid*). From the education's point of view, such negatives are: effort, impatience, fatigue, frustration. The resources are being spent on work (Dudek et al., 2007). There appears a strong need to dismiss them, and to introduce pleasure, relief, and entertainment in their stead.

The addiction is, by its nature, a process of competing between various methods of coping with negative emotional states and emerging of the one that is inadaptative but attractive, a positive reward in the terms of classical conditioning. As a principle, the closer proximity there is between a stimulus and a result, the conditioning becomes more efficient, and therefore an evasive behaviour bringing about an immediate pleasure will be reinforcing, even though it is also connected with a postponed dissatisfaction and problems. Especially, when there are no serious penalties on the horizon: a mediocre student will be promoted anyway, penalty homework may not be issued, and the material the student learns is clearly artificial and impracticable. A negligent behaviour will be reinforced, while others will be extinguished. The student will pay a price of inelasticity and inadaptivity to future adversities (Rowicka, 2015; Chodkiewicz & Gruszczyńska, 2018). Seeking pleasure and relief, while natural in itself, will be employed in an unnaturally wide range of situations (eg., when one has to work), with harmful frequency or intensity.

One must clearly understand that a given behaviour does not have to be pathological, to produce pathological addiction (sexual educators fail to understand this, as they argue that 'an autoerotic pleasure is natural, and therefore harmless'). Pathogenic is its frequency, loss of self-discipline (or reasons) to refrain from it, and its increasing intensity. The *mechanism of illusion and denial* (Mellibruda, 1997) causes the addicted person to maintain that he is still in full control of the behaviour, and that the circumstances for it to occur are natural. This is precisely why the permissive morality is so disruptive to young persons: it dilutes the ideas of good, health, and moderation, and reduces the chance of realising that wholesome boundaries have been crossed. In what name would a youngster refrain from achieving pleasure?

When the behaviour of which we speak becomes a strong habit, most activities and daily routines of a person will become subservient and adjusted to its pattern. The *mechanism of disintegration of 'Self'* ensues (*ibid*). It is the psychological equivalent of biochemical

habituation to an addictive substance, as well as of the withdrawal syndrome. In the same way that the organism becomes habituated to the presence of a chemical compound, and requires it in order to perform its functions normally, the mind starts to require the addictive behaviour and its effects in order for the thought processes to proceed normally. The addictive pattern becomes the catalyst of normal (or any) functioning of a person. What follows is that this single thought becomes the focal point in one's planning and routines, as it becomes a necessity and outright compulsion. One suffers a loss of control.

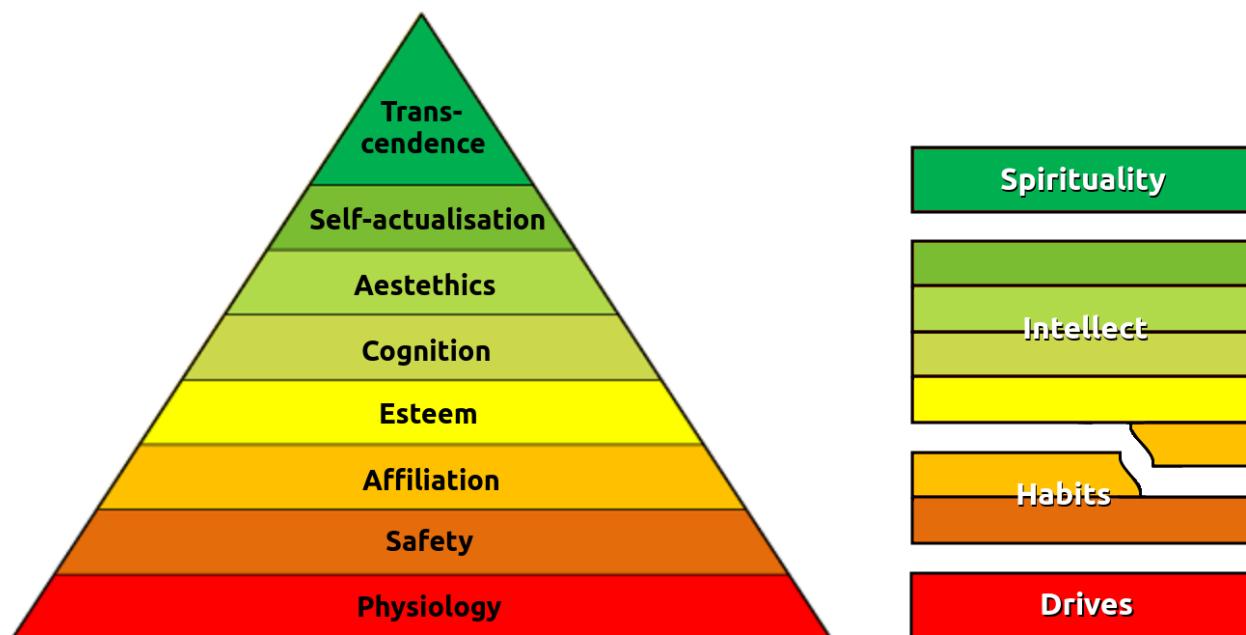
At this stage, the question if the given behaviour still produces the pleasure and relief is irrelevant. On the contrary, just as the dosage of an addictive substance must be increased so that an organism reacts to its presence, the same goes with addictive behaviour: it must be ever enhanced and intensified in order to bring the same amount of enjoyment to the addict (Seligman, 2005).

In case of an intimate relationship, such an addiction would result in viewing the other person from the angle of bringing us pleasure and delivering sensual satisfaction, and whether she is still fun as she used to be. Such a relationship will not evolve or persevere, and will be prone to cheating. There will be no dedication and selfless faithfulness, which are the two factors which constitute the psychological axioms of love by Sternberg (Wojciszke, 2009); from the author's personal experience in psychotherapy of couples, one can expect that the main binding medium will only be a child (which, by the way, will suffer the costs of such a responsibility) and a common ownership of an apartment. Whereas 'Love is always a process of purification and renunciation, of painful alterations, leading to maturity', as indicated by Ratzinger (2007).

A relationship built solely on sexuality and attraction is unable to last, as an infatuation expends biochemically in the time scale of a couple of years, whereas sexuality is meant to be subservient to communion (Bader, 2010), not to exist for its own sake. This is a bone of contention between those with the culture-forming, transcendence-based understanding of reality (de Loyola, 1526; Leon XIII, 1891; Maslow, 1971; Ratzinger, 2007), which considers basic drives just a part of a whole system of a human hierarchy of needs, in fact the lowest one, and the ideologies which view the pleasure and satisfaction as the final goal and only aspiration of a human being (Marx, 1848; Freud, 1929; Marcuse, 1955). For further reference available in Polish, see (Karoní, a,b,2018). Also, see the Addendum (section V).

II. The SUPER-Z model 1. The vertical system of needs

The current model is based on the eight tier hierarchy of needs by Maslow (1971). The graphical concept of a pyramid originates from interpreters of Maslow. He abandoned his previous, five tier model which concentrated on self-reliance and self-realization, as he declared it invalid; instead, he emphasized the human need to surpass one's nature and capacities by opening oneself to the transcendence, via spirituality.



This vision corresponds with our discussion of the external origins of human development, as opposed to an illusion of 'a self-made man'. Even the curiosity of a child, as well as independent exploration of its environment, are due to its parents and caretakers (Wysocka & Ostafińska-Molik, 2015), who tend to its organic needs and present it with a safe and stimulating surroundings. Further continuation of this social learning encompasses the ability to take one's responsibilities and own decisions, which respect rights of the others.

The tiers of the SUPER-Z model are comprised of the aggregate tiers of Maslow's pyramid, as seen above. A portion of the Affiliation tier is advanced to the higher tier to represent this part of the need of belonging which is purely cognitive (abstract) and human in nature. This way, the two lower tiers are inherent to the animal world and – in their intrinsic human complexity – represent the nature, while the two higher tiers represent the culture – as a result of an external formation. Their names reflect action; even the Intellect is defined by the dynamic qualities – fluency and capacity – of the thought process, rather than any static trait (Nęcka, 2000).

The tiers do not emerge simultaneously. First, we are born equipped with drives and some instinctive habits (sensomotor stage; Piaget, 1966a,b), then the cognition and abstract ideas (both cognitive and moral) become available (symbolic operations, *ibid*; post-conventional morality, Kohlberg, 1981). The higher the tier, the later it opens and requires more sublime formation and putting forth effort (Pervin, 2005). Effort inspires instinctive unpleasantness as a result of a need to conserve resources.

The model emphasizes the three main principles:

(1) Of a tiered, hierarchical nature of the human motivation system.

Pleasure is not a sufficient prerequisite of taking action, as much as unpleasantness is

not a sufficient reason to avoid effort. The Drives which govern pleasure are but a piece of a bigger whole, and this whole system works correctly only when fully developed and undivided. Each tier interacts with other tiers and balances itself against the remaining ones in a circular, mutual constraint. One cannot dismiss one of the tiers (say, Spirituality) without negative consequences for the whole system.

There are modern techniques which help make the communication between the tiers more permeable and allow to encompass them with one's self-awareness, neglecting and suppressing none. We refer here to mindfulness (Williams & Penman, 2014).

(2) Of the impossibility of simultaneous dedication to pursuing physiologic pleasure and intellectual satisfaction, the latter being the key to learning advanced competences.

As their nature, goals, and dynamics are significantly contrastive, it is believed – and remains to be quantitatively researched (cf. section VI) – that those two are mutually exclusive, with one of the extremes (a high point) presenting itself in the form of behavioural addiction – where one exhibits an unrestrained urge to satisfy a desire, yet his everyday competences and coherent thoughts are in the state of disarray.

It is a well known fact that addiction therapy subjects must be taught a number of basic skills, which include daily schedule planning, and regaining interest in self-service activities (Grela-Parandyk, 2015).

(3) Of the critical importance of parents', teachers' and educators' influence on a young, developing mind.

See discussion in section I.2. A human being cannot effect one's own cognitive development unattended. Piaget's mental development of a child (Piaget, 1966a,b) – autonomic, however stimulated externally – only equips it with capabilities ('potentials'; 'potencje' – Karoń, 2018) to gain competences, and not the competences themselves. These come with a toilsome process of learning and training, under the supervision of competent and demanding adults. Some powers, such as the ability to speak, can only be conferred upon, never developed by one's own effort.

2. The correspondence principle

In this section, we cover the similarities (facade compliance) between the current model and other, well-established theories, which support its validity. A full list may be found in the unabridged paper in Polish, here we will limit ourselves to just a couple of significant examples:

- We observe close resemblance of the SUPER-Z tiers with the stages of moral development by Lawrence Kohlberg (1981):
 - 'I want' - the pre-conventional stage – corresponds with the tier of Drives;

- 'I must' – the conventional stage – corresponds with the Habits tier;
- 'I choose' – the post-conventional stage – corresponds with the tier of Intellect and Spirituality. It also shows, at what age a mature spirituality of a person starts to develop (as an independent and consciously codified and internalised entity, although originating externally).
- Our vertical model exhibits compliance with the time scale of behaviour consequences:
 - In its lower areas, the short-term and ad-hoc results are located. It corresponds with the principle of time and space proximity from a stimulus to a response in the classical conditioning (including addiction), and the temporary nature of satisfying the basic drives, as they unfailingly reemerge in a scale of hours (hunger, drowsiness, etc.).
 - In the higher areas, the long-term and deferred effects take lead. An intellectual effort must be planned and undertaken. Training must be endured and performed regularly, before the results start to show. With regard to Spirituality, or Transcendence, we can speak of the results which surpass and exceed both the scope of awareness and the lifetime of a person, or the society as a whole.

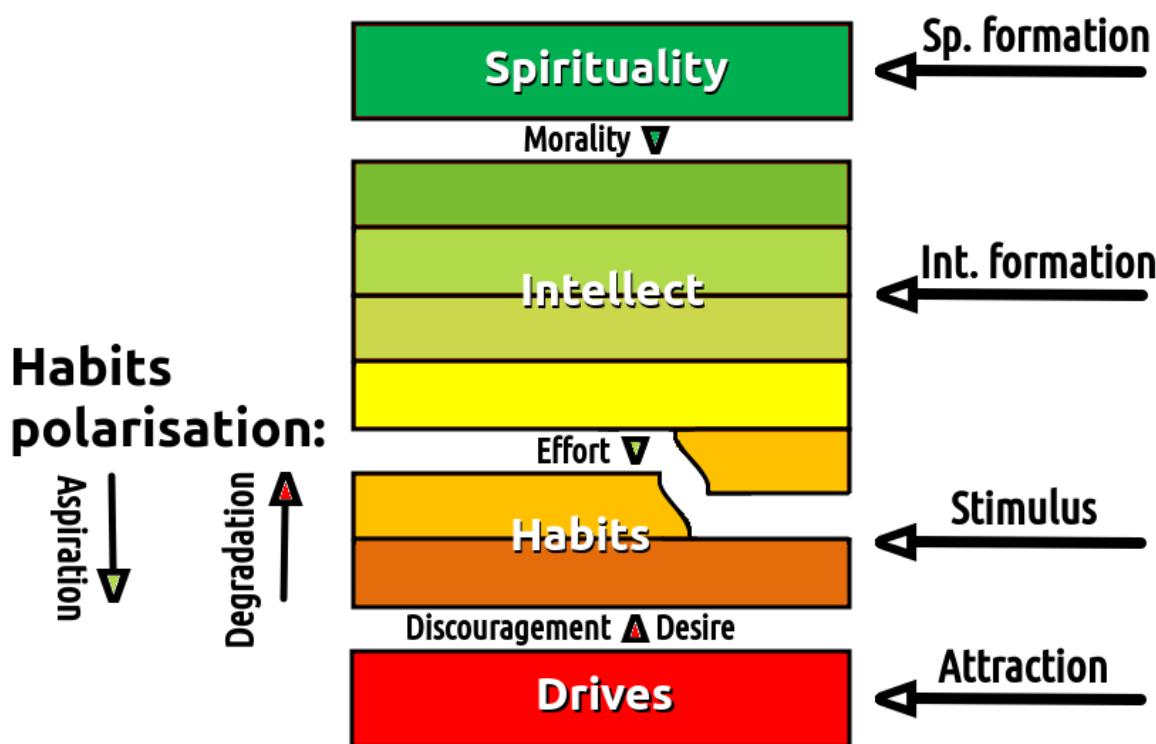
3. Primary sources of tier potentials

A relative level of activation of a given tier, its charge with information and level of arrangement, we will call its potential. It will determine a response strength (reactivity) of this tier to external interactions as well as those originating from other tiers.

The potential of each tier above the Drives and rudimentary innate Habits, always originates from outside the system. Originally, its source lies in heredity, curiosity when provided a safe and stimulating environment for an infant to explore, upbringing effectuated by parents, and early education.

4. Tier interactions

The potentials do not come into direct contact with each other and do not mutually neutralise. Following an electrostatic intuition of the word 'potential', one should imagine those more like charges on plates of a capacitor, which induce each other at a distance by causing polarisation.



An influence of Spirituality on Intellect may be identified as morality (or work ethics). The Spirituality, when adequately developed, arranges the motivation system to follow one's higher purpose, or vocation (de Loyola, 1526; Heszen-Niejodek & Gruszczynska, 2004).

- A restrictive morality is the only one which allows for an inflexible intellectual attitude towards an unpleasant activity of performing work, which brings about no immediate results save being tired and discouragement. In this case, our actions are subservient to the work ethics.
- A permissive morality allows for exceptions and compromises, which ensue a loss of persistence and justice (a moral appraisal will be circumstantial and relative to one's own interests, to the point it may even justify theft). As a result of justifying one's actions rather than supervising them, strokes of conscience and unpleasantness will be removed, but at expense of effort and regularity. Intellect will cease to improve itself and govern the motivations, but instead it will conform to Habits.

One may conclude that the only morality which fulfills its definition, is the restrictive one. Applied to Intellect in the form of conscience, it will endorse undertaking and maintaining effort, which will become customary and therefore reflect upon Habits. Such an influence of the Intellect tier on the Habits tier we will call its polarisation in the direction of Aspiration.

- From an opposite direction, a natural desire to discontinue effort and seek relief will originate from the Drives tier. It will be influencing the Habits tier in order to introduce a custom of avoiding work and concentrating on pleasure (say, in a form of an autoeroticism), and will attempt to polarise it in the direction of Degradation.

- These two: Aspiration and Degradation coexist at the Habits tier and selectively enter applicable interactions. Their influences mutually contradict and the overall resultant potential of the tier is the average of both, ie., their subtraction difference. We will be using the value of either or the average, depending on the specific nature of the interaction, ie., to which one it applies.

The proper goal of an education system (Parsons, 1959) is to develop in a student both a technique and a custom to improve one's competences. It does not aim at automatic reproduction of a given activity, as we would expect from instrumental conditioning, but is about developing a habit of employing one's mental powers and awakening his creativity for problem solving, without an external enforcement (which remains necessary early in the process). This becomes possible as the student develops a habit for regular work, accompanied by his realization of the prospects and benefits of studying. This, in turn, invokes an emotion of intellectual gratification (a result of an equitable system of marks, grants, commendations, and certificates, as well as a facility of after-school learning clubs, field trips, and so on), which is a precise opposite of training for obedience's sake and simply to carry out a programme. There is a degree of liberty in approach granted to Polish teachers, who should realise they are not doomed to follow inadequate and demotivating guidelines, but instead inspire pride in students of their history and their nation's considerable contribution to European identity, culture and science (Brambor, 2004). We are the architects of Europe, not its voiceless subjects, even though several European governing bodies would prefer it the other way.

Aspiration, therefore, stands for self-discipline, ambition, and the awareness of the wider perspective. In a hypothetical situation of a lack of discouragement due to expending attention resources (especially true for inexperienced students), and a lack of disappointment and cases of unfair treatment (still being a part of learning the truth about adulthood), we would observe a 'behavioural perpetuum mobile' with characteristics of a 'gain spiral'. This is, however, unrealistic, as we have already established that the discouragement (the desire to conserve energy and experience relief) is an ever-present and natural element of the Drives tier.

In fact, an opposite trend is quite possible: due to dedication to enjoyment and not committing to work, one's Habits may become polarised in the direction of Degradation so strongly (ie., addiction-wise), that no external stimuli would return a positive response in the form of a meaningful effort.

Because of the instinctive and basic nature of the Drives, a situation of one being addicted to Aspiration, where no desire (like hunger) would produce a hesitation or reduction in productivity, in longer time intervals, is strictly impossible. Workaholism is formed around a compulsive need of evasion and repressing, and not one's aspirations or intellectual needs; on the contrary, a workaholic is increasingly aware of suffering personal and social losses due to his behaviour (Lipka, 2013; see chapter 4). A closest approximation

of this theoretical state is covered by the term of a virtue, as defined by theology and, less precisely, by psychology (Peterson & Seligman, 2004).

In the present application to school education, our model assumes a positive role of intellectual satisfaction and demotivating influence of the desires. It is, however, a convention. When applied to upbringing in a pathological family, a participation in a criminal gang, or intolerant tribalistic religion, the roles of Aspiration and Degradation indeed are swapped. There, the Intellect dictates to be more efficient in theft and deception, to entertain the thought of one's supremacy through violence, and to exercise contempt – to the point of wasting one's life in a terrorist attack – while the survival instinct, the desire to be left in peace, and the basic positive interpersonal feelings all strive to inspire pity and refrain in an offender. What separates a healthy situation from this one, is the adopted model of Spirituality and morality (de Mello, 2015). We can therefore observe the importance of its proper development, with compliance to the greater social good and being purely impartial and all-inclusive ('Love thy enemies').

5. An arrow convention

Interactions between tiers of the system introduced in II.1. and the flow of the thought process (from causes to effects, or from adversities to emotional and behavioural reactions) are indicated by arrows drawn between the interacting tiers. There is a vague similarity between these and associative pathways in one's mind and memory – the flow pattern of a selected thought. In this case, the time scale of the process is milliseconds (implicit associations) or seconds (a conscious mind; Greenwald & Farnham, 2000). Alternatively, with an aid of the arrows we can follow the socratic dialogue in one's mind, dilemmas, hesitation, and the decision-making process – in the time scale of hours or days (Strelau, 2004) – or even the primary and secondary appraisal of coping resources (Lazarus & Folkman, 1984).

Author's therapeutic intuition suggests that, when drawing such a graph during a counseling session, one should arrange and supply arrows with annotations in accordance with client's self-description, for the sake of visualisation and prognostics.

Whenever an arrow, or arrows, enter a given tier, an arrow must come out of it:

- pointing at another tier (or a number of arrows, each directed at a different tier) – the interaction progresses and carries on,
- or
- leaving the system and indicating its final response (only one) – which ends the graph.

In this fashion, starting with arrow(s) entering the system externally (an adversity,

opportunity, or someone's influence) and pointing at applicable tier(s), we consequently fill in the graph with one-directional arrows. These are identified during the therapeutic conversation between a counselor and his client, or a researcher and his subject.

One should understand that the model produces only tentative predictions as to one's behaviour. As it is true with any theory of personality traits, a set of tier potentials does not determine one's choices, only approximates the energy cost of a given choice and therefore its likeliness. On the contrary, seeing one's deficit, one may undertake an extra effort or training to compensate for it and fill in the gaps in one's resources.

6. A new tool for Cognitive-Behavioural Therapy?

Up to this point, the SUPER-Z graph functions as a tool for visual description of one's motivation system, his beliefs, emotions, needs, and their interactional influence on an overall response to a given situation or opportunity. An optional procedure of the 'motivation calculus' described below (II.7.) takes this description one step further, by allowing for an estimation of a relative strength of the response and their contributing factors.

In this fashion, the SUPER-Z graph may be viewed as an aid for further detailing of the knowledge derived, eg., from the all-popular handbook "Mind Over Mood" (Padesky & Greenberger, 2018), specifically its tables 6.1. (noting thoughts), 2.1. (situation description), and 11.2. (behavioural experiment), by the Polish edition's numbering. A rule being in effect that every inbound interaction arrow must be accompanied by an outgoing arrow, is especially beneficial here, as it enforces some structure and consequence in the subject's narrative, and endorses looking for causalities in one's motivation.

The current model is simplified, in the respect that it was created for its brevity and easiness to use, as well as lack of psychological or arithmetic skills required to interpret and use the graph. It may be further developed as a therapeutic aid, or as a scientific tool.

7. Motivation calculus

Let each tier have its current potential assigned (assessed), by denoting it with a number of strokes – 0 through 3. This will indicate the reactive strength of a given tier, or the amount of effort already dedicated to load and improve it. Zero indicates a negligible level, and 1-3 indicate a low, moderate, and high level, respectively. The more developed a tier, the more (re)active it is in the cognitive process. Similarly, zero to three strokes should be assigned to external arrows entering the system, denoting their relative strength or relevance.

- In case of motivating and positive contents or factors (action-wise, not moral), we arbitrarily adopt a convention of a 'slash' stroke: /, //, ///. Arrows are additionally supplied with a plus '+' sign for the sake of clarity.

- In case of de-motivating and otherwise negative elements, we adopt a convention of a 'backslash' stroke: \, \\, \\\. Arrows are supplied with a minus '-' sign.
- When neither can be ascribed, or the content is strictly neutral, use vertical 'pipe' strokes: |, ||, |||.

As indicated above in 4., at the tier of Habits we will most likely be required to have both positive and negative influences simultaneously for our description to be complete. The average, or result of subtraction, of these two is the general polarisation of the Habits. We will be using either of the two components, depending which one is applicable to a given influence or stimulus.

One should begin the graph with placing external arrows, and determining their relative strength (0 through 3), as well as relevant strengths of the graph's tiers potentials. Subsequently, resulting arrow strengths are no longer arbitrary, but are a simple consequence of the arrow topology and relative strength of the current tier (see section III for examples):

- One has to calculate an average value of an arrow's strength falling into the given tier and the relevant tier's potential.
 - In the field of Habits, for motivating effects (plus sign arrows), we consider positive potentials, and for de-motivative effects (minus sign arrows), we take into account negative potentials. If the interaction regards hesitation between either, the flow of arrows conforms to the mean potential (the general polarisation of the tier), for that choice is more likely for the system to follow.
 - For the remaining tiers, where a single potential is assigned to it, it is activated by any interaction – both positive and negative. It shows the general reactivity, the level of activation of the given tier (whether constructive or destructive), as opposed to the desire to avoid interaction and not to act at all.
- A resulting (outgoing) arrow bears the sign and strength of the average of the tier's potential and the strength of the inbound arrow(s). Plus and minus contributions weaken each other, in the range of 0 through 3.

Half stroke is rounded up, according to the elementary arithmetic, so that / + // = //, whereas / + / = /.

One should, however, remember to follow the order in which averages are calculated, so that they agree with the flow of the arrows. A mean value in our case is not an associative operation, as we forget about the number of elements (the average's weighs) which contributed to the average so far.

III. Examples

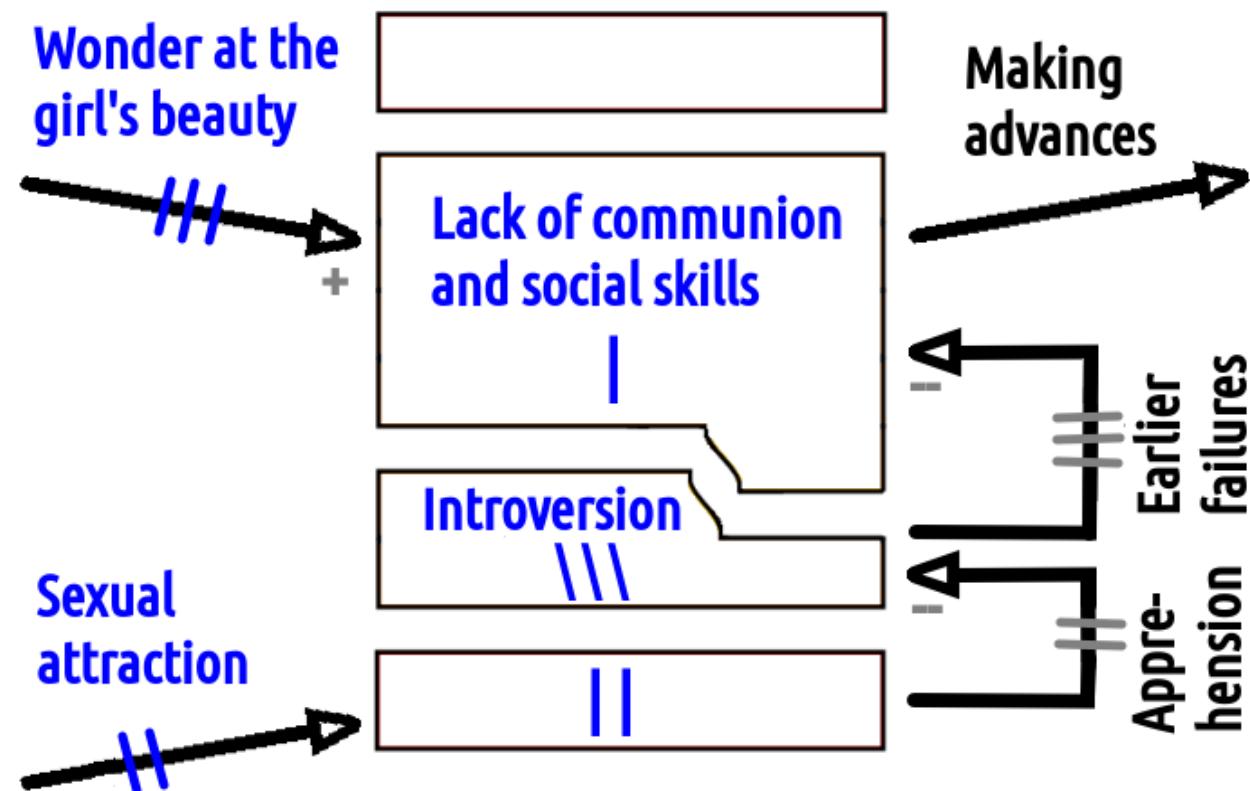
Examples were chosen from the area of male-female relationships, in accordance with other sections' focus on sexuality and virtue/vice development. The colour **blue** indicates primary potentials and external forces. These are determined arbitrarily in advance. Topology of arrows (their number and what tiers they connect) is then determined by a self-narrative of a patient or subject, with the rule remaining in effect that any number of incoming arrows must result in an outgoing arrow. The colour **dark grey** indicates numbers resulting from subsequent averaging, as those are calculated and never arbitrarily adopted.

Only two examples will follow; for more please refer to the unabridged version of the paper, which is available in Polish.

1. Example one: a shy youth picks up a girlfriend

The result is a timid and therefore probably unsuccessful romantic advance. Take note that the input arrow at the Drives tier has no minus or plus sign, as it does not conform to moral evaluation. A weak development of the Intellect tier causes extinction of either influence (rather apathy, than taking action - whether the motivation is good or bad) and, as an outcome, we expect a weak and unpromising effect of the zero force, as $(// + |) - (\backslash\backslash + |) = // - \backslash\backslash = 0$.

If the boy had some applicable passions in his arsenal (say, poetry, astronomy, or romantic strolls), in which the 'Wonder at the girl's beauty' could reflect and find reinforcement, entering the system at the Sense of Beauty level of the Intellect tier, then the outcome would be much more promising (a positive, non-zero force). He should also

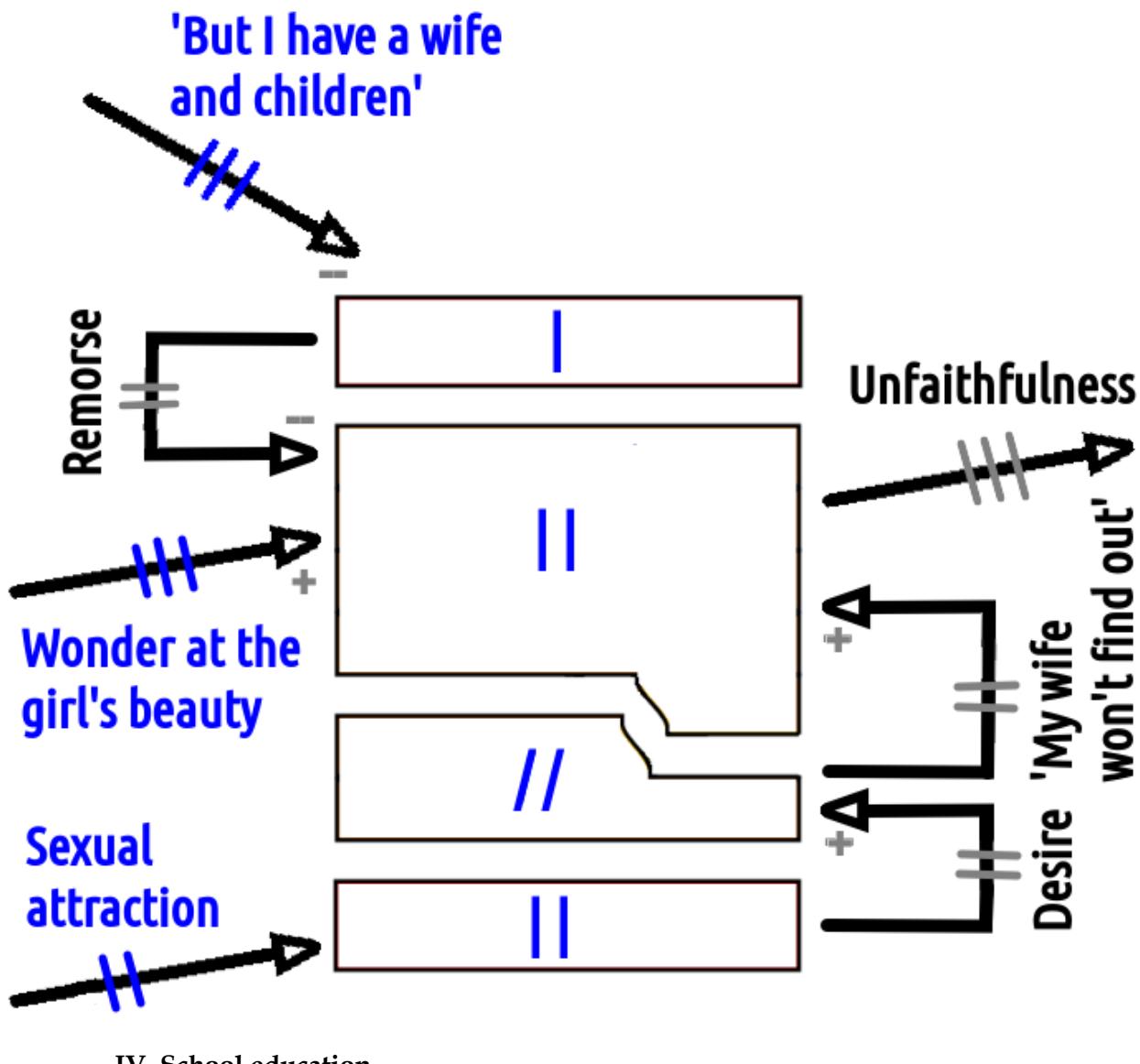


consider planning some workarounds of his introversion-related habits.

2. Example two: marital unfaithfulness with a female coworker

As a result, we obtain a strong inclination towards being unfaithful and taking advantage of the situation ($5 / - 2 \backslash = 3 /$). Lack of competence in the Spirituality tier (or restrictive morality) and previous experience with concealing facts from one's wife (Habits) lead to likely expression of the harmful behaviour.

As usual, inhibiting factors are shown with a minus sign, whereas stimulating factors bear the symbol of a plus sign. This has nothing to do with moral appraisal of the situation, nor with the Aspiration, in application to the education process (II.4.1., IV.1.).



A general SUPER-Z graph and analysis (example three)

An education process, described in the theoretical section, aims at developing the Intellect – knowledge and competences – by the means of habituation of thinking 'outside the box' and taking up challenge when facing an intellectual problem. It is opposed by a natural drive to conserve energy and to seek distractions. The conflict is played out at the tier of Habits.

Depending which habits are prevailing, and therefore, what is the average polarisation of the Habits tier, two outcomes are possible:

- In the case when negative habits (indicated by \\ 'backslash' strokes) prevail over positive ones (/// 'slash' strokes score), we have the situation indicated on the graph below by the outgoing dotted horizontal arrow to the left – the behavioural addiction is being accumulated, and we risk strengthening of the negative polarisation score of the Habits tier. This describes the situation when a student has not taken up effort and educational challenge (or has not been properly motivated/coerced to take them up), but instead, he or she focused on self-indulgence and entertainment, by skipping school, daydreaming during classes, not paying attention, or cribbing homework from someone else.
- In the case when positive habits outweigh or at least balance the negative ones, we have the situation of the outgoing arrow to the right, indicating that effort has been taken. (It is followed by the dotted line, as to signify the resulting accumulation of knowledge in the Intellect tier, and the feedback dotted line to the Habits tier, denoted Aspiration, which shows the possible increase of the positive Habits potential.) This applies to the situation when a student has either been properly obligated to take up effort, or is already accustomed to regular work and postponed rewards, and wishes to experience gratification again, therefore the effort.

Naturally, the interaction described above is long-term and delayed as to its effects, in accordance to the time scale of the learning curve (Ebbinghaus, 1885; Wright, 1936) or the addiction curve (Jellinek, 1952).

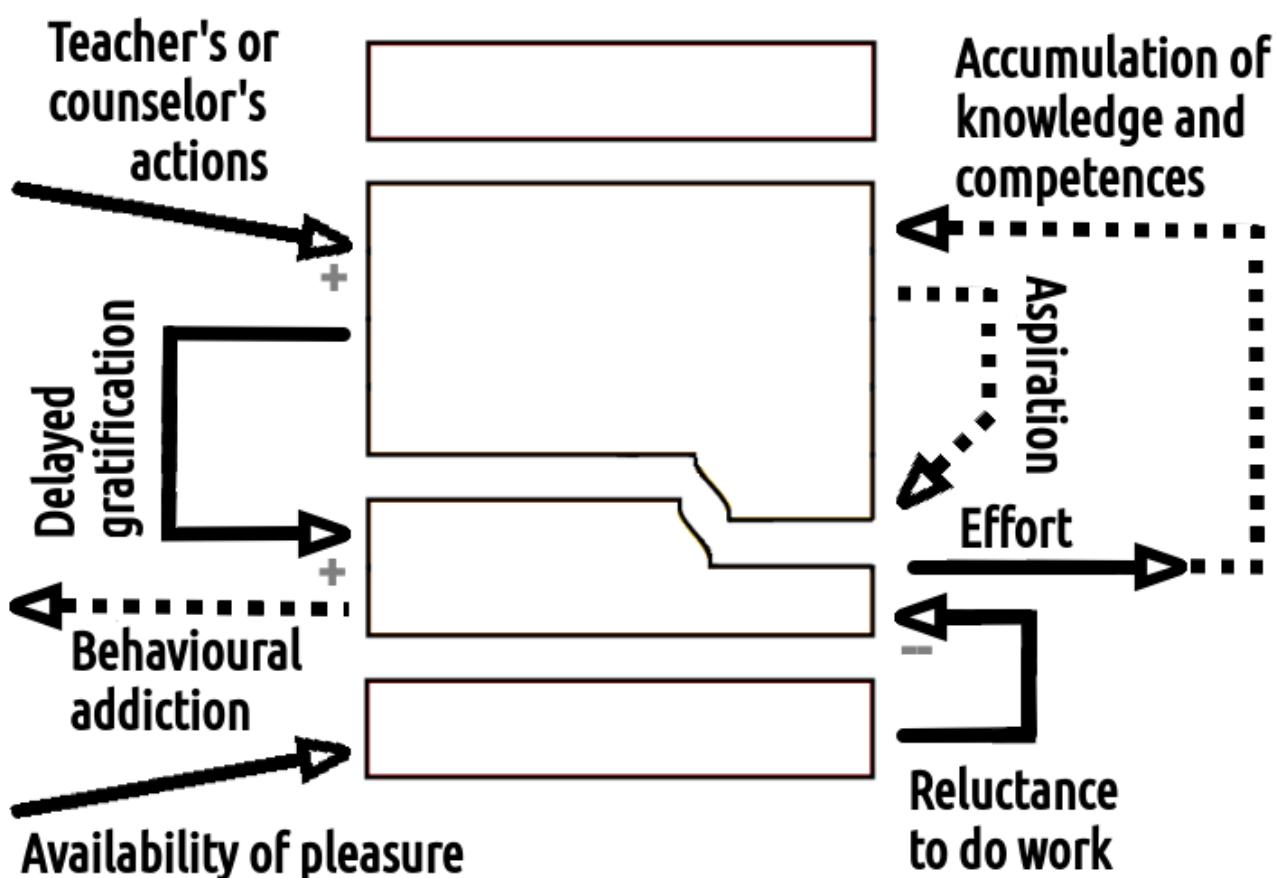
Let us take note that, in agreement with the theory of the SUPER-Z model, an interaction took place in which the Habits were impacted by either the Drives tier (discouragement) or the Intellect tier (effort), appropriately to the magnitude of its mean polarisation (on the Degradation-Aspiration scale).

Graph analysis presents us with a simple conclusion:

The outgoing motivation strength to gain cognitive or procedural competences is the function of the four following independent variables:

- Competence, justice in judgment, and tactics adopted by the teacher – the increasing function (graph: the upper external arrow);

- Already possessed resources by the student in the Intellect tier: moral guidelines, scientific proficiency, sense of beauty and symmetry, curiosity, and the awareness of delayed gratification – the increasing function (graph: the Intellect tier potential);
- Availability of distractions, physiologic pleasure, and the opportunity to abandon studying – the decreasing function (graph: the lower external arrow);
- The magnitude of already accumulated habits to exercise truancy, laziness and entertaining oneself – the decreasing function (graph: the Degradation polarisation of the Habits), or, on the contrary, student's enthusiasm to gain gratification and advance competences – the increasing function (graph: the Aspiration polarisation of the Habits).



We observe that two external manipulations may be employed to ensure results in the education process, and a wise teacher uses the combination of both. Firstly, it is awakening the students' interest and curiosity, by showing them the beauty and symmetry of the universe in its fascinating complexity and purposefulness, and by posing interesting and adequately challenging problems, as well as treating them fairly. And secondly, it is reducing the availability of pleasure which does not encompass studying, or in other words,

enforcing discipline and dedication to one's studies. Entertainment, if employed, must be associated (positive conditioning) with learning and obtaining results, and never for its own sake. It should win students' interest and attention, not their favour by simply reducing their workload.

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