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## Decisional procrastination of school-to-work transition: Personality correlates of career indecision

**Abstract:** Procrastination as putting off until tomorrow what one had intended to do today is well-known tendency in everyday life. In an attempt to understand the character of procrastination in different life-domains, a large body of research has been accumulated over the last decades. This article was aimed to evaluate a specific decisional procrastination of school-to-work transition (SWT) that is treated as maturity postponement. Two studies are reported examining SWT procrastination defined as career indecision among Polish students graduating universities. In Study 1 ( $N=366$ ), attitudinal and identity statuses were analyzed as correlates of career procrastination. A path analysis conducted for the model, which was aimed to explain the influence of career self-efficacy and occupational commitment on career indecision (dependent variable), revealed its very good fitness ( $RMSEA=.000$ ). Those two independent variables explain 10% of career indecision variance. Stepwise multiple regression analyses conducted to ascertain relationship of five identity statuses (Brzezińska, Piotrowski, 2010) to procrastination measure (career indecision) showed that Commitment Making and Ruminative Exploration are strongest predictor variables. In study 2 ( $N=157$ ), the stepwise multiple regression analyses conducted to ascertain the independent relationship of each of Big Five personality factor revealed that Neuroticism and Extraversion accounts of the most of explained variance of school-to-work transition procrastination.

**Key words:** Decisional procrastination, indecisiveness, career indecision, personality correlates, developmental transition

### Introduction

#### Decisional procrastination as prudence versus lack of resolve

Procrastination defined as a trait or disposition for delaying, postponing tasks and decisions has a long history (Milgram, Tenne, 2000). Science research connected with procrastination is conducted in different theoretical models (Krause, Freund, 2014) as well as different life domains (Klassen et al. 2010). Amongst the most popular models the dynamic concept of Heckhausen (1989) can be listed. It defines procrastination as the tendency to delay initiation of goal pursuit in different phases. Another theoretical model, in which a lot of research is undergone is the Lazarus and Folkman (1984) Triple-A Theory (Appraisal-Anxiety-Avoidance) cognitive model, formulated as part of a broader research area connected with coping with stress. Yet another analysis model proposed by Kuhl (1984) in the Action Control Theory postulates a differentiation of two

meta-control processes: self-control and self-regulation. Self-control is an intention-driven inhibition of counter-intentional processes (e.g. concurrent affective preferences) which immediately leads to avoidant procrastination. In this case a decision is taken, but requires intent inhibition to execute. Additionally self-regulation is a higher level of conflict reduction, which includes adjustment and facilitation. On one side, self-regulation adjusts counter-intentional affective preferences to current intents and vice versa, whereas on the other side it facilitates relevant actions. It is the dysfunction of this control process that leads to decisional procrastination (Milgram, Tenne, 2000).

Just as there are multiple theoretical models in which studies on procrastination are conducted, there are various domains of life that are thought to be most prone to dysfunctional self-regulation in the form of decisional procrastination. K. Klingsieck (2013) listed six domains of life, in which the phenomenon of procrastination manifests itself most often: academic, daily routine, work, obligations, health, leisure, family and partnership, social contacts. It

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does not seem that procrastination as the well-known experience of “putting off until tomorrow what one had to do today”, should be confined only to these domains. Nowadays we observe a constant propagation of this phenomenon on new and sometimes even exotic domains of life, which introduce new areas of specific procrastination, like for instance bed-time procrastination (Kroese, 2014).

Procrastination defined as “the purposive delay in the beginning and/or completion of an avert or covert act, typically accompanied by subjective discomfort” (Ferrari, 1994) is a dysfunction that 20-25 percent of adults in the general population suffer from (Ferrari et al. 2007). Procrastination is a phenomenon that is generally counter-productive in a person’s life, however some studies indicate to functional aspects of delay (Schraw et al., 2007). Procrastination is a strategy often applied regardless of the realization that delaying decision making or avoiding obligations solves nothing, moreover is frequently the worst possible course of action (Steel, 2007).

The subject-matter and research presented in the latter part of the article is a specific type of decisional procrastination manifesting itself in the inability to come to a decision in a timely manner regarding realization of developmental tasks and life tasks in early adulthood. In the first instance it is a problem of delaying the identity consolidation of oneself in adulthood (Schwartz, 2007, Cote, 2005), in the second instance it is delaying the life-task of school-to-work transition (Banka, 2004; Fouad, Bynner, 2008). Thus, the subject-matter of further analysis of decisional procrastination in the latter part of the article is difficulties with decision-making in domains of professional development and transitioning to adulthood. Both aspects of developmental procrastination can be summed up in one dire question: „Progress or procrastination?” (Fletcher-Campbell, 1998). These are so difficult to overcome that J. Arnett (2000) introduced a new term, called „the emerging adulthood” to define a developmental age that is hung in a developmental decision-making vacuum.

### **Career indecision as result of prolonged procrastination of maturity**

One of the most important effects of prolonged procrastination is a phenomenon called “indecisiveness”. It is a set of affective, cognitive and behavioral reactions to difficulties an individual faces, when manifesting ones identity in the surrounding environment, which is blurred by nature. Indecisiveness as an inability to coordinate life-goals linked with professional career was known and studied for a long time (Super, 1972), but in the post-organizational era of school-to-work transition (Iellatchitch, Mayrhofer, Meyer, 2003; Fouad, Bynner, 2008) indecisiveness acquired a new meaning. Traditionally the theory of *career indecision* was related to developmental difficulties, thus linked with career choice and a decision that an individual faced when choosing an optimal educational path in adolescence and young adulthood (Rojewski, 1994). New areas of career development resulted in the basic problem of the indecisiveness theory to be still valid. However, expressed

most distinctly in the question: „Why some individuals are unsure of their career choices, whereas some are confident about them?” this needs to be expanded on the entire period of adulthood of an individual.

Making life changing decisions in a chaotic reality is increasingly difficult and there is always a risk of failure, be it simply the assessment of pursued goals and sought after values or in the goals themselves. Therefore, it is no surprise that nowadays people link the most important life issues with career decision. The potential risk of error in judgment and life-goal choices, as well as the risk of failure in these aspects is extremely stressful, triggering special self-regulatory mechanisms that protect the identity of an individual from negative consequences of irreversible discontinuation as a result of mistakes made.

One of the self-regulatory mechanisms triggered in face of a threat of potential wrong decision is indecisiveness (Spunt et al. 2009). Indecisiveness is the most basic form of self-regulation when faced with a real or potential threat of discontinuation of identity in ambiguous situations, because it can be narrowed down to the psychology of doing nothing (Anderson, 2003). In this context, doing nothing does not necessarily have only negative connotations, but fits a certain life philosophy, which can be summed up in the words “make haste slowly”.

Indecisiveness as decisional procrastination is a pattern of coping with stress, which in psychology is analyzed in relation to several sources. First of all, indecisiveness is identity based, i.e. its roots are in excessive self-criticism in relation to an individual’s resources from anxiety, shyness and depression (Saka and Gati, 2007). A second source of indecisiveness can be a lack of environmental resources like poverty as well as too many options to choose from, as is in the case of having to pick a career path without a sense of calling for a particular profession (Duffy and Sedlacek, 2007). A third source of indecisiveness can be problems related to cognitive functioning of an individual in his/her environment (Palatano and Wengrovitz 2007).

There are two separate indecision mechanisms, namely functional and dysfunctional indecisiveness or chronic indecisiveness (Rassin et al. 2008), which makes decision making impossible in basic life domains, namely: work, education, household or marriage, regardless whether an individual is experiencing stress or not. Functional indecisiveness is an adaptive developmental mechanism that enables an individual to seek the best possible life solutions related to his/her career or other life plans. The developmental mechanism of indecisiveness is a process of delaying the decision making until more suitable circumstances arise as well as finding a value in life that an individual perceives as worthy of dedicating his/her life to (Guay et al. 2006).

The developmental mechanism of indecisiveness points to an inevitable forming of a temporary inability to make important life decisions that require an individual to recognize values in his/her life-span (Saka and Gati 2007). From this point of view indecisiveness is without a doubt a defense reaction from choosing wrong values or values that seem right at the time, but ultimately are unsuitable

in the long-term. Delaying decision-making, in response to potential threats of uneducated life choices, protects an individual from irreversible losses or a risk of falling into meanders of an empty life (Palatano and Wengrovitz 2007).

Functional indecisiveness is an applied psychology of doing nothing not in the category of “how?” but “when?”. Avoiding hasty decisions is an inevitable result of difficulties in value and priority selection. Decisions are postponed because of the inability to decide which alternative to choose, when they are equally important for an individual. In this light, indecisiveness is expecting that postponing a decision in a dynamic situation will result in better future circumstances for noticing transparency in a system of values. When expected usefulness in every set of hypothetical states of the future is estimated to be equally probable, then acquiring a better overview of a situation by stalling is perfectly justified, but only in dynamic situations (Tykociński, Ruffle 2003). In static situations, deliberation does not lead to a better overview of a given situation, thus from a value-seeking standpoint it is counterproductive (Palatano, Wengrovitz 2007).

Classic concepts of indecisiveness tie this phenomenon with notions of career crystallization, vocational maturity and career maturity (Super 1972). D. Super’s concept of maturity points out a gradual fulfillment of professional development within subsequent developmental stages in an individual’s life cycle. New concepts of career maturity that include new contexts of an ever-changing environment, assume that maturity is a process that is repeated in an individual’s life cycle multiple times, depending on the career capital (Iellatchitch et al. 2003) and identity capital (Cote, 2005). Career maturity is defined by such traits as: elasticity, openness and decisiveness (Creed, Patton, 2001). It is an identity competence, which develops in time and through experiencing the surrounding as being aware of obtaining other life competencies by an individual. Decisiveness is not genetically but situationally determined through an active struggle against environmental pressures.

Career maturity has two dimensions. One of them is career decidedness and the other is career commitment, meaning the level of engagement in set career goals. Career maturity crystallization – i.e. shaping of preferences as identity types, e.g. Holland’s hexagonal identity concept – goes through a phase of career provisional commitment. Hence, an individual can have a crystallized career maturity stance, i.e. crystallized preferences within a given identity type (e.g. conventional, entrepreneurial or artistic), but it does not need to have a crystallized concept of a specific career choice. Thus, the knowledge of: “what interests me in life and who am I because of it?” is not equal with what an individual wants and can do in his/her life. This state is defined as “fear of commitment” (Wolfe and Betz 2004). In other words, a general career decidedness as a problem of identification of personality goals and their compatibility with corresponding career environments is one thing, but another thing is the level of career commitment in career fields as a problem of life-goal crystallization in given set of circumstances (Lent et al. 2000).

Studies on career indecision are conducted in two directions. The first one focuses on the indecision syndrome (Searlich and Betz 1990), i.e. emotions and states experienced by individuals that are classified as decided and undecided. The second one studies the differences amongst the indecisive personality, as well as the differences between developmental indecisiveness, typical for individuals temporarily undecided, and chronic indecisiveness.

The differentiation between developmental indecisiveness and dispositional indecisiveness relates to the differences between the lack of an action plan as a natural stage of development and a pathological personality as a consequence of an abnormal development. However the notion of chronic indecisiveness applies to individuals who are permanently incapable of making a career decision based on their own preferences and abilities. Contrary to career indecisiveness as a natural state of development featuring uncertainty and a hindered decision-making capability that diminish through an individual acquiring life experiences and knowledge (Fuqua, Hartman 1983).

The requirement to overcome personality indecisiveness is, according to Wolfe and Betz (2004), the sense of career self-efficacy. It is a pursuit of environmental exploration reflected in five competencies related to career choice: 1 – self-esteem accuracy, 2 – collecting professional information, 3 – goal selection, 4 – plan making, 5 – problem solving. According to Wolfe and Betz (2004) the notion of career decision-making self-efficacy is equivalent with achieving career maturity based on social and personality competencies.

Theories and studies on career indecisiveness point to two separate mechanisms of this phenomenon. The first one is a developmental mechanism accentuating the process of delaying a decision to enter an appropriate career path until favorable conditions arise. This mechanism points to an inevitable phase of not being able to make binding life choices. From this standpoint indecisiveness is an adaptive and functional reaction. The second one is a type of generalized indecisiveness, i.e. pathological personal tendency that manifests itself in a constant inability to make decisions.

The contexts of a blurred social reality (Schneider, 2002) and labor market (Fouad, Bynner, 2008) shuffle the emphasis in the issue of indecisiveness. Contrary to the reality of the 20<sup>th</sup> century, nowadays we are witnessing a significant extension of adaptive behavior that is part of the mechanism of temporary functional indecisiveness. It is a period of 10-20 years and covers an already described life phase, known as emerging adulthood (Arnett 2000). Unfortunately, together with new tendencies on the labor market and changes in professions and employment a systematic increase of people afflicted by the indecisiveness syndrome can be seen across all ages. This phenomenon is a result of an increasing disparity between factors that are a basis for social and individual identity as well as vocational maturity, and factors that are a basis for a provisional identity as a first step towards a career vision. In this context, the lack of decisiveness means a sense of lack of career self-efficacy, foregoing making lasting and long-term life decisions as

well as a lack of job and career commitment (Tokar, et al. 2003). Many researchers indicate that indecisiveness is linked with a lack of clear career perspectives (Bynner, 1999; Bynner and Passoron, 2003) and results in a tendency to forego any sort of long-term investments. This is related to an erosion of adulthood markers (Crowford, 2009) and an uncertainty towards the future.

Career indecisiveness has almost no relation with vocational competencies acquired in the process of formal education (Vardi, 2000). It is related with life and social competencies acquired through everyday life experiences, through environmental pressures on one side and the pressure of personality variables on the other. That is why the aim of the studies presented below was to verify how big of an impact the personality variables isolated through theoretical analysis can be recognized as personality correlates of decisional procrastination in the developmental domain – i.e. transition to adulthood and school-to-work transition.

## Method

### Strategy

Based on former studies (e.g. Milgram, Tenne; Saka, Gati, 2007), three personality correlates of career indecision clusters were chosen. The first group consists of independent variables linked with attitude towards career: vocational commitment, career self-efficacy, career readiness and openness. The second group consists of raw personality variables, i.e.: Five Personality Factors, general indecisiveness, optimism, hope, motivation, locus of control and Life meaning. Third group consists of personality variables linked with the development of identity statuses, i.e.: temporal orientations towards a preferred lifestyle and adulthood statuses compatible with Luyckx's and co. concept (Luyckx et al. 2008). The studies have been conducted in four phases on different, independent subject groups.

### Study 1. Attitudinal and identity related correlates of career indecision

The aim of the first study was to verify the interdependence between the difficulty of making a decision to start a professional career and vocational commitment, career self-efficacy and four identity statuses (Commitment Making, Identification with Commitment, Exploration in Depth, and Exploration in Breadth).

### Method

#### Instruments

For the study of career indecision a 24-item Career Indecision Scale (CIS) developed by A. Bańka (2007, 2014b) was used. The scale points to criteria that young Poles, university graduates, incorporate in their decision-making process when delaying the start of a professional career. Validation studies revealed the existence of five latent types

of adaptive career indecision (developmental) linked with decisional procrastination of school-to-work transition. The first type forms the Globalized Indecision, representing self-consciousness of „Who am I?“ (7 items). An example of an item included in the scale: *Making a decision about my career is not easy for me, because when I made mistakes in the past it had always resulted in serious problems.* The second type forms the Informational Indecision represented by the question “Who I want to be?” (7 items) An example of an item included in the scale: *I need more information about educational programs that could help me in designing my career.* The third type forms a factor of Emotional Indecision reflected in a range of uncertainty and fear surrounding the question: “Who could I be?” (4 items). An example of an item included in the scale: *The fear of a wrong choice that could close other, potential career paths forever, prevents me from pursuing an actual career path.* The fourth type is the Crystallizational Indecision determined by the question: „Who should I be?“ It is formed by 3 items, e.g.: *Before I start a career I still need to ask myself: „what are my personal values?“* The fifth type is Indecision in Automatic Action formed by Indecision in Practical Action determined by the realization “Who have I become”? It involves 3 items, e.g.: *Before I set out on a specific career field I will still need the advice of other people (i.e. those working in the same or similar profession).* The value of the alpha-Cronbach reliability coefficient for the scale is .920. The alpha-Cronbach reliability coefficients for five subscales proved to be high and are equal to, respectively: Globalised Indecision .875, Informational Indecision .876, Emotional Indecision .850, Crystallizational Indecision .883 and Indecision in Autonomic Action .631. Every entry is assessed on the 7-point Likert scale.

For measuring efficacy the Career Self-Efficacy Scale (CSS) (Bańka, 2013) was used. Career self-efficacy is an assessment of an individual's confidence in one's ability to organize and execute a given career involvement. CSS has 19 items forming 3 subscales: 1. Sense of Competitiveness Power, where entries indicate a conviction whether one has confidence in own vocational competencies for competing on the labor market. 2. Sense of Competence in Career Management 3. Sense of Employability is the conviction of one's high market value competencies. The items help express a conviction of having social competencies used in interpersonal interactions in various social, organizational and cultural environments that decide of one's employability.

To measure occupational commitment an 18-item Occupational Commitment Scale (OCS) (Hauziński, Bańka, 2013) was used – its construct is based on the Three Component Model of Commitment by J.P. Meyer and N.J. Allen (1991, 1993). The scale is a predictor of directions one seeks in career field and employment field. It pertains to people that are preparing to start a career (students, undergraduates) as well as those that are already under way. Items are worded as general statements, e.g. *I do not identify with the occupation I practice/study,* and reflect a general adjustment towards a long-term work environment (*If I would change my career/field of study my life would suffer from too much turmoil*). The subjects are

asked to declare how well the items' content correspond with their field of study on a 7-point Likert scale. A high result on the OCS scale is a measure of crystallization of career preferences according to Holland (1985). Thus, in a way, measures vocational maturity. The *alpha*-Cronbach coefficient for the entire OCS scale equaled 0.788. Even though OCS has a three-factor structure, these studies used only its one-factor version, for which the RMSA adjustment factor is on a satisfying level of 0.85.

For identity statuses assessment a Polish adaptation (Brzezińska, Piotrowski, 2010) of the Luyckx and co. (2008) Dimensions of Identity Development Scale (DIDS) was used. The *alpha*-Cronbach reliability coefficient of the Polish version of the scale equaled 0.85. The scale factor of the Exploration in Breadth (*alpha*-Cronbach .70) is the range in which an individual seeks different alternatives in relation to his/her goals, values and convictions before he/she commits. The Exploration in Depth (*alpha*-Cronbach .70) factor is a deep assessment of already made decisions and choices (commitments) in order to evaluate the level in which these commitments fulfill personal standards. Factor 3. Ruminational Exploration (*alpha*-Cronbach .82) expresses an individual's anxiety and experienced problems in engaging in fields important for identity development. Positions on this questionnaire that form the scale relate to: difficulties in refraining from thinking about one's future, difficulties with defining one's life-goals, anxiety related to one's future. Factor 4. Commitment Making (*alpha*-Cronbach .85) is the scope in which an individual made choices and commitments in terms of important matters in identity development. Questionnaire positions that make up the scale relate to the degree in which an individual thinks that he/she already decided his/her future plans, has a clear vision and knows what he/she wants to achieve. Factor 5. Identification with Commitment (*alpha*-Cronbach .82) is the degree in which an individual identifies with the choices and commitments made; the scale relates to their internalization and the level of conviction that the choices made were/are appropriate. Each position is evaluated on a 6-degree scale, where "1" – „definitely not" and „6 – „definitely yes".

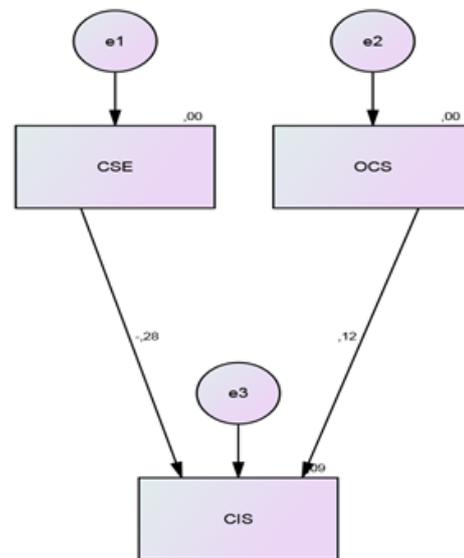
### Subjects and procedure

$N = 366$  undergraduates of various faculties that had to be on their last year of studies took part in the procedure. Average age was 22 years ( $M = 22.8$ ,  $sd = 2.8$ ) and the cumulative percentage for the age of 25 years exceeded 90%. There were 286 women (78%) and 80 men (22%). 92% were unmarried. Almost 80% were finishing postgraduate studies, whereas 20% were finishing undergraduate studies.

### Results

A path analysis was conducted for results obtained with the use of OCS, CSE and CIS scales on subjects. Structural modeling of Amos 21 module of the SPSS Statistica software was used.

**Figure 1. Structural model of observable variables with the standardized effect values**



Prior to values interpretation an evaluation of obtained model parameters was done. The FMIN value is 0.000 and is identical to the saturated model. Whereas the statistics value of the CMIN adjustment model is 0.138, which for a single degree of freedom gives a significance level of 0.711, which means that the model is a solid representation of the variance-covariance matrix from the sample. Hoelter's  $N$  for a confidence level of 95% shows a value of 10191 and the CMIN/DF value is 0.138, which indicates to similarity between the analyzed model and the saturated model. However the value of the approximation error measured by RMSEA is 0.000 and shows the highest level of model adjustment in relation to the population. For value differences of variance-covariance matrix elements occurring between the matrix implied by the model and the matrix observed, RMR increased its value by 0.005 and the GFI value shows that the model explains 100% of the variance-covariance matrix variability. The expression of adjustment in degrees of freedom AGFI is 0.998. Applying a correction on the complexity of the model expressed by TFI and TLI values is close to 1, whereas PGFI is 0.167 and PNFI and PCFI are 0.332 and 0.333, respectively. The criteria values of AIC and BIC show a proximity to the saturated model values, as well as the criteria of ECVI and MECVI show a proximity to the saturated model. The results indicate that a good model adjustment has been reached.

The study of the structural model parameters significance for OCS, CSE and CIS observable variables with standardized effects value, obtained through the use of the highest reliability method shows that OCS and CSE observable variables influence significantly the CSI observable variable. Path variables for  $CSI \leftarrow CSE$  equal  $-0.29$ , S.E. is 0.05, C.R. is  $-5.67$ ,  $p < 0.000$  whereas for  $CSI \leftarrow OCS$  path variables are 0.21, S.E. is 0.08, C.R.

is 2.41,  $p < 0.01$ . The upper listed data indicates that the influence of career self-efficacy on career indecision is significant and negative, which is additionally confirmed by the  $r$  Pearson correlation of 0.285 ( $p < 0.000$ ). Moreover the influence of vocational commitment is significant and positive ( $r = 0.126, p < 0.01$ ). Self-efficacy and vocational commitment variables are proven to be significant by the stepwise regression analysis, indicating that CSE as well as OCS are significant predictors of indecision, accounting for ~10% of CSI variance.

**Table 1. Stepwise regression of CIS, CSE and OCS (N=366)**

Dependent variable	Model's independent variables	R	R <sup>2</sup>	Beta	Sig.
Generalized CIS	CSE	.285	.081	-.285	.000
	OCS	.309	.096	.120	.017

The same group  $N = 366$  was a subject of another study with the aim to verify a correlation between adulthood statuses development and career indecision. The study posed a question whether the identity statuses development measured by five dimensions of the DIDS are equivalent to the career indecision dimension. The question is based on study results and theoretical assumptions that prove that from the standpoint of an individual's development towards adulthood, career indecision as functional decisional procrastination as well as the development of ego are similar measurements of maturity.

Study results of the measurement of linear relation between underlined variables have shown that there is a significant dependence at  $p < 0.001$  level between all of them. Two identity statuses stand out in table 2 in respect to the strength of dependencies, i.e. CM and RE. These results are consistent with theoretical assumptions. Commitment making (CM) as a range of already made significant choices and commitments important for identity development is a way of expressing one's conviction as to what direction to follow and ways of doing it. Commitment making is converse to indecision, therefore the strong negative correlation result with global CIS and its subscale CIS-II is no surprise. The negative correlation indicates that a clear vision of one's future and a higher level of overall life decidedness is linked with lower levels of indecisiveness and a lesser feeling of confusion about one's options to start a career. On the other hand, ruminative exploration – individual's anxiety and difficulties linked with committing to fields crucial to identity development – as a form of anxiety, understandably correlates positively with career indecision. Individuals who have trouble with getting satisfactory answers to identity questions, naturally are unsure of their own competencies and the anxiety experienced with it positively correlates with CIS Statuses and the subscale CIS0-II. It means that a high level of insecurity of crystallization and appreciation of one's self and one's career role together with a high global career indecision – particularly informational indecision – which expresses itself in the inability to gather and use helpful information in order to overcome decisional procrastination in the school-to-work transition.

**Table 2. Correlation matrix of CIS and ego development statuses DIDS (N = 366).**

	CIS - Global	CIS - Generalized	CIS - Informational	CIS - Emotional	CIS - Crystallizational	CIS - in Autonomic Action
Commitment making (CM)	-.548**	-.320**	-.647**	-.461**	-.334**	-.248**
	.000	.000	.000	.000	.000	.000
Identification with Commitment (IC)	-.416**	-.161**	-.597**	-.410**	-.210**	-.146**
	.000	.002	.000	.000	.000	.005
Exploration in Breadth (EB)	.339**	.327**	.135**	.236**	.239**	.326**
	.000	.000	.010	.000	.000	.000
Exploration in Depth (ED)	.294**	.301**	.123*	.200**	.179**	.327**
	.000	.000	.019	.000	.001	.000
Ruminative Exploration (RE)	.608**	.397**	.604**	.524**	.339**	.381**
	.000	.000	.000	.000	.000	.000

**Table 3. Stepwise regression of career indecision and ego development statuses ( $N = 366$ ).**

	Predictors DIDS	R	R <sup>2</sup>	Beta	t
CIS Global	Commitment making (CM)	,548	,301	-,548	12.53**
	Identification with Commitment (IC)	,608	,366	-,533	-1,28**
	Exploration in Breadth (EB)	,622	,387	-,523	6.91**
	Exploration in Depth (ED)	–	–	–	–
	Ruminative Exploration (RE)	,639	,408	,281	3,59**
CIS - Indecision Generalized	Commitment making (CM)	,320	,102	-,320	-6,43**
	Identification with Commitment (IC)	,358	,129	-,540	3,31**
	Exploration in Breadth (EB)	,448	,201	-,491	5,76**
	Exploration in Depth (ED)	,460	,212	-,462	2,19*
	Ruminative Exploration (RE)	,467	,218	-,366	1,67**
CIS - Indecision Informational	Commitment making (CM)	,647	,419	-,647	-16,19**
	Identification with Commitment (IC)	,660	,435	-,473	-3,24**
	Exploration in Breadth (EB)	–	–	–	–
	Exploration in Depth (ED)	,667	,445	-,455	2,50**
	Ruminative Exploration (RE)	,682	,465	,264	3,67**
CIS - Indecision Emotional	Commitment making (CM)	,461	,213	-,461	-9,92**
	Identification with Commitment (IC)	–	–	–	–
	Exploration in Breadth (EB)	,493	,243	-,451	2,01*
	Exploration in Depth (ED)	,501	,251	-,444	3,79**
	Ruminative Exploration (RE)	,535	,286	-,183	4,16**
CIS - Indecision Crystallizational	Commitment making (CM)	,334	,111	-,334	-6,75**
	Identification with Commitment (IC)	,348	,121	-,468	2,01*
	Exploration in Breadth (EB)	,380	,144	-,441	2,54*
	Exploration in Depth (ED)	,399	,159	-,406	3,12**
	Ruminative Exploration (RE)	–	–	–	–
CIS Indecision in Autonomic Action	Commitment making (CM)	,248	,062	-,248	-4,88**
	Identification with Commitment (IC)	–	–	–	–
	Exploration in Breadth (EB)	–	–	–	–
	Exploration in Depth (ED)	,400	,160	-,230	6,51**
	Ruminative Exploration (RE)	,425	,181	,267	3,02**

Note. \*  $p < .01$ ; \*\*  $p < .01$

The stepwise regression has shown an influence of identity statuses on the generalized CIS scale as well as the fact that model 5 of predictors is well suited to the data, since the variance analysis in each case is statistically significant. Model 5 with predictors explains 40% of the results variance on the CIS scale. Based on beta variables values it can be stated that the higher the value of CM, IC, EB variables the lower the level of career indecision. Conversely in the case of RE variable, higher values lead to a higher level of career indecision. Other interesting results have been acquired in the CIS subscales. In the case of Indecision Generalized the Identification with Commitment (IC) variable decreases it the most. This variable accounts for 12% of results variance in the model. Moreover, the Ruminative Exploration (RE) predictor also decreases the value of CIS – Indecision Generalized. Summing up, it can be stated that the larger the influence of predictors:

Commitment Making, Identification with Commitment, Exploration In depth and Exploration in Breadth, the lower the level of indecision in each highlighted category.

## Study 2. Five Personality Factors as correlates of career indecision

### Method

#### Instruments

For study 4 apart from the Career Indecision Scale the NEO-FFI Personality Inventory was used. The 60-item abbreviated form of the well-established scale (Costa and McCrae, 1992) consists of 12 items for each of the five major personality factors. The scale was used with the official Polish translation (Zawadzki, et al. 1998). Items were rated on a five-point scale from 0 – disagree greatly, to 4 – agree greatly.

**Table 4. Correlations of career indecision scales and personality five factors.**

	CIS - Global	CIS - Generalized	CIS - Informational	CIS - Emotional	CIS - Crystallizational	CIS - in Autonomic Action
Neuroticism	,417**	,037	,497**	,466**	-,095	,164*
	,000	,648	,000	,000	,238	,040
Conscientiousness	-,171*	,126	-,358	-,186*	,294**	-,043
	,032	,115	,000	,020	,000	,592
Agreeableness	,126	,161*	,065	,037	,027	,110
	,115	,044	,420	,647	,737	,172
Openness	-,075	,098	-,255**	-,040	,161*	,006
	,348	,221	,001	,620	,043	,946
Extraversion	-,025	,252**	-,288**	-,082	,151	,159*
	,752	,001	,000	,308	,058	,046

Note. \*  $p < .05$ ; \*\*  $p < .01$

### Subjects and procedure

$N = 157$  undergraduates of various faculties that had to be on their last year of studies took part in the procedure. The average age was 22 years ( $M = 22,8$ ,  $sd = 2,3$ ). 79% of the subjects were women and 21% were men.

### Results

Results of the linear relation between five personality factors of NEO-FFI and global CIS have shown that significant correlations can be seen with regard to Neuroticism in particular. Thus, high values of Career Indecision are accompanied by high values in Neuroticism, social anxiety and a high level of insecurity towards own competencies and self-efficacy. Moreover the factor Conscientiousness correlates highly positively with Crystallizational, developmental decisiveness. It can be assumed that thorough and dutiful performing of one's everyday obligations favors integration of one's own image in life roles.

A high level of Openness to Experience correlates negatively with Informational Indecision. Openness to Experience favors seeking and gathering necessary and valuable information about planning and executing career goals. Extraversion correlates positively with Indecision in Autonomic Action. It may mean that thanks to high Extraversion a lower level of sense of competency in intentional and autonomic practical actions conducive towards dealing with procrastination is compensated by relying on others. This interpretation is backed by the fact that Extraversion correlates negatively with Generalized Indecision and Informational Indecision. Extraversion is in this case a certain way of sharing the burden of one's own insecurity with others.

Stepwise multiple regression analyses of global CIS and CIS subscales with five personality factors of NEO-FFI aimed at determining the level of influence of each factor in explaining indecisiveness variance. Results of the stepwise regression analysis have shown that the model encapsulating the influence of the five personality factors on global CIS scale suits the data well, since variance analysis in each case is statistically significant. Regression model with neuroticism predictor and extraversion meets the aforementioned requirements  $F(1,155) = 32.54$  and  $F(2,155) = 18.80$  with  $p < .001$ . These predictors explain 17% and 19% of result variance. (Table 5 - see next page)

Analyses of further models show that Informational Indecision increases the influence of the personality trait – Neuroticism – however, decreases Conscientiousness and Openness to Experience. Emotional Career Indecision intensifies under the influence of Neuroticism but does not get influenced by other NEO-FFI factors. What is interesting – Crystallizational Indecision intensifies under the influence of Openness to Experience and Conscientiousness. Summing up, the data presented above show that the strongest predictor of career indecision proved to be the Neuroticism factor.

**Table 5. Stepwise regression on five factors (N = 157).**

	Predictors DIDS	R	R <sup>2</sup>	Beta	t
CIS Global	Neuroticism	,417	,174	,417	5,70**
	Conscientiousness	–	–	–	–
	Agreeableness	–	–	–	–
	Openness to Experience	–	–	–	–
	Extraversion	,443	,196	,164	2,08*
CIS - Indecision Generalized	Neuroticism	–	–	–	–
	Conscientiousness	–	–	–	–
	Agreeableness	,161	,026	,161	2,03*
	Openness to Experience	–	–	–	–
	Extraversion	,280	,079	,232	2,96**
CIS - Indecision Informational	Neuroticism	,497	,247	,497	7,12**
	Conscientiousness	,554	,307	-,253	-3,66**
	Agreeableness	–	–	–	–
	Openness to Experience	,579	,336	-,172	-2,56*
	Extraversion	–	–	–	–
CIS - Indecision Emotional	Neuroticism	,466	,217	,466	6,54**
	Conscientiousness	–	–	–	–
	Agreeableness	–	–	–	–
	Openness to Experience	–	–	–	–
	Extraversion	–	–	–	–
CIS - Indecision Crystallizational	Neuroticism	–	–	–	–
	Conscientiousness	,294	,087	,294	3,83**
	Agreeableness	–	–	–	–
	Openness to Experience	,331	,109	,151	1,98*
	Extraversion	–	–	–	–
CIS Indecision in Autonomic Action	Neuroticism	,164	,027	,164	2,06*
	Conscientiousness	–	–	–	–
	Agreeableness	–	–	–	–
	Openness to Experience	–	–	–	–
	Extraversion	,293	,086	,265	3,15**

Note. \*  $p < .01$ ; \*\*  $p < .01$

## Discussion

People demonstrate specific generalized tendencies within specific forms of procrastination. In the case of developmental procrastination, manifesting itself in delaying the latest developmental task through postponing the school-to-work transition, this generalized pattern is career indecision: generalized, informational, emotional, crystallizational and indecision in autonomic action. The specific domain of procrastination, which is the life-span development domain, is a matter of various studies in the context of different determining factors that form reasons for procrastination (Ferrari, Emmon, 1995), most notably situational and personality determinants (Millgram, Tenne, 2000). The domain of procrastination that is recently a target of extra focus is the career indecision of individuals

that are about to or already have graduated university (Creed, Muller, Patton, 2003). This phase creates a difficult to overcome dilemma of „Progress or Procrastination?“ (Fletcher-Campbell, 1998).

Career indecision dilemmas are however defined in different ways and experienced by individuals according to various strategies they adopted of dealing with procrastination (Krause, Freund, 2014) as well as influenced by personality differences. As shown by other studies, career indecision is determined by such personality factors as: general and specific self-efficacy (Haycock, McCarthy, Skay, 1998), occupational commitment (Patton, Creed, 2001), development of adulthood statuses (Gati, Gadassi, Saka, 2011), the Big Five factors (Milgram, Tenne, 2000).

The presented study on career indecision conducted within two groups of students/undergraduates that are about

to graduate university focused on personality factors that were assumed as significant predictors of career indecision. Firstly, the model of dependency of career indecision to two personality sources of procrastination was verified, i.e. self-efficacy and occupational/career commitment. Even though a high dependency between self-efficacy and CIS in the light of previous studies (Saka, Gati, 2007) has been proven, it does not mean that the same can be said about occupational commitment and CIS. It can be explained by the fact that nowadays the procrastination of school-to-work transition is a result of the inability to recognize institutions that are career fields for an individual to exercise one's career readiness (Markstrom, et al. 1998). This is why individuals with a strong vocational commitment experience a lesser procrastination pressure. Vocational commitment helps building identity capital (Côté, 2005) as a personality resource that allows an individual to reach beyond the identity crisis horizon. Analysis undergone with the use of SEM structural equations has shown a satisfactory model adaptation, for which the RMSEA was 0.000. This result together with the stepwise regression analyses results, in which the CIS variance is accounted for by two predictors (40%), i.e. CSE (Career Self-Efficacy Scale) and OCS (Occupational Commitment Scale) lets us formulate a general thesis that personality variables are the most prominent sources of career indecision.

Following the lead of former studies (Saka, Gati, 2007) the hypothesis of a significant impact of identity statuses development on procrastination underwent verification. The correlations between adulthood statuses measured by the DIDS scale (Brzezińska, Piotrowski, 2010) and career indecision types (measured by the CIS scale) as well as the results obtained from the stepwise regression analyses, in which the predictors of career indecision were 5 adulthood statuses have shown that both measures can be treated as equivalent to the measurement of adulthood development level and the level of achieved identity capital (Côté, 2002; Patton, Creed, 2001).

Very interesting results have also been obtained through analyzing the interdependence of the big five factors with procrastination types measured by the CIS scale. Most notably, the results obtained in this study are in line with results from previous, similar studies (Millgram, Tenne, 2000), which have pointed towards two most important sources of procrastination, namely Neuroticism and Extraversion. The experienced difficulties and tensions when coming to a decision about school-to-work transition are strongly linked to feelings of insecurity, vulnerability and worrying – characteristics subsumed under the heading of Neuroticism. By contrast, Extraversion is defined operationally by the following characteristics: being energetic, outspoken, gregarious, which are all an asset in the decision making process. The presented study has proven that extroverts have greater self-confidence and social competence and are able to solicit advice as a form of support that facilitates the decision of school-to-work transition.

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