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**TITLE**

# Personality assessment and career interventions

**Research paper**

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**Abstract**

Career interventions for adults frequently include personality assessment. Personality in career counseling contexts should no longer be considered as vocational personality associated with personality interests but, rather, as a set of dispositions that has an impact on several vocational and career-related outcomes, such as work engagement, work satisfaction, job performance, etc. Although the relationship between personality and the vocational and career related outcomes is not direct, it might certainly be mediated by several regulatory processes, such as work adaptability, and moderated by contextual and environmental factors. Personality assessment initiates an individual's self-regulatory process and contributes to the overall effectiveness of career interventions when feedback is individualized and stimulates a deconstruction, reconstruction, and co-construction of the vocational or multiple self-concept. Personality assessments can also promote the reconstruction of a self-concept more aligned with the perception of the environment about the personality of the counselee, strengthening the reality principle allowing more rational and controlled choices. In addition, some specific personality profiles, such as having high levels of neuroticism and low levels of conscientiousness, can be considered as risk factors frequently leading to career decision-making difficulties. Moreover, people with low conscientiousness benefit less from career interventions, so special attention should be devoted to counselees having that characteristic. Two case studies are provided to illustrate these important aspects of personality assessment in career interventions.

**Keywords**

Personality assessment | Personality | five-factor model | career adapt-abilities | regulation processes | vocational guidance | career interventions

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# 1 Introduction

From the beginning of educational, vocational, and career guidance psychology and the initial work of Parsons (1909), who is usually considered the father of career counseling, " a clear understanding of yourself" has been considered as crucial for making a "wise choice." This representation of the self had to be related to a representation of work requirements and opportunities using "true reasoning" competences. This process was supposed to favor rational vocational choices and work adjustment, to increase work performance and engagement, and to facilitate job placement (Pope, 2000). Continuing the work of Parsons, Claparède (1922) suggested relating temperament characteristics to types of occupations. Claparède posited that peaceful, stolid people would choose a conventional occupation, whereas lively, cheerful people would choose a more technical occupation:

> Up to the present only the sensory mental, and motor abilities required by the various classes of trade have been considered. There are still the problems of the emotions, traits of character, and temperament. Some trades are more specially suited to placid temperaments, other to lively temperaments; one trade may require continuous, another spasmodic work. Some occupations demand exceptional moral qualities, such as power of resisting temptation and honesty (e.g. in bank cashiers). (p. 32)

Later, during the development of the field of vocational counseling, personality was even conceived as a direct expression of vocational interests, and personality and interests were supposed to share a similar structure:

> At the same time, a person's differentiation of interests with age is accompanied by a crystallization of correlated values. These events – an increasing differentiation of preferred activities, interests, competencies, and values – create a characteristic disposition or personality type that predisposed to exhibit characteristic behavior and to develop characteristic personality traits, attitudes, and behaviors that in turn form repertoires of collections of skills and coping mechanisms. (Holland, 1985, p. 16)

From the beginning, personality – or constructs closely connected with personality, such as character, temperament, and moral qualities – has been considered relevant in making vocational choices. The intuitive, and certainly rational, conception of vocational choice and vocational counseling of the founders of the field of career counseling was followed by an "increasing involvement of psychological

testing" (Pope, 2000, p. 196) and assessment. This trend was supported by the development of the psychology of individual differences in different countries, by Alfred Binet and Henri Piéron in France, Charles E. Spearman in England or Raymond B. Cattell and Edward K. Strong, Jr. in the United States, for example (Revelle, Wilt, & Condon, 2011).

## 2 From vocational personality to personality dispositions

According to Holland's perspective about peoples' development, the differentiation of personal characteristics is the result of a continuous interaction with the environment. Biologically determined personal characteristics, in interaction with the environment, are actualized in terms of activities that promote the development of vocational interests, competences, and dispositions. Holland (1959) assumed "that at the time of vocational choice, the person is the product of the interaction of his particular heredity with a variety of cultural and personal forces including peers, parents and significant adults, his social class, American culture, and the physical environment" (p. 35). The activities reinforced depend on the person's environment. Furthermore, this development defines a person's self-concept, personal values, behavioral repertoires, and personality traits. Thus, the environment and most of these personal attributes can be described according to Holland's (1985) well-known hexagonal taxonomy, which accounts for the following six personality, interest, competence, and environment types: realistic, intellectual, artistic, social, enterprising, and conventional. The structure of vocational interests and personality is supposed to be analog, where personality is supposedly rooted in personal interests. However, Holland was not always consistent concerning the causal relationship underlying the development of vocational interests and personality:

> In a theoretical sense, the proposed schemes are based on the assumption that vocational choice is an expression of personality. Put another way, if we classify together people having similar vocational choices we are also classifying similar personalities together. (Holland, 1966, p. 278)

A high congruence between a person's interests, competences, and personality is supposed to be the sign of a high internal coherence that may be associated with several positive features, such as career maturity and self-knowledge. Congruence between an individual's characteristics and his or her environment should be related to job tenure, job satisfaction, and positive health outcomes. This association was empirically established by numerous studies (e.g. Klein & Wiener, 1977; Meir & Melamed, 1986). This idea that a fit between the work environment and personal characteristics is an important aspect to consider is present in most theories in the field of career counseling and work and

organizational psychology.

Several studies have shown that meaningful relationships exist between personality dimensions and interests types (Mount, Barrick, Scullen, & Rounds, 2005; Tokar, Fischer, & Subich, 1998). However, these relationships do not imply an identical structure but confirm that personality and interests are two different aspects of a person. Indeed, the overlap between personality dimensions and interests types is rather limited. Larson and Borgen (2002) observed that neuroticism correlated negatively with the intellectual, social, enterprising, and conventional types; extraversion correlated positively with the artistic, and particularly with the social (r = .31) and enterprising types (r = .41); openness correlated negatively with the conventional type and positively with the social and particularly with the intellectual (r = .28) and artistic types (r = .48); agreeableness correlated with the social type; and conscientiousness correlated with the social and particularly with the enterprising (r = .22) and conventional types (r = .25). Personality relates also with people's vocational choice (Rossier, Wenger, & Berthoud, 2001).

Cognitive abilities are also known for being associated with personality dimensions, although correlations are rather modest. According to Holland (1959, 1985), if personality is a multidimensional construct, then interests are conceived in six types in a two-dimensional space; cognitive ability, then, is hierarchical with a unique higher order construct (or latent disposition): the g factor, or general intelligence. In their meta-analysis, Ackerman and Heggerstad (1997) observed that neuroticism correlated negatively with general intelligence (r = -.15) and also with several second-order constructs, such as crystalized intelligence (Gc), fluid intelligence (Gf), and visual perception; moreover, extraversion and openness correlated with general intelligence (r = .33), Gc, and visual perception. Agreeableness and conscientiousness did not correlate with cognitive abilities in their study.

Even if correlations between cognitive abilities, interests, and personality are modest, several authors have suggested considering them simultaneously in an integrative framework. The Atlas of Individual Differences includes all individual differences used in career counseling in a single three-dimensional interest structure (Ackerman & Beier, 2003; Armstrong, Day, McVay, & Rounds, 2008; Armstrong & Rounds, 2010; Sodano, 2011). This framework constitutes a more recent version of Holland's conception, claiming that all these domains share a common structure, but it doesn't really acknowledge the small relationship between these constructs and the fact that they might have different origins. In fact, a large amount of the observed variance may be lost when representing only two or three independent interests dimensions (Tracey, 2002), five independent personality dimensions (Digman,

1990; Rossier, Meyer de Stadelhofen, & Berthoud, 2004), which are relatively independent from interests, and general intelligence (Golay & Lecerf, 2011; Golay, Reverte, Rossier, Favez, & Lecerf, in press), which is quite independent form interests and personality dimensions.

There is some overlap between personality, interests, and general intelligence, but they also have their unique contributions in predicting career related behaviors (Barrick & Mount, 2005; Bratko, Chamorro-Premuzic, & Saks, 2006). Moreover, these three domains might not have the same status, origin, evolution, or function and impact on the process of career choice, career trajectories, and life designing.

### *2.1 Personality as a set of dispositions*

Personality traits, interests, and general cognitive ability are relatively stable compared to behavioral expression. According to Watson (2004), the short-term stability for big five personality traits (about 2 months) is about .82, whereas the long-term stability (more than 2.5 years) is about .64. The short-term stability of interests is about .70 with a higher stability between 25 and 30 years of age and a lower stability before the age of 18 (Low, Yoon, Roberts, & Rounds, 2005). The long-term stability for general cognitive ability (about 2 years) is.93 (Plomin, Pedersen, Lichtenstein, & McClearn, 1994). Thus, general cognitive ability and personality seem very stable and interests slightly less stable. Moreover, the stability of interests varies across the life span. This stability is much lower for emotions or behaviors that are partly responses to environmental demands and constraints (Rossier, Verardi, Genoud, & Zimmermann, 2012). During development, dispositions, such as personality traits, seem to differentiate from a structure with relatively low number of second-order traits, such as childhood temperament models (Putnam, Ellis, & Rothbart, 2001), to a more differentiated model that is also better aligned with expectations from the social environment (Quartier & Rossier, 2008). During adulthood, then, the expression of dispositional traits seems to take into account social and environmental expectations.

The stability of dispositional traits is always seen as a relative stability. First, these dispositions evolve quite rapidly during development (Rossier, Quartier, Enescu, & Iselin, 2007) and continue to evolve during the entire life span (Terracciano, McCrae, Brant, & Costa, 2005). With age, neuroticism, extraversion, and openness decrease whereas agreeableness increases. Conscientiousness increases until 55 or 60 years of age and decreases thereafter. Roughly speaking, with age, people tend to become less open but more sociable. Some major life events might also have an impact on the expression of personality traits. For example, patients suffering from major depression, before and after a positive

response to a psychological and pharmacological treatment, have highly similar personality profiles; however, at the moment of hospitalization, neuroticism scores , associated with negative affects, were higher and extraversion scores, associated with positives affects, were lower compared to the scores post-treatment (Costa, Bagby, Herbst, & McCrae, 2005). The mean personality profile of these patients indicates that some of these dispositions might be considered as risk factors for major depression, such as high neuroticism scores and low extraversion or conscientiousness scores (De Fruyt, Van Leeuwen, Bagby, Rolland, & Rouillon, 2006). Moreover, these personality domains also have an impact on patients' treatment outcomes. Patients with high neuroticism scores, low extraversion scores, and low conscientiousness scores respond less favorably to treatments than patients with the opposite profile (Quilty, De Fruyt, Rolland, et al., 2008). Finally, the expression of traits depends on the environment, and each person's behavior has to be adapted to the moment and to the circumstances. Thus, a person's level of anxiety varies all of the time according to circumstances, but his or her usual or average level of anxiety might be the expression of the underlying disposition (Zuckerman, 1991). The expression of personality disposition is very unstable and depends on the circumstances whereas disposition themselves remains stable. To be adapted to circumstances, the expression of personality traits have to be regulated, taking into account information provided by the environment and by anterior experiences about the expression of these traits.

The stability of dispositions might also be due to their high heritability. The heritability of personality is of about .50 (e.g., Jang, McCrae, Angleitner, Riemann, & Livesley, 1998; Loehlin, McCrae, Costa, & John, 1998), and the heritability of general cognitive ability of about .80 (Plomin, 1999). The heritability of interests is slightly lower and of about .40 (Schermer & Vernon, 2008). Notably, if personality and general cognitive ability are inherited dispositions, and if interests are the result of a social learning process based on social reinforcement about spontaneous behaviors, then the heritability of interests simply might be due to the manifestation of the heritability of personality and cognitive abilities and the impact of these dispositions on the development of interests. If this is correct, interests should not be considered as dispositions, but as an expression or resulting from a regulation of the continuous interaction between the individual and his or her environment.

According to the McCrae and Costa's (1996, 1999) five-factor theory, basic tendencies are biologically inherited and include dispositions, such as personality main dimensions or general cognitive ability. These basic tendencies never express themselves directly in terms of behaviors, but are moderated or mediated by a set of dynamic, adaptive, and regulatory processes. These characteristic

adaptations might be seen as an acquired set within one's behavioral repertoire also including environmentally and personality adapted values, habits, and interests. Individuals' behaviors, emotional expressions, and feelings, are expressed in accordance with circumstances but also under the indirect influence of basic tendencies regulated by these dynamic processes. The self-concept or personal identity, which can be conceived of as a set of multiple identities or subjective identity forms (Guichard, 2005, 2009), is a component of these characteristic adaptations and is extremely important for regulating the expression of these personality dispositions. This self-concept or self-identity can be conceptualized as a meta-competency, allowing people to partly control these dynamic, adaptive, and regulatory processes (Guichard, Pouyaud, de Calan, & Dumora, 2012). In the five-factor framework, adaptivity is a disposition or a trait associated with a personality disposition of the basic tendencies. Adaptability is a regulation process that moderate or mediate the expression of this adaptivity (Rossier, Zecca, Stauffer, Maggiori, & Dauwalder, 2012). Adapting is the behavioral response that more or less fits the requirements of the environment (Savickas, 2005). The level of adaptation depends on the fit between the behaviors and the requirements in terms of personal development, success, or satisfaction.

Recently, Matsumoto (2007) proposed a very similar conception of the interaction between the cultural environment and an individual's behavioral expression. According to him, the cultural context moderates this expression through its impact on a mediator variable that is called personality in his model but that corresponds to the characteristic adaptations for the five-factor theory. Human nature, which includes universal biological needs, universal social motives, universal psychological processes, and dispositions (personality traits and intelligence) in interaction with the ecological context is at the origin of what is called culture; culture can be conceived as a system of meaning and information transmitted across generations. Cultural settings have an impact on the definition of specific situational contexts, which then have an impact on the expression of human nature also on the expression of personality traits. Role identities, narratives, values, and aggregate social roles are characteristic adaptations (an acquired repertoire of behaviors or sets of meaning) that mediate the expressions of dispositions in terms of performance. The context has a moderator effect on the expression of these traits through its impact on these characteristic adaptations. This model and the five-factor theory explain why personality structure seems stable across cultures. The main level of personality traits across cultures is culture-specific because the expression of personality traits is moderated by the contexts (Rossier et al., 2008; Zecca et al., in press). Matsumoto's (2007) and McCrae and Costa's (1999) models are in total contradiction with Holland's (1985) model, which suggests that heredity

allows for the expression of spontaneous activities, which initiate the emergence of interests, which found the development of competencies that originate dispositions. Nowadays, personality and general cognitive ability are conceived as dispositions, and interests as characteristic adaptations that mediate the expression of dispositions.

### *2.2 Personality dispositions and vocational behaviors*

Several studies have shown that personality has an impact on vocational behaviors or on work related outcomes, such as professional success or performance (Barrick & Mount, 2005; Judge, Higgins, Thoresen, & Barrick, 1999). For example, emotional stability and conscientiousness seems to be positively related to overall job performance in all professional settings, whereas extraversion, openness to experience, and agreeableness predict performance only in some specific professional contexts. Extraversion is important for professions that require social interactions, such as sales or management jobs; openness is associated with job performance for jobs that require creativity and adaptability; and agreeableness is associated with job performance for jobs in social fields. These relationships are very similar to that between interests and personality. Personality traits also predict many other work related outcomes, such as counterproductive behaviors, leadership, organizational citizenship, job satisfaction, work stress, burnout, work engagement, etc. (Györkös, Becker, Massoudi, de Bruin, & Rossier, 2012; Hough & Dilchert, 2010; Johnston et al., submitted).

Several models have been proposed to explain the relationship between personality and job related outcomes and job performance, in particular. In their theory of work adjustment, Dawis and Lofquist (1984) posited that this adjustment implies a correspondence at two levels. At the first level, a correspondence between skills and abilities and the organizational requirement (Hesketh & Myors, 1997), which was called the "can do–required to do" correspondence by Hesketh and Dawis (1991), is associated with the ability to deliver a satisfactory performance. At the second level, a correspondence between workers' needs and values and the work conditions, also called the "want to do–reinforcers" (Hesketh & Dawis, 1991), and is associated with job satisfaction and well-being at work. These correspondences interact and are required to warrant job tenure. Personality could contribute both to the "can do" and "want to do" components of this model. Indeed the expression of some personality traits are directly linked to some competences, such as being able to communicate with others or to work with a group, but also to some motivational aspects that might be associated with the "want to do" component. More recently, in their model of work competences, Kanfer and Ackerman (2005) distinguished abilities, competences, and performance from one another. The actualization of abilities in

competences that can express themselves in a job performance – the "can-do pathway of influence" – is under the influence of personality factors, called the "will-do pathway of influence." According to this perspective, work competences results from an interaction between cognitive abilities and personality. However, personality certainly has a direct link with some work competences, including emotional regulation, relational and behavioral abilities, and is mediated by some regulatory or motivational variables (Barrick, Stewart, & Piotrowski, 2002).

Personality also relates to several relevant variables for career counseling, such as career exploration, vocational indecision, career indecisiveness, career decision-making, career decision self-efficacy, or career maturity. Career planning, career exploration, self-efficacy, and career decision self-efficacy relate negatively to neuroticism and positively to extraversion, openness to experience, and conscientiousness; correlations with agreeableness are lower (Page, Bruch, & Haase, 2008; Rogers & Creed, 2011). Indecisiveness, usually defined as chronic indecision, is strongly positively related to neuroticism and strongly negatively related to conscientiousness. By contrast, developmental career indecision is less stable and correlations with personality traits are lower. Career indecision correlates positively to neuroticism and negatively to conscientiousness. Interestingly, the correlation with emotional intelligence, which can be considered as a regulatory resource, is much higher (Di Fabio, Palazzeschi, Asulin-Peretz, & Gati, in press; Germeijs & Verschueren, 2011). Career decision-making difficulties are also strongly associated with personality dimensions and correlate positively to neuroticism and negatively to extraversion, openness to experience, agreeableness, and conscientiousness (Di Fabio & Palazzeschi, 2009). Savickas, Briddick, and Watkins (2002) showed that personality types related with career maturity and, more specifically, that internalization was negatively related to and orientation to social norms was positively related to planning and exploration. Finally, reagrding the implementation of career plans, it is interesting to note that academic performance, job search behaviors, and outcomes of these job search behaviors are also correlated with personality traits. According to Rosander and Bäckström (2012), academic performance was positively correlated to openness to experience, agreeableness, and conscientiousness. Job search behaviors were positively correlated to extraversion, openness to experience, and conscientiousness, and the number of offers received was positively correlated to extraversion, openness to experience, and agreeableness (Kanfer, Wanberg, & Kantrowitz, 2001).

The relationships between personality and relevant career counseling variables are not surprising. Indeed most models in career counseling consider personality as one aspect to consider in understanding

career choice and career development. As mentioned above, for Holland (1985), it is the differentiation of interests, origins, and personality traits that found career choices. In his life-span, life-space theory, Super (1990) considered personality as a personal determinant that described career development, and some traits were also conceived as important self-concept dimensions for structuring an identity and or self-concept meta-dimensions – traits that contribute to people's reflexivity aptitude (Super, Savickas, & Super, 1996). For Gottfredson (1996), precursor traits (temperament and basic capabilities) differentiate due to the interaction between the individual and his or her environment (in terms of experiences) into general traits (personality and abilities, for examples) that further emerge into interests and values. Finally, a comparison of the representations of the self and of the social worlds results in the definition of a "zone of acceptable alternatives," that after some compromise underlie a career choice. For the cognitive information processing approach to career development and services (Sampson, Reardon, Peterson, & Lenz, 2004), personality and personality awareness contribute to self-knowledge, and personality is an important aspect to consider when verifying the fit to a career alternative (see also Gait & Asher, 2001). According to Lent, Brown, and Hackett's (1994) social cognitive career theory, personality belongs to the set of predispositions that are part of person inputs. According to the systems theory framework, personality is one aspect of an individual to consider among many that interacts with a complex social, historical, and environmental context (Patton & McMahon, 2006). In career construction theory (Savickas, 2005) people can no longer select the adapted work context where they can express their vocational personality. People constantly have to adapt to new environments and, for this reason, mediator regulation processes, such as career adaptability, might be crucial variables to consider in describing professional trajectories. Finally, personality dimensions certainly contribute to the development of the personal identity, as defined by Guichard (2005, 2009).

Most theories in the field of career counseling consider personality as an important aspect to take into account, but also consider that the link between personality and career choice, career development, or professional trajectories is not direct and that several regulatory processes might mediate this relationship. Moreover, this relationship might be moderated by several contextual factors that can also have a direct impact on the expression of personality traits thought feedback loops. Personality is part of a relatively complex and dynamic system that allows people to design their own life trajectories (Savickas et al., 2009).

### *2.3 Personality and career interventions*

Personality measurement is very frequently used in career counseling interventions, because

personality matters for career development and planning, especially with adults. Personality is much less frequently, if almost never, tested with adolescents, because personality is thought to be still under development. In France, personality traits have been tested with 93.4% of, interests with 90.0% of, and cognitive abilities with 84.0% of adult counselees (Laberon, Lagabrielle, & Vonthron, 2005). Moreover, the use of psychological tests has a positive impact on the subjective satisfaction of clients (Bernaud, Di Fabio, & Saint-Denis, 2010). Usually, normal personality traits are tested, but abnormal personality traits might also have an impact on people's ability to integrate into the world of work. For example, a person that suffers from a borderline personality disorder will have a lot of difficulties in finding and keeping a stable professional situation. On the contrary, obsessive-compulsive persons certainly may be very engaged in their professional activity but might suffer more frequently from burnout (Kjos, 1995).

Using a personality assessment tool, and giving individualized feedback about the results to a counselee during a counseling session certainly helps the person to deconstruct and reconstruct his or her self-perception and self-construct. This deconstruction and reconstruction process increases self-knowledge, and most notably so with adults. Bernaud, Gaudron, and Lemoine (2006) found that this increase of self-knowledge was associated with a large effect size ($d = 1.45$) and lasted even six months after the end of the intervention. Personality assessment also helps to identify counselees' strengths and weaknesses, which have to be taken into account when designing career plans. For this reason, using a personality measurement can contribute to the effectiveness of a career counseling intervention in two important ways: to identify strengths and weaknesses thereby helping counselees making appropriate career choices, and to increase self-knowledge and promote identity reconstruction. Deconstructing and reconstructing self-concept might also increase the flexibility in and between the set of subjective identity forms that constitutes personal identity.

Some personality dimensions correlate with career decision-making difficulties and can be considered as risk factors. More specifically, high neuroticism and low conscientiousness are usually associated with low career maturity and high career decision-making difficulties. Moreover, some personality dimensions also have an impact on the effectiveness of career counseling. Indeed, neuroticism and conscientiousness moderate this effectiveness. Interventions seem less effective for people high in neuroticism and low in conscientiousness (Stauffer et al., in press). This means that people at risk for having career decision-making difficulties also benefit less from career interventions. For this reason, it might be interesting to develop specific interventions for people presenting such a personality profile.

## 3 Personality and regulatory processes

The expression of personality disposition in terms of career related behaviors, career choice, career indecisiveness, or of job related behaviors, job performance, job engagement, job stress, etc., has to be regulated in order to allow people to adjust their behaviors to the constraints or barriers in their environments. This regulation has to be operated by processes that might vary according to the type of behavioral expression. These processes might work as mediators or as moderators and have a differentiated impact on the expression of personality dispositions according to the level of these dispositions or to the level of the behavioral expression. Moreover, with dispositions being rather stable across time (even if some slow adjustment can be observed, implying the existence of a feed-back loop), the environment might have an impact on the expression of these dispositions by influencing these regulatory processes.

Several variables or constructs are interesting in regulating the expression of personality disposition. Emotion regulation skills could regulate the expression of personality traits in terms of emotions (Rossier et al., 2012). Neuroticism correlates with negative affects trait (r = .69) and state (r = .38), and extraversion with positive affects trait (r = .51) and state (r = .32). A trait measure of emotions might be more a measure of the latent personality trait, whereas a state measure relates more to the immediate behavioral expression (Terracciano, McCrae, Hagemann, & Costa, 2003). Reicherts, Genoud, and Zimmermann (2012) wrote about emotional openness, which includes having cognitive representations and being able to communicate, to perceive internal and external emotional indicators, to take into account social norms about emotional expression, and to regulate one's emotions. In career counseling, Lent et al. (1994) suggested that the expression of "predispositions" in terms of interests, choice goals, choice actions, and performance is mediated by learning experiences, self-efficacy, and outcome expectations. In career construction theory (Savickas, 2005), adaptivity promotes adaptation through a set regulation abilities, or career adapt-abilities, that might also regulate the expression of personality dispositions (Rossier et al., 2012). Finally, according to the five-factor theory, the self-concept that is part of characteristic adaptations might also regulate the expression of personality dispositions. Moreover, this self-concept might also be seen as a meta-competency (Sampson et al., 2004).

### *3.1 Personality and self-efficacy*

The social cognitive career theory suggests that people's characteristics in interaction with their environments provide learning experiences. These learning experiences permit self-efficacy and outcome expectations to develop, which promote the development of interests, career goals, career

choices, and career performances (Lent et al., 1994). These performances constitute new learning experiences and thus allow a feedback-loop to moderate the relationship between personal and environmental characteristics, and self-efficacy and outcome expectations. It is important to note that, according to this theory, the context moderates the relationships between interests, career goals, career choices, and career performances. Relationships between personality dimensions and self-efficacy or outcome expectations are well documented. For example, in a large Danish sample of the general population (N = 3,471), general self-efficacy correlated especially negatively with neuroticism (r = -.51) and positively with extraversion (r = .51) and conscientiousness (r = .48; Ebstrup, Eplov, Pisinger, & Jorgensen, 2011). Correlations were similar with self-efficacy in some specific domain, such as career self-efficacy (Hartman & Betz, 2007) or occupational self-efficacy, but slightly different with career decision-making self-efficacy, which correlates especially with emotional stability (r = .30), openness (r = .42), and conscientiousness (r = .34; Bullock-Yowell, Andrews, & Buzzetta, 2011).

Several researchers have investigated whether self-efficacy mediates the relationship between personality and career interests or other career related outcomes or behaviors. In a relatively small sample of college students, Nauta (2004) observed that self-efficacy usually mediated the personality-interest relationship. Schaub and Tokar (2005) confirmed these results, but specified that the relationship between personality and interests was mediated by learning experiences and sociocognitive mechanisms (self-efficacy and outcome expectations), and that the relationship between learning experiences and outcome expectations was partially mediated by self-efficacy, as postulated by the social cognitive career theory. Learning experiences, self-efficacy, and outcome expectations mediate the relationship between personality and career interests. Self-efficacy also mediates the relationship between personality and other work related behaviors, such as perceived work stress (Ebstrup et al., 2011). Remarkably, no one has published a study investigating the moderator effect(s) of these sociocognitive variables on career or work-related outcomes or behaviors.

### *3.2 Personality and career adapt-abilities*

Adaptability is a psychosocial construct that refers to the ability to alter our responses without too much effort in order to fit into new or changing circumstances. Thus, it constitutes a resource for facing occupational challenges, such as transitions, and might facilitate occupational and social integration. Career adapt-abilities is defined as a set of four resources: the ability to look ahead and to be aware of one's own future (concern), the ability to control one's career and life trajectories (control), the ability to explore a variety of situations and roles (curiosity), and the self-confidence in one's ability of reaching

his or her aspirations (confidence). As a resource for adapting to changing work circumstances, career adapt-abilities might mediate the relationship between personality dispositions and career and work-related outcomes or behaviors. Career adapt-abilities are mainly negatively correlated to neuroticism and positively to extraversion, openness to experience, and conscientiousness (see Table 1). Interestingly, these correlations vary according to the personality theory considered and the personality measurement used. Considering Zuckerman and colleagues' alternative five-factor model (e.g., Joireman & Kuhlman, 2004), career adapt-abilities also correlate with activity dimensions (Rossier et al., 2012); and considering the big five lexical model (Goldberg, 1990), the correlation with the intellect dimension is slightly higher compared to the correlation with the openness dimension of the five-factor model (Teixeira, Bardagi, Lassance, Magalhaes, & Duarte, 2012).

"Adaptability as psychosocial resources or transactional competencies is more changeable than traits" (Savickas & Porfeli, 2012, p. 663) and is certainly situational and context dependent. In a recent study on a large representative Swiss sample aged 25 to 55, Rossier and colleagues (2012) assessed personality and career adapt-abilities and studied the impact of the perceived job security or of the duration unemployment. We observed that personality dimensions were not affected by the perceived level of job security but that unemployment was associated with an increase of neuroticism with the duration of unemployment (known for causing anxiety) and that the level of conscientiousness was higher for people being unemployed between 4 and 10 months. However, adaptability seemed to be negatively associated with perceived level of job security, and unemployment of more than three months was associated with much higher levels of career adapt-abilities. This could suggest that people with lower adapt-abilities have more difficulties in finding stable jobs, and that people who lose their jobs activate their adapt-abilities resources, though not immediately but after three months (see Figure 1). Finally, Rossier et al. (2012) tested if career adapt-abilities could mediate the relationship between personality and work engagement and observed a partial mediation that accounted for up to 14% of the work engagement variance. These results are coherent with those obtained with similar constructs, such as psychological flexibility (Bond, Flaxman, & Bunce, 2008). As suggested in career construction theory (Savickas, 2005), adapt-abilities seem to be resources that might be activated in adverse situations that partly mediate the expression of people's dispositions.

### *3.3 Personality and the self-concept*

Matsumoto (2007) suggested that personality traits are inherited and that these traits contribute to the development of role identities, aggregate role, experiences, narratives, values, etc. The five-factor theory

also distinguishes the personality from the self-concept that belongs to characteristic adaptations and contributes to the regulation of the expression of personality dispositions (McCrae & Costa, 1999). According to the five-factor theory, basic tendencies, personal history, and the environment have an impact on the development of the self-concept. For Savickas (2005), the self is "personally constructed, interpersonally conditioned, and linguistically communicated" (p. 161). Since James (1890) published his theory of a dualistic self, the construction of the self-concept has been conceived as resulting from reflexive process articulating the self as an "I" or as a subject or agent, and the self as a "me," or as an object (Stead & Bakker, 2012). Later, Super (1990) articulated the idea of multiple selves, or multiple self-concepts with the notion of social role. The possible use of multiple selves is associated with personal flexibility, which is an essential ability to adapt to a variety of social, cultural, and professional situations (Martz, 2001). Guichard (2009) described the self-concept as a dynamic system of subjective identity forms. The development of this system results from the tension associated with two kinds of reflexivity. A first reflexivity, "I-me," confronts the intimate and the daily or social self (that "I" display to others), which usually tends to strengthen the stability of the self-concept. The second reflexivity, "I-you-s/he," articulates the intimate, the social, and the self as an object for others. This second reflexivity induces a continuous, dynamic process of self-analysis.

"Objective scores and subjective self-estimates clearly are different perspectives on the self, each with evidence of its own validity. Objective measures are concerned with public norms and resemblances whereas subjective measures are concerned with private goals and purposes" (Savickas, 2011, p. 24 Usually self-stories (or self-narratives), are based on a selection of memories that try to preserve the coherence and integrity of the self, for obvious economical reasons (Bujold, 2004). If the process of continuous self-analysis does not work effectively, the "I-you-s/he" reflexivity might not allow the self-concept to evolve, taking into account the self as an object. By promoting self-analysis and strengthening the reality principle, the wideness of people's multiple selves and their ability to adjust to a variety of situations is supposed to increase. A structured, flexible, dynamic self-concept should also allow for planning and anticipating the future and for planning future aspirations. The self also has to be conceived as a project (Savickas, 2011). In return, these anticipated trajectories and aspirations contribute to shaping this multiple self-concept. Self-analysis takes into account feedback from our social and cultural environment and increases our ability to design our life trajectories. This process moderates the expression of personality traits but might also be associated with a threat of fragmentation, in some cases explaining the ineffectiveness of career counseling with counselees that do

not have the psychological resources to undergo such a redefinition. According to this perspective, personality measurements can be used as self-knowledge tools, stimulating this deconstruction and reconstruction process to increase the flexibility of peoples' multiple self-concepts (Portnoi, Guichard, & Lallemand, 2004).

## 4 Personality assessment

Almost all personality measurements are not objective tests but are self- or peer-report scales. In career intervention, the use of implicit or projective measures is unusual. Currently, the most often used personality measurements for research and practice are certainly the 16 Personality Factor-Fifth edition questionnaire (16PF5; Cattell et al., 1993), the Eysenck Personality Questionnaire-Revised (EPQ-R; Eysenck & Eysenck, 1991), and the Revised NEO Personality Inventory (NEO-PI-R) and its latest version the (NEO-PI-3; McCrae, Costa, & Martin, 2005). These instruments were translated into more than 35 languages and are used all over the world. For practitioners, instruments that allow only a small number of higher-order personality dimensions, such as the EPQ-R, are less interesting for use during career interventions than hierarchical inventories that assess higher-order dimensions and a series of more specific personality traits. Moreover, hierarchical personality inventories might be more robust and have a higher predictive power (Rossier, Hansenne, Baudin, & Morizot, 2012). Although those mentioned above are very frequently used personality inventories, some others are also popular, such as the California Psychological Inventory (CPI; Gough & Bradley, 1996, 2002), the Comrey Personality Scale (CPS; Comrey, 1994), the HEXACO personality inventory (Lee & Ashton, 2004), or the Zuckerman-Kuhlman-Aluja personality questionnaire (ZKA-PQ; Aluja, Kuhlman, & Zuckerman, 2010), a revised and hierarchical version of the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ). The last two inventories (HEXACO and ZKA-PQ) are free of charge for non-profit academic research. Measurements of abnormal personality traits, such as the Minnesota Multiphasic Personality Inventory (MMPI-2; Tellegen et al., 2003) or the Dimensional Assessment of Personality Pathology-Basic Questionnaire (DAPP-BQ; Livesley & Jackson, 2009), are almost never used in career counseling interventions.

### *4.1 Hierarchical personality inventories*

In this section, a brief description will be provided of the two more frequently used hierarchical personality inventories, the 16PF5 and the NEO-PI-R. The ZKA-PQ, which is a recently created alternative, will also be presented.

The first version of the 16PF was developed in the 1950s (Cattell, 1957) and is extensively used since then for research and practice. The fifth edition of this multi-level instrument (Cattell, Cattell, & Cattell, 1993) includes 170 items an considers 16 lower-order traits (called primary scales): Warmth (A), Reasoning (B), Emotional stability (C), Dominance (E), Liveliness (F), Rule-consciousness (G), Social boldness (H), Sensitivity (I), Vigilance (L), Abstractedness (M), Privateness (N), Apprehension (O), Openness to change (Q1), Self-reliance (Q2), Perfectionism (Q3) and Tension (Q4). Recent studies reanalyzing the factor structure underlying these 16 lower-order traits identified five orthogonal higher-order dimensions, similar to the Big Five factors: Extraversion (Ex), Anxiety (An), Tough-mindedness (Tm), Independence (In), Self-control (Sc). Responses have to be given using one of the three following answer possibilities: "yes," "no", and "?" For primary scales, test-retest reliabilities (temporal stability) ranged from .69 to .87 (M = .80), and for global scales this reliability ranged from .84 to .91 (M = .87). Internal consistencies (homogeneity of the items within a scale) on primary scales ranged from .66 to .86 (M = .75). Normal internal consistencies estimates are not applicable for the global scales, because these scales are weighted linear combinations of all 16 primary scales. However the estimated internal consistency of these global scales for the French version of the 16PF5 ranged from .74 to .86 (M = .85). The factor structure was validated in large samples and the stability of this factor structure across culture was assessed, and seemed consistently stable (Hofer, Horn, & Eber, 1997) with some exceptions (Rossier et al., 2004). This personality measurement often is used by industrial/organizational or counseling psychologists.

The Revised NEO Personality Inventory was initially published 1985. In 1992, a major revision was published introducing facet-scales for all five main dimensions (NEO-PI-R; Costa & McCrae, 1992). For the recent NEO-PI-3, some modifications were introduced in order to increase items' readability and scales' internal consistencies (McCrae, Costa, & Martin, 2005). The NEO-PI-R and the NEO-PI-3 include 240 items measuring thirty traits, termed facets: Anxiety (N1), Hostility (N2), Depression (N3), Self-consciousness (N4), Impulsiveness (N5), Vulnerability (N6), Warmth (E1), Gregariousness (E2), Assertiveness (E3), Activity (E4), Excitement seeking (E5), Positive emotions (E6), Fantasy (O1), Aesthetics (O2), Feelings (O3), Actions (O4), Ideas (O5), Values (O6), Trust (A1), Straightforwardness (A2), Altruism (A3), Compliance (A4), Modesty (A5), Tender-mindedness (A6), Competence (C1), Order (C2), Dutifulness (C3), Achievement (C4), Self-discipline (C5) and Deliberation (C6). These thirty facets are combined into five major personality dimensions, termed domains: Neuroticism (N), Extraversion (E), Openness to experience (O), Agreeableness (A), and Conscientiousness (C). Each

dimension is made up of six facets. Responses are made on a 5-point Likert-type scale, 1 = strongly agree, 5 = strongly disagree. The six-months test-retest stability, using a short version of the NEO-PI-R, ranged from .80 to .87 for the five main dimensions (M = .83; Murray, Rawlings, Allen, & Trinder, 2003). The internal reliabilities for domains ranged from .86 to .92 (Mdn = .89), and for facets from .56 to .81 (Mdn = .71). The validity of the factor structure is very well documented, and this structure is especially stable across cultures and languages (McCrae et al., 2004; Rossier, 2005; Rossier, Dahourou, McCrae, 2005). The NEO-PI-R can be used in clinical, counseling, work, and organizational settings. This instrument is available in more than thirty languages and is certainly the most used personality inventory across the world.

The newly created version of the ZKPQ, the ZKA-PQ (Aluja et al., 2010), is based on a slightly modified version of the five-factor model: the alternative five-factor model. Four out of the five main dimensions of these two models are similar, and the difference between these two models is the presence of one dimension in each model that has no similar counterpart (Joireman & Kuhlman, 2004). The ZKA-PQ is a 200-item inventory aimed at assessing the five main dimensions of that revised alternative five-factor model: Aggressiveness (AG), Activity (AC), Extraversion (EX), Neuroticism (NE) and Sensation Seeking (SS). Each dimension includes four facet scales. Aggressiveness (AG) is divided into Physical Aggression (AG1), Verbal Aggression (AG2), Anger (AG3), and Hostility (AG4). Activity (AC) is divided into Work Compulsion (AC1), General Activity (AC2), Restlessness (AC3) and Work Energy (AC4). Extraversion (EX) is divided into Positive Emotions (EX1), Social Warmth (EX2), Exhibitionism (EX3) and Sociability (EX4). Neuroticism is divided into Anxiety (NE1), Depression (NE2), Dependency (NE3), and Low Self-Esteem (NE4). Finally, Sensation Seeking (SS) is divided into Thrill and Adventure Seeking (SS1), Experience Seeking (SS2), Disinhibition (SS3) and Boredom Susceptibility/Impulsivity (SS4). Each 20 facet-scale includes 10 items and the response format is a 4-point Likert-type scale (1 = strongly disagree, 4 = strongly agree). Test-retest reliability is unknown for the ZKA-PQ, but internal reliabilities range from .88 to .93 (Mdn = .92) for main dimensions and from .56 to .90 (Mdn = .78) for facet-scales. The validity of the ZKA-PQ was established in several studies, and the alternative five-factor model replicates well across cultures (Rossier et al., 2007, 2012). This hierarchical personality questionnaire is now available in 16 languages, ten European languages including English, three Asian languages, Arabic, Farsi, and Hebrew.

The three inventories presented all have good cross-cultural validity and can be used in a variety of

cultural settings. Many other personality inventories have been created in different countries across the world and might be of interest for career interventions. More complete descriptions of a larger set of personality measurements are available in several handbooks on personality assessment (e.g., Boyle, Matthews, & Saklofske, 2008; Weiner & Greene, 2008).

### *4.2 Purposes of a personality assessment and interpreation process*

Personality assessment consists of comparing the personality profile of one individual with the profiles of a representative sample of people from his or her linguistic and cultural group. This comparison identifyies personality dimensions or traits on which this individual obtains average, low, or high scores according to the distribution observed for this representative sample. For practical reasons, scores are usually standardized, in z-scores (M = 0, SD = 1) or t-scores (M = 50, SD = 10), for example. The identification of low or high can reveal a person's strengths and weaknesses. Usually, extreme scores are associated with both resources and risks. For example, a high level of conscientiousness is usually associated with a high level of job performance and being well-ordered, but it is also associated with a tendency to procrastinate. Widiger, Costa, and McCrae (2002) presented potential problems associated with high or low scores for each domain and facet of the five-factor model in further detail. These strengths and weaknesses have to be confronted in light of the counselee's career plans. If a person would like to have a career in the police force, but scores very low on conscientiousness, he or she might have some difficulties adjusting to this specific, very structured, and constrained work environment. To anticipate this possible difficulty does not mean that this person should not plan a career in the police work force, but that this counselee should be prepared for this challenge. Personality assessment also helps to identify individuals' "adaptive capacities and limitations, their preferred coping style, their underlying needs and concerns, and their attitudes toward themselves and others" (Weiner & Greene, 2008, p. 20).

Negative emotions are associated with the neuroticism domain whereas positive emotions are associated with the extraversion domain. So, in a second step, it is interesting to combine domains or dimensions on which the person as high or low scores. According to Costa & McCrae (1992), for the five-factor model, when neuroticism and extraversion are combined, this describes the "style of well-being." If a person scores high on neuroticism and low on extraversion, he or she might be describe as a "gloomy pessimist"; or if a person scores low on neuroticism and high on extraversion he or she might be described as an "upbeat optimist." For analyzing the "style of defense," Costa and McCrae suggested considering neuroticism and openness. For analyzing the "style of anger control," neuroticism and

agreeableness can be considered. The "style of interests" is described by combining the extraversion and openness dimensions, the "style of interactions" by combining the extraversion and agreeableness dimensions, and the "style of activity" by combining the extraversion and the conscientiousness dimensions. These combinations are relevant for high, very high, low, and very low scores. Average scores do usually not characterize a person, but when someone has a high number of average scores, that could be a sign of excessive social conformism. These combinations can be used in reference to a person's specific goals. For example, someone would like to start new studies in order to get a more social job but scores low on extraversion and agreeableness; that usually describes people who are very distant and suspicious. To answer specific questions, a combination of facets might also be relevant. For example, to describe impulsiveness and venturesomeness, as defined by Eysenck and Eysenck (1978), it is relevant to consider impulsiveness (a facet from the Neuroticism domain), excitement seeking (a facet from the eExtraversion domain), and altruism (a facet of the Agreeableness domain). According to our studies, deliberation is also very relevant (a facet from the Conscientiousness domain that correlates strongly with impulsivity), and maybe more so than altruism (Zimmermann, Rossier, & Meyer de Stadelhofen, 2004).

The process of personality testing has to be included in much larger process of personality assessment, which implies integrating other types of information, such as the counselor's perception of the counselee's personality, the free description of personality-relevant behaviors by the counselee that are sometimes available through collecting a careful background history, or by asking the counselee to share his or her own perception about his or her personality. It is very important that the counselee understand the reasons of the usefulness of a personality assessment. The most frequent reason is for identifying personal strengths and weaknesses. When a counselee seeks services of on his free will, personality assessment does usually not present a difficulty. However, administrative assessments are more difficult to conduct with mandated clients, such as prison inmates or persons benefitting from social security/disability insurance; and, again, the reasons and objectives of a personality assessment have to be clearly explained. It is also important to explain who will have access to the results prior to the assessment. Generally, people undergoing a personality assessment have to be confortable, and counselors need to promote cooperation and engagement in the process. For this reason, this type of assessment should be done after the working alliance has been established. Indeed, the working alliance has an impact on the counselee compliance, satisfaction, and on career intervention effectiveness (Masdonati, Massoudi, & Rossier, 2009). At end of personality testing, it is important to ask the

counselee if he or she perceived the inventory test situation to be acceptable or difficult. If the situation was perceived as difficult, it important to understand why. When personalized feedback is given, it is important to remain neutral and descriptive. Implications and questions have to be formulated tentatively. In particular, implications should be evaluated together by the counselee and the counselor (using oral and written forms combined) to stimulate the reconstruction or co-construction process necessary for a redefinition of the counselee's self-concept. However, it is important that the counselor grounds his or her hypothesized implications empirically or conceptually. Inconsistencies between the personality profile and other information are very interesting and are usually very helpful in encouraging this redefinition process. Finally, the use of personality assessment has to comply with the ethical standards enforced in a particular country and profession, such as the Standards for Educational and Psychological Testing (AERA et al., 1999), the Ethical Principles and Code of Conduct from the American Psychological Association (2002), or the standards of the International Test Commission (2000). However, most principles are internationally relevant, like the use of appropriately validated language forms (Duarte & Rossier, 2008).

The personality assessment process should help counselees to redefine their relationship with their environment through reconstructing and co-constructing his or her self-knowledge. Personality identity might also be redefined to incorporate multiple and more differentiated identity forms. Personality assessment might thus promote adaptability and adaptation.

## 5 Case studies

Career counseling interventions with adults often include personality assessment. To illustrate the type of results a counselee and a counselor might expect from such an assessment, two case studies are presented. In both cases, this assessment had an important impact on the outcomes and conclusions of the intervention. It was also an opportunity for the counselee and the counselor to better understand the counselee's personal situation. In both cases, information provided by that assessment was not spontaneously mentioned during the previously conducted background intake history. The face-to-face career intervention we offer, usually starts with the analysis of the counseling request, a background intake interview, followed by an evaluation phase of past professional experiences and personal aspects. Personality assessment takes place during this evaluation, which is aimed at describing and defining the counselee's current situation (e.g., "Who am I?," "What I have done?"). This evaluation phase is followed by a phase that is devoted to selecting the best options and to planning and implementing the most relevant option.

### *5.1 The case of Susan*

Susan is a 40-year-old, white, heterosexual woman raised in a middle-class family. She finished high school without any difficulties. Instead of undertaking further studies, she decided to work as a secretary. Since then, she has worked at three different places, and has worked as a secretary for 8 years in a social institution. She likes this socially-oriented work environment, and her employer seems very satisfied with her work. She didn't report any difficulties at work, but expressed that it was not challenging enough any more, and that she would like to have a job where she could express her social interests and altruistic values. She also would like to take more responsibility and is thinking about enrolling in a psychology program, for example. Susan is married and has two children, aged 8 and 12. She is having marriage difficulties. The conflicts with her husband are mainly about his unemployment, the little effort he puts into finding a new job, and about his low level of involvement in raising their two children. Susan really would like to start new studies, but cannot afford it and asks if there are opportunities to obtain help from the state or to get a loan in order to pursue her ambition. In the evaluation phase, her work experiences were carefully analyzed, and a personality assessment was suggested in order to identify her personal strengths and weaknesses.

Susan's NEO PI-R profile showed that she scores extremely low on neuroticism, high on extraversion, agreeableness, and conscientiousness, and average on openness. She has a very differentiated profile. The scores for the neuroticism facets are all low or extremely low, with especially low scores for anxiety, anger-hostility, and self-consciousness. These very low scores can be associated with a lack of appropriate negative feelings; generally, for example, in the case of objective danger, an inability to become angry, even in appropriate situation of provocation or abuse, may manifest, as well as an insensitivity to social feedback. She also scored low on the Depression facet. These scores showed that she rarely experiences negative affect, that she controls her temper, and that she feels that she is very resistant to stress. Scores for extraversion facets are more contrasted with a very high score on activity, sometimes associated with disorganized hyperactivity, that goes along with a difficulty concentrating on a single task and an intolerance for inactivity. Her scores were high for assertiveness and positive emotions, showing that she likes to take the lead in a group and that social interactions and life, in general, are associated with positive emotions. She had average scores on warmth, gregariousness, and excitement-seeking. Her Openness to experience facet scale scores were also differentiated with high scores on fantasy and values, and low scores on aesthetics and feeling. Score were average for actions and ideas. This profile suggests that Susan's inner fantasy of having many

different experiences and being active is important for her own personal satisfaction and well-being. Her scores on the Agreeableness facet scales were homogeneous, with average scores for altruism and modesty, high scores for trust, straightforwardness, and compliance. This profile suggests that Susan usually think that others are honest and that she, herself, is compliant, honest, and reliable. Very high scores on the Tender-mindedness facet are sometimes associated with a tendency of becoming overwhelmed when confronted to others' pain and suffering. Concerning the Conscientiousness facet scales, Susan scored average on dutifulness and self-discipline and high on competence, order, and achievement striving, showing that Susan is an effective, organized, and ambitious person, and she scored very high on deliberation, which is sometimes associated with the tendency to ruminate and to be unable to make a decision.

Simultaneously considering neuroticism and extraversion, Susan's profile is associated with low levels of negative affect and high levels of positive affect. She is optimistic, and might also be overly optimistic sometimes. Low neuroticism and high agreeableness characterize people that are easy going. Indeed, Susan prefers to cooperate and to forgive and forget when confronted with conflict. Low neuroticism and high conscientiousness is usually associated with clear goals, the ability to plan one's actions, and a high frustration tolerance. High extraversion and agreeableness are associated with good interpersonal skills. People with high extraversion and conscientiousness scores are usually productive and effective, and people with high agreeableness and conscientiousness scores are active altruists who like to make efforts for the collective or for others. Overall, Susan's profile seems to be very well-adapted for a social job, as she is emotionally stable and has a high level of interpersonal skills and conscientiousness. However, low or very low scores on anger, hostility, vulnerability, and feelings could be associated with the inability of being aware of her own negative emotions and of the eventual associated dangers. Her feeling of being invulnerable increases that danger. However, Susan seems to be very attentive to the feelings of others, with very high scores on sensibility. Being inattentive to her own emotions and being overly attentive to the emotions of others might be potentially problematic, and may increase the probability of Susan being overwhelmed by others' feelings. Moreover, she seems very active, as she is in her private and professional life, but has some difficulties making decisions. Susan's profile is associated with strengths, interpersonal abilities, emotional stability, activity, etc., but also with weaknesses, such as inattention to her own needs and being active but unable to make decisions.

During the restitution of her profile, Susan shared with us that she was not very attentive to her own

internal signs of exhaustion, and that she already has had to take time off from work due to burnout. She also realized that attention to others and attention to her own needs should be more balanced. Considering the emotional vulnerability associated with this inattention to her own feelings, her difficult family and economic situation, starting a new and demanding training program to become a psychologist, for example, appeared to be unrealistic. For this reason, the career plan that was elaborated by both Susan and her counselor included promoting Susan's emotional self-awareness, working on her family situation (asking her husband to take more financial and familial responsibilities), and afterwards starting a less demanding education program that could be completed alongside her actual work.

### *5.2 The case of Mike*

Mike is a 21-year-old, white, heterosexual man raised in an upper-class family. He finished high school without any difficulties, following a scientific program of study. In high school, Mike received a strong science education and always thought that he would enroll in a very demanding and prestigious engineering school. His slightly older sister faced a lot of difficulties in school and had to be enrolled in a special class for people with learning disabilities. Now, she is working in an adapted and protected work environment for people with disabilities. Unfortunately, after his first semester in engineering, Mike realized that his level in math and physics levels were insufficient. For this reason, he asked to join a special preparatory class for people that did not have sufficient levels in math and physics. Even after completing this preparatory class, Mike definitively failed his first year at this prestigious engineering school and was dismissed from the program. Having never thought about any other option, he came to our counseling center to identify other possible alternatives he could pursue. During his free time, Mike likes to write software programs, repair computers, and take photos. He is also very interested in Japanese culture and architecture. He even completed a high school project about Japanese movies. Concerning his professional aspirations, he would like to have a socially well-recognized profession. In the evaluation phase, interests, work values, and personality were assessed to better define Mike's professional aspirations and to identify his personal strengths and weaknesses.

Mile's NEO PI-R profile showed that he scored high on neuroticism, low on agreeableness, very low on conscientiousness, and average on extraversion and openness. He has a very differentiated profile, with high and very low scores. His scores on Neuroticism facets were highly contrasted, with very high scores on depression and self-consciousness, which could indicated that he is depressed, and feels hopeless, humiliated and ashamed; he also had a high score on vulnerability, a low score on

impulsiveness, and average scores on anxiety and angry hostility. Mike seems quite sensitive to stressful situations and has experienced = emotional distress, but is able to control his desire and needs and seems to resist frustration quite well. Scores of the Extraversion facet scales are particularly contrasted with very a very high score on Excitement-Seeking and a very low score on Positive Emotion, which might be associated with engaging in highly dangerous activities and being unable to enjoy himself. He also received a high score on Gregariousness and a low score on Assertiveness, showing that he likes to be with other people but that he doesn't like to take the lead in a group. This corresponded to his own description of his social interactions with his friends. Finally, he received average scores for the Warmth and Activity facet scales. For the Openness dimension, Mike's scores were less contrasted with average Fantasy, Aesthetics, Feelings, and Values scores. He had very low scores on Actions and Ideas, which indicates that he prefers established routine activities and avoiding changes and prefers to focus on specific topics rather than being interested in a variety of activities. In the Agreeableness domain, he presented a high score on Modesty, low scores on Compliance and Tender-Mindedness, and a very low score on Trust. On Straightforwardness and Altruism he had average scores. This indicates that he can be aggressive in interpersonal relationships, competitive, rational, and not very sensitive to others' needs. On the other hand, he seemed to lack self-esteem and self-confidence. Concerning his Conscientiousness' facet-scales, Mike scored average on Order, low on Competence, Dutifulness, and Deliberation, and very low on Achievement Striving and Self-Discipline. This indicates that he might have low self-esteem and an external locus of control, might be unstable and not very reliable, and might make decisions without thinking about the consequences. He might have difficulties setting clear goals, plans, and aspirations, and might be negligent in school. This picture reflects Mike's lack of motivation and his difficulty in engaging in school work that he described during intake interviews quite well.

High scores on neuroticism and low on agreeableness characterize people that are perceived as sometimes difficult and unstable, who expresses their tempers without precautious. In Mike's case, it might be more of a combination of negative affect and a low sensitivity towards others' emotions, as he was preoccupied with his own emotional difficulties. People high on neuroticism and low on conscientiousness are generally characterized by difficulties to resist their desires who might engage in health risk behaviors. For Mike, it might be more precisely a combination of high negative affect and very low motivation and capacity to engage in a particular project or course of study. Finally, people low on agreeableness and conscientiousness have the tendency to focus more on their own pleasure and

needs. For Mike, this might be secondary to his emotional distress. Scores on the Depression, Self-Consciousness, Vulnerability, Positive Emotions facets, all confirm Mike's emotion distress. Interestingly, he didn't mention his emotional distress during previous sessions. Considering his distress, it is interesting to investigate his impulsivity and acting out tendencies. Mike had a high score on Excitement-Seeking, and low scores on Altruism and Deliberation. Fortunately, he had low scores on Impulsiveness, which moderates this picture a little bit. Finally, his overall activity and motivation could be analyzed, considering his low scores on Activity and very low scores on Actions, Achievement Striving and Self-Discipline. Mike is certainly characterized by low self-esteem, low self-efficacy, low activity, and low motivation, which certainly had to be addressed during subsequent career counseling sessions.

After receiving personalized feedback about his profile, Mike was able to admit that he was indeed very depressed and affected by his failure at that prestigious engineering school. After having further investigated this emotional distress during the following session and having also assessed Mike's symptoms of depression, using the Beck Depression Inventory (BDI; Beck & Steer, 1987), Mike was encouraged to see and referred to a psychiatrist or a psychologist to seek help for his emotional distress. Mike took a first appointment with a psychiatrist, in parallel with career counseling sessions. Analyzing Mike's career aspirations confirmed an interest for studies in architecture, which combine aesthetical and technical components. In Swtizerland, architecture can be studied at his former very prestigious and demanding engineering school, but also at universities of applied sciences. Mike decided to start new architecture studies at that university of applied sciences.

## 6 Conclusion

Personality can no longer be conceived as the expression of vocational interests, and has to be conceived as a distinct entity. Personality dimensions are dispositions, such as general mental abilities. These personality dispositions are associated with several vocational and career-related outcomes, such as work engagement, work satisfaction, job performance, work stress, burnout, etc. However, these relationships are probably regulated by several characteristic adaptations, or regulatory processes. One such promising self-regulation attribute for vocational and career-related outcomes is certainly career adapt-abilities and self-efficacy. However, other self-regulation processes might also be important, such as those implicated in the regulation of affective expression. The self-concept, itself, can be conceptualized as a meta-competency that regulates the expression of personality dispositions. These dispositions and all of these regulation processes are important in order for people to express adapted

behaviors that fit into the expectations of their social and cultural environments.

Personality assessment facilitates the deconstruction, reconstruction, and co-construction of the self-concept that occurs during career interventions with adults by promoting self-analysis. However, this self-analysis implies receiving personalized feedback in sessions where the implications of personality profiles for counselee's career plans are analyzed and considered. Personality assessment cannot be distinguished from the interpretation of the results and the restitution that implies personalized feedback. Moreover, redefining the self-construct can take time, and personality assessment takes at least one and a half hours to complete. In order to stimulate this self-analysis, hierarchical inventories are certainly more appropriate because they provide much more information. Both case studies have shown that personality assessment promotes the discovery of new aspects, barriers, or resources that might be taken into account for future career planning. In career counseling, normal personality traits are usually assessed. There is almost no data concerning the impact of abnormal personality traits on vocational and work-related outcomes. Implications of abnormal personality traits should be further studied, knowing that people suffering from a personality disorder, such as borderline personality disorder, might have a lot of difficulties entering the labor market. In fact, a large part of young adults that have not completed a professional training program and who were not able to enter the labor market report personal problems (Baer, Frick, & Wiedermann, 2011).

*Table 1 : Correlations between personality dimensions and career adapt-abilties in a representative sample of the active Swiss population*

| | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 6.1 | 6.2 | 6.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Neuroticism | 30.83 | 7.19 | | | | | | | | | |
| 2. Extraversion | 40.89 | 5.80 | **-.31** | | | | | | | | |
| 3. Openness to experience | 41.33 | 5.95 | .01 | .26 | | | | | | | |
| 4. Agreeableness | 43.55 | 5.41 | -.12 | .10 | .17 | | | | | | |
| 5. Conscientiousness | 47.21 | 5.54 | **-.34** | **.30** | .05 | .18 | | | | | |
| 6. Adaptability | 3.75 | 0.53 | **-.36** | **.40** | **.33** | .05 | **.49** | | | | |
| 6.1 Concern | 3.53 | 0.66 | -.26 | **.34** | .22 | .01 | **.43** | **.82** | | | |
| 6.2 Control | 3.94 | 0.61 | **-.43** | **.36** | .22 | .04 | **.44** | **.86** | **.58** | | |
| 6.3 Curiosity | 3.65 | 0.63 | -.21 | **.32** | **.44** | .08 | **.31** | **.85** | **.60** | **.63** | |
| 6.4 Confidence | 3.89 | 0.59 | **-.32** | **.35** | .23 | .05 | **.49** | **.87** | **.58** | **.72** | **.68** |

*Note*. Correlations equal to or above .30 (medium effect size) in absolute magnitude are in in bold ($N$ = 2,002).

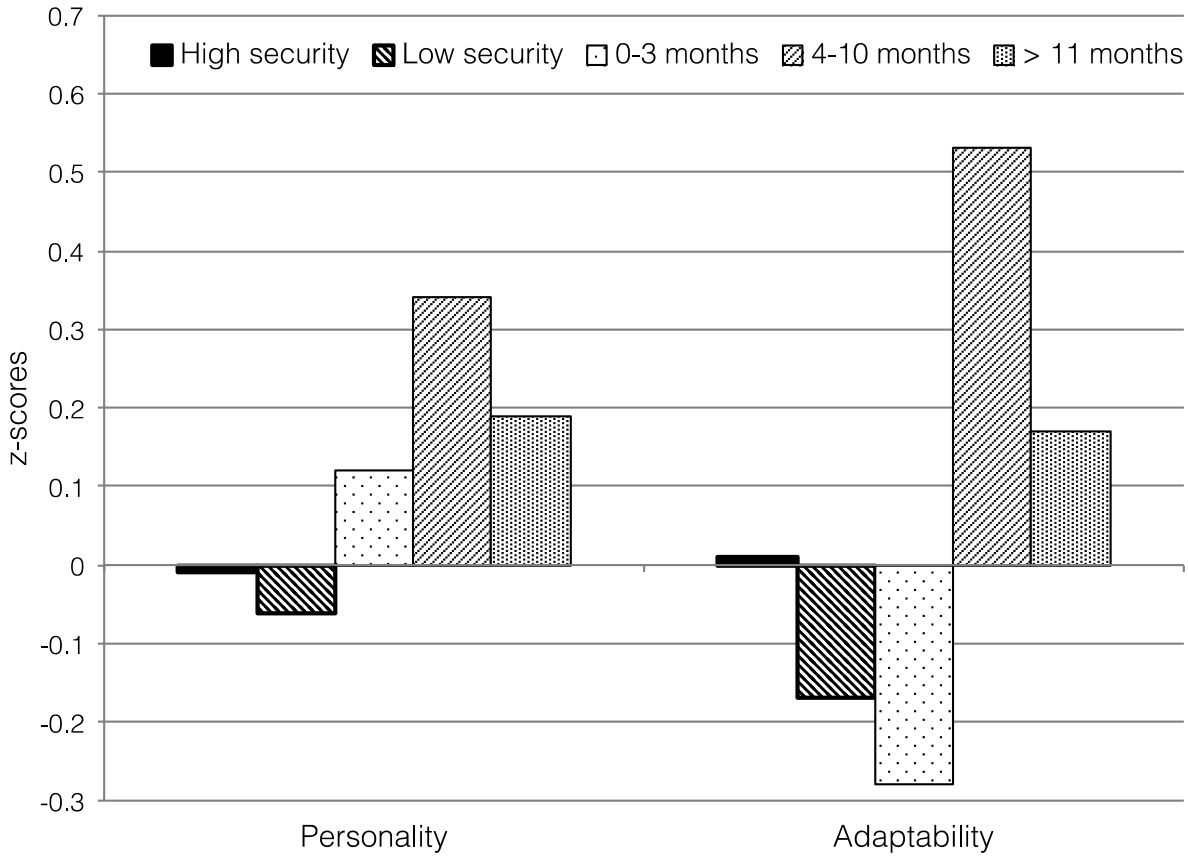


*Figure 1*. Mean career-adapt-abilities and overall mean personality *z*-scores as a function of the subjective perception of job security (high vs. low) and duration of unemployment (0-3 months, 4-10 months, 11 months and more).

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