IDENTITY CAPITAL MODEL IN ITALIAN UNIVERSITY STUDENTS: EVALUATION OF THE ITALIAN VERSIONS OF THE MULTI-MEASURE AGENTIC PERSONALITY SCALE AND IDENTITY STAGE RESOLUTION INDEX

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Abstract. *The current study assessed the applicability to the Italian context of the Identity Capital Model, which postulates that in late-modern societies personal agency is positively associated with two senses of adulthood: adult identity and acceptance in an adult community. The participants comprised 332 Italian university students. Three self-report measures were used: The Multi-Measure Agentic Personality Scale (MAPS20); the Identity Stage Resolution Index (ISRI); the Dimensions of Identity Development Scale (DIDS). Confirmatory factor analyses of the Italian version of MAPS20 and of the ISRI, along with the convergent validity between them and measures of identity processes (DIDS), suggest that the Italian version of both the MAPS and the ISRI are a promising tool for assessing identity capital.*

Keywords: Identity capital, Identity commitments, Transition to adulthood

1. INTRODUCTION

There is growing interest in several fields concerning the changing nature of the transition to adulthood. It seems that the transition to adulthood is taking much longer than in the past in terms of passing key social markers of adulthood (e.g., full-time employment and family formation), sometimes because of new obstacles that make it more difficult to pass these markers (e.g., poor employment prospects for the youth segment of societies) (e.g., du Bois-Reymond & Chisholm, 2006; Schulenberg & Schoon, 2012; Sica, Aleni Sestito & Ragozini,

2014). Western, late-modern societies are in many ways anomic and unstructured, leaving people to fend for themselves through their own personal resources (e.g., Côté & Levine, 2002, 2016; Luyckx, Schwartz, Goossens & Pollock, 2008; Schwartz, Côté & Arnett, 2005). Even the identity formation can be more prolonged and complex because of the vagaries of late-modernity, but personal agency and proactivity can mitigate the effects of obstacles (e.g., Côté, Mizokami, Roberts & Nakama, 2016; Crocetti, Rabaglietti & Sica, 2012; Livi Bacci, 2008; Sica, Luyckx, Goossens, Ragozini & Aleni Sestito, 2017). Finally, the nature of adulthood has become ambiguous, including when someone can be considered an "adult" (Côté, 2000).

Research and tools are needed that tie these concerns together, namely, to identify the factors that can help young people to traverse the period of adolescence and find secure membership in an adult community. The present study adopts a model that promises to address this need broadly by adapting tools for personal agency and identity resolution and linking personal agency with the adoption of a sense of adult identity and entry into adulthood (Côté, 2016).

2   PERSONAL AGENCY AND ADULT IDENTITY IN LATE MODERNITY

The Identity Capital Model (ICM) is a developmental social-psychological framework proposed by Côté (1996, 1997, 2016) that has proven useful for understanding how young people develop and use the resources necessary for functioning more effectively in late-modern societal contexts that are relatively unstructured, such as in the increasingly prolonged transitions through educational systems and their loose connections with employment (Côté, 2002). Côté (2000) identified two individualized responses to the current destructured social life: a passive one defined as "default individualization," in which young people approach their life-course according to circumstances and impulse, and an active response defined as "developmental individualization." The latter requires that individuals be involved in their own personal growth in personally agentic ways. In other words, the ICM proposes that individuals can compensate for the instability and relatively anomic contexts of late-modern society by proactively engaging in identity-work that culminates in certain identity capital

acquisitions. Based on Erikson's (1968) work, effective resolutions of the identity stage that involve entry into adulthood constitute important forms of identity capital acquisition that provide stability to people's lives and access important resources, like full-time employment.

The ICM has been operationalized with two measures: the Multi-Measure Agentic Personality Scale (MAPS; Côté, 1997) and the Identity Stage Resolution Index (ISRI; Côté, 1997). The MAPS comprises versions of four subscales of agentic traits that are well established in the developmental literature: internal locus of control (the individuals believe that they are the cause of their own behaviors), purpose in life (the short term and long term purposes of the individual in his/her life), self-esteem (as a feature of agency is referred to three meanings consisting of self-love, self-acceptance and sufficiency), and ego strength (the belief that one is in control of one's decisions and is responsible for their outcomes and the confidence that one will be able to overcome the obstacles that impede one's progress). The ISRI is based on Erikson's (1968) well-established premise that the resolution of the identity stage coincides with the final steps of the transition to adulthood, which are manifest in two ways: (1) feeling like and being recognized by others as an adult (adult identity), and (2) being integrated into an adult community based on viable and long-term socially validated roles (societal identity). The ISRI thus has two subscales, the Adult Identity Resolution Scale (AIRS) and the Societal Identity Resolution Scale (SIRS), respectively. The MAPS emphasizes personal agency as a form of identity differentiation, whereas the ISRI subscales emphasize the integration and continuity aspects of identity consolidation (cf. Côté & Levine, 2016).

Support for the ICM has been found in numerous studies involving identity formation processes, educational experiences, education-to-work transitions, professional socialization, and impression management (Côté, 2016). Based on translations the MAPS and ISRI, the ICM has been successful applied in several cultural contexts, including China (Yuan & Ngai, 2016), Portugal (Oliveira, Mendonca, Coimbra, & Fontaine, 2014), Taiwan (Chen & Chou, 2014), Turkey (Atak, Kapci & Cok, 2013; Morsunbul, 2014), Japan (Côté, Mizokami, Roberts & Nakama, 2016) and the UK (Bynner & Parson, 2002; Schuller, Preston, Hammond, Brassett Grundy & Bynner, 2004).

3 THE MAPS20 AND THE ISRI: SCALES CONSTRUCTION AND FACTOR STRUCTURES

As explained by Côté (2016), the MAPS (Côté, 1997) in its first version was of 96 items then reduced to 20. This last version was articulated in four subscales of five items each based on the following instruments: Self-Esteem (Coopersmith, 1981), Purpose in Life (Crumbaugh & Maholick, 1969), Internal Locus of Control (Rotter, 1966), and Ego Strength (Epstein, 1983). In order to develop the 20-item version, the Author (2016) first did a factor analysis for every scale and the results showed that the items loading strongest on the first factor. When more than five items loaded on the first factor, the authors selected five items whose content was most diverse. After that, the 20 items were submitted together to a PCA with Varimax Rotation. The four-component structure was replicated, with Cronbach's alphas, respectively, of .68, .75, .61, and .69; and .73 for the 20-item scale (Côté, 1997).

Recently, according to Byrne's (2010) recommended procedures, the MAPS20 was assessed using the Confirmatory Factor Analyses (CFAs) using a sample of US college students (N = 490; 18 to 24 years old; Côté et al. 2016). Findings of Principal Components Analysis replicated the four-factor structure but with a CFI < .90 and the RMSEA < .08. To improve the fit, on the base of the modification indices suggested, Authors added a covariance term between the two error terms correlated precisely between the reverse-scored items PL2 and PL3. Then, the items LC2 and PL5 were deleted. According to the author (2016), the last version had a good fit (CFI=.961; RMSEA=.037).

Regarding Identity Stage Resolution Index [ISRI] (Côté, 1997, 2016), is composed by six items, three tapping the sense of being an adult (the Adult Identity Resolution Scale [AIRS]), and three items the sense societal integration (the Societal Identity Resolution Scale [SIRS]). The Author (2016) reported that the Cronbach's alpha coefficient of reliability ranges from 0.64 to 0.79 for each three-item scale, and upwards of .85 when the six items are considered one scale.

The structure at two factors was replicated and confirmed in various studies (for example: Luyckx, Witte, and Goossens, 2011; Piotrowski & Brzezińska, 2015; Schwartz, 2007).

3.1 IDENTITY CAPITAL MODEL: CONVERGENT VALIDITY

The convergent validity of the ICM has been documented by showing that the measure of agency, comprising internal locus of control, self-esteem, ego-strength and purpose in life, was found to be positively related to identity achievement and negatively to identity diffusion (Cotè & Schwartz, 2002). Schwartz (2006) also demonstrated the Cotè at colleagues' argument (Cotè, 2000; Cotè & Levine, 2002) that agency is the primary mechanism underlying successful identity consolidation. More in general, identity capital acquisition appeared to be an internal resource enabling individuals to navigate into the modern and unstable labor market (Bynner & Pearson, 2002; Luyckx, De Witte, & Goossens, 2011).

3.2 THE PRESENT STUDY

The overall purpose of the present study was to validate Italian versions of the MAPS20 and of the ISRI. To that end, we first examined reliabilities of the four subscales of the MAPS20 and of the two subscales of the ISRI proposed by Côté (1997). Second, we tested, using Confirmatory Factor Analysis (CFA), whether the four-factor structure of the MAPS and the two-factor structure of the ISRI were also appropriate for the Italian versions. Third, we tested for significant differences on the observed mean MAPS20 and ISRI scores by gender. To date, two studies have consistently shown no mean differences by gender, while tests for age differences cannot be conducted because the sample is homogenous with respect to this variable. In this study, we did not collect other socio-demographic variables. Fourth, we examined the convergent validity of the MAPS20 and ISRI by analysing associations of their dimensions with identity processes.

4. METHOD

4.1 PARTICIPANTS AND DATA COLLECTION

A sample of 332 Italian university students (160 males and 172 females), attending the first two years of three different university faculties (45% psychology, 38% sociology and 27 % law) in a large Italian city (Naples), took

part in this study. The mean age of the participants was 20 years (ranging from 19 to 21). Two research experts with the survey attended classes to assist the respondents with questions about the survey, while protecting their anonymity. Completion time was between 20 and 40 minutes. Only students volunteering to take part were involved in the research. Informed consent was obtained from all individual participants included in the study.

4.2   Measures

Agency. The MAPS20 is a short version of 96-item *Multi-Measure Agentic Personality Scale* (MAPS; Côté, 1997), and consists of 20 items, with four 5-item subscales and with different response scaling for each subscale, measuring: Self-esteem (e.g., "I have a low opinion on myself"), Purpose in Life (e.g., "My personal existence is very meaningful and purposeful"), Internal Locus of Control (e.g., "What happens to me is my own doing"), and Ego-Strength (e.g., "I have a lot of willpower").

The MAPS20 was translated into Italian following the guidelines of the International Test Commission (Hambleton, 1994), using a back-translation procedure (Brislin, 1980). This exercise was carried out on 50 subjects in a pre-test phase, resulting in a few linguistic adjustments upon which the final Italian version is based[1]. These adjustments concerned progressive clarification of the items to make them immediately understandable to respondents and unambiguous.

Identity Capital accumulation. Côté (1997) developed the *Identity Stage Resolution Index* (ISRI) to operationalize forms of identity capital accumulation during late adolescence. The six items in this scale measure the progress made in resolving aspects of the identity stage by developing a self-definition as an adult and establishing membership in an adult community. Each item is measured on a five-point scale ranging from "not at all true" to "entirely true." The ISRI consists of two subscales: three items evoke the sense of being an adult [Adult Identity Resolution Scale (AIRS); $\alpha = .69$]; the other three items reflect a sense of integration into an adult community [Societal Identity Resolution Scale

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[1] The Italian versions of MAPS and ISRI are available from the lead author.

(SIRS); $\alpha = .66$]. Sample items read: ''I consider myself to be an adult'' (AIRS); ''I have found a community in which to live for the remainder of my life'' (SIRS). The ISRI was translated into Italian following the guidelines of the International Test Commission (Hambleton, 1994), using a back-translation procedure (Brislin, 1980). As was the case in assessing the MAPS20, this exercise was carried out on 50 subjects in a pre-test phase, resulting in a few linguistic adjustments upon which the final Italian version is based.

Identity Dimensions. The Italian version of the Dimensions of Identity Development Scale (DIDS; Luyckx et al., 2008; Crocetti, Luyckx, Scrignaro, & Sica, 2011) was used to assess five identity dimensions. The DIDS includes 25 items (5 items for each identity dimension) with a response scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). Sample items read: "I have decided on the direction I want to follow in my life" (commitment making -*CM*), "I sense that the direction I want to take in my life will really suit me" (identification with commitment -*IC*), "I regularly think over a number of different plans for the future" (exploration in breadth -*EB*), "I regularly talk with other people about the plans for the future I have made for myself" (exploration in depth -*ED*), and "It is hard for me to stop thinking about the direction I want to follow in my life" (ruminative exploration -*RE*). Cronbach's alphas were.90, .85, .71, .70, and .79, respectively.

5.   RESULTS

5.1   THE ITALIAN VERSION OF MULTI-MEASURE AGENTIC PERSONALITY SCALE (MAPS20-I)

To assess the reliability of the MAPS20-I subscales, the internal consistency of each subscale was evaluated using Cronbach's alphas, which were: .56 for Self-Esteem, .73 for Purpose in life, .67 for Internal Locus of Control, .63 for Ego Strength. The Cronbach's alpha inclusive of all 20 items is .73, suggesting that the full version of the MAPS20 should be used as an overall indicator of the personal agency. These Cronbach's alpha values, according to literature (George & Mallery, 2003), are mostly to be considered questionable and in one case poor

but nevertheless overlapping with those known in the literature (see Cotè, 1997; Cotè, 2016; Atak, Kapci & Cok, 2013).

The factorial structure of the MAPS20-I was assessed through a second-order confirmatory factor analysis testing the proposed four-factor model of personal agency using the software Lavaan R-package (Rosseel, 2012). In order to verify the goodness of fit of the model, wherein the four manifest factors represent the theoretical latent factor of personal agency, we relied on various indices: the Normed Fit Index (NFI; Tucker & Lewis, 1973; Bentler, Bonett & Douglas, 1980), the Comparative Fit Index (CFI; Bentler, 1990), SRMR (Hu & Bentler, 1998) and the IFI (Hu & Bentler, 1999). In addition to these, we considered the Root-Mean-Square Error of Approximation (RMSEA; Steiger & Lind, 1980; Steiger, 1989) and the Goodness of Fit Index (GFI; Jöresborg & Sörbom, 1985). The model's indices of goodness of fit are all satisfactory (GFI=.93; CFI=.96; NFI=.92; IFI=.96; SRMR=.054; RMSEA=.052). Also the ratio between the χ^2 and the degree of freedom ($\chi^2 = 241.39; df = 127$) highlights a good fit being less than 5 (Wheaton et al. 1977). A series of t-tests revealed that all factor loadings are significant and that the items contribute in a substantially similar and well-balanced way to the determination of each of the four factors (Figure 1).

5.2   THE ITALIAN VERSION OF IDENTITY STAGE RESOLUTION INDEX (ISRI-I)

The internal consistency of the two ISRI subscales was assessed using Cronbach's alphas, which were .75 for the AIRS-I and .64 for the SIRS-I. The alpha was .763 for all six ISRI-I items. Following Côté (1997), a two-factor model was assessed CFAs. The indices of goodness of fit of the model are all satisfactory (GFI = 1.00; CFI = .99; NFI = .99; IFI = 1.01; SRMR = .024; RMSEA = .032). An analysis of t-values found that all factor loadings are significant and that the items contribute in a substantially similar and well-balanced way to the determination of each of the two factors (Figure 2). Thus, the factorial structure of the ISRI-I replicates the original English version.
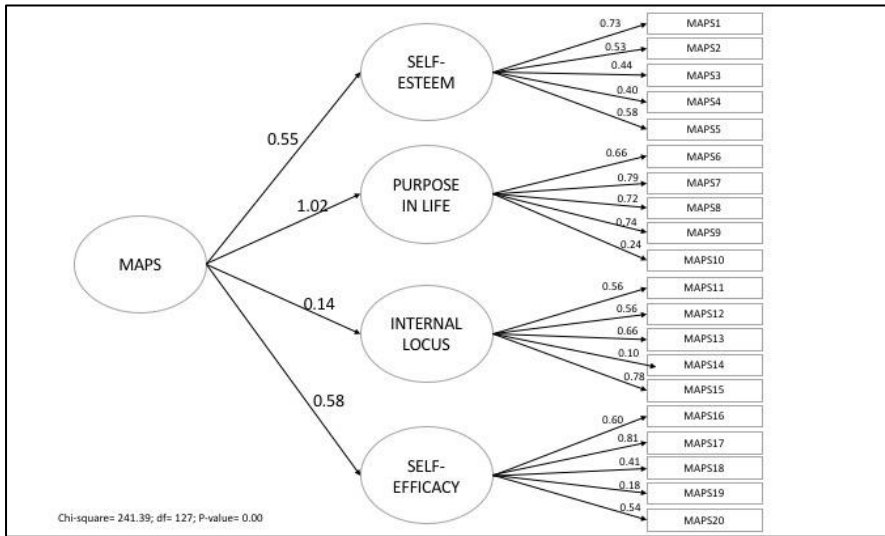
Figure 1: Second order confirmatory factor analysis of the four subscales of the MAPS20
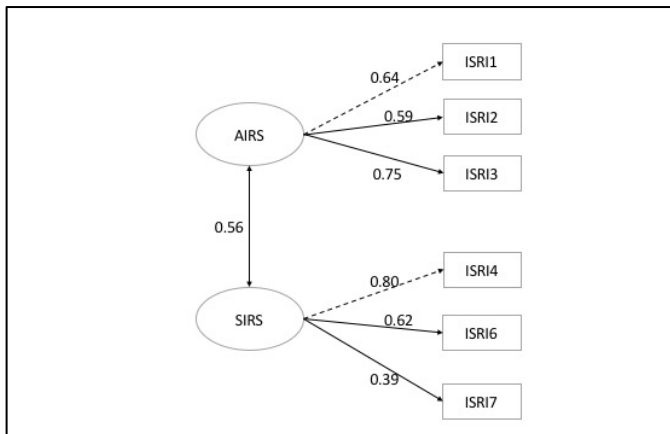
Figure 2: Confirmatory factor analysis of the two subscales of the ISRI

5.3 GENDER DIFFERENCES ON MAPS20-I AND ISRI-I

To test for gender differences on mean scores of the identity capital model, we performed a *t* test for independent samples. Findings indicated no gender differences for AIRS, CIRS and the Identity dimensions, while a slight difference for the maps (Table 1).

Table 1: Gender differences for the analyzed measures

Variable		Mean	gdl	s.d.	*t*-value	*p*-value.
MAPSSTOT	Male	-0.0911	281	0.72979	-1.940	0.053
	Female	0.0728		0.68731		
AIRS	Male	3.0159	281	0.66914	-1.016	0.311
	Female	3.1040		0.76781		
CIRS	Male	2.6601	281	0.73618	-0.829	0.408
	Female	2.7357		0.78334		
CM	Male	3.3611	281	0.79099	-1.228	0.221
	Female	3.4719		0.72363		
IC	Male	3.5425	281	0.73215	-1.307	0.192
	Female	3.6596		0.76185		
EB	Male	3.7456	281	0.64875	-1.004	0.316
	Female	3.8228		0.63536		
ED	Male	3.5947	281	0.55243	-0.594	0.553
	Female	3.6356		0.59331		
RE	Male	3.1694	281	0.87444	-0.172	0.864
	Female	3.1866		0.80486		

5.4 CONVERGENT VALIDITY

The final aim of the present study was to examine the convergent validity of the MAPS20-I and ISRI-I. Accordingly, we computed bivariate correlations of MAPS20-I dimensions (i.e., Self-esteem Purpose in Life, Internal Locus of

Control, and Ego-Strength) and ISRI-I dimensions (i.e. Adult Identity Resolution and Societal Identity Resolution) with identity processes. A correlation matrix was computed to ascertain the bivariate relationships among all study variables (Table 2). The total score for the MAPS20-I, as an operationalization of personal agency is positively correlated at a moderate effect size (Cohen, 1988), with both the AIRS-I and SIRS-I, replicating previous research with the English version of these measures (Côté, 2016). Further, the MAPS20-I is correlated with all DIDS subscales: positively with both forms of identity commitments and with in-depth and in-breadth forms of exploration; and negatively with ruminative exploration. The effect size is moderate to large for the commitment subscales and small for the other three subscales (Cohen, 1988). None of the correlations differed significantly by gender.

Table 2: Summary of Correlations, Means and Standard Deviations for Scores on the MAPS20-I, the five subscales of DIDS (Identity Processes) and the two subscales of ISRI-I (AIRS= Adult Identity Resolution and SIRS= Societal Identity Resolution). Cronbach's alphas are in first column

Measure	α	2.	3.	4.	5.	6.	7.	8.	M	SD
Agentic Personality										
1. MAPS	.73	.44**	.50**	.20**	.20**	-.28**	.31**	.44**	2.18	0.34
Identity Processes										
2. CM	.90		.70**	.32**	.32**	-.54**	.31**	.42**	3.52	0.73
3. IC	.85			.27**	.29**	-.46**	.32**	.48**	3.66	0.71
4. ED	.71				.44**	.02	.13*	.19*	3.66	0.53
5. EB	.70					.09	.11	.12*	3.88	0.57
6. RE	.79						-.15**	-.31**	3.35	0.82
Sense of Adulthood										
7. AIRS	.75							.60**	3.06	.72
8. CIRS	.64								2.70	.76

*p<.05; **p<.01; ***p<.001

6. DISCUSSION

The aim of the present study was to explore the applicability of the Identity Capital Model to Italian university students, validating the Italian versions of both the Multi-Measure Agentic Personality Scale and the Identity Stage Resolution Index, two tools developed to assess the extent of agentic traits and identity capital accumulation during late adolescence. Findings revealed that both the MAPS20 and the ISRI are two promising tools for evaluating identity capital model in Italian late adolescents. This claim is supported by a number of results. First, the Cronbach's alpha values of the Italian versions are within an acceptable range and are comparable with those of the English-language version. Second, we found through CFAs that the four-factor structure of the MAPS20 that emerged in previous studies conducted with US college students (Côté et al., 2016) was replicated with Italian young people as well. The factorial validity of the Italian version of the MAPS20 (Côté, Mizokami, Roberts & Nakama, 2016) as a measure of the latent factor of personal agency was confirmed and its reliability among Italian university students established.

We found through CFAs that the two-factor structure (even if confirming AIRS and SIRS as interrelated factors) of the ISRI that emerged in the original model (Côté; 1997, 2016) was replicated with the Italian young people.

Third, convergent validity of the Italian version of the MAPS20 and the ISRI was demonstrated through theoretically consistent associations of the identity capital with identity processes. Specifically, this study assessed the correlations among personal agency, identity processes, and sense of adulthood, revealing relationships among all three. At the bivariate level, personal agency, sense of adulthood, identity commitments, and in-depth/in-breadth exploration processes are all positively correlated, whereas ruminative exploration was negatively correlated with both the adulthood transition and personal agency. The correlations between the AIRS and the DIDS partially replicate previous research (Luyckx et al., 2008; Morsunbul, 2013), although in the present study some of the correlations between the AIRS and the two exploration subscales were significant, albeit with a small effect size. However, both commitment subscales have stronger correlations with both the AIRS and the SIRS, at moderate effect sizes.

6.1 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCHES

The results of the present study should be considered in light of some important limitations. First, we employed a cross-sectional design. Hence, we were not able to examine test-retest reliability of the MAPS20 and ISRI or to investigate stability of identity capital over time. Future longitudinal studies are necessary to address these issues. Longitudinal studies even offer the opportunity for a more robust test of the impact of personal agency and identity commitments on sense of adulthood over time. Second, other identity dimensions rooted in Erikson's conceptualization might also be used to further demonstrate the convergent validity of both the MAPS20 and the ISRI.

6.2 CONCLUSIONS AND STUDY IMPLICATION

Despite these limitations, the current findings have many important conceptual and practical implications. Indeed, the current study provides support for the importance of agency, for identity development during the transition to adulthood and it gives evidence of the relationship among personal agency, identity processes, and sense of adulthood.

In conclusion, the Italian version of the MAPS20 may thus be a useful instrument in assessing personal agency in Italian university students for research and intervention purposes (cf. Crocetti, Rabaglietti & Sica, 2012; Crocetti, Schwartz, Fermani, Klimstra & Meeus, 2012; Sica, Aleni Sestito & Ragozini, 2014) and the ISRI may be a useful instrument in assessing people's progress in the transition to adulthood and establishment in a functional community. Both could be useful tools to study and measure Identity Capital Model (ICM) in Italian young people.

DISCLOSURE OF INTEREST

The authors declare that they have no conflict of interest.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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