

THE IDENTITY CAPITAL MODEL:

A HANDBOOK OF THEORY, METHODS, AND FINDINGS

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Contents

INTRODUCTION.....	4
THE ORIGINS OF THE MODEL	6
THE FUNDAMENTAL ASSUMPTIONS OF THE MODEL.....	10
THEORETICAL INTERLUDE: STRUCTURE AND AGENCY—A TYPOLOGY OF RESOURCES	14
IDENTITY CAPITAL RESOURCES.....	17
KEY MEASURES OF RESOURCES.....	19
THE MULTI-MEASURE AGENTIC PERSONALITY SCALE	19
<i>MAPS20: Confirmatory Factor Analysis</i>	<i>20</i>
THE IDENTITY STAGE RESOLUTION INDEX.....	22
<i>ISRI: Confirmatory Factor Analysis</i>	<i>23</i>
EMPIRICAL FINDINGS.....	25
INITIAL VERIFICATION	25
CULTURAL INVARIANCE: CFAs AND SEM PATH ANALYSES	27
RELEVANCE FOR MENTAL HEALTH AND LEVEL OF FUNCTIONING	28
IDENTITY CAPITAL AND TRANSITIONS TO ADULTHOOD	31
IDENTITY FORMATION	31
EDUCATIONAL TRANSITIONS.....	34
IDENTITY HORIZONS	37
<i>Identity horizons among post-secondary students.....</i>	<i>39</i>
EDUCATION TO WORK TRANSITIONS	42
CROSS-CULTURAL FINDINGS AND APPLICATIONS.....	44
<i>The MAPS–ISRI nexus in comparative perspective.....</i>	<i>44</i>

<i>Professional socialization</i>	46
<i>Ethnicity</i>	47
<i>Impression management skills in context</i>	48
THE IDENTITY CAPITAL WORKPLACE PORTFOLIO	49
CONCLUSIONS, FUTURE RESEARCH, AND APPLICATIONS	52
REFERENCES	56
APPENDICES	67
APPENDIX A: MAPS20 ITEMS.....	67
APPENDIX B: ISRI ITEMS.....	68
APPENDIX C: IDENTITY HORIZONS SCALES ITEMS	69
APPENDIX: D: STUDENT MOTIVATIONS FOR ATTENDING UNIVERSITY (SMAU20)	71
APPENDIX E: PERCEIVED RETURN ON INVESTMENTS (IN POST-SECONDARY EDUCATION) ITEMS	73

INTRODUCTION

The identity capital model (ICM) provides a perspective with which social scientists can study how people can strategically manage the various elements of their subjective, interactional, and social lives. This strategic management involves developing, organizing, and executing a “portfolio” of identity-based resources that are suitable to various institutional contexts (like educational systems and the labour force), and more generally, are adaptable to a functional adulthood in a given society. Some sociologists will be quick to try to argue that structural obstacles and power relations can make the exercise of this type of strategic agency difficult, or that the ICM naively serves the more ruthless aspects of neoliberal capitalism¹ (e.g., Sukarieh & Tannock, 2011). At the same time, some psychologists will be skeptical of the need for such an abstract framework that relies on “unobservables” (cf. Hempel, 1966). I disagree with both extreme views, and hopefully the explanation of the origins and purpose of the ICM in the next section will allay the structural/political concerns of sociologists, just as the empirical validations described in the remainder of the paper will satisfy the methodological reservations of psychologists.

The basic premise of the ICM is that certain context-specific resources are particularly important in societies where many roles and statuses are no longer strictly ascribed, but there is little structure to replace the ascriptive processes. There appears to be a need for such a theory to the extent that the diminished normative structure in these societies makes identity-formation more complex and the passage to a functional adulthood more precarious, even unwelcoming. For example, in contemporary Western societies, occupations are less likely to be passed from one generation to the next, so successive cohorts of young people face an ambiguous and

precarious entry into the labour market, and in many cases students' many years of (mass) education have not prepared them for these experiences or given them marketable work skills.

The scope of these problems is extensive, requiring for analysis a comparable multidimensional theoretical framework that spans the micro through macro levels of analysis. Accordingly, the ICM adopts an interdisciplinary social-psychological framework based on several bodies of work that date back to the early social sciences: developmental psychology in respect of identity formation (e.g., Erikson 1968), sociological conceptions of late-modernity (e.g., Beck, 1992; Giddens, 1991), and symbolic interactionist models of identity management techniques in the presentation of self (e.g., Goffman, 1959, 1963; Hewitt, 2003).

From the Eriksonian influence, rooted in Freudian psychoanalytic theory, comes the assumption that people seek to resolve conflicts in their lives in growth-producing ways that are meaningful to them as they make their way through the life stages associated with specific societal demands for particular forms of contributions (e.g., being productive, assuming responsible roles, developing intimate relationships, and being a contributing community member). From the late-modernist influence, the ICM adopts the assumption that traditional normative structures have diminished (cf. Durkheim's concept of anomie), requiring people to individualize their identities, in the face of certain risks and opportunities. And, the symbolic interactionist influence provides the pragmatist assumption (dating back to William James) that people are meaning-seeking, problem-solving, and goal-oriented entities. People can use these capacities to adapt to their environments in practical ways that overcome obstacles and take advantage of opportunities (Hewitt, 2003).

Although the ICM can be applied to a variety of macro societal and cultural contexts (and not just capitalist ones), as well as more specific micro-contexts, the discussion to follow is

specific to late-modern cultural contexts, in part because all of the studies to date have been conducted in these contexts. A full discussion of the late-modern context is beyond the scope of this handbook, so readers unfamiliar with this concept should consult the original writings of Beck and Giddens for their “late-modernist” approaches, as well as Côté (2002, 2014) and Côté and Levine (2002, 2016) for detailed discussions of concepts of late-modernity in the reference to the ICM. Hopefully, though, there is a sufficient elaboration of the late-modernist framework below to allow readers to follow its logic and relevance to the ICM.

THE ORIGINS OF THE MODEL

The ICM owes its origins in part to the author’s own lived experiences of moving among various cultural contexts, and through certain social structural barriers, especially from the working class (as a factory worker) in a small town to the middle class (as a professional academic) in a large city. Sociologically, making the transition from one social class context to another—penetrating a structural barrier—requires that the person doing so understands the social dynamics by which people are judged based on “who they are.” As Bernstein (1971) argued, the social classes have different symbolic codes in terms of language, attitudes, and habits. According to the logic of the ICM, moving among cultural and class contexts requires learning these codes, along with managing the appropriate identities to properly present oneself in those new contexts. These skills involve the *executive* personality processes that Erikson (1968) called *ego strengths*, and others call *agency* (cf. Emirbayer & Mische, 1999). For these identity enactments to be successfully validated, it is crucial for the person to have a working knowledge of the contents of identities in differing situations for various audiences (e.g., knowledge of role expectations and how to meet them, as well as the various types of specific codes of deportment).

Making the transition from the working class to middle-class professional life is by all accounts difficult, and subsequent life in the middle class is not necessarily a problem-free one in terms of managing deeply ingrained behavior and language patterns, especially when middle-class prejudices are encountered (cf. Ryan & Sackrey, 1996). Those who “change” social classes must learn many things as adults that are taken for granted by those whose primary socialization prepared them for the class-specific aspects their adult lives. Those who begin new lives in different social contexts are acutely aware of many things that are taken for granted by those who have only known that one way of living. People who have experienced a type of “contradictory class-location” (e.g., Wright, 1982), or a bi-cultural dislocation (e.g., Hughey, 2008) should particularly identify with the ICM on a personal level.

The early theoretical formulations of identity capital were influenced by developmental contextualism (Lerner & Kauffman, 1985), from which the Integrated Paradigm of Student Development was partially developed (Côté, 2005; Côté & Levine, 1997). This model of student development proposes that students’ own personal efforts can help them to transcend or overcome structural barriers through specific forms of active educational involvements. In late modernity, although societies continue to present barriers associated with social class and other forms of disadvantage, institutions like universities can be open enough in certain respects for some people to overcome those barriers by adapting their developmental efforts to compatible contexts. In fact, significant changes have taken place over the past century in countries like Canada improving the access to higher education for those from previously excluded and disadvantaged segments of the population.² In spite of these improvements in access, however, the contemporary university setting in many countries still constitutes a “middle-class experience.” Most students have parents from occupations ranging from the white-collar, lower-

middle-class occupations through to the professional upper-middle class, and most professors have middle-class backgrounds. This relative homogeneity raises several questions of interest to those who want to learn how to better help those from disadvantaged backgrounds:

1. Why do people of similar (social class) origins and abilities have different educational and occupational outcomes?

2. What would we recommend to *our own children* when counseling them on strategies to maximize their life chances via educational routes to adulthood?

3. What can we learn from those who are most successful in achieving a goodness-of-fit with their educational opportunities?

The first question raises the issue of *individual differences*, a concept that is very familiar to psychologists but somewhat foreign to sociologists. Because social class is more or less constant in this context, the study of university students allows us to examine *variations in* the influence of psychological factors like agency. (Note that this approach does not assume that all people are equally agentic in their lives, even if they might have potentials to be so—agency is seen as something to be learned.) Based on the assumption that the “educational competition” with other classes is largely undertaken at the primary and secondary levels, even in societies where class barriers are not obvious, middle class university students are in effect in competition with each other, so the psychological variables relevant to this competition can be more clearly examined.

The second question brings the issue of educational outcomes down to earth for academics that might otherwise be content to deal with other people’s lives as abstractions. For example, educational sociologists who are policy advocates of de-streaming in secondary schools—a policy in which students of all backgrounds and ability levels are put in the same

classrooms—have been known to actually send *their own children* to private schools so they get a “better” education and are ahead in the status competition associated with the education-to-work transition. Accordingly, one intention with the ICM is to bring the issues of dis/advantage to a more pragmatic level where the concern is for the ultimate welfare of *all* individual students, not categories of students defined by ability or background. In this way, the ICM should be helpful to parents with offspring to advise, as well as to academics who are asked by young people facing the university-work transition what is best for them to do. Both groups of advisors need to be able to say something more specific and definite than offering a social critique of late-modern educational systems, pointing out the intractability of the structure–agency debate, or warning them about becoming “slaves” to neoliberalism. All societies benefit from the aggregate personal strengths of their citizens. So, let me be clear that the word “capital” in the name of the model does not refer to people being “capitalists.” There is nothing inherent in the ICM that recommends people to use their personal agency to exploit and dominate others, or to seek courses of action that alienate them from their own interests as meaning-seeking entities (e.g., Côté, 2000; Côté & Levine, 2016).

Finally, the third question leads to the programme of research undertaken to develop and test the ICM. After learning what gives people advantages or disadvantages currently involved in the status competition contexts of the late-modern education-to-work transition, we should be in a position to recommend to others what works and what does not work. Importantly, this status competition is not necessarily a zero-sum game, except to the extent that people are aiming to gain access to specific occupations like medicine. Rather, the idea is to understand how people can best mobilize their own personal resources so that they find the most suitable person-context fit for them in their educational, work, and personal lives. It is important for people to realize that

their best fit may not be in the high-status professional occupations that are by definition only available to a minority. Rather, most people can find personally meaningful and rewarding niches in the communities and societies. The push that many people feel to strive to achieve high-status careers in law, medicine, and business, for example, can be a very negative and distracting force in their lives that creates unhappiness and a lack of fulfillment. We can coach people to be realistic about what life has to offer without alienating and exploiting them, or “cooling them out.”

THE FUNDAMENTAL ASSUMPTIONS OF THE MODEL

The ICM is an approach to life-course transitions and functioning that integrates (developmental) psychological and (late-modernist) sociological understandings of identity. Sociologically, it is based on the assumption that global economic and political changes—most recently neoliberal ones—have disrupted traditional normative and community structures in late-modern (contemporary Western) societies leading to an overall decline in agreed-upon social norms. Consequently, the life course of people in these societies has become more “individualized.” Beck (1992) views the individualization process as a function of the above normative disruption/destructuring processes. In response to disruptions, cultures undergo a reorganization, rendering many old norms become ambiguous or even obsolete, often leaving people to their own devices in making major life decisions, including finding communities within which to establish integrative bonds. Psychologically, individualized life courses involve developing self-styled lifestyle and value-orientation strategies based on personal preferences and choices (“individualization” is to be distinguished from “individuation,” the process involving the boundary between self and other). Accordingly, an emerging normative course of maturation in late-modern societies compels people to develop themselves as self-determining,

independent “individuals,” especially in terms of negotiating their own life courses (setting and achieving goals).

The stances that can be taken toward an individualized life course can range from “default individualization” through “developmental individualization” (Côté, 2000). Default individualization involves following paths of least resistance and effort, where people “allow” decisions to be made for them as a result of their inaction; in turn, this lack of effort can lead to a deferred or passive formation of an adult identity and adult-community commitments. In contrast, developmental individualization refers to active and strategic approaches to personal growth and a life project, leading the finding a niche in an adult community. Conceptualizing variations in default-developmental individualization is useful in understanding both the range of agentic potential and the variations in how active people are in taking advantage of the potential benefits of the “open” developmental contexts associated with normative voids.

By explicitly taking into account agency—taking it out of the “black box”—this approach has a more nuanced view of structural barriers than do sociological approaches that emphasize structure without taking into account the capacity for agency (especially in navigating normative voids) or person-context interactions that can occur in those structures. With respect to potential person–context effects, higher educational settings vary by institutional ethos, teaching philosophy, and so forth, and within each setting there can be a variety of opportunities for self-exploration and self-development. A developmental-contextual prediction is that, regardless of social class origin or prior ability level, growth could take place if an individual finds an educational setting that is well suited to his or her characteristics. More specifically, notwithstanding insurmountable systemic discrimination and for those who make it to university, individuals should be able to acquire certain forms of identity capital if they find a university

context developmentally appropriate to them, despite disadvantages associated with a less privileged background.

Additionally, the ICM recognizes that although the requirement to individualize their identities clearly presents potential benefits to young people, it also presents them with potential pitfalls. While the normative ambiguities and voids in late-modern societies can provide more freedom from traditional normative constraints (e.g., the loosening and disruption of restrictive norms concerning sexual orientation), they often do little to help people overcome many of the economic obstacles associated with social class and other “older” structural barriers.

Thus, to ensure that the ICM is not misunderstood, it must be stressed that it is based on the late-modernist assumption that individualization involves *freedoms from* normative constraints and some identities that were in the past ascribed or stigmatized, not *freedoms to* pursue activities independent of systemic barriers such as social class disadvantage or racial and gender discrimination, even if some of these barriers are under assault in some countries (e.g., in Canada same-sex marriages have been legal since 2004, a trend slowly spreading to other jurisdictions) (Côté, 2014).

Moreover, the freedom to individualize has emerged because of a *lack of normative structure*, which can create serious challenges for some people (as argued below), whereas persisting social stratification along class, race, and gender lines presents *too much unwanted structure* for those placed at a disadvantage because of those structures. Some specific deficits in normative structure, or relatively normless (*anomic*) contexts affecting the transition to adulthood, include: deconstructed gender/family norms and ideologies (e.g., personal values associated with what it means to be male or female [gender], how to establish intimate relationships [marriage], and how to deal with one’s sexuality); disjunctive links among

institutions (e.g., ambiguities and dead ends in the education-to-work transition); and destructured social markers of adulthood (e.g., the meaning of events like leaving home, securing employment, and establishing a family during the transition to adulthood).

What is vital in the late-modern context, then, are the resources that the individual can muster in dealing with both the lack of normative structure *and* the residual burdens of older structural barriers. In opening up the “black box of agency” in its relation to structure, the identity capital model proposes that the personal resources acquired developmentally become important in late-modern contexts, particularly those psychological resources that can facilitate the agentic movement through, and negotiation with, various social contexts. In this sense, certain internal resources acquired at a given point of development are postulated to enable subsequent agentic mastery of later tasks as required by specifically relevant late-modern contexts. To cite a couple of examples, higher levels of ego strength associated with early task mastery can help the person undertake more challenging tasks that can lead to future benefits; and a greater sense of purpose in life associated with task mastery can facilitate long-term planning, increasing the likelihood of accomplishing later higher-order personal and professional goals.

These assumptions of the ICM correspond with the notion of the “Matthew Effect” (cf. Merton, 1968). Applied to identity formation in a prolonged transition to adulthood, the Matthew Effect means that those who are able to resolve identity formation issues before or during their early 20s may be able to move more deliberately into adulthood to the extent that adult roles become available to them and/or they forge them for themselves. Conversely, those who do not have a strong beginning in their identity formation in their teens and early 20s may struggle throughout their transition to adulthood with these issues and then miss out on the potential

benefits derived from resolving those issues in a timely manner. The results from several studies discussed below suggest that potential “late bloomers”—those who do not make sufficient progress with the identity issues by the time they are in their thirties—may suffer the most in terms of their emotional health and integration into the occupational system and social structure of their society (Côté, 1997, 2002, 2006).

Theoretical interlude: Structure and agency—a typology of resources

In clarifying which resources are most useful in context-transitions, contradictory-location management, and finding a goodness-of-fit, the ICM has the potential to help us learn how to help young people improve their life chances, including the economically and socially disadvantaged. In particular, this knowledge should be useful to those who do not have the benefit of an affluent background, and/or do not have parents who know how to pass on intangible resources that enable optimal adaptation to the best that higher-educational contexts have to offer. In advocating the exercise of agency, therefore, the intention behind the ICM is not to increase existing social-class advantage, or advocate some sort of neoliberal or Machiavellian agenda, but to help all young people better negotiate the confusing transitions in late-modern societies, including those young people without birthright or other socio-economic advantages. For those sociologists who are skeptical of the use of agency or other psychological concepts involving personal strengths, I remind them that those from disadvantaged backgrounds need to learn how to identify and mobilize their own internal potentials if they are to improve their life chances, regardless of the type of society in which they live (e.g., capitalist, socialist, or communist). Simply handing someone an opportunity or a sum of money, without providing them with the skills and wherewithal to prudently utilize them, will not necessarily help them in the long run.

At the same time, while removing structural barriers should still be our goal if we are to liberate the disadvantaged, and we must continue to identify structures that discriminate against people in harmful ways, these structures can be slow to change. In the meantime, we need to be mindful of the circumstances confronting young people “today” and learn how to help them to “penetrate” structures that might otherwise constitute barriers for them (cf. Emirbayer & Mische, 1999³). Moreover, the ICM is not meant as a prescription for “saving the working class from itself,” a common but misguided implicit preoccupation among some sociologists. There is much to be respected in working class culture, and such pejorative attitudes only increase the stigma that the more affluent classes impose on the working class. Ironically, this stigma constitutes a symbolic barrier that exacerbates the need for identity management among the working class. What most working-class people want are good jobs with good pay, and access to higher-level careers that constitute good fits for their motivations and abilities. But, as noted, the number of high status positions are limited (by definition, in all societies), so it makes no sense from a policy or practice perspective to “over-promise” young people or direct large numbers of them to destinations they are unlikely to reach (Côté & Allahaar, 1996, 2007, 2011).

With the persistence of structural barriers in mind, along with the recognition that certain forms of personal agency can help people penetrate and move beyond them in many cases, it is a basic assumption of the ICM that young people more than ever need a repertoire of personal, social, and economic resources to manage various transitions and diverse contexts (cf. Côté, 2000). Those without these resources face greater risks for social and economic exclusion. Table 1 provides a way to cross-tabulate psychological resources/barriers with sociological resources/barriers, providing an algorithm for estimating risks and benefits. Sociological resources include parental affluence, ethnic group membership, and social capital networks,

while psychological resources include mental health, IQ and the various agentic capacities to be discussed below (the absence of resources is considered a barrier).

Table 1: A model of resources and the risks/benefits (-/+) associated with them			
		Psychological resources	
		High	Low
Sociological resources	High	++	-/+
	Low	+/-	-/-

In general, this typology is useful in terms of evaluating the needs of people (of any age), as well as among disadvantaged subpopulations. To illustrate the algorithm in a general application, in Canada about 20% of the population lives in or near poverty—an economic/structural disadvantage/barrier associated with various risks—whereas 80% do not live in poverty (and therefore have structural resources that those in poverty do not have). Additionally, as in many countries, at any one time some 20% of the Canadian population struggles with some sort of psychiatric problem or disorder. These problems constitute a psychological barrier that 80% of the population do not experience. Of course, these percentages and the cut-off points are inexact, but if we enter these percentages/probabilities into the above table, at any given time only about two thirds of the population would be estimated to have both types of resources—“sufficient” economic and mental health resources for “risk-free” functioning. This estimate is derived by multiplying the two percentages in the ++ cell (.8 x .8 = .64, or 64%). The remaining one third of the population lacks one or both of these crucial resources (the two low/high cells have 16% probabilities [.8 x .2], and the low/low cell has a 4% probability [.2 x .2]).

To show how this typology would work for a more specific group of young people, if we focus on a disadvantaged community such as an impoverished inner city area, the proportion of the population inadequately resourced can be similarly identified. For example, if the poverty rate is 40% for the area and the poor mental health rate is 40% (e.g., as a result of a local culture of heavy drug use), the estimate is that only about one third of the population is adequately resourced ($.6 \times .6 = .36$, or 36%). Young people growing up in such areas would thus at such a compounded risk.

In addition to providing a means of estimating population risks, this typology reminds us that young people are not homogeneous in their resource needs and that youth/adolescence theories/policies need to take this into account.

IDENTITY CAPITAL RESOURCES

As noted above, identity capital resources can be broadly categorized as both sociological and psychological. Sociological resources tend to be more tangible and psychological resources more intangible. *Tangible resources* include: ascribed or conferred identities such as parents' social class/wealth/networks; the person's gender and ethnicity as related to specific *social capital* contexts; and achieved or attained identities such as the person's earned credentials, peer/professional networks, reputation, and statuses. Some of these resources have been studied by sociologists with the designation of *cultural capital* (Bourdieu & Passeron, 1977). Tangible resources can also include the material possessions that constitute cultural codes of social status (cf. Woodward, 2007) along with the demonstrable behavior patterns of the person, as with impression management skills and social skills. People who are perceived as charismatic are especially advantaged in these respects.

Intangible resources include capacities such as ego strengths, an internal locus of control, self-esteem, a sense of purpose in life, social-perspective taking, critical thinking abilities, cognitive reasoning abilities, and moral reasoning abilities, all of which can constitute context-specific elements of agency (Côté, 1996, 1997). Erikson (1968) identified these as *ego-synthetic abilities*. The common feature of intangible attributes is that they can afford the person the cognitive capacities with which to understand and negotiate the various obstacles and opportunities commonly encountered throughout the late-modern life course, with its decoupled and multifaceted transitions. In turn, these ego-synthetic capacities buttress the *ego-executive abilities* identified above as tangible resources (like impression management) that are crucial in identity maintenance (see Côté & Levine, 2002, 2016, for detailed elaborations of these ego capacities and their relationship to agency).

The identity capital model also proposes that people can take advantage of, or compensate for, the normative ambiguities and voids of late modernity by making *identity investments* as they individualize. This can involve a strategic development of “who one is” on the basis of exchangeable resources, such as money, abilities, appearance, and interactional skills. These resources could include parents’ social class (if it is advantageous) and parents’ investment in offspring,⁴ gender, or group memberships as well as agentic attributes, prior identity capital acquisitions, or level of emotional and cognitive development. As a portfolio, these resources can be used to establish and accumulate certain identity gains, including community memberships and the transition to adulthood itself. A partial list of identity capital acquisitions that have been empirically found to result from these strategic exchanges during early adulthood includes adult-identity resolution and societal-identity resolution, which in turn are related to positive outcomes such as salary and job satisfaction, desired personal

development, and progress in one's life project (Côté, 1997, 2002). More empirical findings regarding positive outcomes like well being and mental health are presented below in a separate section.

Finally, the basic requirement for the acquisition of identity capital involves the utilization of existing resources to gain more resources by means of various strategies. Note, however, that the person does not have to be consciously aware that these strategies are being followed, because strategic behaviour can result from imitation or forms of cultural conditioning (cf. Schuller, Bynner, & Feinstein, 2004). However, the more reflexive that people are about their own thoughts and behaviours, the more conscious these strategies will be (cf. the “epistemological shift” described in Côté & Levine, 2002). Over time, the gains made through these efforts can become resources for further exchange. In short, a person would ask what is “exchangeable” to invest in “who I am” in relation to an ideal group, goal, value, skill, and so forth. The proactive person engaging in developmental individualization, for example, would be reflexive about what is “exchangeable” in terms of “who they are” in relation to a social status (e.g., adulthood), a goal (e.g., financial independence), or a career (e.g., professor). An inactive or passive person following the default individualization route would not be as reflexive about such strategies or resource accumulations. Instead, such a person would simply and mindlessly follow reinforcement patterns derived from experiences in their family and schools, and from peers and popular culture.

KEY MEASURES OF RESOURCES

The Multi-Measure Agentic Personality Scale

In developing an operationalization of a global measure of identity-based agency, a variety of established personality inventories were analyzed by Côté (1997) to determine their

suitability as indicators of intangible identity capital resources. Of the 14 scales analyzed, six were determined through factor analytic procedures to represent an adequately reliable, composite scale. This composite scale was based on the standardized sums of measures of self-esteem, purpose in life, self-actualization, internal locus of control, ego strength, and self-derived ideological commitment. Sample items from these six scales are as follows, respectively: (1) ‘I can make up my mind without too much trouble’; (2) ‘My personal existence is ... very purposeful and meaningful’; (3) ‘For me, work and play are the same’; (4) ‘What happens to me is my own doing’; (5) ‘I enjoy difficult and challenging situations’; (6) ‘I’ve gone through a period of serious questioning about faith and can now say I understand what I believe in as an individual.’ The Cronbach alpha based on the sums of these six scales was .67, although the alphas of the individual scales ranged from .65 to .86. Of the 14 scales examined (which included more “communal” traits like empathy, self-monitoring, and Adlerian social interest), it was concluded that the Multi-Measure Agentic Personal Scale (MAPS) adequately operationalizes agentic-identity *resources* relevant to the individualized, late-modern, contexts associated with the transition to adulthood (Côté, 1997).

MAPS20: Confirmatory Factor Analysis

The six scales constituting the MAPS totalled 96 items (Côté, 1997), too many for use in studies employing other scales, especially in online survey research. Some years later, to produce a scale suitable to survey research, the number of items was reduced to 20 as part of proprietary consulting contract (Acumen Research Group, 2008), with five items making up each of the four subscales drawn from established instruments: Self-Esteem (Coopersmith, 1981), Purpose in Life (Crumbaugh & Maholick, 1969), Internal Locus of Control (Rotter, 1966), and Ego Strength (Epstein, 1983). Several steps were taken in that 2008 study to develop the 20-item version.

First, each of the four scales was individually factor analysed and the items loading strongest on the first factor were noted. Second, in cases where more than five items loaded on the first factor, the five items whose content was most diverse, while on the face representing identity-based agentic traits, were selected. And third, these 20 items were then 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. Because each subscale uses different scaling ranges, it is recommended that items be standardized before summing into subscales (Côté, 1997).

Recently, the MAPS20 was assessed using the newer Confirmatory Factor Analyses (CFAs) following Byrne's (2010) recommended procedures. This was done on a sample of US college students (N = 490; 18 to 24 years old, with males and females almost equally represented (Côté et al. 2016). Although a Principal Components Analysis replicated the four-factor structure, the MAPS20 did not show an adequate fit in terms of the CFI ($< .90$), although the RMSEA was in the adequate range ($< .08$). To improve the fit, modification indices suggested two of the error terms were correlated. Adding a covariance term between these the error terms between PL2 and PL3 (both are reverse-scored items—see Appendix A for these items) resulted in an improved fit. After this model was run, the modification indices suggested two items could be deleted to significantly improve the fit: LC2 and PL5. The PCA had flagged these items as having cross-loadings with other factors just below the .40 cut-off. This second modification produced a good fit (CFI=.961; RMSEA=.037). The two shortened subscales were highly correlated with the original scales (LC = .96; PL = .97), suggesting that there was no important loss of information associated with the fine-tuning accomplished by the CFAs, or that there would be serious distortions in results if all 20 items are used.⁵

Other researchers have reported problems with some other items in the MAPS20 for samples with different characteristics (e.g., Atak et al. [2013] eliminated five items in their Turkish sample, based on a Turkish-language version, but different modification procedures may have produced different results). However, a strength of short scales is their compatibility with large-scale online surveys where the number of questions that can be asked is limited because respondents may simply stop filling out the survey or may not give sufficient thought to their answers after a given number of questions are answered. A weakness of short scales, however, is that the ability to assess reliability by conventional methods such as Cronbach's alpha is limited (e.g., alpha coefficients are artificially affected by the number of items).⁶ Structural equation modelling (SEM) techniques allow researchers to circumvent some of these problems and to arrive at conclusions about the reliability and validity of measures based on more information (e.g., item intercepts and correlated errors; Raykov, 1997). I recommend that researchers continue to use all of the original MAPS20 items, along with the original scaling, in conjunction with the standardization and fine-tuning CFA techniques illustrated above. Eliminating one or more items per subscale rarely affects the magnitude of their relationships with other measures because the revised scales are highly correlated with the original scales. Accordingly, the scales and subscales can be adjusted in minor ways to the measurement vagaries associated with developmental and cultural variations in samples without raising concerns about the integrity of the scales or the comparability of studies.

The Identity Stage Resolution Index

An additional scale was developed to approximate forms of identity capital *accumulation* during the transition to adulthood, based on the Eriksonian assumption that completion of the transition to adulthood coincides with the resolution of the identity stage (Identity Stage

Resolution Index [ISRI]; Côté, 1997). The ISRI allows researchers to chart people's progress toward adulthood and establishment in a functional community of significant others, an accomplishment that can have many benefits for the person in terms of resources at their disposal, including access to better quality work roles and forms of social capital.⁷

The total scale comprises six items⁸ measured on five-point scales, ranging from 'not at all true' to 'entirely true'. Principal components analyses have consistently revealed two factors in numerous studies, with three items tapping the sense of being an adult (the Adult Identity Resolution Scale [AIRS]), and three items representing the sense societal integration (the Societal Identity Resolution Scale [SIRS]). The items constituting the AIRS enquire about the extent to which respondents: (1) consider themselves to be an adult; (2) feel they have matured fully; and (3) feel respected by others as an adult. The items making up the SIRS tap the extent to which respondents feel they: (1) have found their niche in life; (2) have settled on a lifestyle with which they are satisfied for the rest of their life; and (3) have found a community in which to live for the remainder of their life. Over various data collections, 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.

ISRI: Confirmatory Factor Analysis

Most studies published to date using the ISRI have been based on Principal Components Analysis (PCA), which consistently produces two factors, with three items for the AIRS and three for the SIRS (e.g., Côté, 2006). Recently, Luyckx, Witte, and Goossens (2011) reported CFA results indicating that a two-factor solution adequately fit their data (RMSEA = .08, CFI = .97), providing a better fit than a one-factor model. Similarly, Piotrowski & Brzezińska (2015) found that the two-factor structure fit the data very well among three groups of secondary-school

students, solutions that were better than one-factor solutions. In addition, Schwartz (2007) did not report problems using the ISRI items in a CFA that identified two distinct factors. In this study, Schwartz (2007) examined the relationship between the ISRI and other measures of identity resolution using SEM techniques, showing that these factors are distinct but correlated with two other latent factors, identity synthesis and identity status, each of which had two manifest factors/measures.

However, it is also the case that some of these items have relatively high loadings on both factors that are just below the rule-of-thumb cut-off level of .40 (see Appendix B for examples), and that these loadings can vary in different samples, as can correlations among error terms. Côté et al. (2016) reported problems identified by CFAs run on the ISRI items using a sample of US college students (the same sample used above for examining the factor structure of the MAPS20). Several cross-loadings created problems in establishing measurement model fits in CFA, as did the number of correlated errors among items (some due presumably to similar wording). Indeed, examinations of the two-factor solution failed to find an adequate fit unless two items were given paths to each factor and the error term of those items were covaried. Further modifications would require additional error covariances to the point where the model became saturated (i.e., arrows are specified among all variables).⁹

Accordingly, Côté et al. (2016) examined one-factor solutions. In order to find a good measurement model, it was necessary to drop AIRS1 and add covariances between the error terms of AIRS2 and AIRS3 and between each of these AIRS items and SIRS1 (US: CFI=1.00; RMSEA=.000). In light of this finding, future studies are advised to examine the factor structure of this scale using CFA techniques, or simply to use the five-item version of the ISRI, which does not distinguish between the adult- and societal-identity aspects of the resolution of the

identity stage. Further work needs to be done on this scale to replace the problematic item. At the same time, the shortened five-item scale was highly correlated with the six-item scale ($r = .98$), so as is the case with the above analysis of the MAPS 20, there does not seem to be any important loss of information associated with the CFA fine-tuning of the ISRI.¹⁰

EMPIRICAL FINDINGS

Initial verification

The first publication assessing the ICM was based on two waves of a longitudinal study of university students from first- to third-year (Côté, 1997). This study concluded that: (1) the MAPS has significant associations with the ISRI when assessed at the same points in time and across a two-year span; (2) over two years of university, adult identity capital (AIRS) increases overall for female students and societal identity capital (SIRS) increases for those with less financial support from their parents; (3) identity capital resources acquired before attending university (especially agency) are predictors of identity capital acquisition after two years of attendance, with variations by gender and class; and (4) while certain forms of adult/societal-identity capital were acquired during the first two years of university for some types of students as person-context, goodness-of-fit effects, agentic resources did not increase, suggesting that identity-based agency is deep-seated attribute developed earlier in life that is resistant to change.

The second report of the ICM provided an assessment of the importance of structural factors in relation to individual agency (Côté, 2002). This study built on the first report by adding a third wave of data some 10 years after the above respondents had been in first year. The results suggested various person-context fits between identity capital and university context. From these results, although there do seem to be weak ‘structural’ effects, those predicted by a strictly structural hypothesis (i.e., that the most affluent and financially supported males would have the

best outcomes) were not supported.¹¹ Instead, females who received high levels of parental financial support and males who received *low levels* of parental financial support appeared to benefit the most from their university experience in terms of long-term identity capital acquisition and their long-term satisfaction with the progress of their lives, as assessed in their late twenties. Parental affluence, per se, played no consistent role in long-term, ten-year outcomes such as satisfaction with current job, personal development, or life project, and identity capital acquisition, while agency (measured ten years earlier, in first-year university) had a positive effect on all of these measures.

These initial studies suggest that among university students there are three sets of person-context effects that can affect development: moratorium opportunities, compensation effects, and acceleration avenues (Côté, 1997, 2002, 2006). For example, more affluent male students may feel they can afford a longer “moratorium period” and therefore may not expend as much effort in university to immediately accumulate forms of identity capital associated with adulthood (cf. Hamilton, 2013, regarding the moral hazard involved with parents paying tuitions fees for their children). In contrast, the less affluent students seem to use their time at university to more directly acquire adult identity assets (compensation) and move more quickly (acceleration) into adulthood.

In sum, the initial tests of the ICM support its explanatory utility and predictive capacity, and go some way to allay the concerns of sociologists who are suspicious of concepts of agency that do not take into account social structure. Net of structural obstacles (these sample were largely middle class), these studies suggest that those who are more agentic in investing in their adult identities are better equipped to negotiate individualized life-course passages. When framed in terms of the structure-agency debate, the results more specifically suggest that affluence and

gender are moderated by agency (MAPS) in terms of long-term identity capital accumulation (ISRI) and other outcomes in the subjects late 20s.

Cultural invariance: CFAs and SEM path analyses

In the above-mentioned study reporting the CFAs of the MAPS20 and ISRI, Côté et al. (2016) also conducted multigroup CFAs of both measures as well as a path analysis of the relationship between the four MAPS subscales as independent variables and the ISRI as the dependent variable, including age and gender as exogenous variables. Multigroup CFAs were performed to compare this 18-item MAPS solution for cultural invariance. Using raw scores, the multigroup CFA found evidence for metric invariance but not scalar invariance. Accordingly, the procedure was repeated using within-culture standardized scores as recommended by Fischer (2004).¹² Using standardized scores, all five forms of invariance¹³ were found.

Côté et al. (2016) also conducted multigroup SEM path analysis, specifying paths between the four MAPS subscales and the ISRI (all scales are based on the within-culture standardized items), along with paths from age and gender to the ISRI. Covariances were also specified among all four of the MAPS subscales. Although the invariance fit was adequate for all forms of invariance ($CFI > .90$; $RMSEA < .05$), the modification indices suggested that the fit could be improved by specifying covariances between gender and two MAPS subscales: Ego Strength (for the JP sample), and Locus of Control (for the US sample). The fit was slightly improved and modification indices indicated that no further parameters needed to be provided.

The path analysis confirmed the importance for both samples of the links between the forms of identity-based agency measured by the MAPS in explaining variations in identity capital acquisition as measured by the ISRI. Minor differences in the regression weights suggested that ego strength and purpose in life are slightly more important for the Japanese

students in terms of the ISRI, whereas an internal locus of control have only minor importance for the Japanese students. Interestingly, ego strength appears to be a particularly important resource for Japanese males, while an internal locus of control is more important for American females. It is also of interest that the variance explained (R^2) results suggest that the Identity Capital Model has more explanatory power for the Japanese sample than the American one (.392 vs. .277).

Relevance for mental health and level of functioning

It is axiomatic in Erikson's theory that positive forms of identity formation are associated with other forms of optimal development and better mental health (e.g., 1968). This axiom is based on the assumption that, as people gain a more secure sense of ego identity (i.e., temporal-spatial continuity) during their progress through the identity stage, overall mental functioning improves. Several studies have confirmed that the operationalization of identity-capital acquisition in the transition to adulthood (ISRI) is positively related to several forms of mental health as well as other favorable developmental outcomes. Importantly, the same relationship is found for identity-based agency (MAPS), which itself is a predictor of identity-capital acquisition as measured by the ISRI.

For example, with respect to identity-based agency, Schwartz et al. (2009) used a 4-subscale version of the MAPS (corresponding to the MAPS 20, but using the full scales for self-esteem, purpose in life, internal locus of control, and ego strength), finding that higher scores were associated with fewer internalizing tendencies, like depression and anxiety, as well as fewer externalizing dispositions, such as impulsivity and tolerance for deviance. These findings held across a multi-ethnic sample of 905 White, Black, and Hispanic American university students.

Similarly, Schwartz et al. (2010) found that identity-capital acquisition (the ISRI) was associated with better avoidance of health-compromising behaviors, such as drug misuse, risky sexual practices, and driving while intoxicated. This study involved a multisite sample of 1546 American university students, and these relationships were observed across gender, ethnicity, socioeconomic status, and living arrangements (living with parents, or not).

Two additional studies are relevant the considerations of mental health. Both used the Purpose-in-Life Scale subscale of the MAPS in relation to level of functioning. In a report of two studies titled “Purpose as a form of identity capital for positive youth adjustment,” Burrow and Hill (2011) concluded that a measure of purpose, compatible with the MAPS, “was positively associated with positive affect, hope, happiness among adolescents, and fully mediated associations between identity commitment and these indices of well-being. [Additionally, it] fully mediated the relationship between identity and changes in daily positive and negative affect” (p. 1196). Based on this set of results, they concluded the following:

Collaborating existing theory on identity capital (Côté, 1997), the specific finding that purpose was linked with a greater sense of agency establishes purpose as an asset that promotes greater wherewithal to overcome life’s challenges. Furthermore, the demonstrated linkages between identity, purpose, and wellbeing may also lend some support for Erikson’s (1968) theoretical notion that purpose plays an important role in the resolution of identity crises. (p. 1196)

Likewise, Weems et al. (2004) found that the Purpose-in-Life subscale of the MAPS was negative correlated with identity distress (-.39) and existential anxiety (-.44). Regression analyses indicated that both existential anxiety and purpose in life are unique predictors of “identity distress” (Berman, 2004).

It appears, then, that agentic-identity resources (MAPS) and identity capital acquisition (ISRI) play a role in better mental health and day-to-day functioning. These findings support the validity of the ICM in terms of its roots in Eriksonian theory and more generally recommend the model in terms of how it can be applied in helping those who are having difficulties making the transition to adulthood in late-modern societies. Although the studies do not directly address the question of cause and effect, the finding that the MAPS represents deep-seated agentic skills nurtured before the transition begins suggests that it is a quality to be recommended in our policy, intervention, and counseling efforts directed toward young people in terms of its potential in promoting mental health. This conclusion is compatible with the Matthew Effect discussed above; namely, that those who begin their adult/societal-identity formation without sufficient resources will struggle more in the transition to adulthood than those who do have intangible resources, such as those measured by the MAPS. As noted above concerning the longitudinal study reported in Côté (1997, 2002, 2006), those who began university with higher levels of agency (MAPS) made more gains in identity resolutions (ISRI) between their first and third years of study, and ten years later. In addition, in their late twenties and compared to those who had lower levels of agency in their first year, those who had more agency in their first year of university (late teens) made even more gains in identity resolutions as well as with other developmental outcomes (e.g., life satisfaction) and transitions to workplace (e.g., job satisfaction).

As noted below in the section “The MAPS–ISRI nexus in comparative perspective,” these positive associations with mental and health and wellbeing are have been replicated and extended in a number of cultural settings.

IDENTITY CAPITAL AND TRANSITIONS TO ADULTHOOD

Identity Formation

A series of empirical studies has confirmed the positive relationship between both forms of identity capital—identity-based agency (MAPS) and societal-/adult-identity acquisition (ISRI)—as well as between the MAPS and ISRI and other measures of identity formation.

The most popular empirical model for studying identity formation during the transition to adulthood has been the identity status paradigm (Marcia, 1964, 1980). Because there are a number of complexities to this model and a variety of criticisms, an empirically robust and theoretically defensible way to employ this paradigm is to contrast identity confusion (operationalized with the “diffusion” status from the identity status paradigm) and identity synthesis (measured with the identity “achievement” status), thereby making it compatible with Erikson’s original postulate the transition through the identity stage involves resolving the tension between identity diffusion and identity stage resolution/identity synthesis (Côté, 2009).

Côté and Schwartz (2002) examined this contrast between identity confusion and identity synthesis, finding that “identity diffusion status” is associated with lower scores on both the MAPS (a four-subscale version, instead of the original six-subscale version, anticipating the MAPS20) and the ISRI. At the same time, the “identity achievement status” was associated with higher scores on both measures. Côté and Schwartz argued that identity diffusion represents a form of default individualization and identity achievement a form of developmental individualization.

Following this postulated homology between these two identity statuses and default/developmental individualization, Schwartz, Côté and Arnett (2005) reported that, replicated across three U.S. ethnic groups and using SEM, higher levels of agency (MAPS) are

positively related to proactive identity formation (exploration and flexible commitment), and negatively related to inactive identity formation (avoidance of exploration and commitments). Cluster analysis on this sample supported the theorized polarity between developmental and default forms of individualization (44% and 56% of the sample thus classified, respectively). These findings confirm that the two forms of individualization can be empirically identified categorically and that they are related to clear variations in the use of identity-based agentic capacities.

In an examination of the long-term relevance of the identity resolutions that had occurred in the late teens, a longitudinal study that included both secondary-school students and university students (Côté, 2006), found that those who do entered their 20s with a less synthesized identity (operationalized the “achieved identity status” subscale of the OMEIS; Adams et al., 1987) were more likely to be experiencing problems in their late 20s in developing a sense of societal/adult identity and to experience chronic identity confusion at sub-clinical levels (some 20% of the sample had this level of identity confusion). In terms of the subscales of the ISRI, for the sample as a whole, there appears to be no significant mean development in societal identity during the subjects’ early 20s, and only minor progress adult identity formation during that age period. However, more development took place on average for both scales in subjects’ late 20s.

Côté (2006) interpreted these results as providing further support for the postulate that young people need a sufficient level of certain intangible resources for the now prolonged transition to adulthood. In this case, higher levels of ego identity in the subjects’ late teens/early 20s appear to be related to later gains in forms adult/societal identity. In contrast, as noted, subjects with a less synthesized identity in their late teens had a more problematic transition to

adulthood in their 20s, with a sizable portion of the sample studied (20%) experienced chronic identity confusion in their late 20s which apparently was impeding the transition to adulthood.

Other studies have confirmed that the relationship between the MAPS and ISRI is robust and applies among diverse samples. Schwartz (2006, 2007) confirmed this relationship in several ethnically diverse samples of American university students, and replicated the correlations between the MAPS/IRSI and the identity diffusion/achievement statuses.

Focusing specifically on the AIRS, Luyckx et al. (2008) found that those who scored higher on this subscale of the ISRI scored higher on commitment making, sense of coherence (SOC), and lower on “ruminative exploration.” Additionally, in comparing samples of university students with those in workforce, those in the workforce scored higher on the AIRS than did university students. Luyckx et al. (2008) speculate that some young people can get caught up in continual identity exploration “as they continue to ruminate over different options. Such individuals may remain uncommitted for years as they continue to ruminate and worry about (or avoid) settling down—possibly resulting in a state of prolonged moratorium or perpetual exploration that Côté (2006) has labeled as youthhood” (p. 573).

Luyckx, De Witte, & Goosens (2011) went on to study the stability of roles in a sample of working youths in Belgium, finding that the AIRS moderated the relationship of role instability with lower self-esteem and depressive symptoms. Additionally, subjects who scored higher on the AIRS did not experience the self-esteem problems and depression that those did who scoring lower on the AIRS. These results are consistent with the Matthew Effect (discussed above, that those with an initial advantage do better in the long-run) that predicts the problematic nature of the prolonged transition to adulthood for those without sufficient levels of intangible identity capital resources.

Educational transitions

Before presenting the empirical findings with respect to educational transitions, some comments are useful regarding the structural contexts of these transitions. Part of the difficulties faced by students in many late-modern societies is that higher educational settings have changed as these educational system massified, pushing more people into these settings for longer periods. The creation of these mass higher-educational systems has led to the development of a business model at the university level, both in terms of how universities are governed and in terms of how students are recruited and treated. The university student is increasingly treated as a “consumer.” At the same time, more young people with diverse abilities and backgrounds are *pushed* by external factors to attend (e.g., parental pressures, poor youth labour market, and credentialism). Together, these influences signal to students that knowledge is something to be “consumed” in the same fashion as other commodities in late modernity (Côté & Allahaar, 2007, 2001).

The “student-as-consumer” model of education encourages various forms of intellectual passivity. In cases where some students expect to be “served,” they are less likely to meet their educational environments “halfway” in bilateral relationships that would foster active academic engagement. Approaching education as something to be served and consumed encourages a hedonic, extrinsic motivation for participating, as opposed to an intrinsic *pull* motivation based on an appreciation of learning, self-discipline, and mastery of experience. Such a system thus encourages more default forms of individualization and is not nurturant of identity-based agency. These issues have been recently discussed in two books written for the public (Côté & Allahaar, 2007, 2011).

The importance of this digression about educational contexts for the ICM is that the experience of higher education as part of the transition to work can now constitute a structural “obstacle” in ways it did not before the rise of mass higher education. Previously, attaining a university degree was largely for those from very privileged backgrounds, so the social class obstacles were clearly defined and there was little normative confusion for those involved. Increasingly, however, the relevance of the mass university experience is ambiguous, especially for disengaged students—those who lack motivation and direction, and therefore are less likely to benefit either in terms of their personal development or credential attainment. The massive, government-endorsed push in late-modern societies for this level/type of educational attainment can constitute a rabbit hole from which many people emerge with few benefits unless they are able to find a good fit and apply some degree of personal agency to their experiences in these educational contexts.

Returning to ICM theory, as noted above, the early formulations of identity capital began with a model based on developmental contextualism (Côté, 2005; Côté & Levine, 1997, 2000). The implications of these investigations of higher-educational developmental contexts for the ICM are clear: only a minority of university students is fully engaged in their studies, with the majority either putting in a token effort or treating their studies like a part-time activity (Côté & Allahar, 2007). This “culture of disengagement,” implicitly condoned by many universities in countries like Canada, the US, and the UK (Côté & Allahar, 2011), encourages a default individualization strategy to identity capital acquisition in this setting and thus does not encourage the use of, or nurture, agentic or integrative forms of identity capital. Graduates who have immersed themselves in this culture of disengagement will likely acquire minimal identity

capital from their higher education, except from the possession of what can be a mass credential of little value in the workplace.

Two studies testing this model of student development are reported in Côté and Levine (1997) and (2000). These articles proposed the Integrated Paradigm of Student Development (IPSD), applying the goodness-of-fit concept of university students to learning contexts. The Student Motivations for Attending University (SMAU; see Appendix D for the items) was developed to measure the various reasons university students have for attending. This questionnaire was found to be a reliable and valid measure of five “push–pull” motivations. The logic in developing this measure involved identifying the intangible resources associated with various motivations and person-context interactions that university students might find in contemporary universities.

This research revealed that two push motivations are relatively common, but passive, approaches to learning among contemporary students: an *expectation driven* motivation, where students are attending largely to please their parents; and a *default* motivation, where students are attending because of a lack of perceived alternatives, yet they feel they are deriving little from their studies. These passive approaches generally show negative outcomes with respect to learning, as measured by skills acquired and grades attained (Côté & Levine, 2000).

Three active pull approaches undertaken by undergraduate students are also identified: the “careerist materialist” approach, the “personal-intellectual development” drive, and the “humanitarian” motivation. Of these three active approaches, the personal-intellectual development motivation demonstrates the best goodness of fit in terms of acquiring academic skills and attaining higher grades, while the careerist-materialist approach yields fewer positive benefits, suggesting that those who are most willing to invest in their personal-intellectual

development acquire more identity capital than those who are simply making career investments (Côté & Levine, 2000).

Côté, Skinkle and Motte (2008) examined the correlations between the MAPS20 and the five SMAU motivations, as follows: personal/intellectual development = +.41; Careerist = +.29; Humanitarian = +.36; expectation-driven = -.15; and default = -.31.¹⁴ These results provide further verification for the ICM in reference to the capitalizing role of agency, namely, that identity-based agency is important as a catalyst for certain forms of development. And, following the Matthew Effect, these forms of development can lead to the further development of identity capital (in this case, academic skills associated with developmental individualization, and the grades/credentials necessary to move into higher sphere of functioning). The sequence in the capitalization on agency thus looks something like the following: Agency → active motivations → academic engagement → skills/grades ... [iterations of these sequences] ... → further opportunities (including chances to exercise more complex forms of agency in an expanded social radius)

Identity horizons

A line of inquiry emerging out of the research reported by Côté, Skinkle and Motte (2008) involves the concept *identity horizons*. This concept draws on the ICM as rooted in the Integrated Paradigm of Student Development. As noted, the latter model proposes that positive outcomes are predicted by a goodness of fit between the motivations students have in attending universities and the learning environments they encounter there. The ICM built on this proposition by adding the concept of agency, namely, that individual-differences in personal agency help to account for how people can potentially influence this goodness of fit by being active participants in their own personal/intellectual development. Using these assumptions, Côté

et al. (2008) operationalized four ways in which high-school students might conceptualize the potential benefits and liabilities of undertaking a university career as a workplace trajectory: monetary benefits, non-monetary benefits, debt aversion, and identity anxiety (see Appendix E for these items, which make up the Perceived Return on Investments in Post-Secondary Education scale [PROI-PSE]). This study focused on identifying which secondary-school students would attend post-secondary institutions (2-year colleges or 4-year universities) and why they would do so. The various perceptions high school students had of the costs and benefits of post-secondary education, in relation to direct entry into the workforce, were assessed based these four cost/benefits. The results of this study led to the development of Identity Horizons Model, which postulates that some of these costs and benefits are based in identity formation.

Côté et al. (2008) identified a form of “identity costs” with the PROI items measuring identity anxiety—a fear of transformations associated with proactive identity formation. (This measure can be used as a proxy for a *deficit* of agency). This version of the identity anxiety scale, designed with high school students in mind, has four items (alpha = .72; see Appendix E for the item wordings). The correlation of this scale with the MAPS20 was significant and negative; this scale also significantly correlated negatively with the three active SMAU subscales and positively with the two passive SMAU subscales.¹⁵

Côté et al. (2008) concluded from this study that there was strong support for the *identity horizon effect*, finding that first-generation students (students with parents without a post-secondary education), especially those without parental encouragement, had more limited perceptions of their future educational and occupational horizons. This limited horizon appeared to involve anxieties about potential identity changes that in some cases created an inflated estimate of financial costs and increases indecision concerns, both of which were not

counteracted by seeking out accurate information on funding opportunities. Ultimately, this can lead some secondary students to not pursue a post-secondary education at all, even though they have the ability to do so (with ability based on their high school grades).

Côté et al. (2008) recommended that the Identity Horizon Model should be assessed through studies of educational planning by students and parent, and in evaluations of programs that address the problems associated with the restricted identity horizon effect. Given the deep-seated nature of these agency-based attributes, these interventions should start no later than early in high school, especially among first-generation students. These recommendations were based on the assumption that early interventions should help those with identity anxiety (and thus with lower levels of intangible identity capital) to become proactive in their own identity formation and develop more positive academic self-concepts and future possible identities. These findings and recommendations are consistent with other findings that the agency operationalized by the MAPS is likely a relatively stable, deep-seated disposition, probably formed earlier in life, and that it may be too late to attempt to nurture it for most types of students at the post-secondary level, except through intensive counseling (Côté, 1997, 2002; Côté & Levine, 2016).

Identity horizons among post-secondary students

Côté et al. (2015) undertook a study to extend the Identity Horizons Model (IHM) to post-secondary students, the first step of which involved examining the validity of a newly developed measure applicable to this older population. This study sampled American and Japanese college/university students aged 18 to 24, mindful of criticisms that current formulations of self and identity development have been criticized as ethnocentric, conducted in Western contexts characterized by high degrees of individualism (e.g., Markus & Kitayama, 1991). The Identity Horizons Scales (IHS) items were developed with specific reference to the

conditions affecting postsecondary (undergraduate and community college) students in both countries. This first version of the IHS had twenty items with five items designated to operationalize each of four hypothesized factors characterizing the circumstances experienced by students at this level of education and in this age range: work-identity horizons, educational-identity horizons, work-identity anxiety, and educational-identity anxiety (see Appendix C for item wording, scaling, and rotated factor component loadings).

An Exploratory Factor Analysis (EFA) indicated that a three-factor solution was most viable, not a four-factor one. Because two items cross-loaded across factors, they were excluded from further analyses (items WH5 and EIA4). Nine of the ten work- and educational-identity anxiety items loaded on Factor 1, all 5 educational horizons made up Factor 2, and 4 of the 5 work horizons items constituted Factor 3.

The 18 items emerging from the EFA was then subjected to a Confirmatory Factor Analysis (CFA). Although the above three-factor model provided the best fit, it was still not associated with an acceptable or good fit overall. Modification indices suggested that an item (WH4) would need to be dropped for the model fit to be acceptable, resulting in the 17-item version of the IHS (RMSEA = .053; CFI = .928).

Tests of measurement invariance between the two cultural samples using CFA multigroup analyses indicated that several more items needed to be dropped because of sample differences in item intercepts for some items. The result was the 13-item version of the IHS, deemed suitable for cross-cultural research between the US and Japan, comprising three subscales as follows (Appendix C): Education-to-Work Identity Anxiety (7 items), Educational Horizons (3 items), and Work Horizons (3 items). Cronbach's alphas for the scales were .85 for

the 7-item Education-to-Work Identity Anxiety subscale, .81 for the 3-item Educational Horizons subscale, and .67 for the 3-item Work Horizons subscale.¹⁶

Côté et al. (2015) interpreted the results of their study as suggesting that culture has a much stronger effect on identity horizons/anxiety than does gender: the Identity Horizons Model appears to apply best to American males, and next best to American females. At the same time, the relationship between the two horizons subscales is stronger for males from both cultures, suggesting that the key to broadening young men's work identity horizons lies with broadening their educational identity horizons. This relationship appears to be much less important for American females, even though American females scored higher on both of the educational- and work-identity horizons subscales. There is no significant relationship between these subscales for Japanese women, suggesting that their education is not as determinant of their occupational destinations.

Based on additional results involving correlations with established measures of identity formation (ISI; Berzonsky et al., 2013) and agency (PPS; Crant & Kraimer, 1999), Côté et al. (2015) concluded there was evidence supporting the assumption that identity horizons have a basis in identity formation and personal agency.¹⁷ However, whereas some hypotheses held consistently for the American sample, they did not do so consistently for the Japanese sample, suggesting that a more nuanced model may apply there. It may be the case that agency-based constructs (such as personal agency and identity horizons) are in some ways still more applicable to individualistic cultural contexts than to collectivistic ones, perhaps because more collectivist contexts are traditionally more rooted in filial piety and interpersonal obligations (cf. Markus & Kitayama, 1991). At the same time, the similarities of experiences with some aspects of identity anxiety/horizons is consistent with recent research suggesting that the Japanese cultural context

is changing on a generational basis, with unique blends of individualism and collectivism among younger cohorts (Sugimura & Mizokami, 2012).

In sum, these findings support the underlying premise of the Identity Horizons Model that the choices some students make can be based on more than simple monetary cost–benefit analyses of the prospects of pursuing a postsecondary education (Côté et al., 2008; cf. Akerlof, 2010).¹⁸ Some students are apparently influenced by identity-based factors that can inhibit or stimulate forms of agency that would take them into educational and work contexts that seem foreign to them. For some, certain anxieties associated with stepping out of familial and peer-based comfort zones may be holding them back when they otherwise have the intellectual and financial means of pursuing higher forms of education. These findings help to explain why some government-based student-loan and scholarship programs are insufficient for motivating such young people to reach their educational and occupational potentials (e.g., Finnie, Lascelles, & Sweetman, 2005). To the extent that identity issues play a role in such cost–benefit decisions, rather than providing eleventh-hour financial incentives, policy efforts need to be devoted to psychosocial interventions as early as primary school (Côté et al., 2008).

Education to work transitions

The ICM has been utilized in studies undertaken by Bynner (1998, 2002) to interpret data generated by the British Birth Cohort Studies, which drew samples based on births in a single week in the three years 1946, 1958, and 1970. Data from the 1958 and 1970 birth cohorts provide information on 16,500 people, who were followed every few years into adulthood. The survey in 2000 provided information at age 44 for the 1958 cohort and age 30 for the 1970 cohort. Bynner’s interest was in studying the changing nature of the education-to-work transition, where marked changes were evident in the UK following the 1970s. His chief finding

is that the most recent cohort (born in 1970) needed more intangible identity capital resources than did the earlier cohorts, whose transitions were governed far more by the extant occupational opportunities and normative structures in the education-work transition (rather than proactive forms of agency, he used measures of deficits in agency, such as fatalism, lack of a sense of control, dissatisfaction with life, and life problems). In the past, employment prospects were structured much more independently of these sorts of agentic qualities, whereas more recently people have needed to possess certain agentic characteristics if they were to make the transition at all.

To summarize Bynner's findings, those without certain key agentic attributes increasingly face exclusion from, or precarious participation in, the labor force, whereas in the past some sort of transition could have been made independent of these attributes (including basic resources such as literacy and numeracy). These new requirements in the education-to-work transitions are of particular concern in the UK with respect to those young people who leave full-time education at the minimum age of 16 and then spend a substantial period "not in education, employment, or training" (NEET). Accordingly, Bynner called for counseling targeted at high risk groups to help young people compensate for a lack of tangible and intangible identity capital in the transition to work and adult life (Bynner & Parsons, 2002) and has made recommendations to the UK government to this effect (Schuller, Bynner, and Feinstein, 2004).

In the US, Savickas, Briddick, & Watkins (2002) drew upon the ICM to conceptualize "the deficiencies in guiding structures caused by dejobbing and disintegration of career paths in contemporary organizations" (p. 39) that require planful competence (i.e., the form of agency captured by the MAPS) among prospective employees. Using different measures (Gough's

California Psychological Inventory and Super's Career Development Inventory), they essentially replicated the relationship between agency (MAPS) and integration into societal/adult communities (ISRI). Their findings confirmed the ICM's fundamental postulate that "planful competence in career development [would be] related to greater realization of one's potential and a higher degree of social adjustment" (Savickas et al., 2002, p. 35).

CROSS-CULTURAL FINDINGS AND APPLICATIONS

The MAPS-ISRI nexus in comparative perspective

As noted above, a longstanding criticism of formulations of self and identity development is that they are ethnocentric because they are based on Western contexts characterized by high degrees of individualism, and therefore must be applied with caution to contexts in which social relations are more collectivist (e.g., Markus & Kitayama, 1991). Accordingly, an important question for researchers to investigate is whether identity capital operates in the same way in less individualistic cultures as it does in individualistic cultures like the US? Common definitions of collectivism focus on a greater emphasis on the types of norms that are supportive of group goals as personal motivations, and greater social cohesion based on the family unit. Studies to date using the ICM have been conducted in three cultural contexts that differ in varying degrees in these respects from the American model of "economic individualism" (Côté & Levine, 2016): Mediterranean family-centered cultures, the Nordic welfare state, and Asian collectivist cultures.

Three studies have successfully applied the ICM in Mediterranean family-oriented cultures. In Italy, Sica et al. (2014) reported that higher scores on the AIRS and SIRS are related to lower identity distress, anxiety, depression, and that higher scores correlate with greater identity commitments. In Portugal, using a path model, Oliveira et al. (2014) found that parental economic and emotional-autonomy support had direct effects on both tangible and intangible

capital, which in turn had direct effects on psychological well-being (tangible capital was operationalized in terms of educational credentials, and intangible capital was measured with indices of the sense of purpose, self-efficacy, self-determination). They concluded that parental influences on their children's well being was mediated by their children's' tangible and intangible identity capital. Finally, based on a Turkish version of MAPS20 refined through a CFA (Atak et al., 2013), Morsunbul (2013) reported that the effects of agency on life satisfaction where mediated by identity commitments.

In her study in the Nordic country Finland, Tikkanen (2016) used the ICM as a framework to examine relationships between family-related resources and adolescents' worry about future education, employment, and social status. She found that the effect of parent's education and support on worry about the future was mediated by agency (operationalized as academic self-concept and general self-efficacy), concluding that these forms of intangible identity capital are protective factors against negative outcomes.

Studies have been conducted in two Asian collectivist cultures: China and Japan. In Shanghai, Yuan & Sek-yum Ngai (2016) found that social capital had a much stronger impact on various positive outcomes when mediated by agency, and their measure of agentic personality was the most important factor in explaining these outcomes. Four forms of social capital were measured (family, friendship, associational, and linking), along with three positive outcomes (identity achievement, academic achievement, and mental health). Agency was measured with scales tapping resilience (with items similar to those used to measure ego strength), self-esteem, and self-efficacy (with items similar to those found in locus of control and purpose in life scales).

Finally, Côté et al. (2016) conducted a comparative analysis of Japanese and American post-secondary students, finding evidence of invariance for both the measurement model

(MAPS20 and ISRI, including the Japanese version of these) and the identity capital structural path model. The SEM path analysis modeled the four MAPS20 subscales, along with age and gender as independent variables and the ISRI as the dependent variable. The invariant structural model required two minor modifications for the best solution, with covariances required between gender and ego strength (the path for Japanese males was stronger than for Japanese females) and locus of control (the path for American females was stronger than for American males). In addition, a finding that directly disputes the common assumption that models of personal agency apply to individualistic cultures and not collectivist ones was that more variance was explained in structural path model for the Japanese sample (39%) than the American sample (28%). These authors concluded that identity-based agentic attributes may have become more important in current Japanese culture in the transition to adulthood because of the “individualistic collectivism” now influencing the lives and many young people these (Sugimura and Mizokami, 2012).

Professional socialization

A number of investigators have found it useful to adopt the ICM as a framework with which to study the “moral careers” of students-in-training and professional plying their trade.

Two studies have used the ICM in student settings. Simon (2012) found that American pre-collegiate student teachers of low-income students who went on to become teachers drew on their accumulated identity capital grounded in the skills, knowledge and dispositions for “prospective efficacy.” Similarly, Goldie (2012) found that medical students are more successful as they learn how to acquire and mobilize tangible and intangible identity capital, especially females.

Three studies have been published that apply the ICM in professional settings. Selkirk (2011) used the ICM to investigate how artists use involvements in community-based arts projects to exchange and accumulate identity capital to transform their identities over time. Likewise, Kim (2010) explored the concept of “transnational identity capital” to examine the position of transnational mobile academic intellectuals, framing this form of identity capital within Simmel's concept of the “stranger” (i.e., someone not committed to the specifics of the group, but having a special form of detached objectivity with respect to the group and its members). Kim found that a number of generic competences were used by itinerate academics to forge and sustain social relations, thereby facilitating movement among diverse ethno-national groups and professional contexts. Lastly, Lee & Berrick (2014) recommend the use of the identity capital model in social work settings for developing counseling models of youth aging out of foster care.

Ethnicity

The management of ethnic identities has been investigated in several qualitative studies. Sundar (2008) studied young South Asian-Canadian women and men, observing how they used their available “ethnic identity capital” to strategically choose whether to “brown it up” or “bring down the brown,” depending on the ethnicities of their audiences. Sundar concluded that her respondents’ ethnic identities were multi-dimensional and flexible, and they possessed the resilience and agency to mediate their personal biographies and cultural attachments in multicultural contexts.

Similarly, Brunnsma and Delgado (2007) explored how black-white biracial American young adults deployed of their identity capital resources in multiracial “identity markets.”

Likewise, Ho and Bauder (2010) examined the identity capital deployment strategies among staff members in a Canadian multicultural immigrant-serving organization. They concluded that various forms of identity capital are strategically deployed as part of impression management through greetings, body language, finding connecting pieces, and methods of communication in interactions with clients, colleagues and supervisors.

Impression management skills in context

Several observers have commented upon the exercise of impression management as an identity capital skill that is useful for moving among diverse and sometime contradictory audiences. Woodward (2007) used the ICM to explain how material-culture objects can be used for projecting cultural and social identities. In traditional societies, only the wealthy had/have the material means for carefully constructed identity displays. In late-modernity, however, people can manipulate tangible resources like clothes, jewelry, and automobiles to project the images appropriate to certain contexts, thereby using these resources as “passports into desired social, cultural, and institutional spheres” (p. 137).

Similarly, Newman and McLean (2004) found the ICM useful in interpreting how museum visitors made use of exhibitions as a context to make strategic investments, which have a range of anticipated social benefits, including ameliorating the effects of social exclusion.

Lastly, the author of a blog found the ICM useful in understanding identity management on the Internet, noting that “The lack of hierarchical structure on the Internet minimizes the importance of how you [were] socialized (which ties into social, cultural, and human capital), [so that] the power of your thoughts, and your knowledge, and how it is presented, becomes more important than the amount of degrees you have hanging in your office, or the kind of car you drive, or the number of ”clubs” you belong to.”¹⁹

The Identity Capital Workplace Portfolio

Based on the theory development and empirical research to date, Figure 1 provides an illustration of the postulated “portfolio” of identity capital resources identified by the ICM as needed for successful transitions to late-modern social statuses and occupational “identity markets” (see Côté & Levine, 20016, for a full discussion of this portfolio). These postulates are based on the assumption that people’s acceptability in these “markets” requires that they earn a certain legitimacy that affords them “social inclusion,” particularly entry into the job market and potential movement up career ladders or through skill certifications.

This illustration allows for a placement of the various resources that are identified by the ICM, and how each plays a role in entry into identity markets. Placed at the top are the more intangible resources. At the bottom are the more tangible resources. One way to more concretely frame this model is to place it within policy debates, and in doing so to consider intangible resources more generically as “soft skills” and tangible skills as “hard skills.” In the past, as noted above in the section on the transition to work, it appears that mere possession of hard skills was sufficient for social inclusion, but it increasingly appears to be the case that soft skills are now more necessary for people to strategically mobilize their hard skills and combine them with soft skills if they are to gain access to the job market, in any but the most rudimentary occupations. For example, while educational credentials are tangible assets that can represent the acquisition of “hard skills” traditionally thought to be all one would need to succeed, it is increasingly evident that in the labour markets of late-modernity, people need additional skills to gain entry into, and maintain good standing in, certain occupational categories.

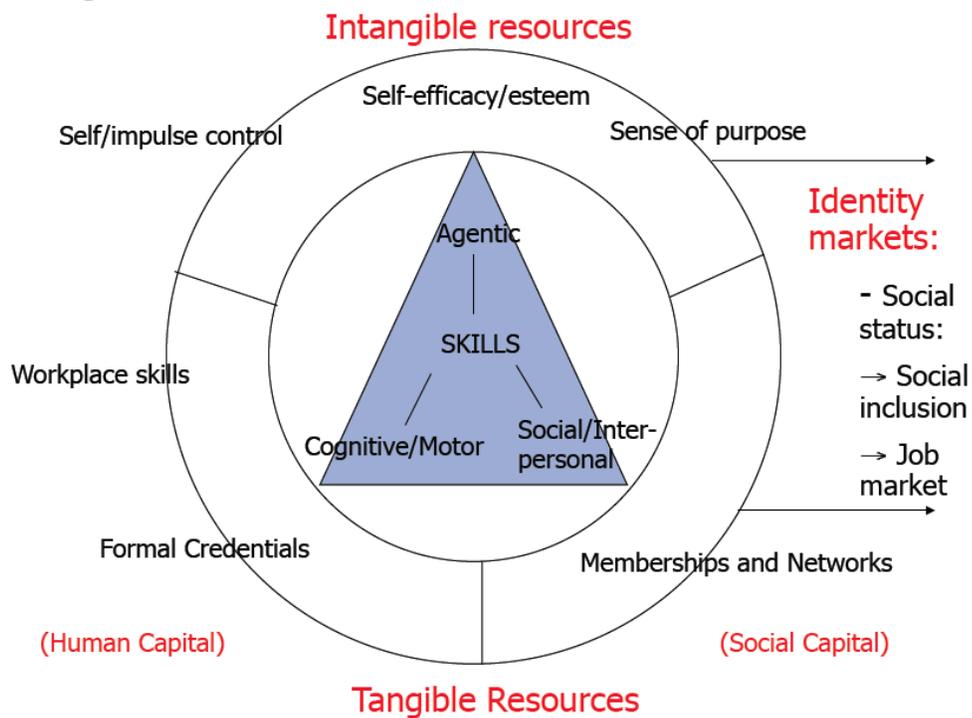
Figure 1 also includes other “capitals” that can be included in the ICM (cf. Schuller et al., 2004). In the ICM, identity capital is considered the overarching resource that subsumes human-

and social-capital. The apex of the triangle at the centre of the figure refers to agentic skills, with the two lower points representing cognitive/motor (human capital) skills and social/interpersonal (social capital) skills. Consistent with the above soft skills/hard skills argument, agency is necessary to put the other forms of capital into action and to bring them to fruition in the identity markets of late-modernity in terms of securing a validated social status that integrates the person within a functioning community (social inclusion) and the job market.

In brief, this figure is based on the accumulated findings based on the ICM and specifies the portfolio of identity capital resources posited by the model as necessary to compete effectively in the late-modern identity markets of adult communities and occupational systems. Intangible resources comprise the agentic skills identified by the ICM and operationalized by the MAPS. It is through these agentic resources that workplace skills and formal credentials, as well as memberships and networks, can be negotiated and exchanged in identity markets. At the same time, this model gives us clues as to why some “credentialed” and otherwise skilled people cannot find work, net of structural factors, and even why networks do not always work in gaining employment.

In drawing these conclusions about the importance of agentic “soft skills,” I am mindful of the tendency of some observers to “blame the (unemployed) victim” or excuse neo-liberalism for structural unemployment. To the contrary, one intention of the efforts behind the ICM is to find ways to help those who are social excluded and un/under-employed, or who are headed for social exclusion, to find ways to overcome these problems. This intention goes back to the origins of the identity capital model as a way of learning from those who successfully exchange resources, and passing this knowledge onto those who have trouble doing so.

Figure 1: THE LATE-MODERN IDENTITY CAPITAL "PORTFOLIO"



CONCLUSIONS, FUTURE RESEARCH, AND APPLICATIONS

The Identity Capital Model (ICM) provides a means of integrating psychological (micro/developmental) and sociological (macro/contextual) concepts to enhance our understanding of the changing nature of life course transitions in late-modern societies where old normative structures, and to some extent social class, gender, and race barriers, have broken down, requiring individuals to exert personal agency in certain contexts if they are to reach certain goals. For those who are able to do so, life chances can increase proportionately; for those who are unable to do so, life chances can be diminished accordingly. Thus, the ICM can help us understand how people successfully navigate new passages through late-modern life courses, and we should be able to use this understanding to help those who encounter difficulties navigating their life courses, particularly those from disadvantaged backgrounds. The model thus provides a potential framework for recommending policies and structuring interventions that ameliorate the impact of the disjunctures between institutional contexts and fragmentations within these contexts.

The empirical research governed by the framework of the ICM has found strong and consistent support for its basic tenets. Identity-based agency, especially as measured by the MAPS, is an important factor driving development. Path models have identified its importance as both an independent and intervening variable in predicting myriad positive developmental and mental health outcomes, as well as in the accumulation of adult- and societal-identity capital, as measured by the ISRI. This form of agency is also demonstrably important in various types of cultures, regardless of their individualistic–collectivistic nature, at least in the current socio-historical era of late-modernism.

Similarly, adult- and societal-identity capital are clearly important resources and outcomes, contributing to an iterative process whereby higher scores on the ISRI at one point in time have cumulative effects on the ISRI at later points in time, as well as on other positive outcomes.

Thus, the combined effects of the MAPS and ISRI supports the hypothesized Matthew Effect: agency, in conjunction with adult/societal identity capital, is an important combination of factors/resources, whereby earlier gains in these attributes establish a basis for a steeper slope of development for both forms of identity capital as well as other positive developmental and life course outcomes, including more optimal education-to-work transitions.

The ICM has also been applied qualitatively to several education and work contexts and its potential for ideographic analyses has been examined. The acquisition of forms of intangible identity capital has been found to be important as part of the socialization into certain professions and in maintaining personal validation in those settings. These intangible resources are important for successful impression management, especially in settings where identities are the object of subtle negotiations in establishing legitimacy and smooth interactions in the pursuit of context-specific goals.

The ICM differs from Bourdieu's cultural capital model because it is not context specific and can be applied in contexts that take researchers beyond the old focus on class struggles rooted in a continental, post-feudal mindset. Studies based on Bourdieu's concepts of cultural capital are conceptually anchored to the residual ideologies legitimating aristocratic dominance over identity formation, defined by "tastes" and "distinctions" (e.g., Bourdieu & Passeron, 1977). Even in modern-day Europe, the influence of feudalism has waned and is irrelevant to the common person's identity formation. For example, there are now many educational and

occupational contexts that are suitable for many people, depending on their goals, interests, and aptitudes (see Côté & Levine, 2002, for examples).

In this context, it is important for identity researchers to be mindful of their potential middle class biases that privilege only certain types of “high status” activities and occupations as “successful” because they are based on old forms of “tastes” and “distinctions.” Thus, a goal of research using the ICM can be to determine variations in the success of certain identity capital strategies and resource portfolios in a wide array of contexts (including, for example, entry into the trades, or mastering a craft, and not just those occupations based on a university education) with an eye to recommending how intervention efforts might increase the success rates of those experiencing difficulties in negotiated the transition to adulthood and “finding themselves” in some productive role that will afford them a living wage and the respect of their community.

Herein lies the challenge for future research with this model: identity resolution (ISRI) is developmental, but agency (MAPS) is more fixed, so how can we enhance agency among youth populations, especially vulnerable ones? Possible interventions must vary by target groups. For example, Jay (2012) reports success in counseling middle class young adults whose lives have fallen prey to the Matthew Effect because they whiled away their formative years, believing that their childhood entitlements would continue into a prolonged period of “youth” (i.e., their 20s could be a time of relative leisure without consequences of their adulthood attainments). Among less privileged youth, Oyserman and Destin (2010) have developed techniques for developing Identity Based Motivations among academically struggling grade-school minority students, identifying “small interventions with big effects” by helping these students to imagine future possible identities involving academic successes. More generally, early educational interventions appear to be the key in targeting the attributes identified by the ICM as the foundation of

identity-based agency among all children, but with special efforts to reach children whose backgrounds do not nurture intangible identity capital resources such as self-esteem, internal locus of control, purpose in life, and ego strength.

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APPENDICES

Appendix A: MAPS20 items

Subscales, Principal Components, and Cronbach's alphas (N = 995)

Scale and item #	Item wording	Factors			
		F1	F2	F3	F4
Self-Esteem (SE) ¹					
SE1	I'm a lot of fun to be with.			.670	
SE2	I'm popular with persons my own age.			.725	
SE3	People usually follow my ideas.			.612	
SE4	I'm not as nice looking as most people.*			.472	
SE5	Most people are better liked than I am.*			.664	
Purpose in Life (PL) ²					
PL1	I am usually completely bored ... exuberant and enthusiastic.		.683		
PL2	Life to me seems always exciting ... completely routine.*		.796		
PL3	Every day is constantly new and different ... exactly the same.*		.788		
PL4	My life is empty, filled only with despair ... running over with exciting good things.		.736		
PL5**	I am a very irresponsible person ... very responsible person.		.359		
Locus of Control (LC) ³					
LC1	Becoming a success is a matter of hard work. Lucky breaks have little or nothing to do with it.				.758
LC2**	When I make plans, I am almost certain that I can make them work.				.476
LC3	There is a direct connection between how hard I study and the grades I get.				.683
LC4	It is impossible for me to believe that chance or luck plays an important role in my life.				.551
LC5	What happens to me is my own doing.				.678
Ego Strength (ES) ⁴					
ES1	I enjoy difficult and challenging situations.	.676			
ES2	I have a lot of will power.	.686			
ES3	I am able to concentrate better than most people under distracting conditions.	.745			
ES4	I can bear physical discomfort better than most.	.670			
ES5	When I have a job to do, I am not easily distracted.	.736			
Eigenvalues		5.42	1.99	1.53	1.34
% variance explained		27.09	9.94	7.65	6.72
5-item alphas		.69	.78	.73	.74

Note. Principal Components Analysis, Varimax Rotation with Kaiser Normalization, rotation converged in 5 iterations

¹. Two-point scale: Unlike me; Like me

- ². Seven point scale, with “neutral” as the center anchor
³. Six-point scale ranging from “strongly agree” to “strongly disagree” with no neutral response.
⁴. Five-point scale, from “completely false” to “completely true,” with an intermediate response of “partly true and partly false
* reverse scored
** deleted on the basis of CFAs

Appendix B: ISRI Items

Subscales, Principal Components, and Cronbach’s Alphas (N = 995)

Scale and item #	Item wording	Factors	
		F1	F2
Adult Identity Resolution Scale (AIRS) ¹			
AIRS1*	You consider yourself to be an adult.	.155	.882
AIRS2	You feel respected by others as an adult.	.227	.835
AIRS3	You feel that you have matured fully.	.362	.761
Societal Identity Resolution Scale (SIRS) ¹			
SIRS1	You have found your "niche" in life.	.820	.264
SIRS2	You have settled on a lifestyle that you are satisfied with for the remainder of your life.	.857	.214
SIRS3	You have found a "community" in which to live for the remainder of your life.	.840	.220
Eigenvalue		3.46	1.08
% Variance Explained		57.61	10.02
Alpha		.83	.84

Note. Principal Components Analysis, Varimax Rotation with Kaiser Normalization, rotation converged in 3 iterations. Items measured on a 5-point scale: 4 = entirely true; 3 = true for the most part; 2 = somewhat true; 1 = a little true; 0 = not at all true

* deleted on the basis of CFAs

Appendix C: Identity Horizons Scales Items

Subscales and Principal Components loadings (N = 525)

Code	Item	Education/Work Identity Anxiety	Educational Horizons	Work Horizons
Work Horizons				
WH1	I wouldn't mind changing my life for a career to achieve my dreams and goals that really interests me.			.484
WH2	I would take a job that really interests me even if my parents did not support me in that choice.			.572
WH3	I would take a really good job far from where I grew up.			.751
WH4**	I would be uncomfortable about working in a place far away from where I grew up. (R)			.637
WH5*	I would not want to travel too far to look for a job even if I would like it. (R)	-.436		.574
Work-Identity Anxiety				
WIA1	If I pursued a high-level career, some of my friends might think that I am trying to be better than them.	.589		
WIA2	Pursuing a high-level job might confuse me about "who I am."	.666		
WIA3	Pursuing a high-level career might create tensions between my parents and me.	.713		
WIA4	I would not take a job that interests me if those around me thought I was trying to show them up.	.686		
WIA5	Launching a career worries me because it may affect the personal relationships in my present life.	.524		
Educational Horizons				
EH1	I need to study hard in school to achieve my dreams and goals.		.590	
EH2	More education beyond my current program would help expand my understanding of the world.		.716	
EH3	Studying at school is useful for my personal development.		.680	
EH4****	More higher education beyond my current program would lead to more opportunities to expand my horizons.		.743	

EH5 ^{***}	If necessary to achieve my dreams and goals, I would pursue more higher education even if I would have to significantly change my present life.	.582	
<hr/>			
Educational-Identity Anxiety			
EIA1	Pursuing a higher level of education beyond my current program might confuse me about “who I am.”	.624	
EIA2 ^{****}	Pursuing more education beyond my current program might make me lose some important personal relationships in my life.	.516	
EIA3	My parents would disagree with me pursuing more education beyond my current program.	.533	
EIA4 [*]	It would not be beneficial to me personally to pursue more education beyond my current program.	.503	-.493
EIA5 ^{***}	Studying hard at school will make little difference for the job I will likely get after leaving school.	.467	

Note. Maximum likelihood (ML) and varimax rotation. Items measured on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

* Items dropped on the basis of the exploratory factor analysis (EFA).

** Item dropped on the basis of the first confirmatory factor analysis (CFA).

*** Items dropped to establish configural invariance.

**** Items dropped to establish (partial) scalar invariance.

iv. A PSE would be a means by which I would make meaningful changes to the "system".	<input type="checkbox"/>						
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d. Expectation-Driven (EXP):

Why I would undertake a post-secondary education (PSE).	Strongly Agree	Agree	Slightly Agree	Agree nor Disagree	Neither	Slightly Disagree	Disagree	Strongly Disagree
i. My parent(s) would be very disappointed in me if I didn't go on to a PSE.	<input type="checkbox"/>							
ii. There are considerable pressures on me from my friends to get a PSE.	<input type="checkbox"/>							
iii. I basically have no choice but to get a PSE.	<input type="checkbox"/>							
iv. There are considerable pressures on me from my family to get a PSE.	<input type="checkbox"/>							

e. Default (DEF):

Why I would undertake a post-secondary education (PSE).	Strongly Agree	Agree	Slightly Agree	Agree nor Disagree	Neither	Slightly Disagree	Disagree	Strongly Disagree
i. I don't think I would really get anything out of a PSE, but it beats the alternatives.	<input type="checkbox"/>							
ii. I don't expect to get anything out of courses I would take as part of my PSE.	<input type="checkbox"/>							
iii. I would undertake a PSE basically because there are few other options.	<input type="checkbox"/>							
iv. I often ask myself why I would bother getting a PSE.	<input type="checkbox"/>							

Notes: From Acumen Research Group (2008). Version suitable for secondary-school students. For samples currently in PSE, change item wording to the present, active tense when necessary to suit the current circumstances of the sample.

Appendix E: Perceived Return on Investments in a Post-Secondary Education (PROI-PSE) items

Subscales, Principal Components, and Cronbach's Alphas (N = 704)

	Non-monetary benefits	Identity anxiety	Debt aversion	Monetary benefits
Eigenvalue →	3.2	2.8	2.3	2.0
% variance explained →	20%	17%	14%	13%
Cronbach's alpha →	.79	.84	.75	.81
I am confident that a PSE would lead me to a better paying job.	.596			.535
Although a PSE can be costly, I believe that I would make more money in the long-run.				.635
I think that if I were to put the time and effort into getting a good PSE, I would make a lot more money in the long run.				.702
People who get a PSE will make more money over their lifetime than those who just get a high school education.				.535
People who have a PSE get jobs that are much more satisfying.	.775			
The best way to get a prestigious job is through a PSE.	.749			
If you want a rewarding career these days, you need a PSE.	.827			
Getting a PSE will lead me to find work that I really enjoy doing.	.596			
I'm hesitant to pursue a PSE because it would create tensions between my parents and me.		.825		
I'm hesitant to pursue a PSE because it would create tensions with the people I grew up with.		.818		
If I pursued a PSE, I'm afraid that it would confuse me about "who I am."		.808		
If I were to pursue a PSE, my friends would think that I'm trying to be better than them.		.716		
The costs of a PSE have become so high that they outweigh any future financial benefits.			.740	
I'm hesitant to undertake a post-secondary because of the amount of debt I'm likely to accumulate by the time I graduate.			.804	
I'm not sure that a PSE would pay off even in the long-run, given how costly it is these days			.736	
Given the high costs of a PSE and the time it takes to complete it, you are really no further ahead financially than if you get a job right after high school.			.533	

Notes: From Côté et al. (2008). Suitable for secondary-school students

ENDNOTES

¹ The use of the word "capital" in this model is unfortunately something of a lightning

¹ The use of the word "capital" in this model is unfortunately something of a lightning rod in disciplines like sociology. These disciplines have many members who consider

themselves to be anti-capitalist, blaming capitalism itself for most of the maladies in capitalist

societies, rather than other factors that might be related to the human condition. Addressing the debate about the merits of capitalism is beyond the scope of this handbook, but see Côté (2016) for a discussion of how radical social theories can be reconciled with the ICM. Suffice it to say, for present purposes the word capital is synonymous with “resources” and these resources are relevant in all types of societies, even socialist/communist ones.

² For example, Canadian research consistently finds that parental education level—and not income—is the strongest predictor of university attendance, with each year of parental university education increasing the likelihood by about five percentage points that a child will attend university (Finnie, Lascelles, & Sweetman, 2005). According to Finnie et al. (2005), holding income constant, if their parents have just a high school education, in the early 2000s the likelihood of young males attending university was 29%; for young women it was 37%. However, this probability jumped to 53% and 65%, respectively, if at least one parent had some university education. Tracked over time, there has been a significant increase in university graduation among “first-generation” university students (i.e., students who are the first in their family line to attend). According to Turcotte (2011), between 1986 and 2009, the percentage of Canadian-born first-generation university graduates aged 25 to 39 increased from 12% to 23%, compared with increases from 44.7% to 55.8% for those with a least one parent who had a university degree. Thus, an examination of what happens among those who attend university finds that parental income “washes out” when other factors are taken into account.

An identity-based explanation for these findings is that parents with higher educations can give more appropriate advice and information and act as intellectual and emotional role models. Thus, children with more educated parents are more likely to grow up seeing higher education as part of who they are—their identity—and to not feel that the university environment

is a foreign or hostile one to them. In the language of the ICM, university-educated parents have more intangible resources to pass onto their children that are relevant to the university context, so their children are less likely to experience “identity anxiety” and have broader “identity horizons,” as discussed below.

³ Emirbayer and Mische argue that the potential for agency in a given individual depends both upon the specific qualities of that individual and the specific qualities of the context in which the individual is acting. Actors, by definition, function in contexts; as such, they are never free from structure, but also vary in terms of their ability to utilize and transform that structure. In this respect, Emirbayer and Mische endorse the position that agency “consists primarily in the capacity of *resource-equipped actors* to act creatively through the transposition of existing schemas into new contexts” (p. 1005, emphasis added).

⁴ Note that parental financial “investments” in their children is not perfectly correlated with social class—some affluent parents want their children to make their own way in life, and some children insist on doing so. Moreover, as the figures presented in endnote 2 indicate, almost half of those with parents who have a PSE *do not* attend university in Canada, for example.

⁵ Multigroup invariance tests were undertaken on the 18-item MAPS, one for gender and the other for age. For gender, the indices verified all five types of invariance computed by AMOS (Byrne, 2010, lowest CFI = .931; highest RMSEA = .035). With respect to age, each age grouping between 18 and 24 was identified as the seven groups to be compared. Multigroup invariance was consistently found as far as the scalar criteria for these seven groups (CFI = .902; RMSEA = .021), but the CFI for structural covariances decreased to .897. Because the 24-year-old group had only 72 cases, it was dropped and the invariance tests were re-run. For the six age

groups 18 to 23, all five forms of invariance were consistently found (lowest CFI = .912; highest RMSEA = .022).

⁶ A psychometric issue raised by the shortening of the MAPS subscales is the fact that as the number of items in a scale is reduced, Cronbach's alphas become smaller in magnitude. A rule of thumb that is commonly used as the lowest boundary for the adequacy of alpha coefficients is .70, but lower alphas in the .50 to .69 range can be acceptable under certain conditions (Nunnally, 1967). Yet, very few researchers who employ the alpha coefficient know why these rules of thumb apply, and most researchers appear to be unaware that this commonly used statistic has been criticized on a number of grounds, including whether it is even an estimate of internal consistency or unidimensionality (e.g., Sijtsma, 2009). For example, Cronbach's alpha can over-estimate item intercorrelations because of its inflation in relation to the number of items in a scale. Conversely, it can underestimate intercorrelations when item variances and inter-item covariances are not homogeneous (e.g., Garson, 2015). Thus, on the one hand, whereas well-constructed items with diverse wording and content may map more aspects of a given construct, these items may have "low" alphas. But, on the other hand, scales with similarly worded items can have very high alphas (.90+) but may inadvertently be mapping fewer aspects of construct (thereby reducing their validity). More seriously, such items may have correlated error terms produced by the response biases inherent in repetitive items, such as when respondents are simply checking off a series of similar sounding items based on their first responses, but these respondents may be giving little thought to the (very minor) variations in subsequent item content.

More recent approaches are resolving these psychometric shortcomings by using Structural Equation Modelling (SEM) as a substitute for, or addition to, Cronbach's alpha. SEM

allows researchers to assess the size of factor loadings of each item on their appropriate factors, while at the same time detecting correlated errors among items, such as those produced by response biases. SEM modification indices allow researchers to produce more parsimonious and valid measurement models than what is achieved by simply relying on Cronbach's alphas (e.g., Raykov, 1997).

⁷ This transition is a potentially precarious life-course event in late modernity because the prolongation of the youth period can have certain disadvantages (Côté, 2014). Overall, the current youth segment of contemporary (neoliberal) societies faces poorer economic prospects than did generations of the 20th century, as the "age of economic maturity" has risen to later ages (cf. Clark, 2007). Consequently, many of those who at an earlier age are able to achieve legitimacy in an adult community will have more economic and social opportunities and will be more likely to benefit from the Matthew Effect (above).

⁸ There were originally seven items in this scale, but one was eliminated from the SIRS to make the range of the two scales equivalent. The Societal Identity Resolution Scale was originally called the Community Identity Resolution Scale. The revised name more accurately represents the content of the items and the meaning of the underlying construct.

⁹ In this particular study, a two-factor CFA solution worked for configural variance when the first item of the AIRS were dropped and two covariances were added between error terms (US: CFI=1.00; RMSEA=.000). The resulting 2-item AIRS has an acceptable alpha (.75), but two-item scales are frowned upon, so I would recommend that a two-item AIRS be used only if there are theoretical reasons for distinguishing adult identity (AIRS) from societal identity (SIRS).

¹⁰ As was done with the MAPS18, two additional multigroup invariance tests were undertaken with the five-item ISRI: one for gender and another for age. For gender, the fit indices verified all five types of invariance (lowest CFI = .989; highest RMSEA = .037). Similarly, multigroup invariance was found for age on all five types of invariance (lowest CFI = .964; highest RMSEA = .025).

¹¹ In reference to sociological debates regarding structure and agency, it should be noted that in this particular study parental affluence (a potential tangible resource) was not related to identity capital acquisition in ways that correspond to the simple notion that higher socioeconomic status is always associated with the best outcomes. For example, a proposition central to “conflict theories” in sociology is that favourable outcomes accrue mainly to those of more privileged origins, because the educational process is seen to constitute a smokescreen by which the upper classes maintain their superior position in society (e.g., Bowles & Gintis, 1976). The upper classes are believed to do this in part by making sure that their children achieve higher levels of academic attainment (Bourdieu & Passeron, 1977). Thus, if the passage through universities and the transition to adulthood were totally structurally determined, agency should not be a significant predictor. This particular study found the opposite with respect to the significance of “structure” and “agency.”

¹² This study examined the response patterns in the two cultural samples, finding two forms of bias that are common in cross-cultural research using Likert-type items (Fischer, 2004). The US participants were significantly more likely to select extreme responses on most items (extreme response style), whereas the JP respondents were significantly more likely to select responses reflecting modesty (modesty response style). Following Fischer's (2004) recommendation, each item response is standardized using the “within culture” method, where

within-culture z -scores are computed for each individual item. This produces a mean of “0” on each item within each sample (along with a SD of 1.0), which unfortunately renders tests of mean differences meaningless but allows for an examination of structural relationships.

¹³ Five forms of increasingly stringent invariance can be examined using AMOS 23: configural invariance (equal numbers of factors in each sample), metric invariance (equal factor loadings/weights), scalar invariance (equal intercepts), factor invariance (equal structural covariances), and error invariance (equal measurement residuals). It is generally agreed that scalar invariance is the minimum requirement for comparing mean differences between group responses.

¹⁴ All correlations are significant and based on a sample of 606 students.

¹⁵ These correlations are reported in Acumen Research Group (2008), a consulting report written by Côté and Skinkle, Table 2.

¹⁶ The shortened subscales were highly correlated with the original scales using all 20 items (Education-to-Work Anxiety = .88; Educational Horizons = .93; Work Horizons = .90), suggesting that there was no important loss of information with the fine-tuning accomplished by the CFAs.

¹⁷ At the time of writing (March 2016), the data examining the relationships between the MAPS/ISRI and Identity Horizons Scales has not been fully analyzed. Preliminary results on the full sample of American and Japanese students show positive correlations with moderate effect sizes ($\sim +.35$) between the MAPS20 and the two horizons subscales (education and work) and a negative correlation between the MAPS20 and identity anxiety of a small effect size ($-.24$). The AIRS shows a similar pattern of correlations with the three identity horizons subscales, but consistently at a small effect size ($-.14$ to $+.27$). However, the SIRS is not significantly correlated

with either horizons subscales and is *positively* correlated with identity anxiety (+.15). This later finding suggests that those who have made inroads into adult communities are more resistant to change and thus moving out of the niche in which they have established themselves. This is an interesting finding worthy of further investigation.

¹⁸ The new field of Identity Economics (Akerlof, 2010) would make a prediction consistent with the Identity Horizons Model that those who have identities that are deeply embedded in groups with norms that are more locally focused than globally focused would have narrower educational and work horizons and experience anxiety in thinking about moving out of those comfort zones.

¹⁹ Unfortunately, this link is now dead:

<http://charlenecroft.wordpress.com/2007/05/20/virtual-capital/>