

Malanchuk, M., Messersmith, E. E., & Eccles, J. S. (2010). The ontogeny of career identities in adolescence. In S. Shulman & J.-E. Nurmi (Eds.), *The role of goals in navigating individual lives during emerging adulthood*. *New Directions for Child and Adolescent Development*, 130, 97–110.

8

The Ontogeny of Career Identities in Adolescence

Oksana Malanchuk, Emily E. Messersmith, Jacquelynne S. Eccles

Abstract

Exploration and identity formation are primary developmental tasks during adolescence and the transition to adulthood. Yet little is known about occupational identity formation and growth during this period of life. In this chapter, the authors describe their ongoing research on this topic. First, they present their findings on the ontogeny of the complexity of career identities. Then they discuss their findings regarding the relationship between early career identity formation and psychological well-being at ages nineteen and twenty-one.
© Wiley Periodicals, Inc.

The data used in this study was funded by grants to Jacquelynne S. Eccles and Arnold J. Sameroff from the MacArthur Network on Successful Adolescent Development in High Risk Settings (Chair: R. Jessor) and the National Institutes for Child Health and Human Development; to Jacquelynne S. Eccles from the W.T. Grant Foundation; and to Tabbye Chavous and Jacquelynne Eccles from the Spencer Foundation. The authors wish to thank the many former members of the Achievement Research Lab at the University of Michigan who made the study possible and especially the research assistants who coded the open-ended data used in this report.

Exploration and identity formation are primary developmental tasks during adolescence and the transition to adulthood (Erikson, 1959; Jepsen & Dickson, 2003; Roisman, Masten, Coatsworth, & Tellegen, 2004). Developing a coherent and realistic occupational identity during adolescence is critical to a successful transition into adulthood (Marcia, 1993). Yet little is known about occupational identity formation and growth during this period of life. Our first goal is to describe ontological changes in the nature of adolescents' career identities as they pass through their junior and senior high school years. Developing a coherent and realistic occupational identity may also be linked to psychological well-being (Meeus, 1996). Our second goal is to describe the relation we found between occupational identity development and well-being during adolescence and the transition to adulthood. Thus, first we examine patterns in occupational identity development across the adolescent years to illustrate how more abstract development in this domain occurs. Then we relate occupational identity formation to well-being and suggest that, as with other aspects of identity formation, the process of choosing and preparing for future occupations has important developmental implications for adolescents' later well-being.

Identity Development and Occupational Choice

Identities are complex notions of one's personal uniqueness that are formed over time through a variety of psychological and social processes. According to Eriksonian identity formation theorists (e.g., Erikson, 1959; Marcia, 1993), young people form their identities through processes associated with exploration and commitment. In healthy development, adolescents explore a variety of possible identities across different domains of functioning. As they mature, they develop a more nuanced conception of different identities and they gradually make personal commitments to various identities. Furthermore, within this theoretical perspective, it is assumed that well-functioning youth cycle through these processes of exploration and commitment repeatedly over time as they develop more sophisticated concepts of various possible identities. Finally, it is assumed that identities that have neither been explored nor committed to are less well developed than identities that have undergone one, or both, of these processes. Thus, although rudimentary identities can exist early in life, well-developed, mature identities begin developing in adolescence or even later and can continue to develop throughout second and third decades of life.

Occupational identities (an individual's notion of who she or he would be as a worker, and what kind of work would best suit her or him) are a central aspect of identity formation (Eccles, 2009; Nurmi, 2004; Nurmi, Salmela-Aro, & Koivisto, 2002). Many young people in the United States, as well as in most industrialized countries, must begin making educational choices that are directly related to their later occupational

options while they are in secondary school. For example, they must decide how much mathematics and science to take, how many foreign languages to take, and which, if any, vocational education courses to take. These decisions have implications for the kind of post-secondary school education they can select, as well as the types of jobs they are most likely to enter after they finish their schooling. A maturing but healthy occupational identity is likely to be useful to them as they make such educational choices and as they begin to decide which jobs and careers are likely to provide satisfying work experiences. Such a developing identity is likely to reduce the stress of making critical educational choices and to smooth the psychological transition to adulthood. In support of this suggestion, having well-articulated occupational goals predicts higher self-esteem in high school students (Chiu, 1990), whereas one's value of occupational goals predicts success in the transition to the workforce (Nurmi et al., 2002).

The research we summarize here also supports these conclusions. First, we present our findings on the developmental progression in occupational identity development from age twelve to age twenty-one. Then we link the maturity of late adolescents' occupational identities to their well-being. In light of previous research, we expect to find evidence of a developmental progression in the nature of young people's occupational identities across adolescence and early adulthood, and that this development of a career identity is linked to individuals' well-being. Specifically, we expect that young people whose occupational identities are more mature during adolescence will fare better during the transition to adulthood than their peers whose identities are less well developed. Furthermore, we expect that this association will be particularly strong as youth enter early adulthood and begin to make the transition from schooling to employment (Nurmi, 2004; Roisman et al., 2004).

Methodological Overview

The analyses described here come from data collected as part of the Maryland Adolescent Development in Context Study (MADICS)—a longitudinal study of adolescents and their social contexts. In 1991, we recruited our participants from an ethnically diverse county in Maryland. Because we were interested in studying normative development in both African American and European American adolescents, we chose this county because the socioeconomic status of the African American and European American families were as close as possible given the nature of American society at that time. The majority of the African American and European American families were in the middle class and had at least some post-secondary school education. Many parents in both ethnic groups were college educated and held professional jobs associated with the government. Initially, 1,482 adolescents and their parents agreed to participate in

the study. Of these participants, approximately 61 percent were African American, 35 percent were European American, 4 percent were of other or mixed ethnicity, and 50 percent were female. More information about the sample is provided by Eccles, Early, Frasier, Belansky, and McCarthy (1997), Sameroff, Peck, and Eccles (2004), and Wong, Eccles, and Sameroff (2003).

We collected data from the youth and their parents using both an in-home interview and a self-report questionnaire at the beginning of the students' seventh grade school year (modal age twelve), at the end of the students' eighth grade school year (age fourteen), and in the winter of the students' eleventh grade school year (age seventeen). We collected additional survey data from only the youth one year and three years after most of the students had graduated from high school (at ages nineteen and twenty-one, respectively). We were able to collect the survey data from nearly 900 of our participants when they were twenty-one years of age. The data we present here are based on those participants who participated at age twenty-one ($N = 862$).

Defining Occupational Identities

Our occupational identity development measure was created under the assumption that the self is a dynamic system (Markus & Wurf, 1987) with motivational consequences (Eccles, 2009). In designing our MADICS survey, we included several open-ended questions related to our participants' career aspirations, life goals, and personal values. We asked them what job they would like to have when they grow up and what job they actually thought they might have; what they hoped to be like and what they did not want to be like in five years (future possible selves); if they had three wishes what they would wish for; what they would do with one million dollars; and whom they admired and why. Their open-ended responses were coded within waves but across interview questions for several constructs related to occupational futures, including what we labeled *Occupational Goal* and *Occupational Identity*.

Occupational Goal, or the most salient occupation that was identified in each participants' responses regarding their futures, served as the starting point for determining Occupational Identity. In coding for Occupational Identity, raters considered whether an adolescent's Occupational Goal was merely clarified or consistent (mentioned several times across different questions), an aspect of his or her self-concept (mentioned as a possible self), or supported by a plan. Adolescents whose Occupational Goals were supported by a plan had to display some knowledge of how to turn their goal into reality. For example, if an older adolescent's desired career required a college degree, a supportive plan would be expecting to attend college and taking the necessary steps to enroll. (A more detailed coding manual is available on request.)

Based upon these three criteria, each adolescent was classified into one of the following categories of Occupational Identities at ages twelve and fourteen: Integrated, Supported, Clarified, Conflicted, and Vague. An adolescent classified as Integrated had thought about how his or her Occupational Goal would impact his or her life in the future. This is the most complex category of Occupational Identity. These participants showed active planning and effort to reach their strongly endorsed occupational goals and also exhibited an understanding of what the occupation might mean for their future lives. For example, one of the young women reported a strong interest in medicine. Ideally, she wanted to be a researcher in biomedical engineering, but she had the flexibility to see herself becoming a family practitioner instead, if she didn't like the research as much as she thought she would. The obstacles she saw to either of these jobs were reasonable and personal: low grades, low drive, and lots of stress. She also showed an appreciation of the field of medicine in her current activities and her role model. She was looking for internships and studying hard. Her role model was a mentor who was also a doctor.

In the Supported category, participants have a clear goal that is developed more thoroughly than just having a consistent goal. They either have a deeper desire to reach the goal, or they are engaged in activities to reach it, but not both. The most defining aspect of these adolescents is that there is a "missing piece." That is, their strategies may not necessarily reflect an understanding of their chosen occupation. They may know what they want to do with their lives and integrate that desire into their self-concept, but do not demonstrate that they know how to turn that dream into reality. As an example, one young man who wanted to be and thought he could be a computer programmer realized that the job market might make it difficult to get a job as a programmer and was trying to be a good employee at his current job so that he could get good recommendations. However, wanting to be a computer programmer was not supported by either his wishes or role models or in any other open-ended questions.

To be Clarified or consistent, an adolescent had to have an Occupational Goal that was mentioned across at least three different questions during the interview, which indicated that he or she exhibited a strong and coherent sense of what he or she wanted to do in the future. Clarified participants endorsed a clear Occupational Goal, but they were not thinking about it as realistically as they could be. It was more of a dream than a future reality. Furthermore, they were not doing anything to reach that goal. For example, one young man both ideally wanted to be a famous musician and realistically thought he could be one. A commitment to this goal was evident in his role model (a famous songwriter) and wishes (success in music), but it was not backed up by realistic planning. For instance, he saw broken hands as an obstacle specific to his career goal, but there are more likely obstacles, such as trouble getting signed to a record label, that he did not mention. In addition, he did not mention any

current activities that could help him achieve fame (such as practicing, learning music theory, or playing in shows for the public).

Adolescents who were classified as Conflicted mentioned multiple occupational goals that were clearly opposing. Their future occupational self did not appear to be a salient aspect of the Conflicted youths' identities, because their goals required mutually exclusive or antagonistic lifestyles. Conflicting participants endorsed at least two occupational goals that were in direct opposition with one another. This category appeared in respondents' answers mostly during the first few waves of data collection, when participants were still in junior high and high school and had little practical knowledge of the demands of some careers. For instance, one participant wanted to be both a doctor and a lawyer. However, when asked to describe what her life would be like as an adult, she mentioned doing both jobs at the same time.

Adolescents classified as having a Vague occupational identity showed no strong interest in any one particular Occupational Goal. Vague was our category for the least complex self-structure in grades seven and eight. These participants either gave no occupational goal or gave a vague one that was not strongly endorsed. Because Occupational Identity formation occurs over time and is related to the maturity of the individuals in different age periods, we wanted our categorical system to be responsive to age-related changes in our participants' responses to our questions. As we coded the eleventh graders responses, it became clear to us that the Vague category included two distinct types of youth; thus, we split this category into Unresolved and No Real Idea when coding the last three waves of data collection.

Unresolved adolescents were not motivated by a clarified goal, but they did have occupationally relevant plans. Although they remained undecided about specific career goals, they were thinking about their future career options and were actively doing things (such as going to college or exploring potential careers) that could help them in their future careers. Unresolved participants are similar to those who have no real idea about their occupational goals except that they are engaging in or planning activities that might be related to their occupational futures. In high school, these people might report studying hard. One young man coded as Unresolved had "no clue" as to what his desired occupation might be nor did he indicate a realistic job he might have at age thirty. He had no role model and listed no obstacles since he had no Occupational Goal. Yet he was studying hard and was happy to have been accepted to the University of Berkeley, which he planned to attend.

Youth classified in the No Real Idea category neither had an occupational goal nor reported engaging in any serious career-related exploration or planning. Respondents who were classified as having "no real idea" stated no clear notion of an occupational goal, although one might have been mentioned once in the answers. In addition to not having any clear

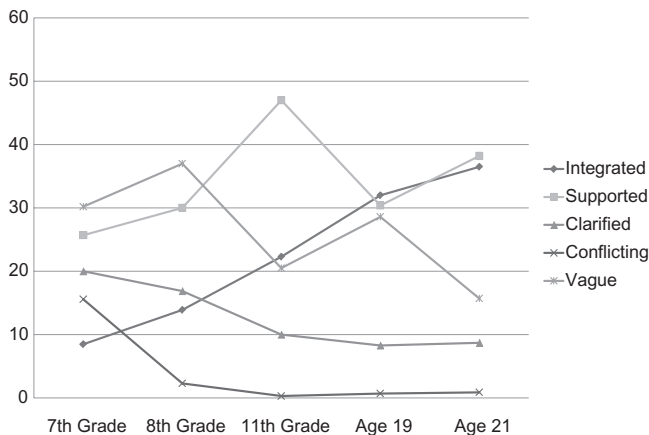
or consistent goal, they showed no activity that could be related to their future career. For example, consider the responses of one participant when he had been out of high school for one year. Remember that participants had many opportunities throughout the questionnaire to mention jobs that they might have or want. This man mentioned that he wanted to be a printing manager only once, but in response to the follow-up question, “Do you realistically think you will be a printing manager by age thirty?” he replied “I couldn’t even begin to say.” In fact, he had no idea what he might really be at that age. Because he had no real goal, the only obstacles he could think of to his success were if he died or went to jail. In addition, he was not doing anything to work on becoming a printing manager and he had no role model.

Our coders had little difficulty with the categories at each wave; inter-coder reliability was 80 percent or better.

Developmental Changes in Occupational Identities

First, we examined changes in occupational identity over time. Percentages of the sample that were coded into each occupational identity category at each wave are presented in Figure 8.1. Clearly, more complex categories of Occupational Identity (Integrated and Supported) became more frequent as our participants grew older. As we expected, memberships in less-developed Occupational Identities (Vague, Conflicting, and Clarified) were more common during early and middle adolescence, when participants were still considering idealistic career pathways and not yet feeling pressured to start developing and enacting clear plans to reach

Figure 8.1. Occupational Self-Structure



their occupational goals. Over time, our adolescents developed more complex Occupational Identities, as evidenced by the peak of the Supported category at eleventh grade and the steadily increasing percentage of participants in the Integrated category.

This rate of increasing complexity of occupational identity is consistent with the notion that individuals explore and begin to commit to their various identities during adolescence and young adulthood. But to provide solid support for the Eriksonian perspective, these changes need to be evident at the individual as well as the population level. To determine whether this developmental progression characterized individuals as well as the population at large, we examined patterns of Occupational Identity within participants over time. Because space is limited here and because identities are thought to become more developed during late adolescence, we focus here on the individual patterns across ages seventeen, nineteen, and twenty-one only. Overall, 40 percent of our participants exhibited increasingly complex Occupational Identities and 11 percent exhibited a stable pattern over this five-year period. In contrast, only 25 percent exhibited decreasingly complex Occupational Identities. The remaining 24 percent showed no consistent pattern. The frequencies of these patterns suggest that many individuals do develop more complex Occupational Identities over time, but that occupational identity development is neither necessarily linear nor universal.

Effects of Occupational Identity Development

We next asked whether occupational identity development is related to well-being at ages nineteen and twenty-one. As we noted earlier, identity theory suggests that having an integrated and clear occupational identity should be comforting as adolescents are faced with making critical educational decisions. To quote Erikson, "In general, it is primarily the inability to settle on an occupational identity which disturbs young people" (Erikson, 1959, pg. 2). Other literature suggests a similar prediction. For example, Linville (1987) demonstrated that self-complexity moderates the adverse impact of stress on depression. Similarly, Campbell, Assanand, and Di Paula (2003) demonstrated that having a clear and internally consistent self-concept correlates with high levels of psychological well-being and low levels of anxiety and depression.

First, we conducted analyses of variance (ANOVAs) to relate the occupational categories from each wave to four measures of well-being (anger, depression, self-esteem, and resilience) at concurrent and subsequent waves. Anger was assessed with three items asking how often in the last month the participant had felt so angry they wanted to smash something or hurt someone and how often in the last month they had felt they couldn't control their temper. Depression was assessed with five items asking how often in the past two weeks the individual had felt different

indicators of depression. Self-esteem was measured with a modified version of Harter's Self-Worth Scale (1985) reflecting self-acceptance. Resilience was measured with four items that asked how often in the last month the person felt different forms of resilience (like bouncing back after a mistake). All ANOVAs were significant. Subsequent simple effects yielded a consistent pattern with those individuals in the three most complex categories (Integrated, Supported, and Clarified), showing better mental health both concurrently and subsequently than those individuals in the less complex and more conflicted categories. Figures 8.2 and 8.3 illustrate the significant comparisons at ages nineteen and twenty-one.

Figure 8.2. Self-Structure Predictions at Age Nineteen

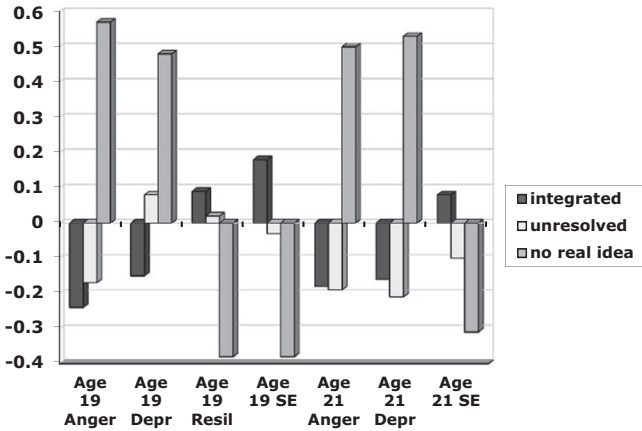
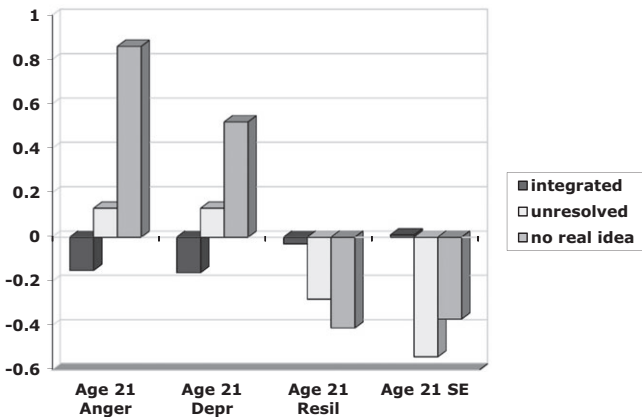


Figure 8.3. Self-Structure Predictions at Age Twenty-One



At both ages, the Integrated youth (those with the most complex occupational identities) reported much higher self-esteem and resilience and much lower anger and depression than the youth in either the Unresolved or No Real Idea categories. At both ages, the youth in the No Real Idea category looked particularly at risk both concurrently and at the later age.

We next used hierarchical regressions to explore these relationships in more detail, focusing on the prediction of anger and depression at ages nineteen and twenty-one. We included measures of gender, ethnicity, and socioeconomic status (SES) to control for group differences in aggression and anger and occupational identity at age twenty-one. The variable of interest, Occupational Identity, was modeled with four dummy-coded predictors; the least developed category (No Real Idea) was the comparison category. (Since there were very few participants [no more than 10] in the Conflicting category during late adolescence and early adulthood, we excluded these participants from analyses.)

All regression analyses also included prior measures of mental health. We ran two sets of regressions: one using age nineteen Occupational Identity and one using age twenty-one Occupational Identity. Thus, when regressing anger at age twenty-one on Occupational Identities at age nineteen, we also included anger measured at age seventeen, and when regressing anger at age twenty-one on Occupational Identities at age twenty-one, we included anger measured at age nineteen. Likewise, regressions of depression at age twenty-one included measures of prior depression. Findings are presented in Tables 8.1 and 8.2.

As expected, categories of Occupational Identities at ages nineteen and twenty-one predicted anger at age twenty-one, controlling for prior anger and all of the demographic variables. Nineteen year olds in the Integrated, Supported, and Unresolved categories were significantly less angry than those in the No Real Idea category. By age twenty-one, youth in all modeled Occupational Identity categories were less angry than the No Real Idea category.

As expected, both prior mental health and our sociodemographic characteristics predicted depression at ages nineteen and twenty-one. Most importantly for this chapter, depression at age twenty-one was predicted by Occupational Identities at ages nineteen and twenty-one. All categories of Occupational Identity except the Supported category were less depressed than those who were in the No Real Idea category at age nineteen. Similarly, at age twenty-one, members of all Occupational Identity categories except Clarified were less depressed than members of the No Real Idea category.

In summary, youth who were in the Integrated category at either age nineteen or twenty-one fared better than youth in the No Real Idea Occupational Identity group in terms of their mental health in late adolescence. As others have demonstrated, individuals who prepare for transitions before they begin tend to have more successful outcomes in these

Table 8.1. Summary of Hierarchical Regression Analyses Predicting Anger at Ages Nineteen and Twenty-One

	Age 19 (N = 492)				Age 21 (N = 445)			
	<i>b</i>	<i>SE</i>	β	ΔR^2	<i>b</i>	<i>SE</i>	β	ΔR^2
Gender	-0.17	0.08	-0.09*		-0.26	0.09	-0.14**	
African American	0.14	0.09	0.08		0.07	0.09	0.04	
Other ethnicity	0.18	0.13	0.07		0.21	0.14	0.07	
SES	-0.06	0.05	-0.05		-0.08	0.05	-0.07	
				0.02				0.03*
Prior anger ^a	0.29	0.04	0.35***		0.39	0.04	0.41***	
				0.12***				0.16***
Integrated	-0.41	0.13	-0.23**		-0.61	0.14	-0.33***	
Supported	-0.29	0.13	-0.16*		-0.46	0.14	-0.26***	
Clarified	-0.24	0.17	-0.07		-0.37	0.18	-0.11*	
Unresolved	-0.33	0.15	-0.13*		-0.42	0.20	-0.11*	
				0.02*				0.03***

Note: Comparison group is the least developed Occupational Identity (No Real Idea). SES = Socio-economic status.

^aAnger reported at the wave prior to the wave of Occupational Identity measures (age seventeen for age nineteen regression, and age nineteen for age twenty-one regression).

* $p < .05$. ** $p < .01$. *** $p < .001$.

transitions, such as adjusting to college, maintaining mental health and well-being, and meeting their goals (Nurmi, 2004). Thus, in this sample, the benefits of having a clarified and coherent occupational goal begin to emerge in the eleventh grade, as adolescents are preparing for their post-high school pursuits.

At twenty-one, members of the Supported category also showed consistently better mental health than members of the No Real Idea group. In contrast, the pattern of associations for members of the Clarified category was less consistent and less strong than the results for the Integrated and the Supported youth. Apparently in contrast to those in the Integrated and Supported categories having only a strong occupational aspiration—without a plan to reach it or a clear sense of what the career would be like—was no better than having a weak occupational identity.

The findings regarding members of the Unresolved category were somewhat surprising. As a group, these participants endorsed weak occupational aspirations that were only vaguely related to other aspects of their lives, but they were doing things that could help them gain more insight into their future careers. Although there appeared to be little difference between Unresolved youth and No Real Idea youth in terms of the development of their occupational identities, they reported significantly different levels of mental health during young adulthood. It is possible that the

Table 8.2. Summary of Hierarchical Regression Analyses Predicting Depression at Ages Nineteen and Twenty-One

	Age 19				Age 21			
	<i>b</i>	<i>SE</i>	β	ΔR^2	<i>b</i>	<i>SE</i>	β	ΔR^2
Gender	0.06	0.05	0.07		0.08	0.04	0.09	
African American	-0.03	0.05	-0.04		-0.04	0.04	-0.05	
Other ethnicity	0.06	0.07	0.05		0.05	0.07	0.04	
SES	-0.06	0.03	-0.12*		-0.06	0.03	-0.11*	
Prior depression ^a	0.49	0.05	0.45***	0.02	0.65	0.04	0.59***	0.03*
Integrated	-0.22	0.06	-0.26***	0.20***	-0.28	0.06	-0.33***	0.34***
Supported	-0.12	0.06	-0.14		-0.25	0.06	-0.30***	
Clarified	-0.20	0.09	-0.13*		-0.08	0.07	-0.06	
Unresolved	-0.22	0.08	-0.18**	0.03**	-0.21	0.08	-0.12*	0.04***

Note: Comparison group is the least developed Occupational Identity (No Real Idea). SES = Socioeconomic status.

^aDepression reported at the wave prior to the wave of Occupational Identity measures (age seventeen for age nineteen regression, and age nineteen for age twenty-one regression).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Unresolved category comprised youth who were in a state of elongated identity exploration and flexible roles or emerging adulthood (Arnett, 2000). They were able to extend their identity exploration, at least in the occupational domain, without negative consequences to their mental health. By actively engaging in career-related pursuits, Unresolved youth appeared to be able to postpone career decisions and commitments without sacrificing their careers or their well-being. In the future, we plan to examine whether such youth continue to outperform their peers who are not actively exploring (i.e., No Real Idea youth) into their mid- to late twenties. For optimal functioning in middle adulthood, it is likely that extended exploration of one's occupational identity must come to an end at some point, even in societies that permit flexibility for young adults.

Summary and Conclusions

Our goal in this chapter was to present a new methodology for assessing the coherence of adolescents' occupational identities. Because the notion of occupational identities is complex in and of itself, we wanted to design an open-ended method that could yield rich qualitative data but

be administered within a traditional survey format. We believe we were successful. Our series of short, open format questions yielded data that could easily be coded in terms of the complexity and the content of our adolescents' occupational identity formation.

We also had two substantive empirical goals: to investigate the ontogeny of adolescents' occupational identity formation and to determine whether having more complex and well-articulated occupational identities is linked to better mental health during the transition to adulthood. We were successful at both of these goals as well. At the population level, more mature occupational identities become more prevalent across the adolescent period of development. Furthermore, at the individual level, far more adolescents show the expected progression of occupational identity complexity than do not. But as is true in many studies of identity development, a sizeable number of our adolescents showed a nonlinear pattern of development and still had quite undeveloped occupational identities at ages nineteen and twenty-one (Nurmi, 2004). Finally, as we predicted, adolescents with the most mature occupational identities also exhibited the best mental health, supporting Erikson's concern that being unable to form a mature occupational identity is a major problem for late adolescents.

References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480.
- Campbell, J. D., Assanand, S., & Di Paula, A., (2003). The structure of the self-concept and its relation to psychological adjustment. *Journal of Personality*, 71(1), 115–140.
- Chiu, L.-H. (1990). The relationship of career goal and self-esteem among adolescents. *Adolescence*, 25, 593–597.
- Eccles, J. S. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, 44(2), 78–89.
- Eccles, J. S., Early, D., Frasier, K., Belansky, E., & McCarthy, K. (1997). The relation of connection, regulation, and support for autonomy in the context of family, school, and peer group to successful adolescent development. *Journal of Adolescent Research*, 12, 263–286.
- Erikson, E. H. (1994 [1959]). *Identity and the life cycle*. New York: W. H. Norton.
- Harter, S. (1985). Processes underlying the construction, maintenance, and enhancement of self-concept in children. In J. Suls & A. Greenwald (Eds.), *Psychological perspectives on the self*. Vol. 3 (pp. 137-181). Hillsdale, NJ: Erlbaum.
- Jepsen, D. A., & Dickson, G. L. (2003). Continuity in life-span career development: Career exploration as a precursor to career establishment. *The Career Development Quarterly*, 51(3), 217–233.
- Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology*, 52(4), 663–676.
- Marcia, J. E. (1993). The ego identity status approach to ego identity. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky (Eds.), *Ego identity: A handbook for psychosocial research* (pp. 3–21). New York: Springer-Verlag.
- Markus, H. R., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology*, 38, 299–337.

- Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence*, 25(5), 569–598.
- Nurmi, J.-E., Salmela-Aro, K., & Koivisto, P. (2002). Goal importance and related achievement beliefs and emotions during the transition from vocational school to work: Antecedents and consequences. *Journal of Vocational Behavior*, 60, 241–261.
- Nurmi, J.-E. (2004). Socialization and self-development: Channeling, selection, adjustment and reflection. In R. M. Learner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (Vol. 2, pp. 85–124). Hoboken, NJ: Wiley.
- Roisman, G. I., Masten, A. S., Coatsworth, D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development*, 75(1), 123–133.
- Sameroff, A., Peck, S. C., & Eccles, J. S. (2004). Changing ecological determinants of conduct problems from early adolescence to early adulthood. *Development and Psychopathology*, 16(4), 873–896.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African-Americans adolescents' school and socio-emotional adjustment. *Journal of Personality*, 71(6), 1197–1232.

OKSANA MALANCHUK received her Ph.D. from the University of Michigan in social psychology. Her research focuses on the study of the formation and outcomes of various social identities, including gender, racial/ethnic, political, and occupational identity.

EMILY E. MESSERSMITH is a postdoctoral research associate at the Center for Developmental Science at the University of North Carolina, Chapel Hill.

JACQUELYNNE S. ECCLES is the Wilbert McKeachie Collegiate Professor of Psychology, Women's Studies and Education, and a research scientist at the Institute for Social Research at the University of Michigan. She was past president of the Society for Research on Adolescence and is currently editor of the *Journal of Research on Adolescence*. Her research interests focus on the longitudinal study of the development and socialization of psychological influences on motivation, activity choice, and involvement.