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# Reconceptualizing Agency within the Life Course: The Power of Looking Ahead<sup>1</sup>

Steven Hitlin and University of Iowa

Monica Kirkpatrick Johnson

Washington State University

### **Abstract**

Empirical treatments of agency have not caught up with theoretical explication; empirical projects almost always focus on concurrent beliefs about one's ability to act successfully without sufficiently attending to temporality. We suggest that understanding the modern life course necessitates a multidimensional understanding of subjective agency involving a) perceived capacities and b) perceived life-chances, or expectations about what life holds in store. We also suggest that a proper understanding of agency's potential power within a life course necessitates moving beyond the domain-specific expectations more typical of past sociological work. Utilizing the Youth Development Study (YDS), we employ a scale of general life expectations in adolescence to explore the potential influence of a general sense of optimistic life-expectations in addition to the traditional agency-as-efficacy approach on a range of important outcomes.

We can't be content with knowing what kind of people we are; it matters, too, what kind of people we hope to be. – (Appiah 2008 p. 72)

For a number of years, the core sociological concern of linking macro-structures to individual actions has taken the form of a particular theoretical debate over the relative merits of agency vs. structure, a debate with important ramifications for understanding the nature of social stratification and life course pathways. A general consensus coheres around the idea that individual action is circumscribed by structural constraints at the same time that structural forces fundamentally constitute the selves of individual actors (e.g., Archer 2003; Bourdieu 1984; Giddens 1984; Sewell 1992). The most prominent empirical and theoretical treatments on this issue have occurred in the pages of the *American Journal of Sociology*, with vital concepts and measures contributed by Clausen (1991), Sewell (1992), Pickering (1993), Emirbayer and Goodwin (1994), Emirbayer and Mische (1998), Mirowsky and Ross (2007), Frye (2012) and Burt (2012). These treatments attempt to balance and specify the

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<sup>&</sup>lt;sup>2</sup>We gloss over differences between these approaches, focusing on a general consensus that social actors exhibit agency and operate within social structures that are, as Giddens (1984) popularly noted, constraining and enabling.

reciprocal influence of social structure and the individual to conceptualize the relative importance of human agency for explaining stratification and life course outcomes, "agency" being perhaps the sociological construct most requiring specification (Campbell 2009).

Empirical treatments of agency have not caught up with theoretical explication. While theorists highlight the multidimensional aspects of agency, including a vital understanding of its temporally situated aspects (Emirbayer and Mische 1998; Frye 2012; Hitlin and Elder 2007a), empirical projects almost always focus on concurrent beliefs about one's ability to act successfully (Gecas 2003). Notably, the psychological framing of agency that motivates much empirical work, Bandura's (1992) consideration of self-efficacy, highlights two dimensions: a) confidence in behavioral performance and b) the expectation that actions taken will be successful (Seligman et al., 2013). This latter dimension is omitted by the bulk of empirical research on agency, though the study of expectations has a long tradition in sociology. Even the study of expectations, however, typically is restricted to specific domains: educational expectations predict achievement outcomes (e.g., Alexander et al. 1975), fertility expectations predict parenthood (Schoen et al. 1999), and so on.

We suggest that understanding the modern life course necessitates a multi-dimensional understanding of individual subjective senses of agency involving a) perceived capacities and b) perceived life-chances. First, a sense of mastery/efficacy is vital, as represented in a range of previous sociological studies (see Hitlin and Long 2009; Ross and Mirowsky 2013). Secondly, however, we draw on the notion of expectations once central to stratification research (see Andrew and Hauser 2011), but suggest that a proper understanding of agency's potential power within the life course necessitates moving beyond domain-specific expectations; utilizing a scale of general life expectations in adolescence, we explore the potential influence of a general sense of optimism about one's future on a range of important outcomes. Outside of life course studies, many stratification models refer to 'selection effects' to gloss over individual variation motivating differences in life outcomes; we demonstrate that such selection effects, in fact, involve agentic social psychological processes (Elder, Shanahan, and Jennings 2015). The agency-as-efficacy tradition has dealt only minimally with longitudinal processes, while the stratification tradition has focused on longitudinal processes within isolated domains, largely without an explicit accordant understanding of agency.

This paper demonstrates the importance of including future expectations into both theoretical and empirical treatments of agency. Using the Youth Development Study (YDS), we introduce measures of generalized life expectations, a core concern of what psychologists term future orientation (Tromsdorff 1983; Yowell 2000), as well as those for the traditional notion of agency-as-efficacy, into models predicting attainment, health, and well-being outcomes across the transition to adulthood. Specifically, we consider expectations and efficacy side-by-side in a traditional variable-centered approach, and then consider how these two dimensions of agency materialize in combination within a population and how the resulting combinations affect the outcomes in a person-centered approach. We offer admittedly little attention to the unique literatures of each of these life

course outcomes given that our goal is to explicate and test a two dimensional conception of agency across a broad set of outcomes.

# Agency as a Core Sociological Concept

The relative importance of agency vs. structure has been extensively debated (see prominent treatments by Archer 2000; Campbell 2009; Emirbayer and Mische 1998; Giddens 1984; Sewell 1992), with some scholars (e.g.,Fuchs 2001; Loyal and Barnes 2001; Meyer and Jepperson 2000) suggesting agency is an illusion, while others (e.g., Alexander 1993) argue that Western conceptions of agency overly focus on positive, even heroic, notions of the individual, thus obscuring distinctly anti-social agentic action. These discussions occur largely divorced from social psychological work on the topic of individual action within social structures, leading to a curious disjuncture between theory and empirical research (Hitlin and Elder 2007a). Though much attention is paid to the concept of agency, social science knowledge is still lacking (Laub and Sampson 2005).

The common theoretical refrain (e.g., Cockerham 2005; Hays 1994; Sewell 1992) is for sociologists to address the intertwined nature of social structure and agency. Typically, discussions of agency focus on non-routine actions stemming from, or attempting to address problematic situations, such as Sewell's (1992, p. 18) definition of agency as "entailing the capacity to transpose and extend schemas to new contexts." Emirbayer and Mische (1998) similarly suggest that agency involves the interplay of habit, judgment, and imagination as actors react to changing social circumstances. Cockerham (2005) posits agency is present when an actor might have acted otherwise, reflecting an overriding of dispositional habits. Agency is thus commonly treated as evidenced in the presence of non-routine actions or during life course transitions. Individuals are increasingly responsible for their life courses within Western societies, partly as a result of dissolving class networks (Honneth 2004). This suggests the importance of self-socialization (Heinz 2003); the sociological issue involves balancing the structured pathways and constraints actors face with their capacity for self-initiated action.

Agency is often conflated with other concepts like motivation, psychological traits, chance, self-direction, planfulness, resilience or rational choice, and is sometimes simply considered part of statistical residual variation (Laub and Sampson 2005). We argue that individuals with a sense of personal agency demonstrate many of these capacities, but agency is not strictly a motivational drive or an inborn psychological trait (Franzese 2013). It is more like, as Mirowsky and Ross (2007) suggest, a resource that individuals develop and that varies across social stratum, personal experiences, and the life course. Although agency can be thought of as a *universal capacity*, most sociological work treats it as a *variable* that individuals differentially possess (Marshall 2005).

Agency implicates both actual capacities/resources and individuals' perceptions of those capacities/resources (Hitlin and Long 2009).<sup>4</sup> People vary in their individual capacities (e.g., Clausen 1991) and their structural advantages that allow for more agentic options (as much

<sup>&</sup>lt;sup>3</sup>A general consensus is not a complete one. Archer (2006), and Emirbayer and Mische (1998), for example suggest there are advantages to a theoretical de-coupling of the concepts.

of the literature in stratification suggests). The modern life course offers more structural potential for individuals to move up or down various socioeconomic ladders (Heinz 2003), a process influenced both by structural advantage and psychological development. This does not reduce agency to being an idiosyncratic influence on stratification; structural position often shapes agentic choices that reproduce current structural relations (e.g., Kohn and Schooler 1983). The perception of agentic capacity differs from the more concrete resources to influence one's environment (e.g., Sewell 1992), and from the skills that one develops (e.g., delay of gratification) found in Clausen's (1991; 1993) treatment of agency as 'planful competence' (see also Shanahan, Elder and Miech 1997; Shanahan, Hofer and Miech 2003).

Issues of agency are becoming even more salient as the current wave of theorizing about social actors, building off the work of Bourdieu (1977; 1984; 1990), focuses on the embodied, unconscious ways that social structural position becomes internalized to shape individual behavior. Interestingly enough, while different versions of this work agree on the limits of the Homo Economicus model of the social actor, they largely conceive of agency as being another version of structural, patterned forces that get deeply internalized within pre-reflective aspects of the social actor; thus, even individual volition, in this view, becomes another instance of structure's power, minimizing the potential for actors to 'supersede' meanings internalized through structural position. Bourdieu's work develops within a structuralist framework that suggests an individual's options, tastes, and preferences are shaped within relevant fields that highlight and preclude various potential options (Joas and Knobl 2009). Social location, primarily class for Bourdieu, circumscribes what is culturally possible for members of a group (Cockerham 2005), and even the individualized 'habitus' forms a socially-shaped version of aggregate tendencies that become pre-reflective orientations toward action (Adams 2006). While the fluid nature of habitus is intended to allow some room for individual volition shaped within the experience of holding positions within a larger social structure, Bourdieu focuses more commonly on its aggregate, shared aspects and less on variation across individuals within shared positions. For Bourdieu, habitus represents the internalization of an unarticulated internal logic that lies largely outside the realm of conscious reflection, and only rarely are people able to reflect upon their habitus to take conscious control in its shaping (Elder-Vass 2007).

If Bourdieu exemplifies one influential tradition that places less emphasis on an agentic model of social action as constituted within social forces, then recent psychological (Evans 2008) and sociological (Hitlin 2008; Massey 2002) treatments of "dual-process cognition" offer a step toward a model of the actor that allows both non-conscious and deliberative aspects of personhood, offering empirical support for notions popularized by Giddens (1984). This model has been importantly introduced as a partial corrective to the habitus by Vaisey (2008; 2009), who demonstrates that social actors are motivated by recognizable frameworks that lie outside of conscious articulation but, nevertheless, can be identified with the correct survey prompts. As such, a psychologically informed model of the social actor leaves room for socially shaped, internalized motivations that are not reducible to simplified versions of rational, aware actors.

<sup>&</sup>lt;sup>4</sup>Campbell (2009) offers up a related distinction, between a) agency as an actor's ability to initiate a program of action (Type 1 agency) and b) an actor's ability to behave independently of structural influences (Type 2 agency).

We cannot do justice to these traditions, here, but simply point out that both the structural (e.g., Bourdieu) and dual-process (e.g., Vaisey) models of action ultimately place individual volition deeply within the socialized actor, anchored in different forms of deeply internalized patterns of appraisal (habitus) or moral schemas (automatic processing). We build on this work with a fuller social psychological understanding of what it means to have perceptions and/or automatic intuitions. While Bourdieu would suggest that perceptions represent internalized structure, his model suggests that they are only minimally affected by feedback across the life course; our habitus is rather deeply embedded and, when in situations that do not 'fit' with our class-based notion of propriety or expectation, we will feel out of place. Vaisey details little about how these cultural motivational notions get internalized, but again the automatic level of processing largely operates outside of conscious reflection, and while change at this level can happen, it is rare and a long-developing process (e.g., Haidt 2001).

Our model stems from more social psychologically oriented models that assume greater reflexivity on the part of the social actor with respect to developing, maintaining, and potentially altering their perceptions of their current and future capacities. We focus on the extent to which socially patterned perceptions of agency contribute to explaining variation with respect to sociological outcomes of interest. Some people structurally have more agentic opportunities based on power and resource accumulation, yet as Bourdieu (1991) highlights, socially produced beliefs (like incorrectly positive illusions about one's personal futures) can represent misrecognition of objective economic disparities that reproduce existing power structures. We focus on the extent that holding such perceptions is itself a social force (e.g., Frye 2012). The subjective aspect of agency, we argue, allows the development of a model of social actors that can reflectively influence their lives, rounding out influential theoretical models that minimize the place of conscious reflection within understanding social action. Internal beliefs are important – not total—forces underlying variation in observed outcomes (e.g., Vaisey 2010). Some individuals are more likely to persist when confronted with obstacles (Duckworth et al. 2007), and this perseverance includes the subjective sense an individual develops of their prospective life chances omitted from empirical treatments of agency, as we discuss below.

With this, we offer the skeleton of a model of the social actor that moves closer to a view of a deliberative, self-aware social actor embedded within an ongoing life project (Archer 2003; McAdams 2001), yet an actor motivated by the accumulated sense of efficacy and optimism (or not) that has been developed and internalized in reciprocal interaction with objective social structures and other social actors. 'Agency', conceived of as this set of internalized, partly-pre-reflective beliefs, therefore provides a tool for building off of this previous work, yet offers greater possibility for individual volition within temporal feedback loops that can lead to changes in behavior (e.g., Emirbayer and Mische 1998) that are more puzzling within these other influential frameworks of cultural internalization. This sense of agentic possibility has important life course consequences as 1) a mechanism for reproducing inequality, 2) the accumulation of success markers (wealth, prestige), and 3) the ability to 'damp down' impulses that contribute to suboptimal long-term outcomes (e.g., deviant activities or maladaptive health behaviors).

# Agency as an Empirical Construct: The Centrality of Mastery and Efficacy Beliefs

Almost all of the empirical work on agency occurs within social psychology and life course studies, the latter of which brought greater incorporation of temporal issues to social psychology (Elder 1994). Social psychologists rarely expressly study "agency", instead assuming an element of agentic capacity on the part of their subjects. For sociologically-oriented social psychologists, it is a truism that social structures probabilistically influence individuals, but do not fully determine action. Scholars working in the life course tradition have been more explicit in their study of agency, as human agency is a core principle of the perspective (Elder 1998), but with inconsistent application across the field (Marshall 2005).

The social structure and personality (SSP) tradition in social psychology has become part of the "taken-for-granted" and forms a backbone for a variety of sociological subfields. Much empirical work has migrated away from studying general social psychological processes toward applying these insights to specialized subfields such as health (e.g., Cockerham 2005; Mirowski and Ross 2003), education (e.g.; Mirowski and Ross 2007) and deviance (e.g., Sampson and Laub 1993; Laub and Sampson 2005). McLeod and Lively (2003) suggest that the determinative aspects of structure on individual functioning common to classic SSP scholarship are "out of sync" with more recent, dynamic conceptions of human agents, and suggest two broad approaches as found in the SSP literature. The first focuses on individual selection effects (e.g., Kiecolt and Mabry 2000; Shanahan 2000), the ways in which individuals select into various situations and, by implication, social structures. This highlights the nonrandom selection of individuals into various social conditions, contributing to, for example, patterned effects of socioeconomic status on mental health. This approach deals with agency only in the very limited manner of attributing individual psychological characteristics to some vague notion of an acting individual, even one reproducing social structures.

The second approach, in contrast, takes a life course approach to agency, conceptualizing the person as propelled by individual propensities and behaviors: "individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstance" (Elder, Johnson and Crosnoe 2003 p. 11). Agency, thus, involves historically embedded individuals contributing to their own life outcomes based on behaviors, dispositions, preferences and choices. Life course studies add temporality and historical contingency to the more deterministic social structure and personality tradition (Elder and Johnson 2002; Kohn 1989). This notion of agency is more often asserted than engaged empirically; many studies fail to take seriously actors' proactive capacities (George 1996).

Within these largely life course studies, actual empirical treatments of agency have varied, but the most common are the related concepts of self-efficacy (Gecas 2003), mastery (Pearlin et al. 1981), and personal control (Mirowsky and Ross 2007). Self-efficacy is conceptualized as the perception of one's ability to be a causal influence in one's environment, making the classic 'locus of control' (Rotter 1966) literature more life course friendly. Self-efficacy involves cognitive representations that shape beliefs about personal

capabilities (Maddux and Gosselin 2003). Bandura (1992) suggests that such self-appraisals underlie successful functioning, though opportunities to develop this sense vary by location in the social structure (e.g., Gecas and Schwalbe 1983). Efficacy plays a key role in self-regulation and perseverance in the face of obstacles; people with higher such beliefs are more likely to visualize success and less likely to dwell on what might go wrong in a particular domain (Bandura 1992).

Personal control and mastery apply a similar notion of personal belief in potential causality in one's environment (see Haidt and Rodin 1999 for a comparison of these constructs). These two constructs developed within sociology and are employed more commonly than self-efficacy in the social structure and personality (SSP) and life course traditions (see McLeod and Lively 2003, Elder et al. 2003 for overviews). Mastery refers to the belief that life chances are under one's own control rather than being predetermined or determined by external sources (Pearlin and Schooler 1978), while personal control offers what Mirowsky and Ross (2003) suggest is a methodological improvement, <sup>6</sup> also referring to a belief that individuals can shape and direct their own lives. These closely related constructs have been fruitful for linking individual agency to domains like health and education (e.g., Caplan and Schooler 2007; Pearlin et al., 1981; Thoits 2003), though they represent a general force beyond specific domains (Ross and Mirowsky 2013). Such a belief is beneficial to individual functioning (Berrenberg 1987), as a greater sense of control helps an individual handle adversity and address difficult life situations (Conger et al. 2009; Wheaton 1980), and is seen as fundamental for adaptive human development (Schulz, Wrosch and Heckhausen 2003). Personal control can be eroded, however, if an individual repeatedly encounters difficult life events (Wolinsky et al. 2003); it is a learned, generalized expectation (Mirowsky and Ross 2003) reinforced by the accumulated feedback of life events.

Reviews (e.g., Gecas 2003) tend to collapse all three constructs when drawing conclusions about structural influences and social outcomes from this general set of self-beliefs. We term this general concept mastery, based on available measures and its long-tradition of successful usage. Conceptually, however, one might replace our discussion and labeling of one core aspect of agency with personal control or efficacy. These related measures capture the notion that people develop an understanding of the utility of their efforts, and those with greater levels of efficacy feel more competent and effective. The standard empirical measure of mastery offers the most conservative test for our ideas, as one of the items does ask about one's ability to direct their future, related to but not fully encompassing of the second dimension of agency we introduce, below. The remaining items, as well as those contained

<sup>&</sup>lt;sup>5</sup>These varied treatments include agency as: an accumulation of social roles (Thoits 2003), as represented in the formulation of narratives (Evans 2002); and as planful competence (Clausen 1991; 1993). While the latter may appear similar to our conceptualization, it is distinct. Clausen's measure involves three dimensions (intellectual investment, dependability, and self-confidence) representing an individual's capacity for making and following long-term plans (Shanahan et al., 2003). Planful adolescents make more successful long-term life choices (Clausen 1991, 1993; Shanahan et al., 1997, 2003). Our model focuses more on the self-reflectively developed subjective sense of agency than on these particular skills.

<sup>&</sup>lt;sup>6</sup>Mirowsky and Ross (2007) present the personal control measure as two subscales – focused on the respondent's sense of control over good *and* bad outcomes – to improve on the traditional measures of mastery and even older scales focused on locus of control. The personal control scale is intended to combat agreement biases found in older adults and those with less education.

<sup>&</sup>lt;sup>7</sup>Bandura (1986) argues control and self-efficacy deal with different aspects; control beliefs deal with outcomes, efficacy-beliefs deal with actions. Others (Ross and Mirowsky 2003) suggest this is an academic distinction.

within the personal control and self-efficacy scales, tap perceived capacities to influence one's environment, with no reference to long-term life outcomes.

Treatments of efficacy/mastery/sense of control in early life demonstrate its ability to predict later life outcomes. Economic self-efficacy, as a domain-specific measure of efficacy/mastery, is a strong predictor of educational attainment (Grabowski, Call and Mortimer 2001) and fosters socioeconomic achievement across the transition to adulthood (Lee and Mortimer 2009). Perhaps the most well-established sociological notion of agency as influencing the life course comes from its development – measured as personal control -- through obtaining higher education (Mirowsky and Ross 2003; Mirowsky and Ross 2007). One of the core effects of education is increasing this sense of control/agency that, in turn, contributes to a range of optimal life outcomes. Recent work (Pearlin et al., 2007) suggests that mastery beliefs later in life stem from the belief that one has managed life effectively to this point, thus starting to incorporate temporality (in the past) into its conceptualization.

# Agency's Missing Empirical Dimension: Perceptions of the Future

Belief about one's agentic capacity necessitates an understanding of temporality; individuals conceive themselves as ongoing agents with life projects (Archer 2003; Taylor 1989; McAdams 2013). This conception of self is motivational; Mische (2009) suggests that it shapes the interpretations of both internal sensations and external feedback, thus steering action. A person with strong control beliefs, as well as a strong sense that such efforts will pay off in the future, will tend to persevere in the face of hardships (Trommsdorff 1994), or perhaps initiate non-traditional but advantageous options that shift their life trajectories. Bandura (2001) highlights intentionality and forethought as two theoretically core aspects of human agency, yet they are rarely incorporated into sociological treatments (but see Hitlin and Elder, 2007b). Temporality is becoming increasingly important in sociological theorizing more generally, however (Mische 2009; Tavory and Eliasoph 2013). Individuals possess a sense of their ability to act successfully across the life course (Lutfey and Mortimer 2003) and form measurable intentions for future action (Howard 1994).

We build on a conception of the temporally-extended agentic actor (Emirbayer and Mische 1998; Pickering 1993). An actor may not be behaviorally consistent across various domains (Mischel 2004), but she operates with life-projects in mind (Archer 2006), trying to build a narratively coherent self-view that influences current action (e.g., McAdams 2001). Evidence suggests that prospection is a vital organizing principle in human cognition (Seligman et al. 2013). This prospective, narrative vision of the self is a social force (Gecas 1994) and represents the capacity of the individual actor to reflect and occasionally attempt to alter one's position within wider social structures. Proulx and Chandler (2009) term this 'centralized agency', an aspect of selfhood that children develop to unify their conception of self across domains. 'Future orientation' (Lewin 1948; Yowell 2000), encompassing perceptions of the future that include expectations, aspirations and goals, capture how adolescents conceptualize this temporal aspect of their lives.<sup>8</sup>

<sup>&</sup>lt;sup>8</sup>Future orientation is an umbrella encompassing hopes, fears, wishes, anticipations, strategies, goal-setting and a future vs. present focus. Expectations about the future are a key component and most applicable to stratification. Future work might expand to additional aspects concerned with appraising one's future.

We empirically introduce a measure of 'life course expectations', the anticipation of life outcomes, as a second dimension of agency capturing the cognitive and emotional core of a future orientation, a notion underlying prominent theoretical treatments but thus far absent from its empirical development. This forward-looking set of life expectations reflects the person's knowledge of structural constraints and opportunities as well as elements of optimism (Frye 2012; Peterson 2000), positive or negative orientations toward their chances of achieving their goals in life, adding an emotional valence to the theoretical discussion of agency's temporal aspects, discussed previously. These orientations are motivating and serve as buffers from in-the-moment setbacks (Oyserman et al. 2004).

Importantly, most sociological research on expectations is domain-specific (and rarely the focus of efforts to explicate agency). The Wisconsin model of status attainment (Alexander et al., 1975; Sewell, Haller and Portes 1969), for example, focused primarily on achievement expectations, but has amassed a great deal of evidence that individual educational expectations and occupational aspirations are an important factor in predicting attainment outcomes. Once central to stratification research, the focus on expectations diminished in large part due to a shift of focus toward the importance of resources and structural position for explaining life outcomes. Expectations have enjoyed somewhat of a resurgence recently, with renewed attention to their formation, durability, and impact on attainment (Andrew and Hauser 2011; Bozick et al. 2010; Morgan 2005). In contrast to this and other domain-specific work, however, we present evidence that people form a generalized set of expectations across important life domains that, at key junctures of the life course, influences a range of life course trajectories and outcomes.

Actors make appraisals – perhaps unarticulated – of their structurally-available possibilities that shape their lives. Consistent with this, expectations reflect facts about personal capacities and the conditions in which individuals have been brought up (Hallerod 2011; Reynolds and Johnson 2011). Actors also revise their appraisals across the life course, demonstrating "adaptive resilience" when expectations may not work out (Reynolds and Baird 2010; Mortimer et al. 2002). Yet these are not objective evaluations; people often have unrealistically positive visions of themselves and their futures (Taylor and Brown 1988). These "positive illusions" contribute to mental health (Taylor and Brown 1994), relational well-being (Andersson 2012a) and increased social networks (Andersson 2012b). Unwarranted optimism might be detrimental, however, if it leaves people ill-equipped for setbacks (Sweeny, Carroll and Shepperd 2006), and, as mentioned, might represent symbolically potent avenues through which powerful forces hide that power (Bourdieu 1991; see also Young 2004). Yet a person with high expectations feels it worthwhile to engage in certain behaviors that contribute to positive developmental trajectories (Schmid et al. 2011). Such feelings are themselves resources that can be utilized in the face of difficulties (Andersson 2012a; Fredrickson and Joiner 2002), and contribute to mental and physical well-being (Carver, Scheier and Segerstrom 2010) and labor market success

<sup>&</sup>lt;sup>9</sup>As an anonymous reviewer points out, optimism might be expressed not only in life expectations, but in the relative gap between expectations and aspirations (i.e. higher optimism lies in holding expectations that meet aspirations). In practice, because these expectations are assessed on general outcomes that are widely held as desirable, they may already capture this relative difference. Nevertheless, independent measures of life aspirations, were they available, could assess this possibility.

(Kaniel, Massey and Robinson 2010; Vuolo, Staff and Mortimer 2012). <sup>10</sup> Psychological research has demonstrated the substantive outcomes of higher levels of such expectation, including sustained social coping (Scheier et al. 1989), improved social relationships (Assad, Donnellan and Conger 2007), life satisfaction (Bailey et al. 2007), larger social networks (Andersson 2012b) and lower mortality following cardiac events (Brummett et al. 2005).

As noted above, anticipations of the future are not emotionally neutral; people feel hopeful, or not, about future possibilities. Accordingly, we suggest that people with high expectations are more optimistic. Rudd and Evans (1998) are the rare sociologists who even refer to optimism in their discussion of the lived experience of agency (see also Andersson 2012a, 2012b). They report that young people on the verge of the transition to work have relatively high levels of optimism about their chances of success, regardless of class background, even in a depressed labor market. This may reflect the time before adjustment of one's expectations to fit likely outcomes, something that occurs as one ages and becomes more realistic (Johnson 2002; Reynolds and Baird 2010). Nevertheless, for a variety of social (e.g., structural advantages; supportive social interactions) and psychological (e.g., mental disposition) reasons, individuals differ in their optimism about the future (Peterson and Chang 2003). Such expectations, optimistic or not, form an empirically measurable, but unexamined, aspect of agency.

Our consideration of expectations draws on a relatively untapped literature and empirical scale on perceived life chances (Jessor, Donovan and Costa 1996) that, in part, reflects subjective interpretations of cultural and social conditions (Trommsdorff 1983). Consideration of future orientation broadens the empirical understanding of agency within sociology, in line with theoretical understanding. Thus, we examine an individual's self-conscious appraisal of her life-chances, a sense of structurally-influenced opportunities in her life course. This orientation allows us to incorporate a temporal dimension within our empirical measure, informed by Emirbayer and Mische's (1998) and Mische's (2009) focus on the importance of a temporal perspective for conceptualizing agency. Such orientations tap into similar aspects of positivity previously found to influence adaptive life course outcomes (see Mortimer 2012), and overlaps theoretically with the influential psychological notion of 'possible selves' (Markus and Nurius 1986; Markus and Nurius 1987) forming a bridge between reflective self-concept and individual motivation. 11

Control beliefs and beliefs about how one's life will turn out may not always be congruent (Epel, Bandura and Zimbardo 1999; Trommsdorff 1994). We argue that the typical sociological focus on agency-as-self-efficacy (or mastery, or personal control) omits the extent to which people believe *other* factors will influence their ability to achieve positive

<sup>10</sup> Aspirations may also be a resource. Whereas expectations are thought to reflect an awareness of constrained options, aspirations are conceptualized as hopes free of such constraints (Young 2004). Vaisey (2010) finds that both aspirations and expectations predict later school attainment, net of structural controls, though they operate differentially based in part on SES; "although expectations are more important than aspirations on average, aspirations are substantially more important than expectations for predicting the educational continuation of poor youth" (p. 77).
11 A fuller model could build on this notion of possible selves to more completely bridge the literature on agency with social

<sup>&</sup>lt;sup>11</sup>A fuller model could build on this notion of possible selves to more completely bridge the literature on agency with social psychological work on selfhood, the reflective aspects of self-understanding that develop within social circumstances and guide action. For our purposes, we merely point out these links, rather than get bogged down in definitional inconsistencies between notions of 'the self' and agency.

outcomes (Carver et al. 2010). An individual may feel quite efficacious with respect to their ability to study for an exam, for example, but feel that circumstances outside of their control (e.g., perceived teacher animosity, or being in a school with few role models for postscholastic success) make it pointless to work hard (see Young 2004; also Yowell 2000). In such circumstances, a student might not feel like putting forth effort, even if they believe that they have the ability to do well. Or an individual may feel quite efficacious with respect to particular work skills, but believe the future labor market won't afford opportunities for employment using them. Conversely, a low sense of personal control coupled with an extensive belief in a higher power's dedication to one's success might also lead to positive occupational and health outcomes through a confidence in one's religious beliefs and an accordantly lower level of stress or ongoing decisions made in the context of hope. As Weber (1930[1905]) suggests, this belief underlies sets of behaviors equivalent to believing in one's own capacity. Previous iterations of measuring agency would not capture these effects. Given this possibility, the empirical literature is less clear in guiding studies of agency in terms of the multiple dimensions - temporality and mastery belief -- stressed in much of the theoretical work; as such, we begin by examining these two dimensions as discrete constructs, then turn to a person-centered analysis building on the actual distribution of these two constructs within a sample of adolescents followed into adulthood.

# **The Current Study**

Our paper has multiple goals: a) to explore a parsimonious empirical expansion of the notion of agency, making it more relevant for sociological research; b) to assess the utility of a future oriented measure of agency (perceived life chances) by examining whether it predicts sociologically important outcomes, and c) to explore a person-centered model drawing on both measures to see how these dimensions combine in the population and whether unique combinations shape life outcomes. We do this in 3 stages. First, we examine whether optimistic expectations in adolescence predict a range of outcomes in young adulthood, and do so beyond what might be captured by adolescent mastery. The outcomes we selected are intended to be illustrative of the general value of the two-dimensional notion of agency, tapping into key measures across several domains (attainment, health and well-being). In a series of models we assess the impact of adolescent expectations, determine whether it uniquely predicts the outcomes even controlling for mastery, and examine whether educational attainment is a key mechanism in its wide-ranging influence, as is the case with past empirical analyses of agency, personal control in particular. Second, we develop a latent class model utilizing both dimensions of agency, aiming for a more person-centered approach to studying social life, rather than simply assuming a variable-centered one (Smith, 2009). In so doing, we map out the actual distribution of facets of agency, showing that mastery and optimistic expectations are distinct factors and combine in particular ways. Finally, we consider whether latent class membership, thus combinations of mastery and optimistic expectations, aid in understanding the outcomes (attainment, health and wellbeing). Ultimately, we endeavor to show the importance of including future expectations into both theoretical and empirical treatments of agency and provide an initial evaluation of whether the two dimensions work additively alongside one another or whether agency is best represented with certain constellations of the two dimensions.

### **Data and Measures**

The data come from the Youth Development Study (YDS), a panel study of ninth graders selected randomly from the St. Paul, Minnesota, public high schools in 1988 (N=1,010). We selected this data because it includes good measures in adolescence of both dimensions of agency we wish to examine, along with repeated measures on a range of outcomes across the transition to adulthood. We are aware of no other data with this unique combination of measures. Particularly, it includes the Pearlin Mastery Scale, the measure of agency that provides the strongest challenge to our contention that expectations form a separate dimension. It is the only scale of the personal control/efficacy/mastery triumvirate to contain any item explicitly referencing future outcomes, "What happens to me in the future mostly depends on me." We would expect people who score highly on the mastery scale would expect more positive life outcomes, though the scales are only modestly positively correlated (discussed below). Our analyses suggest that a significant number of people have high beliefs in positive life outcomes without accompanying strong mastery beliefs.

Participants in the YDS (64 percent of those invited) completed questionnaires in their classrooms annually between 1988 and 1991. Those who were not present on either of the two administration days, were no longer attending school, or had moved from the area completed questionnaires by mail. We use data from 1991, when most were seniors in high school, and follow up data, collected via mailed questionnaires, in 1995, 2000, 2005, and 2009. In 1988 and 1991 parents were surveyed by mail and our measures of family socioeconomic status are derived from parents' 1988 reports. The retention rates through 2009, when respondents were 35–36,was 67 percent, though notably our analytic approach does not require participation in all waves for observations to be included. Panel retention has not been associated with numerous personal characteristics and experiences, including achievement, mental health, delinquency, and family economic circumstances and structure (Mortimer 2003). Importantly, panel retention has also not been associated with adolescent life course expectations or mastery. Attrition has been higher among males, however, as well as among non-whites and those who had no employed parent at the outset of the study.

**Agency**—To capture the standard empirical measure of agency (mastery/efficacy/personal control), we use items from the classic mastery scale (Pearlin and Schooler 1978). This scale includes both positively and negatively worded items such as "What happens to me in the future mostly depends on me," "I often feel helpless in dealing with the problems of life," and "There is little I can do to change many of the important things in my life," rated on a scale from 1 to 4 and reversed as necessary so that high scores indicate higher mastery ( $\alpha = .80$ ; full question wording for the seven items in this scale as well as those in the Perceived Life Chances Scale appear in Table 8). To capture the second dimension of agency, broadly capturing future orientations, we need a measure that asks respondents about future life outcomes, and does so across a wide range of life domains. The Perceived Life Chances Scale (Jessor, Donovan and Costa 1988) fits these criteria. This 10-item scale asks respondents "Thinking about how you see your future, what are the chances that..." and response items include, for example, "you will have a job that pays well," "You will have a happy family life," "You will be respected in your community", and "Life will turn out better for you than it has for your parents," rated on a scale from 1 (very low) to 5 (very

high;  $\alpha$  = .85). <sup>12</sup> The measure does not ask for a concrete timeframe, such that we cannot adequately speak to a particular future point in the life course, and unlike some assessments of life expectations, is not open-ended (e.g., Lamm, Schmidt and Trommsdorff 1976; Yowell 2000). Both mastery and life course expectations were measured in 1991, when most respondents were seniors in high school, and are moderately correlated (r=.32). <sup>13</sup>

Young Adult Outcomes (1995–2009)—To examine the utility of our conceptualization of agency, we considered a range of outcomes across young adulthood. These included logged hourly earnings and biweekly income (for those employed), both adjusted for inflation, experience with financial problems (mean of three items asking respondents to rate their financial stress, difficulty with paying bills, and burden from debt on a 7-point scale), self-rated health (5-point scale from poor to excellent), self-esteem, and depressive affect. The self-esteem scale (Rosenberg 1995) is based on 7 items, including "I feel I have a number of good qualities," and "I do not have much to be proud of." Items were rated on a scale from 1 (strongly disagree) to 4 (strongly agree), and items were reversed as necessary. <sup>14</sup> The depressive affect scale (Ware et al. 1979) is based on 9 items in which respondents reported the frequency of symptoms including feeling "downhearted and blue," "in low or very low spirits," and "calm and peaceful." Response categories ranged from 1 (none of the time) to 5 (all of the time).

Instead of selecting one age or point in time to assess the outcomes, we draw on data collected across the transition to adulthood. This strategy allows us to assess general levels of the outcome, but also enables assessments of difference that may emerge over time. While we expect overall differences in level, we have not formulated expectations about specific age-patterns. Thus our approach allows us to test, for example, that overall earnings levels in young adulthood are higher for those with greater adolescent agency, but also allows for more complex patterns to emerge (e.g., that earnings differences tied to adolescent agency grow with age). This strategy also increases the proportion of the sample

 $<sup>^{12}</sup>$ Elsewhere, Lee and Mortimer (2009) utilize a subset of our scale to measure "economic self-efficacy". We find that this subset does as well in our models for some but not all outcomes and that the 10-item scale better fits with the global nature of agency, as we theorize the construct.

<sup>&</sup>lt;sup>13</sup>Ideally we could track expectations over time, but the YDS data do not allow this. Stability in educational expectations increases their predictive power with respect to understanding life course outcomes (Bozick et al., 2010). Thus, we are focused on a particular life course moment that 'propels' students into a range of outcomes.

<sup>14</sup>Our consideration of self-esteem as an outcome deserves additional comment, particularly given our bridging of social psychological work with broader theoretical treatments of agency. Social psychological treatments of self-esteem vary widely. Although it has not featured prominently in conceptualizations of *agency*, various theories of the self-consider high self-esteem a resource that buffers the impact of harmful experiences and events on the individual. In a prominent example, Cast and Burke (2002) conceive of self-esteem (which they refer to as worth-based self-esteem, using a measure similar to ours) and self-efficacy (which they refer to as efficacy-based self-esteem, again using a similar measure to our measure of mastery) as two components of self-esteem, both generated through the verification of identities and serving as resources for emotional health. Our modeling approach, treating mastery/self-efficacy as an independent variable in models with self-esteem as a dependent variable (comparable to depressive symptoms) makes little sense under such a view of the self. In their empirical examination, Cast and Burke find an important distinction, however, between these two theoretically joined constructs; efficacy-based self-esteem buffers negative emotions when self-verification is problematic, but they find no buffering effects for worth-based self-esteem. They discuss the possibility that efficacy-based self-esteem may be an outcome of efficacy-based self-esteem.

A considerably different theoretical treatment of self-esteem argues that self-esteem is merely a signal of how an individual is embedded into their social environment. Leary's (2003) sociometer hypothesis, for example, states that self-esteem is a gauge of social inclusion or exclusion. Others have similarly argued that self-esteem is not a resource, having no benefits or effects on behavior itself (e.g., Baumeister et al. 2003). We treat self-esteem as an indicator of life-course well-being, acknowledging that it might also serve as a social force in its own right across the life course and that future revision may be in order as scholars advance understandings of agency and the self.

included in the analyses, whereas using only one wave of data omits those respondents who do not participate in a given follow-up. With two exceptions, the young adult outcomes were measured four times during young adulthood (1995, 2000, 2005, and 2009). Financial problems and self-rated health were only measured at the last three time points as the items were not included in the 1995 survey.

**Controls**—Because both agency and the outcomes we consider in our analyses are grounded in structural conditions, with for example, social class background likely to facilitate both greater agency and adult achievements, we include a number of control variables in our models. While the risk of omitted variable bias always remains, inclusion of as many of these factors as possible helps ensure that estimated effects of agency do not simply reflect these spurious relationships. We acknowledge, however, that in building common models across a range of outcomes, factors unique to each may have been overlooked.

Socioeconomic status of the family of origin was captured by family income and parents' educational attainment, reported by parents. *Family income* was originally measured with an ordinal scale, from 1= under \$5,000 to 13= \$100,000 or more. We coded responses to the midpoints of these categories and then took the log. We represent *parental educational attainment* as a set of dichotomous variables referencing the most highly educated parent, and distinguish four categories: at least a four-year college degree, some postsecondary education, a high school degree, and less than high school. *Family structure* distinguished adolescents living with their two biological or adoptive parents from those living in stepfamilies and those in other family forms (largely with single parents). Parents' educational expectations for their adolescent child was measured by the level they thought would eventually be completed, from 1 = less than high school graduation to 7 = Ph.D. or professional degree (such as medicine, law, dentistry). The adolescents reported their *gender* (1=male), *nativity* (1=native born), and *race/ethnicity*. With limited racial/ethnic variation in the panel (minorities were not oversampled), we distinguish whites from non-whites.

While our measure of expectations is deliberately general, we recognize that educational expectations more specifically are thought to shape educational attainment and related processes in the transition to adulthood. As such, it is useful to know whether optimistic life course expectations predict outcomes beyond what expectations in this single domain predict. We do not introduce adolescent educational expectations as a background control variable, as the causal relationship between general and domain-specific expectations is unclear (and possibly reciprocal), but we do introduce educational expectations (1 = less than high school to 6 = Ph.D. or professional degree) in some models to test whether life course expectations add anything beyond it. In addition to educational expectations and the baseline control variables, all measured in adolescence (1991), we also control a timevarying indicator of educational attainment (number of years of education attained by the respondent) and of mastery (measured in the same was as in adolescence) in some models. Detailed description and rationales for those models including these additional measures appear in the next section.

## **Analytical Strategy**

We modeled young adult outcomes using growth models, a hierarchical modeling technique in which observations across time are nested within individuals. This allows us to examine the extent to which our measures of adolescent agency are associated with both the level (intercept) and rate of change (slope) in the outcomes across young adulthood (based on 3-4 time points, depending on the outcome). A key feature of these models is that all available data are used, regardless of whether respondents were retained in all follow-up waves. We centered time, and as such the intercept in these models represents the midpoints of the trajectories. We restricted the analysis to those respondents with complete data on the adolescent (1988 and 1991) agency and control measures (N=850). We began by estimating unconditional growth models for each outcome, in which there were no predictors, in order to select the best form of the growth curve (not shown). Based on BIC, a goodness of fit indicator, and whether the covariance parameters were non-zero, we determined that three outcomes, financial problems, self-rated health, and self-esteem, were best modeled with linear slopes. The best fitting models for the remaining three outcomes, hourly pay, biweekly earnings, and depressive affect, were curvilinear, represented by two slopes: time and  $time^2$ .

After these preliminary analyses, we estimated a series of five growth models for each outcome. In the first model, we assessed whether adolescent life course expectations predicted the level and rate of change in the outcomes, controlling for a range of sociodemographic indicators from adolescence. In the second model, we included adolescent mastery to evaluate whether life course expectations mattered beyond that captured in the mastery-as-a-measure-of-agency approach. In the third model, we included adolescent educational expectations as well, to evaluate whether life course expectations mattered beyond this important, domain-specific, expectation. To evaluate the extent to which these adolescent orientations operated though the acquisition of higher education, we added a time-varying control for educational attainment in Model 4. Considerable research on personal control indicates that greater control predicts higher educational attainment, which then affects a range of work and health outcomes. Finally, in what we view as a very strong test of whether life course expectations from adolescence are an independent force, we added mastery as a time-varying control in Model 5. This allowed mastery to be updated as it changed with age, though we only had a measure of life course expectations from adolescence. Since mastery and expectations were positively correlated and may have changed over time together to some extent as well, this worked against finding a significant effect of adolescent life course expectations on the outcomes. All of these models were estimated in SAS. In the tables that follow, we do not include coefficients representing the estimated effects of the control variables on the growth trajectory parameters. Complete tables including these estimates are available from the authors.

#### Results

Descriptive statistics for the study measures appear in Table 1. The sample itself is majority non-Hispanic white (78%) and almost exclusively native born. Only just over half of adolescents lived with both parents, and only 28 percent had a parent who had completed a four-year degree or more. Average levels of our two dimensions of agency were fairly high

in 1991, when most respondents were seniors in high school. Average life course expectations neared four on a 5-point scale; average mastery was three on a 4-point scale. Average levels of mastery, for which we have ongoing measures, appear quite stable across young adulthood. Education and inflation-adjusted earnings rise from 1995 (age 21–22) to 2009 (age 35–36), but so do reports of financial problems. Self-rated health declines slightly, but there is no trend in self-esteem and depressive symptoms during this period of the life course.

The series of growth models for the three financial outcomes appear in Tables 2–4. For hourly pay and biweekly earnings (Tables 2 and 3 respectively), Model 1 shows that adolescent life course expectations were positively associated with both the level (i.e. effects on the intercept) of young adult earnings and growth in earnings across young adulthood (i.e. effects on the slope). Adolescent mastery, added in Model 2, was not predictive of hourly pay trajectories, and did not predict the overall level of biweekly earnings, but was positively associated with growth in biweekly earnings over time. The estimates for life course expectations are attenuated somewhat with the introduction of adolescent educational expectations in Model 3, though they still significantly predict later hourly pay and biweekly earnings levels. Little, if any, of the effect of life course expectations operated via accumulating additional education after high school (see Model 4). The estimated effects of life course expectations on pay and earnings trajectories also remain significant in the final model with the addition of the time-varying indicator of mastery (Model 5).

For the trajectory of financial problems (Table 4), optimistic life course expectations were associated with lower average levels of financial problems in young adulthood, but not to their rate of change. This indicates that differences in financial problems were maintained over time; they didn't grow, but they didn't narrow either. Higher mastery in adolescence, too (Model 2), was associated with fewer financial problems, and largely accounts for the association between life course expectations and later financial problems from Model 1. The remainder of that association overlaps with educational expectations, according to Model 3. Thus for perceived financial problems, but not hourly pay and biweekly earnings, life course expectations do not add predictive power beyond knowing educational expectations in adolescence. The final model demonstrates that mastery and financial problems were inversely related over time.

Turning now to the measures of health and well-being, Model 1 for self-rated health (Table 5) again shows a positive effect of optimistic life course expectations on average levels of health, though not to the rate of change in health over time. Adolescent mastery was also positively associated with average levels of health in young adulthood, and its inclusion in the model results in only a slight reduction in the coefficient for life course expectations. The introduction of adolescent educational expectations attenuates the estimated effect of mastery somewhat, but the estimate for life course expectations is unchanged. The final two models indicate that ongoing changes in mastery, but not education level, account for part of the influence of adolescent life course expectations and all of adolescent mastery on young adult levels of health. A significant effect of adolescent life course expectations remains, however.

Models for self-esteem and depressive symptom trajectories follow much the same pattern. Optimistic life course expectations in adolescence predicted higher average levels of self-esteem (Table 6) and lower average levels of depressive affect (Table 7) in young adulthood, but not changes in these with age. Again this means that later differences in self-esteem and depressive symptoms tied to adolescent expectations were maintained across the period examined. Adolescent mastery was associated with both self-esteem and depressive symptoms in the same way, and its introduction in Model 2 results in a somewhat reduced estimate of the effect of expectations, though the latter remains statistically significant for both outcomes. The introduction of adolescent educational expectations results in even less change in the estimates (Model 3). Little of these orientations' effects operate via higher education (Model 4). Allowing mastery to be updated over time in Model 5, however, reduces their effect on self-esteem and eliminates their effect on depressive affect.

In sum, optimistic life course expectations in adolescence predict higher young adult levels of (and growth in) hourly pay and biweekly earnings, and higher average levels health and well-being, even after taking into consideration adolescent levels of mastery as in the traditional mastery-as-agency approach. For these five outcomes for which life course expectations mattered beyond their association with mastery, the acquisition of higher education was not a key mechanism involved. Furthermore, optimistic life course expectations from adolescence remained a statistically significant predictor of four of these five outcomes (excepting depressive affect) even in models in which mastery was updated via a time-varying variable; optimistic life course expectations in adolescence matter beyond any association they may have with changing levels of mastery over time. Though we cannot test it here, a time-varying measure of life course expectations may have produced even stronger estimates. Together, these analyses suggest the core importance of future expectations in predicting outcomes across the transition to adulthood. 15

Our analyses thus far consider our two aspects of agency in tandem, but while our theory clearly indicated the need for a second dimension in empirical treatments of agency, it was unclear whether it can simply be added alongside the more traditional operationalization or whether it operates in combination with it. People are not simply set of social psychological variables (e.g., Smith 2009), so we now explore the empirical pattern of these agency types as they exist within individuals. We present a latent class model for understanding configurations of the indicators of these two aspects of agency. Latent class models were estimated in Mplus based on the 17 items we used earlier to form the mastery scale (7 items) and the life course expectations scale (10 items). We estimated and compared the fit of latent class models ranging from two to six classes. Although the fit of the model continued to improve through a five class model, according to BIC and AIC, the VLMR-LRT test became non-significant beyond a four class model as the best fitting one and assigned respondents to the class for which they had the highest probability of membership. The

<sup>&</sup>lt;sup>15</sup>In supplementary analyses (not shown), we examined whether the effects of life course expectations and mastery varied by parents' socioeconomic status. Interactions between each dimension of agency (mastery and life course expectations) and each measure of socioeconomic status (family income and parental education) were added to the models one at a time. We also estimated models in which we included the interaction of mastery and life course expectations. None of these interactions were statistically significant.

overall sample mean on each of the 17 items appears in Table 8, along with the means on the items by class.

This four-class solution is also graphed in Figure 1, showing the distinctive nature of each group by plotting the relative means of items by class. We took the item mean for each class and subtracted the item mean for the whole sample. Zero on the y axis thus represents the average on an item for the overall sample. If a class then has bars above zero, its members scored above average on the item; likewise bars below zero indicate members scored below average on the item.

The four-class solution clearly includes three concordant classes (classes 2, 3 and 4), in which both mastery and life course expectations are above average, average, and below average, respectively. We label these as "confident," "average" and "pessimistic" for the sake of convenience. The average class is quite large, comprising 48.6% of the sample. The confident and pessimistic classes are considerably smaller (16% and 15% respectively). In contrast to these concordant classes, class 1 is a group who thought they had very good chances for success in life (optimistic life course expectations) but had slightly lower than average levels of mastery; we refer to them as "hopefuls." Hopefuls constitute 21% of the sample. Notably, there is no mirror-opposite group to that of the hopefuls, one that had high mastery but without optimistic life course expectations. This pattern suggests the importance of thinking of agency less as a pair of discrete variables and more as they are actually represented within this population. It suggests that having high mastery is associated with having optimistic life course expectations, but that the reverse seems not to be true. Adolescents can have optimistic life course expectations without feeling particularly efficacious, relative to their peers, and about one in five of the YDS participants actually did.

Our final analytical step is to test the utility of the latent-class categories as predictors of the young adult outcomes under consideration here rather than treating these agency components as fully separate as we did in Tables 2–7. Estimates from a baseline growth model for each outcome appear in Table 9; the pessimist class serves as the reference group. In these models incorporating the latent classes, one pattern is consistent. The pessimists, the group with below-average mastery and life course expectations, did worse across all six outcomes compared to those in all three other classes. As with our earlier results, adolescent agency has less consistent effects on the slopes of these trajectories. Pessimists' earnings growth (by both measures) was weaker, however, their health declined more, and their growth in financial problems was steeper (significant always in comparison to the confident class, and variably so to the hopeful and average classes).

In addition, for financial problems, health, and well-being, other contrasts were also significant. Those we term confidents, who were above average on mastery and perceived life chances, had fewer financial problems, higher self-esteem, and lower depressive symptoms than those we identify as members of the hopeful (optimistic life course expectations but slightly less than average mastery) and average (average on both) classes. Those in the confident class also had significantly higher self-rated health compared to those in the average class (but not the hopeful class).

Thus, it is best to have both beliefs in abundance, while it is particularly bad to have neither. Yet for the two earnings outcomes, having average or high levels of *either* resource was enough (the coefficient for the hopeful, confident and average classes do not significantly differ), and for self-rated health having high levels of both resources was no better than having only optimistic life course expectations. This suggests that for some aspects of life, the two dimensions serve as substitutes for one another. Ultimately, these latent class models suggest floor effects for aspects of agency that appear maladaptive across the transition to adulthood, though in general these models are not as predictive as models that discretely include each component of agency. Variation on each dimension is lost in moving to a categorical approach.

#### Discussion

Shanahan and Hood (1998) suggest that a fully specified model of agency necessarily includes three elements: (1) measurement across multiple dimensions, (2) measurement of relationships and proximal settings that facilitate and mold goal pursuit, and (3) measurement of macrostructual contexts as they shape struct0ured pathways of work, education, and family. Our two-dimension model addresses (1) by adding another empirical dimension to the traditional focus on agency and demonstrating its utility in predicting outcomes years later. We also address (3) through modeling important work and health domains. Given the traditional focus on mastery/personal control and education, which we highlight, we consider one proximal mechanism for point (2) that future work should explore, along with other factors that shape expectations, ranging from demographic, experiential, and potentially biological ones.

Our concern in this paper is to demonstrate the longitudinal success of incorporating future orientation – in this concrete case, expectations about how life will turn out-- into our empirical understanding of individual agency, effectively supporting the sociological importance of conceptualizing the agent rather than simply focusing on structures and resources (see also Christie-Mizell and Erickson 2007; Reynolds et al. 2007). We view agency as an individual capacity for meaningful and sustained action both within situations and across the life course, and offer a model that includes more room for self-appraisal and potentially exerting changes on one's environment than often gets captured in notable sociological treatments, especially the tradition of those influenced by Bourdieu's work. At the center of this perspective is the idea that individuals possess 'bounded agency', the circumscribed ability to influence their life courses (Shanahan et al., 1997). Individuals' choices range from the sociologically trivial (e.g., toothpaste purchases) to the important (e.g., career paths, marriage partners). Our approach points the way toward a social psychological perspective that can ground abstract discussions about the relative importance of "agency" or "structure," building on established social psychological literatures to bridge understandings of agency with life course and stratification research.

This model builds on the dual-system psychology that is filtering into sociology, but puts perhaps more emphasis on the conscious appraisal system than this work (e.g., Vaisey 2009, 2010). People make choices in life, some of which set them on pathways to more education, poorer mental health, or particular family formations. These particular decision junctures do

not simply represent responses to situated influences; people take longer life horizons into account. Once on these trajectories, a host of identity processes and accordant reflected appraisals may serve to keep people 'committed' (Becker 1960) to certain trajectories. Even there, beliefs about mastery and the future serve to motivate behavior. We support, however, that classic treatments (e.g., Pearlin et al., 1981; Mirowsky and Ross 2007) are exactly right in their focus on mastery/personal control as a vital aspect of individual agency, but that Mische (2009) and Emirbayer (and Mische 1998) are also correct when suggesting models of the agent require incorporating a temporal dimension. We find that, treated discretely, adolescent senses of agency as captured by their life expectations are at least as powerful a predictor of a range of later life outcomes as the more commonly employed notion of mastery. Moreover, we find that adolescent optimistic expectations operate fairly independently from higher educational attainments on the outcomes we study. Mirowsky and Ross (2007) developed a model of longitudinal perceived control in which perceived control fosters educational attainment and then education increases perceived control across the life course (until older ages). Without longitudinal data on life course expectations, we cannot assess whether they are improved via educational attainments. Yet it is clear from our analysis that optimistic expectations matter regardless of whether adolescents continue their schooling past high school.

Our model suggests people are not simply unconscious carriers of generalized habits or unconscious understandings based on social location, but actively appraise life conditions and circumstances and that developing more positive future assessments influences stratification across a variety of attainment, health, and well-being. We introduce a novel addition to the empirical measurement of agency – one that is actually an old standard within stratification research -- to explore a range of stratification and health outcomes. We move beyond calls for a simple focus on future-based thoughts to one that includes an emotional valence about the optimism/hopefulness imbued within those expectations. This allows us to bridge discussions of mastery/personal control/efficacy with those showing the power of holding optimistic expectations about one's future, bringing both under the umbrella of a proper understanding of human agency. Those with more optimistic expectations are healthier and more economically privileged than those who see bleaker futures.

Our model is oriented toward the social psychological beliefs that individuals develop, the most common empirical focus of agency, but one that can be interpreted as diverging from theoretical treatments – like Bourdieu and Sewell – that place greater emphasis on structural resources. In addition to the distinction we highlight between individual agentic capacities and beliefs about those capacities (see Hitlin and Long 2009), such scholars focus on the capacity that resources – or various social, economic, and cultural capitals – offer individuals to create new behavioral possibilities and/or navigate social structures. Our project does not directly speak to this point, but we suggest future inquiry might explore the extent to which particular contexts are navigated more successfully based on agentic beliefs as opposed to and in conjunction with more tangible resources and capitals.

Methodologically, we suggest that longitudinal models focusing on agency should include a measure of future orientation such as generalized life expectations as well as the more

traditional mastery/efficacy scales. It appears that reinterpreting the classic expectationsstratification literature as an understated exploration of human agency makes a great deal of sense, given the robust performance of expectations measures across a large time period, even in the face of time-varying measures of mastery. Expectations serve to harness motivation and help people direct their behaviors to more effectively achieve desired outcomes (Oyserman et al., 2004), thus channeling beliefs about one's own capacity to control their lives. What does become clear in attempting to render 'agency' as a set of empirical constructs is their distribution in the population. Focusing on latent classes demonstrates that expectations and mastery are associated, but there is a sizable group of the population who are hopeful/optimistic without an accordantly high sense of efficacy. Moreover, it appears that, for these hopefuls, their optimistic expectations function to improve life course outcomes. This group performs as well as those high in both factors ('confidents') on three of our six outcomes. At the same time, there is no detectable group that corresponds as an opposite to these 'hopefuls'. Having above average assessments of one's own capacities to successfully act seems to require an optimistic sense about how one's life will turn out. Epel et al. (199) argued that time orientation itself (future-focused vs. present focused) required relatively higher self-efficacy, and perhaps similar processes underline both.

In a sense, we are establishing latent classes as orientations to what Archer (2006), as well as Tavory and Eliasoph (2013) consider "life projects". We suggest that expectations as elements of the beginning of those projects are important agentic forces channeling energy and resources toward what appear to be improved outcomes, and that these expectations can serve as important a function as the traditional sociological focus on mastery. This might suggest that a particular subset of "hopefuls" believe life will 'work out' for them, but more by the providence of fate or religious deity than by their own hand. That belief appears to motivate life course decisions and efforts that compensate for what otherwise might appear to be a lower sense of mastery, leading to similarly positive life course outcomes. Mastery is still important however, as the 'average' class with comparable mastery but lower expectations than the hopefuls, also demonstrate relatively positive outcomes.

This research points to a variety of future extensions. Most critically, we do not know enough about the formation and durability of life course expectations over time, nor their relationship to aspirations or other aspects of future orientation (e.g., Young 2004). For example, little is known about how family contexts shape these individual expectations. Parents vary in their engagement with children's futures, with some advantaged parents feeling more assured about children's futures and being less overtly concerned, while other less advantaged parents convey a more limited array of options for their children (Irwin and Elley 2012). Chains of parents and peers help build expectancies in the realm of education, for example, that serve to increase persistence among low-income youths encountering college (Deimer and Li 2012). It will also be important to replicate this analysis with other samples, particularly the finding of an absence of a group with strong mastery beliefs but low expectations for the future, a group that conceivably could exist in a highly disadvantaged population. Ethnographic evidence of such populations (McLeod 1987) finds that black youths have more optimism about their futures, but that such beliefs, alone, may not be enough to overcome racial and structural disadvantage.

Additionally, YDS data does not possess ongoing measures for the expectations portion of agency, as we've defined it. Future work should explore what happens as conditions change, future outlooks seem more or less bleak, and social networks shift. We know that adolescents revise other expectations in life as they age and encounter structural obstacles (Reynolds and Baird 2010; Johnson and Reynolds 2013). Our data do not allow us to explore such changes in generalized life expectations. It also limits our ability to make stronger claims about the essential nature of their relationship to mastery; they may be additive, latent constructs of a larger factor, or reciprocally reinforcing. Future work should engage these issues more concretely. There may also be cohort effects that we cannot capture here; some (Twenge, Campbell and Gentile 2012) suggest that American college students demonstrate increasingly enhanced self-evaluations across the last 50 years. Finally, any long-term longitudinal assessment of life expectations will need to develop measurements that are uniformly applicable across the life course. Some of the items we deemed appropriate here for examining adolescents' senses of their futures, for example, would not be appropriate later in life.

Humans develop capabilities and qualities that they bring to situations and even serve to help them select, within structurally available choices, life course trajectories, what Hitlin and Elder (2007a) refer to as life course agency. Previous empirical treatments of agency overwhelmingly focus on more localized, situated aspects of this social psychological construct, linking a sense of mastery or personal control to various influences and outcomes. This paper builds on that literature to suggest that understanding stratification and health outcomes from a longitudinal perspective requires incorporating theoretical treatments of agency into the empirical measure. Concretely, this suggests a bridge between the classic literature on expectations and the social psychological body of work focusing on efficacy/mastery/personal control. To understand the relative importance of individual senses of agency within socially structured bounds, we offer an economical set of measures that demonstrate agency as both a sense of contemporaneous capacity as well as a sense of what life holds in store, a social force that can aid individuals in developing more optimal life course outcomes.

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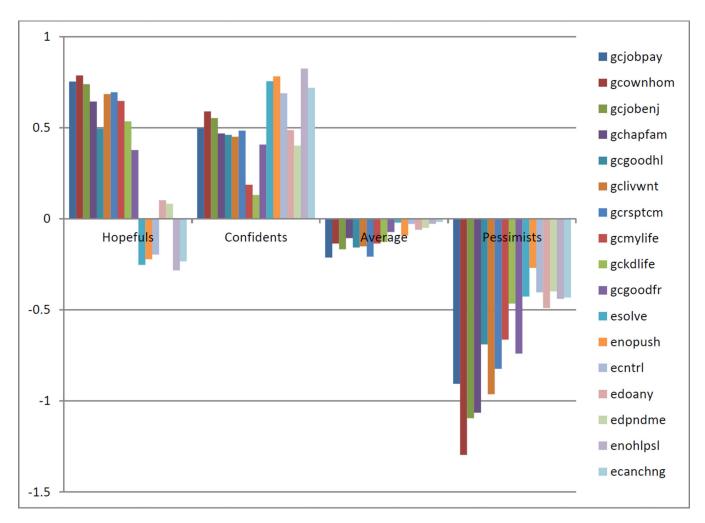
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**Figure 1. Latent Classes**Note: Items beginning with a "gc" are from the perceived life chances scale; items beginning with an "e" are from the mastery scale. Full wording of items listed in Table 8.

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Table 1

Descriptive Statistics on Study Measures, Youth Development Study

	Mean or %	SD	Range	N
Life Course Expectations 1991	3.91	.56	1–5	850
Mastery 1991	3.00	.46	1–4	850
Logged Family income 1988	10.29	.72	7.82-11.51	850
Parents college + 1988	28.24		0–1	850
Parents some college 1988	32.71		0–1	850
Parents high school 1988	33.88		0–1	850
Parents < high school 1988	5.18		0–1	850
Two parent family 1988	57.53		0-1	850
Other family type 1988	28.59		0-1	850
Step family 1988	13.88		0–1	850
Native born 1988	93.76		0–1	850
White 1988	78.35		0-1	850
Male 1988	46.94		0–1	850
Parents' educational expectations 1991	3.87	1.49	1–7	850
Educational Expectations 1991	3.88	1.16	1–6	786
Years of Education 1995	13.17	1.24	10–16	771
Years of Education 2000	14.02	1.81	10-20	757
Years of Education 2005	14.35	1.93	10-20	709
Years of Education 2009	14.50	2.04	10-20	668
Mastery 1995	3.14	.45	1.75–4	779
Mastery 2000	3.19	.45	1.71–4	757
Mastery 2005	3.16	.46	1.83-4	707
Mastery 2009	3.15	.46	1.43-4	662
Hourly Earnings 1995	2.31	.33	.57-3.49	590
Hourly Earnings 2000	2.81	.42	.11-4.73	632
Hourly Earnings 2005	3.01	.50	42-4.80	595
Hourly Earnings 2009	3.01	.70	-3.44-5.66	514
Biweekly Earnings 1995	6.32	.77	2.98-8.00	572
Biweekly Earnings 2000	7.14	.72	3.52-11.68	650
Biweekly Earnings 2005	7.29	.75	2.55-10.33	581
Biweekly Earnings 2009	7.32	.87	3.00-10.60	515
Financial Problems 2000	3.69	1.60	1–7	757
Financial Problems 2005	3.81	1.68	1–7	708
Financial Problems 2009	4.02	1.76	1–7	669
Self-Rated Health 2000	3.70	.83	1–5	756
Self-Rated Health 2005	3.66	.87	1–5	705
Self-Rated Health 2009	3.60	.90	1–5	655
Self-Esteem 1995	3.07	.52	1–4	779

	Mean or %	SD	Range	N
Self-Esteem 2005	3.14	.50	1.43-4	707
Self-Esteem 2009	3.16	.54	1.43-4	662
Depressive Affect 1995	2.62	.58	1-4.33	777
Depressive Affect 2000	2.42	.58	1-4.67	759
Depressive Affect 2005	2.45	.63	1.11-4.67	708
Depressive Affect 2009	2.47	.63	1.22-4.78	665

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Table 2

Hourly Pay from 1995 to 2009: Quadratic Form Growth Model

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Estimate	SE								
Level 2 Intercept	2.14***	.32	2.07	.32	2.13***	.33	1.67***	34	1.51	.34
Level 2 Linear slope	.17	.20	.13	.20	.05	.21	.03	.21	00.	.21
Level 2 Quadratic slope	04	.18	02	.18	12	.19	13	.19	15	.20
Effects on Level 2 Intercept										
Life Course Expectations	.13***	.03	***11.	.03	*80:	.03	**60.	.03	*40.	.03
Mastery			90.	90.	.05	90.	.00	9.	.01	90.
Educational Expectations					.03+	.02	00.	.02	00.	.02
Effects on Level 2 Linear Slope										
Life Course Expectations	*40.	.02	+40.	.02	.01	.00	.01	.02	.01	.02
Mastery			+40.	.03	.00	.03	.00	.03	+40.	.03
Educational Expectations					.05	.01	.04**	.01	****	.01
Effects on Level 2 Quadratic Slope										
Life Course Expectations	01	.00	01	.02	01	.00	01	.00	01	.00
Mastery			02	.02	02	.00	01	.00	01	.00
Educational Expectations					.01	.01	.02+	.01	.02+	.01
Effects on Level 1										
Educational Attainment							.07***	.01	.07***	.01
Mastery									90.	.03
-2 Res Log Likelihood	2582.2		2593.8		2400.4		2369.7		2360.3	
N (person-years)	2130		2130		1993		1983		1977	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

Table 3

Biweekly Earnings from 1995 to 2009: Quadratic Form Growth Model

	Model 1		Model 2		Model 3		Model 4	ĺ	Model 5	
	Estimate	SE	Estimate	SE	Estimate	S	Estimate	SE	Estimate	SE
Level 2 Intercept	6.22***	.52	6.19	.52	6.27	.52	6.22***	.57	5.98	.57
Level 2 Linear slope	.21	.29	.14	.29	08	.29	11	.28	15	.28
Level 2 Quadratic slope	90	.27	90	.27	05	.27	03	.27	04	.28
Effects on Level 2 Intercept										
Life Course Expectations	.24***	.05	.24***	.05	***	.05	***	.05	.16***	.05
Mastery			.03	90.	02	90.	03	90.	09	90.
Educational Expectations					*20.	.03	+90.	.03	+50.	.03
Effects on Level 2 Linear Slope										
Life Course Expectations	*90.	.03	.00	.03	.02	.03	.03	.03	.03	.03
Mastery			*40.	.03	+90.	.03	*40.	.03	*40.	.03
Educational Expectations					.07***	.02	**50.	.02	.05**	.00
Effects on Level 2 Quadratic Slope										
Life Course Expectations	04+	.03	04	.03	00	.03	00	.03	00	.03
Mastery			02	.03	03	.03	01	.03	01	.03
Educational Expectations					03*	.00	02	.00	02	.02
Effects on Level 1										
Educational Attainment							.16***	.02	.16***	.00
Mastery									00	.05
-2 Res Log Likelihood	4633.3		4642.7		4203.8		4123.9		4112.9	
N (person-years)	2114		2114		1980		1970		1965	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

\*\* p<.10

\* p<.05

\*\* p<.01

\*\*\* p<.01

\*\*\* p<.01

Table 4

Financial Problems from 2000 to 2009: Linear Form Growth Model

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Estimate	SE								
Level 2 Intercept	5.46***	1.03	5.92***	1.03	5.98	1.09	7.39***	1.16	8.82***	1.13
Level 2 Slope	44	.70	44	.70	34	.74	26	.75	01	.75
Effects on Level 2 Intercept										
Life Course Expectations	28***	.10	19+	.10	11	.12	11	.12	.05	11.
Mastery			****	.13	41**	1.	40**	.14	13	.13
Educational Expectations					16**	90.	11+	.07	-00	90:
Effects on Level 2 Slope										
Life Course Expectations	07	.07	90	.07	01	80.	01	80.	01	.08
Mastery			04	60:	00	60:	01	60:	04	60:
Educational Expectations					12**	.04	12**	.04	10*	9.
Effects on Level 1										
Educational Attainment							07	.05	08	.05
Mastery									58***	.12
-2 Res Log Likelihood	7007.9		6997.2		6486.0		6468.7		6345.7	
N (person-years)	1914		1914		1777		1773		1765	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

\*\* p<.05
\*\* p<.01
\*\*\*
p<.01
p<.001

Table 5

Self-rated health from 2000 to 2009: Linear Form Growth Model

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Estimate	SE								
Level 2 Intercept	2.39***	.54	2.20***	.55	2.02***	.57	1.25*	.61	.63	.58
Level 2 Slope	19	.35	19	.35	.07	.37	80.	.37	06	.37
Effects on Level 2 Intercept										
Life Course Expectations	.25***	.05	.21***	.05	.21***	90.	.21***	90.	*41.	90.
Mastery			.17*	.07	.13+	.07	.12+	.07	01	.07
Educational Expectations					*40.	.03	.03	.03	.00	.03
Effects on Level 2 Slope										
Life Course Expectations	.01	.03	00.	.03	00	9.	00	9.	00	9.
Mastery			.02	90.	00	90.	01	90.	.01	90.
Educational Expectations					.02	.02	.02	.02	.02	.00
Effects on Level 1										
Educational Attainment							02	.03	02	.03
Mastery									.33***	90.
-2 Res Log Likelihood	4443.4		4442.7		4108.6		4100.5		4015.9	
N (person-years)	1898		1898		1762		1759		1756	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

\* p<.05
\*\* p<.01
\*\* p<.01

Table 6

Self-Esteem from 2000 to 2009: Linear Form Growth Model

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Estimate	SE								
Level 2 Intercept	1.74***	.24	1.52***	.27	1.61	.28	1.21	.31	.31	.22
Level 2 Slope	.07	1.	.10	1.	.17	1.	.17	1.	80.	.12
Effects on Level 2 Intercept										
Life Course Expectations	.22***	.03	.17***	.03	.15***	.03	.15**	.03	**90.	.02
Mastery			.26***	.03	.25**	.03	.25***	.03	.01	.03
Educational Expectations					.03+	.02	.01	.02	01	.01
Effects on Level 2 Slope										
Life Course Expectations	00	.01	00.	.01	.01	.01	.01	.00	00	.01
Mastery			03+	.02	04*	.02	*40	.02	00	.01
Educational Expectations					01	.01	01	.01	01	.01
Effects on Level 1										
Educational Attainment							.01	.01	.01	.01
Mastery									***09.	.02
-2 Res Log Likelihood	3167.5		3108.1		2873.9		2863.0		1765.0	
N (person-years)	2609		2609		2422		2410		2410	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

p<.10

\*
p<.05

\*\*
p<.01

\*\*
p<.01

\*\*\*

Table 7

Depressive Affect from 1995 to 2009: Quadratic Form Growth Model

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Estimate	SI	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Level 2 Intercept	3.44***	.38	3.65	.38	3.69***	.40	4.04	.43	4.77**	.35
Level 2 Linear slope	27+	.16	27+	.16	26	.17	25	.17	12	.16
Level 2 Quadratic slope	.30+	.16	-88+	.17	.26	.17	.26	.17	.38*	.16
Effects on Level 2 Intercept										
Life Course Expectations	18***	.00	14***	.00	12**	9.	12**	90.	02	.03
Mastery			22***	.05	21***	.05	20***	.05	.01	.04
Educational Expectations					04+	.02	02	.02	02	.02
Effects on Level 2 Linear Slope										
Life Course Expectations	01	.00	01	.00	01	.00	01	.00	00.	.02
Mastery			00.	.00	00.	.00	00.	.02	03	.02
Educational Expectations					01	.01	00	.01	00	.01
Effects on Level 2 Quadratic Slope										
Life Course Expectations	02	.00	02	.00	02	.02	02	.00	03+	.02
Mastery			00	.00	00.	.02	00.	.00	.01	.02
Educational Expectations					.01	.01	00.	.01	.01	.01
Effects on Level 1										
Educational Attainment							02+	.01	02	.01
Mastery									57	.03
-2 Res Log Likelihood	4208.8		4185.2		3878.5		3873.7		3267.5	
N (person-years)	2612		2612		2424		2412		2407	

All models controlled the effects of gender, race/ethnicity, nativity, family income, parents' educational attainment, parents' marital status, and parents' educational expectations for the adolescent.

+ p<.10
\*
p<.05
\*
p<.05
\*
\*
p<.01
\*
\*
p<.01

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Table 8

Means on Mastery and Life Course Expectation Items for Total Sample and by Latent Class Membership

	Total Sample (N=853)	Hopefuls (N=193)	Confidents (N=147)	Average (N=453)	Pessimists (139)
What are the chances that					
you will have a job that pays well (gcjobpay $^{\it I}$ )	3.86	4.61	4.36	3.65	2.96
You will be able to own your own home (gcownhom)	3.92	4.70	4.51	3.78	2.62
You will have a job that you enjoy doing (gcjobenj)	4.06	4.80	4.61	3.90	2.97
You will have a happy family life (gchapfam)	4.03	4.67	4.50	3.93	2.97
You will be in good health most of the time (gcgoodhl)	4.06	4.55	4.52	3.90	3.37
You will be able to live wherever you want to in the country (gclivwnt)	3.67	4.35	4.12	3.52	2.70
You will be respected in your community (gcrsptcm)	3.84	4.54	4.32	3.63	3.02
Life will turn out better for you than it has for your parents (gcmylife)	3.77	4.41	3.95	3.63	3.10
Your children will have a better life than you've had (gckdlife)	3.79	4.32	3.92	3.66	3.32
You will have good friends you can count on (gcgoodfr)	4.10	4.48	4.51	4.03	3.36
How strongly to you agree or disagree with the following statements					
There is really no way I can solve some of the problems I have (reversed; esolve)	2.89	2.64	3.64	2.87	2.46
Sometimes I feel that I'm being pushed around in life (reversed; enopush)	2.57	2.35	3.35	2.48	2.3
I have little control over the things that happen to me (reversed; ecntrl)	3.05	2.85	3.74	3.02	2.65
I can do just about anything I really set my mind to do (edoany)	3.27	3.37	3.76	3.21	2.78
What happens to me in the future mostly depends on me (edpndme)	3.46	3.54	3.86	3.41	3.06
I often feel helpless in dealing with the problems of life (reversed; enohlpsl)	2.69	2.40	3.51	2.66	2.25
There is little I can do to change many of the important things in my life (reversed; ecanchng)	3.08	2.85	3.80	3.07	2.65

I abbreviation used for item in Figure 1.

Table 9

Growth Models for Life Outcomes (1995/2000 – 2009)

	Hourly Pay	Pay	Biweekly Earnings	arnings	Financial Problems	oblems	Self-rated Health	Health	Self-Esteem	em	Depressive Affect	Affect
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Level 2												
Intercept	2.54***	.30	7.03***	.49	4.46***	76.	3.26***	.52	2.51***	.26	2.86***	.36
Linear slope	.32+	.19	.42	.28	70	99.	11	.33	.07	.13	31*	.15
Quadratic slope	08	.17	20	.25	;	1	;	1	1	1	.22	.16
Effects on Level 2 intercept												
Hopeful	.21***	90.	.33***	.10	39***!	.19	.34***	.10	.28**1	.05	27*** <i>I</i>	.07
Confident	.26***	90.	.38***	.10	87	.21	.51***	.11	.48**	.05	41	80.
Average	***	.05	.23***	60.	$41^{***I}$	.17	.24***	60:	.22***1	90.	$27^{***I}$	90.
Effects on Level 2 linear slope												
Hopeful	.07+	.04	.07	.05	19	.13	.04	90.	01	.03	03	.03
Confident	.12***	90.	.12*	90.	40**	.14	*41.	.07	02	.03	03	.03
Average	+90.	.03	.05	.05	22+	.11	.02	90.	02	.00	03	.03
Effects on Level 2 Quadratic slope												
Hopeful	02	.03	08	.05	1	1	1	1	ı	}	03	.03
Confident	02	.04	+60	.05	;	1	1	1	ŀ	:	02	.03
Average	02	.03	90	9.	1	1	1	1	ı	}	.01	.03
-2 Res Log Likelihood	2606.7		4665.8		7005.4		4457.8		3177.4		4229.9	
N (person-years)	2130		2114		1914		1898		2609		2612	

<sup>+</sup> p<.10

\*
p<.05

\*\*
p<.01

\*\*\*
p<.01

I coefficient significantly different (p<.05) from confidents.