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Cumulative Knowledge about Cumulative Advantage

Aaron M. Pallas* and Jennifer L. Jennings**

1 Aging and inequality

Since its introduction, the concept of cumulative advantage has been evocative and appealing as a tool for understanding inequalities that emerge and are expressed over time. Cumulative advantage has played an important role in linking the sociology of aging and the life course to the study of social stratification and social inequality. These literatures have, with few exceptions, evolved independently, with the little cross-fertilization that has occurred situated more in the empirical than in the theoretical domain (Dannefer, 2003).

Our goal in this paper is to promote more engagement among these literatures, placing scholars of aging and the life course who study cumulative advantage in deeper conversation with their peers devoted to understanding power, inequality, and social reproduction. We begin by reviewing the concept of cumulative advantage, and the diverse ways in which the term has been used in the literature on stratification and the life course. We then attempt to situate the existing theoretical and empirical work on cumulative advantage in the theoretical framework of Pierre Bourdieu. Blending cumulative advantage and Bourdieu yields a new definition of what constitutes evidence of cumulative advantage; a call for greater clarity on what counts as capital that can be accumulated; a clarification of the boundaries and attributes of the fields in which cumulative advantage might occur; and a proposal to take the habitus seriously as a contingency in cumulative advantage.

2 Cumulative advantage and stratification in the life course

Dannefer (1987) introduced the concept of cumulative advantage to the study of aging and the life course. Drawing on Merton's (1968) account of the "Matthew effect" in the allocation of status in scientific careers, which Merton attributed to the "initial comparative advantage of trained capacity, structural location, and available

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resources,” Dannefer illuminated intracohort differentiation in the life course. He was particularly concerned with what he termed “aged heterogeneity,” the growing variability in domains such as health, lifestyle and socioeconomic well-being within a cohort as its members enter old age. Dannefer noted that the conventional interpretation of this heterogeneity was more psychological (or social-psychological) than sociological. He suggested that “structured mechanisms of social allocation” could also create the heterogeneity in individual well-being observed among members of a cohort as they age. Crystal and Shea (1990) followed soon thereafter with an empirical, albeit cross-sectional, demonstration of within-cohort resource divergence.

O’Rand’s (1996) well-known article on “the precious and precocious” continued this focus on structural allocation mechanisms. At an early age, she argued, “precocious” members of a cohort achieve positions that confer advantages. Over time, these advantages cumulate, as institutional arrangements reward the precocious at each stage of the life course. O’Rand highlights Mehdizadeh and Luzadis’ (1994) study of work careers and retirement and pension wealth as an example of how institutional arrangements interact with individual characteristics over time. In that study, long-term careers in jobs covered by defined benefit pension plans resulted in greater retirement and pension wealth than work careers with multiple job changes and variable pension plans. O’Rand characterized the link between early career conditions and later pension and retirement wealth as evidence of cumulative advantage.

As the Mehdizadeh and Luzadis (1994) example suggests, O’Rand was more interested in mechanisms by which advantages accumulate than in precisely what was being accumulated. Her conception of the “precious” covered a range of valued goods – whatever “is valued, protected, or rewarded over the life course” (O’Rand, 1996, p. 230). It was not essential to her argument that there be continuity over time in any particular valued resource. Nor did other treatments of cumulative advantage limit themselves to the cumulation of the same valued resource over time. For example, Kerckhoff and Glennie’s (1999) treatment of a “Matthew effect” in American education traced the linkages among academic locations in tenth and twelfth grade, four years post-high school, and ten years post-high school. These locations predicted both academic achievement and educational attainment.

Pallas’ (2002) account of cumulative advantage began with a literal reading of the “parable of the talents” in the Book of Matthew, to which Merton (1968) turned in coining the “Matthew effect.” Pallas noted that the parable which spawned the cumulative advantage argument recounted gains and losses over time in the quantity of talents (gold) possessed by three servants; and Merton’s own analysis of scientists examined gains and losses in scholarly recognition over time. In both cases, he noted, a particular form of capital (economic, in the parable, and symbolic, in Merton’s analysis) accumulated or diminished over time. Pallas argued that operationalizing this logic in the domain of education posed a challenge; if the relevant form of

capital in education is human capital, then the conventional equating of educational attainment with human capital is fraught with problems. Although individuals can lose their stocks of capital, educational credentials, once awarded, do not decay. (They can, however, lose their exchange value over time if the supply increases, as has been true of secondary school credentials in many countries.)

Linking educational attainment to adult participation in postsecondary credential programs, work-related education, and personal development courses, Pallas (2002) found substantial evidence for a Matthew effect in education. But he noted that the form of capital that accumulated was not continuous over time. The number of years of schooling an individual has completed conveys some information about that individual's knowledge and cognitive skills, which can be exchanged for wages in the labor market. And the same is likely true for the knowledge and cognitive skills that are developed through postsecondary credential programs and work-related education. However, Pallas argued, since the knowledge and skills gained through personal development courses do not have a market value, participation in personal development courses is conceptually different from its precursor, years of schooling completed.

More recently, Dannefer (2003) has reviewed the empirical and theoretical developments in the cumulative advantage literature in the 15 years following his earlier article. He defines cumulative advantage/disadvantage as "the systemic tendency for interindividual divergence in a given characteristic (e.g., money, health, or status) with the passage of time" (Dannefer 2003, p. S327). Dannefer noted the affinity between cumulative advantage and theories of social reproduction, which link social class origins to class-linked socialization and allocation mechanisms in diverse institutional domains, including the family, education, and the economy. In this view, early sorting and selecting cumulates over time to reproduce the class structure. Dannefer also linked cumulative advantage to what he termed "social allocation," the process by which individuals are matched with positions in a social system, such as a school or work organization. Although these theoretical explanations are familiar to sociologists, he also acknowledged the potential explanatory power of personological approaches that emphasize the ways in which individual differences in talent and personality can be accentuated over time.

The most recent review of the cumulative advantage literature critically examines the multiple meanings of the term. DiPrete and Eirich (2006) describe two major forms of cumulative advantage. The first, which they refer to as the "strict" form, is evidenced by a process in which the rate of growth in an outcome variable is a function of current values of that outcome. In such a process, small differences among individuals will grow larger over time, and there will be growing levels of inequality in the population.¹ One version of this strict form of cumulative advantage is what

1 DiPrete and Eirich (2006) do note that cumulative advantage need not imply unbounded growth, but rather can slow down or stop when the outcome variable reaches a threshold value.

they term path-dependent cumulative advantage, in which the rate of growth in an outcome variable is a function of the entire history of the determinants of that outcome, including exogenous chance events.

The second form of cumulative advantage noted by DiPrete and Eirich is much more common in the life course literature than strict cumulative advantage. An example is Blau and Duncan's (1967) analysis of black-white differences in socioeconomic outcomes, which documented both direct and indirect effects of race on outcomes at different stages of the life course, and the lower socioeconomic returns to education enjoyed by blacks. DiPrete and Eirich term the first mechanism, the sustained effects of a status characteristic on an outcome over time, a cumulative exposure process. They describe the second mechanism as a status-resource interaction process. Both of these mechanisms could generate growing inequality between groups of blacks and whites, but need not result in growing inequality in the population overall.

In addition to their exposition of formal mathematical models for cumulative advantage, DiPrete and Eirich (2006) also discuss the mechanisms that might generate cumulative advantage in the domains of scientific careers and socioeconomic achievement. A generalized mechanism is that "rewards become resources that produce subsequent rewards," as tangible and intangible resources interact with the institutional rules that govern markets in various domains. But some scholars also have invoked social-psychological mechanisms, such as a positive or negative motivation to succeed in response to positive and negative experiences, some of which might be random shocks (Cole and Cole, 1973).

Cumulative advantage is situated at the intersection of the study of social stratification and the sociology of the life course. With few exceptions, however, the scholars who devote their energies to the study of cumulative advantage are gerontologists, medical sociologists, and sociologists of the life course.² For this reason, we turned to the theoretical literature on social stratification, particularly the writings of Pierre Bourdieu, as a possible site for new insights on cumulative advantage.

Why Bourdieu? Much (though by no means all) of the empirical literature on cumulative advantage and the life course treats the individual as the unit of analysis, which leads inexorably to considerations of structure and agency. Of the most well-known efforts to generate a compelling sociological accounting of structure and agency – e.g., Giddens' structuration theory or Archer's critical realist approach – Bourdieu's conceptual apparatus has been most closely linked to empirical studies of the timing and sequencing of role transitions, at least in the USA. It would indeed be an interesting exercise to draw on another theoretical framework to conceptualize cumulative advantage across the lifecourse, but we have selected Bourdieu due to

2 Sociologists of science are a notable exception.

the affinity of his concepts to the questions motivating most empirical life course research and to the data on which that research relies.

3 Bourdieu and social stratification

Bourdieu's project was to specify a general economy of practices. But there is no escaping the role of power in social life, and many of the empirical applications of Bourdieu's ideas can be situated in the literature on social stratification. Bourdieu attempted to explain how systems of stratification sustain and legitimate themselves while engendering little social resistance. Attacking the idea that rewards are allocated on the basis of individual merit, he provided an account of the process through which advantaged families reproduce their status. In this section, we offer a brief overview of Bourdieu's key concepts: capital, field, and habitus.

3.1 Capital

Resources can be understood as capital when they function as a source of power in a social system. Bourdieu described four kinds of capital: economic capital, cultural capital, social capital, and symbolic capital. These forms of capital can be converted from one form to another to the benefit of the holder, although such conversions may be easier in some social settings than in others. For example, a degree from Oxford or Cambridge, a form of institutionalized cultural capital, might provide exclusive access to a position in a financial institution that yields substantial economic capital.

Conversions of capital carry along the inequalities in power which they represent; but some forms of capital disguise these underlying inequalities, because the possession of or lack of capital is misrecognized as a natural feature of the world. For example, Bourdieu argued that schools reward children who display the cultural capital possessed by the dominant social class, such as tastes, ways of speaking, and modes of dress. These rewards take the form of credentials and valued placements in the education system, another form of cultural capital. But because schools claim to be rewarding talent, intelligence and effort, the exchange of capital goes unrecognized. Instead, the educational rewards are viewed as the outcome of a disinterested, meritocratic allocation process. Once a form of capital is separated from the underlying power relations that produced it, it is seen as a form of symbolic capital, or legitimacy. Most valued positions in education systems, such as a high-ability primary school reading group, or a college-preparatory secondary school curriculum track, or admission to an elite baccalaureate institution, are a form of symbolic capital, because these positions are decoupled from both the forms of capital that produced them, and the institutionalized allocation rules that favor those who possess such capital.

Economic capital, which is the defining feature of social classes, takes the form of wealth, income, and property. Bourdieu viewed the distribution of economic capital as the “dominant principle of hierarchy” in modern societies (Swartz, 1997), although the distribution of cultural capital is increasingly important.

Cultural capital, which is central to Bourdieu’s theory of social reproduction, can take three forms: embodied, objectified, and institutionalized. Embodied cultural capital is so described because it resides in an individual’s body. Consisting of dispositions, tastes, and bodies of knowledge that are internalized via exposure to long-term socialization processes, embodied cultural capital is used by social institutions to sort individuals into stratified social positions. Because socialization varies by class position, children of the dominant class gain access to very different cultural capital, which results in differential access to valued positions in the education system.

Objectified cultural capital consists of cultural artifacts and products such as paintings and books that an individual can own (and, with the requisite embodied cultural capital, appreciate). But the most important form of cultural capital is institutionalized cultural capital, which has been formally accredited by social institutions. Educational credentials, particularly the array of credentials coinciding with the expansion of the postsecondary education system in modern societies, are the dominant form of institutionalized cultural capital. Because the education system is seen as autonomous from the economy, such educational credentials disguise the roots of this form of cultural capital in economic capital.

Finally, social capital consists of an individual’s location in a social network that can provide access to economic, cultural and symbolic capital that take on value in a particular milieu. In some cases, an individual’s location in a social network reduces to membership in a group whose very identity is a source of symbolic capital, as in membership in a voluntary association such as the International Sociological Association or Doctors without Borders.

Where is human capital in Bourdieu’s formulation? Economists (and many sociologists) define human capital as personal resources in which individuals can invest to yield economic and psychic benefits. Knowledge, skills and health are personal resources that have value in the labor market, and individuals can enhance their stocks of these resources by investments in formal schooling, job training, and medical care (Becker, 1975). Cognitive ability and talent also are characterized as forms of human capital. For Bourdieu, most of these resources are forms of embodied or institutionalized cultural capital. Investments in formal schooling, for example, are indicated by educational qualifications, the exemplar of institutionalized cultural capital. So too with cognitive ability, as scores on cognitive ability tests are used to allocate individuals to positions within the education system. Such scores are misrecognized as disinterested and natural attributes of the individual, rather than as a resource for power that takes on meaning in particular fields.

We also present a Bourdieuan interpretation of investments in health, since so much of the cumulative advantage literature addresses health outcomes. For Bourdieu, health behaviors reflect one's lifestyle, which in turn is framed by the habitus (discussed below) and its roots in objective experience. Cockerham (2000, p. 166) writes:

"When it comes to health lifestyles, the role of the habitus is to create and reproduce such lifestyles in a manner consistent with the structural parameters of social expectations and experience. Bourdieu is able to explain the pathways by which structure provides durable health lifestyles among the various social classes; thus, his work is particularly fruitful in accounting for the relationship between class-generated structures and health-related behavior."

In turn, a health lifestyle can be viewed as a form of cultural capital that takes on value in particular fields, such as the labor market.

3.2 Field

Fields are the structured social settings in which capital takes on value and meaning. The dominant metaphors for the field are the game and the market. Like fields, games have sets of rules that govern how individuals act in order to gain advantage over other participants. The metaphor of the market conveys a setting in which buyers and sellers exchange valued forms of capital (e.g., a worker selling his labor power to an employer for wages, or a teenager purchasing a high-status pair of sneakers). Although both games and markets contain differentiated positions (e.g., buyers, sellers, players), neither concept conveys clearly that these positions are organized hierarchically (Swartz, 1997). It is a structural property of a field that the actors within it assume competitive positions which are defined in relation to one another.

It is tempting to equate fields with social institutions, since institutions also are marked by a differentiated structure of roles, which in many institutions are organized hierarchically. Yet unlike fields, institutions are not inherently sites for struggle. Moreover, though fields are governed by an internal logic, they may not be as settled or as stable as an institution (Crossley, 2004), and their boundaries may be ambiguous and negotiated (Swartz, 1997). Although each field is governed by its own logic and rules, there may be continuities across fields in how capital works, rendering the fields more or less autonomous.

Fields are not ahistorical; on the contrary, they are the products of long-term historical development, and one must often examine the history of a field to understand the present rules by which it operates. Fields are also bounded by participants' mutual engagement in the struggle to gain advantage. In this view, the

field of primary and secondary education in New York City is a different field than the field of primary and secondary education in London. Families in London are not seeking to enroll their children in the elite schools in New York City, as New Yorkers are. But these two fields are homologous; they have similar logics and rules, and the same forms of capital operate in both.

In each field, three strategies dominate struggles for capital: conservation (trying to maintain one's position), succession (seeking mobility through attaining a better position), and subversion (defining the rules of the field) (Swartz, 1997). The rules of a field are not neutral (although they may be misrecognized as such); rather, they are contested, with those in positions of power claiming the legitimacy to define the rules.

3.3 Habitus

Finally, Bourdieu introduced the concept of habitus into his generalized theory of action. Habitus represents the deeply-ingrained ways an individual sees and classifies the world, and the individual's dispositions toward practical action (i.e., the repertoire of principles and strategies on which an individual relies in everyday life). It is both a "structured structure" and a "structuring structure". Habitus is a structured structure because it is formed in relation to primary socialization experiences in early life, which are structured because there are regularities in the socialization experiences of different social groups, such as the middle class and the working class, or males and females. One can speak of a working-class habitus because of the shared socialization experiences of members of the working class. But overlaid on top of such group similarities are the distinctive life experiences of the individual, which "fine-tune" the habitus.

Habitus is a structuring structure because it organizes the present perceptions and actions of individuals. An individual's habitus might lead him or her to perceive a social setting as a land of opportunity (e.g., going to college is taken for granted), or as a minefield of constraints and disappointments (e.g., "going to college isn't for people like me"). Such divergent perceptions are likely to evoke differing strategies for action. Since the habitus is formed in relation to the stratified experiences of groups and individuals, these differing perceptions and strategies will tend to reproduce the existing social order. However, Bourdieu sought to avoid a determinism in which the habitus reduces to an unvarying strategy for acting in particular ways. Rather, the habitus may incorporate the ambiguities and contradictions of social experience, and hence result in unpredictable and creative lines of action (Wacquant, 2005).

Bourdieu argued that habitus operates below the level of consciousness. Although durable and stable, the habitus responds to changing patterns of life experience, although this too is typically more a matter of fine-tuning than a fundamental restructuring of perceptions and dispositions (Swartz, 1997). A critical feature of

the habitus, in Bourdieu's exposition, is that it is transposable from one's current and past milieux to settings and situations that have not yet been encountered.

3.4 The interrelations among capital, field and habitus

In *Distinction*, Bourdieu (1984) specified that practice (i.e., the actions of individuals) is a function of habitus, capital and field. The concepts cannot be understood in isolation from one another. An individual's habitus shapes whether an individual recognizes and enters a field as a "player". Conversely, engagement with (and, hence, experience in) a field shapes the individual's habitus. The logic of the field determines what counts as capital, and the distribution of capital among individuals defines the contours of the field. The habitus determines whether an individual recognizes the value of the capital in the field and "activates" the capital through his or her actions.

4 Some implications of Bourdieu for research on cumulative advantage

In this section, we consider some of the implications of Bourdieu's framework for understanding social stratification for research on cumulative advantage. The points we seek to illuminate are not original to us, and in fact they already exist in lacunae in the cumulative advantage literature. Not all readers will be as sympathetic to Bourdieu as we are in this exposition. Our point is not to offer a sweeping endorsement of Bourdieu's framework but rather, taking it *sui generis*, to work out its implications for the study of cumulative advantage. His framework warrants serious attention, whether or not one is in full agreement.

4.1 Clarifying what counts as evidence of cumulative advantage

The first point – clarifying the nature of evidence needed to demonstrate the presence of cumulative advantage – does not, at the outset, depend heavily on Bourdieu. Among the phenomena that have been characterized as evidence of cumulative advantage are: the effects of education on health and mental health outcomes (Ross & Wu, 1996; Mirowsky & Ross, 2005a); socioeconomic position in childhood and the risk of heart attack (O'Rand & Hamil-Luker, 2005); the effects of educational attainment on retirement income (Crystal, Shea and Krishnaswami, 1992); the effects of childhood socioeconomic adversity on subsequent economic hardship and cognitive functioning (Lynch, Kaplan, & Shema, 1997); and the effects of educational attainment on participation in adult education (Pallas, 2002), to name but a few examples.

We have already cited several different definitions of cumulative advantage. For Dannefer (2003, p. S327), cumulative advantage consists of "the systemic tendency for interindividual divergence in a given characteristic (e.g., money, health, or status)

with the passage of time.” O’Rand (2003, p. 15) defines cumulative advantage as “institutional processes that underlie achievement systems in the United States, i.e., educational, occupational, and related status hierarchies correlated with earnings, wealth and health over time, preferentially reward early levels of advantage and achievement—no matter their basis in ability, capacity, or chance—in the direction of privileging early higher advantage or performance in a process of accentuation over time.” As we noted earlier, O’Rand’s definition does not demand that the nature of the advantage or performance that diverges over time remain constant.

Finally, DiPrete and Eirich (2006), in their least-strict formulation of cumulative advantage, argue that evidence of cumulative advantage consists of unequal growth rates in an outcome variable for individuals with differing status (e.g., gender, race), and growing inequality over time in status groups (and, perhaps, in the population overall.)

But even with this straightforward formulation, many of the examples DiPrete and Eirich cite do not examine growth in a particular outcome variable over time. Rather, the most common operational definition of cumulative advantage is a correlation between an individual’s position in a population distribution for some outcome at t_1 and that individual’s position in the population distribution for either the same outcome, or another outcome in the same institutional setting, at t_2 . In fact, it would be quite limiting to impose the requirement that the outcome be the same at each time period, because some outcomes are only defined in relation to particular stages of the life course. One does not have retirement income, for example, until one has retired. Neither does one typically have a position in the education system once one has completed formal schooling, typically by the age 30.

Drawing on Bourdieu, we propose a different evidentiary base for cumulative advantage. In our view, cumulative advantage is indicated by a correlation between an individual’s stock of capital in a field at t_1 and that individual’s stock of capital *in the same or another field* at t_2 , coupled with one other condition: there is more variability among individuals in the amount of capital at t_2 than at t_1 . There are two attributes of this stance that are particularly important. The first is that we do not require continuity over time in the field. Thus, a correlation between, say, the quantity of capital in the field of education at t_1 and the quantity of capital in the labor market at t_2 could be characterized as evidence of cumulative advantage. The second is that we allow for conversions in the form of capital both within fields and across fields. That is, a correlation between the amount of cultural capital an individual possesses within a field at t_1 and the amount of economic capital that individual possesses within the same field at t_2 would also be evidence of cumulative advantage. Since the exchange and conversion of forms of capital are so central to the process of social stratification, it is essential that a definition of cumulative advantage allow for them.

Although most conceptions of cumulative advantage place resources in the foreground, we take seriously Bourdieu's postulate that capital is defined only in relation to a particular field, and that the boundaries of fields are defined by the ways in which actors use capital in a struggle for advantage. We propose to limit the scope of cumulative advantage processes to Bourdieuan fields, which have defined (but also contested) hierarchical positions within them. This scope condition highlights the linkage between cumulative advantage and social stratification.

Adopting our view, however, has serious consequences for the cumulative advantage literature, because so much of that literature is not situated in Bourdieuan fields. We refer specifically to the literature on health outcomes. Although medicine and mental health are fields (Crossley, 1998), in which practitioners and their interest groups struggle for advantage with insurers and the state, it is not evident that there is a struggle for advantage in one's personal health status. In fact, if we define a field as a social setting in which there is mutual engagement in such a struggle, only a small portion of the adult population is likely to be engaged in a competition over health status. The affluent join health clubs, read about advances in medical treatment, eat some foods and not others, and so forth. In doing so, they are exchanging economic capital and one form of cultural capital (medical knowledge) for another form of cultural capital (physical health, which some might also construe as human capital), which might subsequently be exchanged for economic capital in the labor market (in which employers reward healthy white-collar workers through direct compensation and reduced insurance costs.)³

4.2 Clarifying what counts as capital in particular fields

The cumulative advantage literature describes a great many resources that contribute to cumulative advantage and disadvantage. In this section, we critically examine how sociologists describe such resources, and attempt to impose a conceptual clarity by imposing the Bourdieuan framework on them.

O'Rand (2001) offers the most comprehensive treatment of capital in life course studies, explicitly acknowledging that the conversion of one form of capital to another is at the heart of stratification processes across the life course. Defining capital as "unevenly distributed stocks of diverse resources available to populations for meeting their needs and achieving their desires" (O'Rand 2001, pp. 209–210), she explicates the interrelationships among human, social, psychophysical, personal, institutional, community, and moral capital. For O'Rand, human capital takes the conventional form of the stock of skills and knowledge that make individuals pro-

3 Note that we are not claiming that health status is irrelevant to life course outcomes. To the contrary, there are powerful associations between health status and a range of subsequent outcomes. In some fields, health may in fact be a form of capital; for example, "good" health may be seen as embodied cultural capital that advances one's chances of obtaining a desirable job in the labor market. We are simply asserting that most of the variability in health status did not arise from a struggle for power in a well-defined field.

ductive workers; and social capital also is familiar as a stock of social relationships that can be mobilized to help an individual achieve his or her goals. But O'Rand goes beyond these now traditional forms of capital to include psychophysical capital, which she refers to as the stock of health or psychophysical well-being, and personal capital, which takes the form of personal psychological attributes such as self-efficacy, a positive outlook on life, and resiliency.

O'Rand (2001) defines institutional capital as stocks of public (and hence collective) goods that serve to reinforce and protect the forms of "individual" capital described above. Institutional capital thus consists of an expansive view of the welfare state, as it operates at multiple levels of the polity (e.g., nation, state, and community). Finally, O'Rand (2001) defines moral capital as the stock of collective mutual sympathy and identity. Noticeably absent from the conceptions of institutional, community and moral capital is Bourdieu's grim nucleus of unequal power relations, although O'Rand and others might argue that power differentials are the primary source of social inequality, and hence a primary explanation for variation.

Capital takes on so many meanings in O'Rand's exposition that it begins to lack meaning. In treating aggregate contextual factors as forms of capital (whether institutional, community, or moral), she opens herself up to the kind of criticism that Portes (1998) levied at Putnam's (1995) formulation of social capital: Forms of capital become both cause and effect, and the presence of beneficial forms of capital is inferred from positive outcomes.

We do not question the importance of the factors O'Rand identifies. Rather, our concern is whether each is properly termed a form of capital, or whether there are alternative frameworks that are equally appropriate. In particular, we suggest that some phenomena that are referred to as forms of capital in the cumulative advantage literature could be described as elements of an individual's habitus, and other phenomena defined as capital could be described as attributes of the field in which capital takes on value.

We begin with what O'Rand refers to as personal capital, which is also very important to Catherine Ross and John Mirowsky's writings on the effects of education on health outcomes (Mirowsky & Ross, 2005a; 2005b), and what Dannefer (2003) refers to as "psychosocial accentuation." Ross and Mirowsky, along with Schieman (Schieman, 2000; 2001), argue that education increases an individual's sense of control over his or her life. Individuals with a heightened sense of control view themselves as competent, and thus use the resources available to them effectively. A high sense of control, they suggest, also enhances the individual's ability to respond to exogenous personal hardships, such as economic downturns, and to select oneself into or out of contexts that present opportunities or constraints. Mirowsky and Ross (2005b) treat sense of control as part of a constellation of educational effects which they refer to as "learned effectiveness."

In a Bourdieuan framework, a personal sense of control is not a form of capital, but rather a component of the habitus. Because the habitus is responsive to social experience, exposure to education (or other social institutions) may shape one's sense of self-efficacy. Whereas forms of capital are field-specific, the habitus is posited to be transposable, which means that it may structure perception and action across fields. It is primarily via the habitus that Bourdieu admits the psychologizing of social life (Lizardo, 2004).

As for what O'Rand terms institutional, community and moral capital, we see these as attributes of the "rules of the game" in a particular field, rather than as forms of capital. The structural features of fields may systematically advantage some and disadvantage others, but these structures are not themselves forms of capital that can be converted or exchanged.

4.3 Clarifying the boundaries and attributes of fields more precisely

O'Rand and her colleagues and Dannefer have been particularly influential in drawing attention to the role of institutional arrangements in structuring cumulative advantage processes in the life course at large, and other scholars have emphasized the workings of particular fields, such as education, the labor market, and housing. In general, we believe that the cumulative advantage literature could benefit from a more precise mapping of the social topography of the fields in which capital operates.

To be sure, there is general acknowledgment of the importance of time and place, but "place" is often defined in an aggregate way, rather than at the level in which individuals are struggling for advantage within a field. Capital may work quite differently in some settings than in others, depending on the structural features of the field.

Consider, for example, fields that are organized as competitive markets. In such fields, it is possible that the accumulation of capital is a zero-sum game. That is, for one actor to accumulate capital may require that a second actor lacks the opportunity to do so. Winner-take-all markets demonstrate this principle (Elman and O'Rand 2004; Frank and Cook 1995). Attewell's (2001) study of the "winner-take-all high school" provides a tangible example of both the contest for scarce stores of capital and of the power of institutional actors to define legitimate capital. Because families seek schools with strong academic reputations for their children, high-achieving students are concentrated in "star" high schools. High schools' reputations are linked to those of their strongest students, and to struggle for distinction, these schools reallocate their resources to the highest-performing students. In doing so, they disadvantage talented students with lower relative rankings. Colleges define what counts as legitimate human or cultural capital – in this case, class rank is the most important indicator – such that one student's efforts to acquire such capital disadvantage others'. Expanding the scope conditions for this idea, Dannefer (2003) asserts that "people-processing" organizations (schools,

work organizations, and correctional and military institutions) all are driven by a scarcity of desirable positions. In these contexts, one actor's attempt to accrue capital impedes another actor from doing so.

There is a tendency, ironic to be sure, for sociologists to be seduced by the generality of economic capital. Accumulating economic capital is often the motivation for engaging in a field, and economic capital is more easily exchanged for other forms of capital than is true of cultural, social and symbolic forms of capital. The fact that economic capital is a valued resource in so many fields can lead to the erroneous generalization that other forms of capital also have this property.⁴ Only through a careful exposition of the interrelationship between forms of capital and a particular field can this trap be avoided.

4.4 Taking habitus seriously

In the 1949 film "Knock on Any Door," a youthful John Derek utters the memorable phrase, "live fast, die young, leave a good-looking corpse." The converse – "live slow, hang on as long as possible, and leave a decrepit corpse" – doesn't have the same cachet, even though middle-class Western lifestyles are oriented precisely towards this objective. There is a strong strain towards normativity both in terms of what sociologists define as capital in the cumulative advantage literature, and in the ends that they assume that actors are seeking.⁵ The objective of a long, healthy life is so deeply ingrained in our consciousness that it may be hard to imagine an alternative. We are not suggesting that there are great masses of people who aspire to short, eventful lives. But we do believe that there is variability in orientations towards health and old age that ought to be taken into account in considerations of cumulative advantage. Mirowsky and Ross (2005b) assert that "everyone wants" health. The habitus, however, shapes what counts as good health, and indeed whether an individual engages in practical action to improve one's health standing relative to one's peers.

There is a well-known correlation between social class and life expectancy, with individuals in the middle class living approximately 10% longer than those in the working class. A family history of death at an early age likely is incorporated into one's habitus – how one perceives the world, and the strategies for practical action that one adopts.

4 We see this in the writings of Mirowsky and Ross (2005a), who make bold assertions about the "uniformly positive" effects of education that are not contingent on the features of education systems.

5 Certain kinds of capital are treated as unadulterated goods (Attewell 1990; Farkas 2003; Little 2003). Such normativity is most pronounced in the discussion of personal or psychophysical capital. In positing a relationship between education and health, Mirowsky and Ross (2005b, p. 205) wrote: "Too many individuals lack the tools needed to gain effective control over their own lives. Given those tools they would seek health as willingly and effectively as others do."

Even in middle-class families, family history can shape the habitus. Consider, for example, a family in which there is an inherited predisposition for heart disease. Members of such a family may experience a lack of control over their health and their lives, regardless of how much education they accumulate, or the mix of healthy behaviors which they take up. Information-seeking could even exacerbate the sense of low control, as an individual learns more about the genetic pathways by which heart disease is inherited.

Although we use health as the example here, there are two broader points we seek to illuminate. First, sociologists who study cumulative advantage and the life course need to allow for variations across individuals and groups in the habitus. The desire for “good health,” or “good education,” or a “good job,” as defined by middle-class standards, is not universal. Since practical action is a function both of the capital that an individual possesses within a field and the habitus that activates that capital (Lareau & Horvat, 1999; Lareau, 2000), considering capital without habitus yields a distorted, partial perspective.

Second, acknowledging the habitus may provide a more complete picture of who is competing for advantage in a field. The habitus is a perceptual and classifying structure; it shapes what is recognized by the individual as a field, and hence as a setting in which to engage. For example, an individual with a working-class habitus may simply not see health as a field in which one struggles to gain advantage. If, as we suggest, the habitus is responsible for self-selection into fields, then the workings of capital will only be observed among those who have so self-selected.

4.5 Incorporating symbolic capital as a form of capital

For the most part, the cumulative advantage literature has not explicitly recognized symbolic capital as a form of capital that can yield advantages. We claim that symbolic capital can help solve the problem of what to do with positional advantages. In many fields, holding a particular status is itself a form of capital, even though an incumbent has not accumulated economic, cultural or social capital.

Examples in education abound. For example, in a series of studies in the U.S. and Great Britain, Alan Kerckhoff considered secondary school track placement and type of secondary school attended as sources of cumulative advantage in the labor market (Kerckhoff, 1993; Kerckhoff and Glennie, 1999). Other work (e.g., Pallas et al., 1994) has considered primary-school ability group placements as a determinant of subsequent educational success. The school effects literature also points to the consequences of attending one school versus another for adult socioeconomic and health outcomes (Constant & Konstantopoulos, 2003; Pascarella & Terenzini, 2005).

We interpret placements in these stratified positions as a form of symbolic capital.⁶ In their study of primary school students assigned the status of English

6 O’Rand (2003) refers to this as “social signaling.”

language learner, Christian and Bloome (2004, p. 368) articulate the properties of symbolic capital:

Symbolic capital is not something that is inherent in an individual; rather, it is the result of social interaction... symbolic capital is socially constructed by how people interact with each other, by the social organization of events, and by how events play out. Symbolic capital is situational. The symbolic capital assigned to a person in one situation may not necessarily carry over into other situations... Symbolic capital is part of the process by which people let each other know who they are, where they stand in relation to one another, and what privileges and constraints they can assume.

In this view, the position of an individual in relation to others in the same field determines the individual's stock of symbolic capital, which is deployed through social interaction. In many ways, this description resembles Meyer's (1977) analysis of the institutional effects of education, explored by Gamoran (1986), Mehan, Hertweck and Meihls (1986), Pallas et al. (1994), and Oakes and Guiton (1995). These studies document that individuals in particular positions are ascribed certain qualities (e.g., students in the high group/track are good people as well as good students), and that these ascriptions influence the ways in which institutions treat people. Dannefer (1987, p. 223) stated this well: "Differential 'developmental' outcomes may result from interpersonal processes of social expectations as they inform 'expert' diagnosis or other forms of social behavior."

There are examples from other fields as well. Dannefer (1987) cited Kanter's (1977) classic study *Men and Women of the Corporation* as a case in point, emphasizing the importance of labels such as "stuck" or "moving" in structuring face-to-face interaction and the ways in which workers and their colleagues saw one another. The literature on the scar effects of unemployment (Heckman and Borjas 1980; DiPrete 2002) demonstrates how a spell of unemployment hinders workers' ability to maintain their standing in the labor market. Pager's (2003) audit study of employers found that the status of having a criminal record sharply reduced the likelihood of employment, even when the study design precluded any selection or transformative effects of a criminal history.⁷

5 Conclusion

Our overall assessment of the cumulative advantage literature to date is that it has been much more successful in pointing to examples of growing intracohort inequality

⁷ As is often the case with complex concepts, there are some ambiguities in our formulation. Some readers might prefer to characterize these examples as the workings of institutionalized cultural capital rather than as symbolic capital.

over time than in explaining the mechanisms by which this inequality is produced. That is, cumulative advantage has been a useful heuristic to describe stratification over time in various domains of interest to sociologists, but has yielded relatively few testable propositions that might generalize to other settings. Descriptors of the mechanisms that are implied in cumulative advantage processes – whether labeled compounding/cumulation/amplification, permeation, precocity, or selection-optimization-compensation – lack theoretical punch. In blending the cumulative advantage literature with the rich theoretical framework of Pierre Bourdieu, we have sought to expand the theoretical toolkit available to sociologists for understanding continuities in social stratification across the life course.

Not all studies that make use of the cumulative advantage concept are good candidates for the kind of cognitive blending we have sought to promote in this paper. Programs of research that make use of the core propositions of life course theory may benefit, however, as Bourdieu's framework can sharpen the meaning of some of these foundational principles. In our view, the key contributions of Bourdieu to the study of cumulative advantage across the life course reside in his use of the concepts of habitus, capital and field to clarify the relationship between structure and agency, and in particular to provide an account for human motivation to act. Whether or not one embraces this Bourdieuan "solution" to the agency/structure duality, the problem of how intentional action generates inequality over time is central to the linkage between research on aging and the life course and social stratification.

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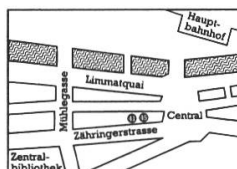
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