11 Sociocultural Influences on the Development of Children’s Action-Control Beliefs

Todd D. Little

Abstract

This chapter focuses on children’s action-control beliefs and how various facets of the action-control system are shaped and affected by sociocultural contexts. From an action theory viewpoint, the action-control system comprises at least three interconnected belief types. Each belief dimension reflects a link between the three constituents of human action: the agent, various means, and the ends (outcome). Children’s perceptions of the action relations among these constituents form three primary belief systems: agency beliefs, means–ends (or causality) beliefs, and control expectancy. Recent comparative investigations using this tripartite action-control framework indicate that some aspects of the relations between children’s beliefs and their performance can vary considerably across different sociocultural settings. In the school domain, consistent cross-sample differences have emerged in children’s beliefs about their personal access (agency beliefs) to school performance–relevant means (e.g., effort, ability, teachers) and the extent to which they believe they can personally control school performance outcomes (control expectancy). The magnitude of correspondence between these beliefs and actual school performance (school grades) has shown sizable cross-sample differences as well. In contrast to these variable outcomes, important sociocultural commonalities exist in the basic structure of children’s belief systems and in their everyday conceptions of what determines school performance (means–ends beliefs). In interpreting such outcomes, I discuss ways in which three general influences (cognitive, motivational, and sociocontextual), as proximal aspects of children’s sociocultural environments, can affect the development and expression of children’s action-control systems.

Introduction

Action-control beliefs are a powerful set of psychological constructs (Skinner, 1995). Their effects can be seen at every phase of an action sequence –
from intention, to initiation, action, interpretation, and subsequent intention—and at every step along the life course from infancy to old age (M. M. Baltes & P. B. Baltes, 1986; Berry & West, 1993; Brandstätter, in press; Brandstätter, Rothermund, & Schmitz, Chapter 14, this volume). Action-control beliefs account not only for group and individual differences in performance but also for intraindividual differences in actions and behaviors (Schmitz & Skinner, 1993). Particularly for children, as they begin to discover who they are and what they are capable of, evolving competence systems lay developmental foundations that they use repeatedly as they negotiate various developmental tasks and challenges (Cantor, 1994; Cantor & Sanderson, Chapter 7, this volume; Heckhausen & Schulz, 1993; 1995, and Chapter 2, this volume; Skinner, 1995; Weisz, 1983). In facing these challenges, children can be adaptive or maladaptive. A person with a developmentally adaptive profile has high aspirations, perseveres in the face of obstacles, sees more and varied options, learns from failures, and has a greater sense of personal empowerment and well-being—in short, this is a person with high personal agency and control expectancy. A person with a maladaptive profile, on the other hand, has limited personal resources: low aspirations, poor problem-solving skills, and feelings of helplessness and disempowerment—in short, this is a person with low personal agency and control expectancy (see Dweck, 1991, and Chapter 10, this volume; Graham, 1994, and Chapter 5, this volume; Skinner, 1995; Weisz, 1990).

As with most important psychological constructs, the range of individual differences between these extreme profiles is wide and many factors can influence the nature of the action-control system. In this chapter I review findings from an ongoing research project in which my collaborators and I conducted a series of cross-cultural studies examining children’s action-control beliefs and the degree of contextual variability in their competence systems. The chapter is organized into three main sections. In the first section, I present our action-control model of psychological control and highlight some of its similarities to and differences from related models. In the second section, I outline some of the strengths and weaknesses of cross-cultural investigations in this area as well as some of the methodological and interpretational problems that can arise. In the third section, I discuss some salient outcomes and life-span implications of our cross-national comparisons.

An Action Theory View on the Psychology of Control

Even when different instruments and models of psychological control are used, the importance of various psychological control perceptions has been repeatedly documented, particularly in the school domain (Dweck, Chapter 10, this volume; Graham, Chapter 5, this volume, Multon, Brown, & Lent, 1991; Stipek & Weisz, 1981; Skinner, 1995). This research shows, for example, that children’s beliefs about the general causes of school outcomes and about their own role in producing such outcomes consistently and systematically relate to their actual school achievement. One important characteristic of many recent psychological control theories is that they differentiate between various belief types that children may hold. These belief types include: agency and means—ends beliefs, competence and contingency beliefs, strategy and capacity beliefs, self-efficacy and outcome expectations (M. M. Baltes & P. B. Baltes, 1986; Bandura, 1995; Connell, 1985; Dweck & Elliott, 1983; Flammer, 1995; Graham, 1994; Skinner, 1995; Weisz, 1986).

An action theory perspective explicitly differentiates the possible belief relations among the primary constituents of an action sequence (Chapman, Skinner, & Baltes, 1990; Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindemberger, et al., 1994; Skinner & Chapman, 1987; Skinner, Chapman, & Baltes, 1988a, 1988b). The three constituents of an action sequence are the actor, the goal, and the various means by which the goal (or end) can be obtained. Agentive action reflects an agent’s general awareness of goals and the means to the goals, taking personal responsibility in pursuing a chosen goal, and being able to select and utilize potential means (Chapman & Skinner, 1985; see also Cantor & Fleeson, 1994). Action-control beliefs reflect three general belief types about the relations among the three constituents of an action sequence. Control expectancy reflects the link between an actor and the goal, personal agency beliefs reflect the links between an actor and the various means, and general means—ends beliefs reflect the links between the various relevant means and the goal or ends (Chapman, Skinner, & Baltes, 1990; Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindemberger, et al., 1994; Skinner, Chapman, & Baltes, 1988a, 1988b; see Table 11.1 for detailed definitions). These belief types are operationalized in the Control, Agency, and Means—Ends Interview (CAMI) (Little, Oettingen, Stetsenko, et al., 1995; Skinner, Chapman, & Baltes, 1988a, 1988b).

Means—Ends Beliefs

The CAMI has been quite useful for cross-cultural comparisons because of the nature of means—ends beliefs (see Skinner, 1995). As reflected in the CAMI, means—ends beliefs represent children’s general conceptions of the importance of a given means (e.g., effort, luck) for obtaining an outcome
Table 11.1. Summary of the action-control beliefs represented in the control, agency, and means-ends interview (CAMI)

<table>
<thead>
<tr>
<th>Definition</th>
<th>Belief dimensions</th>
<th>Symbolic belief relations</th>
</tr>
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<tbody>
<tr>
<td>Means-ends or causality beliefs (M \rightarrow E)</td>
<td>Effort</td>
<td>Means M</td>
</tr>
<tr>
<td>The child’s general expectations about the utility or causal power of specific causes or means (M) for a given domain-specific outcome (E) such as achieving good or avoiding bad school performance.</td>
<td>Ability</td>
<td>causes end E</td>
</tr>
<tr>
<td>Agency beliefs (A \rightarrow M : E)</td>
<td>Luck</td>
<td></td>
</tr>
<tr>
<td>The child’s belief that he or she (A) (has access to / can use / can implement) a specific means (M) that is relevant (\Rightarrow) for outcome (E).</td>
<td>Teachers’ role</td>
<td></td>
</tr>
<tr>
<td>Control expectancy (A \rightarrow E)</td>
<td>Unspecified</td>
<td>Agent A has means M</td>
</tr>
<tr>
<td>The child’s personal expectation that he or she (A) can achieve a given outcome (E) without reference to any specific means.</td>
<td></td>
<td>can achieve end E</td>
</tr>
</tbody>
</table>

Note: Boldface denotes one of the constituents of intentional action: A symbolizes the agent, M symbolizes a given outcome-relevant means, and E symbolizes the desired outcome. Outcome E, such as school performance, implies either the desire to succeed by accomplishing a positive outcome (i.e., getting a good grade) or to succeed by avoiding a negative outcome (i.e., not getting a bad grade).

(see Table 11.1). These causality-related beliefs reflect perceptions of the reasons children generally succeed or fail in attaining their goals. Means-ends beliefs are not personal attributions of performance successes and failures, but instead indicate children’s general notions of causality. Such causality conceptions are shaped through the interplay of reasoning skills and the naturally occurring contingencies embedded in a sociocultural context. In this regard, means-ends beliefs reflect children’s naive theories of the causes of success and failure in a given domain (Little & Lopez, 1997).

Similar models of psychological control operationalize the means-ends connection as first-person or personal strategy beliefs (as opposed to third-person or general causality beliefs; see Skinner, 1995). Although first-person (self-focused) operationalizations are quite useful for many purposes, means-ends beliefs (other-focused and causality-related; or contingency beliefs, Flammer, 1995; Weisz, 1990) can be used as points of reference to determine the degree of commonality in children’s views of the causal contingencies in their school-related worlds (see Oettingen, Little, Lindenerberger, et al., 1994; Stetsenko, Little, Oettingen, et al., 1995).

The CAMI measures children’s beliefs about the causal importance of five means: effort, ability, luck, teachers, and unknowns. Effort and ability are means that emanate from within the child, whereas luck, teachers, and unknowns emanate from outside the child (Little & Lopez, 1997). Children’s perceptions of the causal importance of the self-oriented effort and ability dimensions (as well as the distinction between them) can be influenced by such factors as cognitive maturation (Nicholls, 1978; Nicholls & Miller, 1983), adaptive self-regulation and self-perceptions of performance feedback (Dweck, 1991; Graham, 1991; H. Heckhausen, 1984; Karoly, 1993), and common goal structures across modern schooling environments (e.g., teaching the merits of effort and ability in becoming a productive adult in a given society; Elliott & Dweck, 1988; Stetsenko, Little, Oettingen, et al., 1995). In contrast, the non-self-oriented dimensions (luck, teachers, and unknowns) primarily involve culturally determined value characteristics (e.g., the degree and type of authority a teacher may have). In addition to cognitive and motivational influences, children’s perceptions of the non-self-oriented means may be shaped by factors such as sociocultural variations in the academic socialization practices of parents and teachers (Deci & Ryan, 1987; Dweck, 1986) and sociocultural variations in teachers’ interpersonal styles and practices (Ames, 1992; Ames & Archer, 1988; Boggiano & Katz, 1991).

Self-Related Agency Beliefs and Control Expectancy

Agency beliefs are personal perceptions of whether one possesses or can use a given outcome-relevant means such as effort, luck, or ability (e.g., “When it comes to school, I’m pretty smart”; for sample items, see Oettingen, Little, Lindenerberger, et al., 1994, and see Table 11.1). As self-related perceptions of one’s personal action resources (e.g., behavioral and cognitive capacity), learning history, and domain-related experiences, these beliefs can vary across individuals and across sociocultural contexts. In terms of other theories of psychological control, agency beliefs are similar to self-efficacy (Bandura, 1995), competence beliefs (Flammer, 1995; Weisz, 1990), and capacity beliefs (Skinner, 1995).

In our action theory model, agency beliefs reflect a child’s personal sense of empowerment for each specific means that is relevant to obtaining a goal. Control expectancy, on the other hand, reflects a child’s general likelihood assessment of obtaining the desired outcome. In contrast to the agency beliefs, control expectancy reflects a child’s global sense of whether he or she can produce or avoid a given outcome without referring to any specific means. Control expectancy is a means-unspecialized agency conception of whether a child can personally affect a desired outcome (e.g., “If I want to do well in school, I can”). With such an operationalization, one could view
the control-expectancy dimension as superfluous to the relevant agency dimensions. However, control expectancy reflects a broad self-related perception that is more susceptible to evaluative biases such as personal optimism or pessimism and self-protective buffering than are agency beliefs. In addition, control-expectancy judgments appear to be more affected by immediate (on-line) environmental influences than are agency beliefs (Lopez & Little, 1996).

Other models of psychological control such as locus of control theory (Rotter, 1966) and attribution theory (e.g., Graham, 1991, 1994; Weiner, 1986) are also highly related to the action theory framework. Two differences are the temporal direction (past, present, future) of the control judgments, and the first-person (self-focused) versus third-person (other-focused) distinction. For example, attributions are self-related judgments of the reasons for one's prior successes and failures. As such, they are most closely related to personal strategy beliefs (Skinner, 1995) and only moderately related to general means–ends beliefs. Again, the distinction is that means–ends beliefs are general causality-related conceptions (third-person, other-focused), and attributions or strategy beliefs are personal beliefs of what personally works for a child (first-person, self-focused).

The utility of these distinctions can be seen in many empirical patterns found for these action-control beliefs. For example, the role of luck functions differently when defined as a self-related agency belief as opposed to a causality-related means–ends belief. As an agency conception, luck behaves like a personal, self-oriented factor: Children who believe they have access to effort and ability also believe they have access to (i.e., can influence) their personal luck (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindeberger, et al., 1994). In contrast, as a causality-related means–ends conception, luck behaves like a non-self-oriented dimension. Children who believe that external-related means such as teachers and unknown causes are responsible for school outcomes also view luck as a similar influence. At an individual-differences level, luck, teachers, and unknown causes correlate positively with each other but are independent of the self-oriented effort and ability dimensions (see Little & Lopez, 1997). Moreover, the predictive power of action-control beliefs is quite distinct. In the school domain, self-related agency beliefs predict school performance to a far greater degree (i.e., r generally greater than 0.40, and as high as 0.9; see, e.g., Oettingen & Little, 1993) than do causality-related means–ends beliefs (i.e., typically less than 10 percent overlap). The personal control expectancy is in the middle ground, but always positive.

The Utility of the Comparative Approach

Sociocultural settings provide a quasi-experimental manipulation of many features that can shape children's beliefs about their world and their perceptions of their own competence. Moreover, cross-cultural research designs enhance generalizability because they vary the contexts in which such developmental processes occur (Baltes, Reese, & Nesselroade, 1977; Grob, Little, Wanner, et al., 1996; Little, 1997; Van de Vijver & Poortinga, 1992). A potential benefit of such designs is that they can highlight mechanisms that may shape and form children's beliefs. Surprisingly, however, few studies have examined cross-cultural similarities and differences in children's competence systems, even though examining the development of these beliefs cross-culturally can highlight which facets of the competence system are independent of sociocultural variations and which are not. One reason for the lack of cross-cultural studies may be related to the inherent difficulties in establishing the validity of comparison.

Some Methodological Concerns

Because of the potential for translation errors and other sources of bias (Poortinga, 1989), a number of empirical preconditions must be met in order to examine similarities and differences in comparative investigations (Little, 1997). In our comparative analyses, we delineate two general levels of data analysis: measurement and construct. The measurement level focuses on the psychometric issues surrounding the reliability and validity of comparison as well as possible qualitative differences in the fundamental nature of what the items have actually measured. The construct level focuses on the substantive interpretation or meaning of the examined psychological dimensions (Little, 1997).

From a psychometric viewpoint, absence of structural correspondence (e.g., differing loadings; Little, 1997) reflects noncomparable constructs. Such constructs can arise from translation errors and/or cultural bias in the measurement instrument (Poortinga, 1989). In our own work, for example, we found that one CAMI dimension (agency beliefs for luck) lacked structural correspondence in a sample of Japanese children (Karasawa, Little, Miyashita, et al., 1997). This outcome, which likely reflects a fundamental qualitative cultural difference in the luck concept, is an important and informative sociocultural outcome; however, meaningful quantitative comparisons cannot be made for such a construct.

Measurement equivalence (e.g., mathematical equivalence of all reliable
item-to-construct parameters; see Little, 1997) reflects quantitatively comparable constructs. When tenable, it indicates that the constructs’ measurement structure is the same in each sociocultural setting. It is significant that measurement equivalence does not necessarily imply that the constructs’ psychological meaning is identical (this information is contained in the relations among the constructs). Instead, measurement equivalence indicates that the constructs’ psychometric properties are similar enough to assert that the construct labeled “X” in one sociocultural setting is also a form of “X” in another sociocultural setting (e.g., X, x, or X) and not some other undeterminable construct (e.g., Z, y, or Q).

Measurement equivalence is an important basis for any cross-cultural study because it shows that items have been comparably translated and responded to with minimal or no bias (e.g., no response sets, or ceiling and floor effects). Such constructs can be equivalently defined and their psychological meaning can be quantitatively compared across different sociocultural contexts (Little, 1997; Poortinga, 1989; Van de Vijver & Poortinga, 1992). Measurement equivalence is therefore a critical and necessary condition for valid cross-cultural comparisons. In our own work, we have shown that measurement equivalence is a tenable feature of our comparisons.

In contrast to the measurement level, the psychological level focuses on the constructs’ underlying meaning. Assuming measurement equivalence of the manifest variables, the interpretable substantive information is contained in the constructs’ mean levels, correlations, predictive relations, and so on. Even though measurement equivalence is a necessary precondition to compare constructs, many substantive outcomes can occur. Specificity reflects constructs that have mostly different mean levels, correlational structures, and predictive relations. Functional similarity reflects constructs that have moderately similar patterns across sociocultural contexts. Finally, generality reflects constructs that have mostly similar mean levels, correlational structures, and predictive relations.

As detailed below, children’s causality-related means–ends beliefs show considerable sociocultural generality (or at least functional similarity), whereas children’s personal agency and control-expectancy beliefs show more sociocultural specificity.

An Interpretive Framework

The structural-cognitive, motivational, and sociocontextual perspectives are three basic views that can be utilized to interpret the cross-cultural similarities and differences in children’s psychological control (Little, Oettingen, Stetsenko, et al., 1995; Little & Lopez, 1997; Oettingen, Little, Lindenberger, et al., 1994). These perspectives are not mutually exclusive, nor do they provide competing hypotheses about the similarities or dissimilarities that should emerge. Instead, these foci, as a group, provide a framework for organizing some of the influences that can contribute to sociocultural similarities and differences in children’s action-control beliefs.

From a structural-cognitive perspective, certain developmental patterns might emerge as a function of cognitive maturity. For example, aspects of children’s causality conceptions have been linked to cognitive advances (Nicholls & Miller, 1983; Little & Lopez, 1997; Stipek, 1992). Similar developmental patterns such as correlational differentiation (systematic decreases in the correlations) among two or more action-control beliefs may be shaped by cognitive maturity.

From a motivational perspective, certain developmental patterns may be related to adaptive and maladaptive self-regulatory processes. For example, children who focus on causes such as effort and ability in their performance-related attributions generally use more effective adaptation and adjustment strategies in school settings than do those children who focus on non-self-oriented causes such as luck and teachers (Boggiano & Katz, 1991; Dweck, 1991; Dweck & Elliott, 1983; Graham, 1991; Stipek, 1992). From this viewpoint, similar developmental patterns such as mean-level increases in the importance of effort may be indicative of common motivational processes.

Finally, certain developmental patterns may emerge as a result of the constraints, values, and naturally occurring contingencies embedded in a given sociocultural context. Because school-related contexts and their associated organizational features are generally embedded in the overarching sociocultural fabric of a given society, they generally serve as proximal carriers of the more distal sociocultural influences (Hofstede, 1991; Oettingen, 1995). Therefore, although many factors that shape and regulate children’s action-control beliefs are similar, others can vary, such as parents’ values about academic performance, types of performance feedback, teaching styles, types of learning experiences, and so on (Bandura, 1995; Bandura & Jourden, 1991; Butler, 1992; Dweck, Chapter 10, this volume; Dweck & Elliott, 1983; Graham, 1994, and Chapter 5, this volume; Karoly, 1993; Little, Oettingen, Stetsenko, et al., 1995; Mac Iver, 1987; Oettingen, Little, Lindenberger, et al., 1994; Stipek, 1992). In general, cognitive, motivational, context-common, and context-specific factors converge to provide the setting in which children acquire their self- and causality-related understandings of school performance.
Substantive Outcomes

Two general questions have guided our studies of children’s action-control beliefs across various sociocultural settings. First, what is the basic structure of children’s action-control beliefs? Second, how do the various components of action-control function? Because we have couched both these questions within the context of our broader comparative approach, we therefore address their generality: What is the generality of the structure and function of action-control beliefs?

The Structure of Children’s Action-Control Beliefs

One question in our cross-cultural explorations has been whether the structure of the action-control system is the same in non-Western sociocultural settings as it is in Western contexts. Assuming that active goal-directed behavior is a general human process, the basic structure of the CAMI should be equivalent across sociocultural settings. This question is particularly relevant because not only have most studies on children’s psychological control been based on Western samples (particularly U.S. samples), but also some researchers have suggested that self-efficacious individuals emerge only in the context of the indigenous individualistic values of Western societies (see Karasawa, Little, Miyashita, et al., 1997; Stetsenko, Little, Oettingen, et al., 1995). For example, personal responsibility for performance is assumed to be a basic normative goal in Western countries (Grob, Little, Wanner, et al., 1996; Stetsenko, Little, Oettingen, et al., 1995).

At the most fundamental level, our cross-national comparisons have demonstrated that the measurement structure of children’s action-control beliefs is quite uniform across the sociocultural contexts examined, with only one notable exception. We found that Japanese children’s agency beliefs concerning luck did not follow the Western-based findings (Karasawa, Little, Miyashita, et al., 1997). Specifically, the luck concept in Japanese society appears to preclude individuals from having agentic beliefs in their own personal control of it. This outcome is significant for at least two reasons. First, it highlights the fact that our analysis system (MACS models; Jöreskog & Sörborn, 1989; Little, 1997) is sensitive to sociocultural differences in the measurement structure of the beliefs assessed by the CAMI. Second, it highlights the fact that some Western-based theorizing about psychological control does not generalize to all sociocultural settings.

Other than this one exception, our studies have demonstrated that nearly all the action-control dimensions are generalizable to many and varied sociocultural settings, and the measurement equivalence of the CAMI indicates that our comparisons at the psychological (construct) level are veridical. In addition to the measurement structure, the general internal correlational relations among the CAMI constructs showed considerable similarity across these different sociocultural settings. In particular, as detailed in the following paragraphs, at least three general features of the correlational structure are socioculturally consistent.

A first general consistency is that the correlations among the self-related agency and control-expectancy constructs form a moderately strong and positive correlational manifold (around 50 to 60 percent of the reliable variances are shared) (see Karasawa, Little, Miyashita, et al., 1997; Little, Oettingen, Stetsenko, et al., 1995). Such a pattern suggests that children who report that they have access to effort, for example, also report that they have access to both ability and luck and that they generally believe they can attain performance outcomes (i.e., control expectancy). On one hand, these correlational patterns suggest that a pervasive influence governs the self-related aspects of children’s competence systems. This influence would also be of adaptive significance in that a child would have many different dimensions of his or her personal resources to call upon when faced with a challenge. On the other hand, the lack of perfect correlation indicates that each dimension contains unique and reliable variance. Such correlational patterns also indicate that differential predictive relations could emerge across sociocultural contexts.

Second, the cross-domain correlations between children’s causality-related means–ends beliefs and the self-related agency and control-expectancy dimensions also show socioculturally consistent patterns. First, “Means–ends: Effort” correlated consistently and positively with each personal agency and control-expectancy dimension (r generally in the 0.20s). Such a pattern is consistent with an adaptive motivational profile (see also Dweck, Chapter 10, this volume). Specifically, those children who endorse the role of effort as an important means to acquire good grades (Means–ends: Effort) also report that they can exert effort (Agency: Effort), express their ability (Agency: Ability), influence their luck (Agency: Luck), solicit their teacher’s support (Agency: Teacher), and generally achieve good grades (Control Expectancy). Second, the children’s endorsements of the three non-self-oriented dimensions indicate an opposite, negative correlational pattern (r generally in the –0.20s). Such a pattern is consistent with a maladaptive motivational profile. Namely, those children who believe that factors such as luck, teachers, and unknown factors are important for obtaining school outcomes have lower self-related efficacy beliefs than
do children who generally downplay the causal importance of these non-self-oriented causes. Finally, in contrast to these socioculturally consistent patterns, the other self-oriented causal dimension, ability, showed a more varied pattern. Only in the two Berlin samples was the correlational link to the self-related beliefs positive (r generally in the 0.20s). In the other samples this link was negative or essentially zero (see Karasawa, Little, Miyashita, et al., 1997; Little & Lopez, 1997). Thus, the motivational implications of children’s conceptions of ability as a cause of school performance appear to be tied to their specific sociocultural contexts (Dweck, Chapter 10, this volume; Graham, Chapter 5, this volume).

The third general consistency is that the correlations among causality-related beliefs also indicate that these profiles are relatively independent. Specifically, although luck, teachers, and unknowns were moderately correlated with each other, as were effort and ability, children’s ratings of the importance of effort were mostly uncorrelated with the non-self-oriented dimensions, and ability showed moderate overlap with luck, teachers, and unknowns (Little & Lopez, 1997). The mixed pattern of individual-differences relations for ability suggests that children’s conceptions of the importance of ability in school performance are relatively complex (see Dweck, Chapter 10, this volume). That is, their ability perceptions contain unique self-oriented features (i.e., ability correlates with effort perceptions after controlling for the non-self-oriented dimensions) and unique non-self-oriented features (i.e., ability correlates with luck, teachers, and unknowns, after controlling for effort).

The link between the children’s self-related beliefs in their personal access to teachers and their beliefs in the causal influence of teachers was also consistent across sociocultural contexts. Specifically, children who believed more in the role of teachers as a causal influence in their academic outcomes also believed they had less access to their teachers’ help and support. This general negative relationship between the teacher-related means–ends and agency beliefs suggests that the social dynamic between students and teachers is one in which the more powerful a teacher is perceived to be, the less accessible or more distanced she or he appears to be. The motivational implications of such a relationship may ultimately be maladaptive. That is, although teachers generally are helpful (and gaining access to them would be beneficial), if they are perceived as very important then the benefits of access to them are diminished (cf. Boggiano & Katz, 1991).

In summary, both the measurement structure and the implied psychological structure (i.e., the pattern of internal correlations among the ten CAMI dimensions) have shown striking patterns of intercultural similarity.

These outcomes provide strong support for the action-related components of children’s competence systems assessed by such instruments as the CAMI (Little, Oettingen, & Baltes, 1995; Little & Wanner, 1996; Skinner, 1995). In addition, these outcomes support the idea that cross-cultural investigations can provide useful and comparable domains of psychological inquiry.

The Generality of Functional Aspects of Children’s Action-Control Beliefs

The Causality-Related Means–Ends Beliefs. Regarding the functional aspects of children’s action-control beliefs, another goal that has arisen in our work has been to determine the degree to which children of different sociocultural settings share similar views of the causes of school outcomes. How similar are the children’s causality-related means–ends beliefs? As summarized elsewhere (e.g., Little, Oettingen, Stetsenko, Little, Oettingen, et al., 1995; Little & Lopez, 1997; Oettingen, Little, Lindenberger, et al., 1994; Stetsenko, Little, Oettingen, et al., 1995), children’s everyday conceptions about the causes of good and bad school performance (means–ends beliefs) and their correlation with school performance is likely to be similar within sociocultural settings because, in addition to shared cognitive-developmental and motivational influences, these beliefs are shaped and constrained by core similarities across modern schooling environments. Formal schooling contexts in industrialized nations share generally similar goals, basic procedures, uniform settings, and common activities (see Stetsenko, Little, Oettingen, et al., 1995). As such, school contexts have many fundamental characteristics that are uniform influences across modern sociocultural settings (Little, Oettingen, Stetsenko, et al., 1995; Stetsenko, Little, Oettingen, et al., 1995).

Given the basic school-related commonalities in these sociocultural settings (Stetsenko, Little, Oettingen, et al., 1995), we found that in each sociocultural setting children’s beliefs about the utility of various school-relevant means were generally congeneric. In other words, children generally agree on the basic importance of causal influences such as effort and ability in producing school performance (see Figure 11.1A). Against the backdrop of basic similarities in these mean-level profiles, only three differences are evident in Figure 11.1A (Little, Oettingen, Stetsenko, et al., 1995). The Los Angeles children endorsed effort more highly than did the children in the other sociocultural settings, the children from the East and West Berlin samples endorsed ability more highly than Moscow and Los
Figure 11.1. Sociocultural similarities in the correlations between the causality-related means–ends beliefs and actual school performance. (A) Disattenuated mean levels of the means–ends beliefs. (B) Disattenuated correlation between the means–ends beliefs and the teacher-assigned school grades. Note the cultural generality of the adaptive relations between effort and school performance and the maladaptive relations of the non-self-oriented dimensions: Luck, Teachers, and Unknowns (Source: Data from Little, Oettingen, Stetsenko, et al., 1995.)

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Angeles children, and the children from the two formerly Communist contexts (East Berlin and Moscow) endorsed unknown factors more highly than did the children in the Western contexts. Notably, the differences in the ability ratings relative to the effort ratings suggest that in both German samples, effort and ability are nearly equally emphasized as contingent ways in which one can achieve school outcomes.

Similar to the mean-level patterns, striking sociocultural generality in the causality beliefs’ correlational profiles with academic performance has emerged (see Figure 11.1B). Although the strength of the relations is generally quite small (as expected), these profiles are consistent with a number of motivational assumptions (Dweck & Elliott, 1983; Graham, Chapter 5, this volume). First, the adaptive significance of the self-oriented dimensions can be seen in their generally positive correlations with school performance; second, the maladaptive impact of the non-self-oriented dimensions can be seen in their generally negative performance correlations. In particular, the adaptive importance of effort is consistent across these sociocultural settings. The more children believe that effort is an important causal constituent of school outcomes, the higher is their actual school performance. This pattern is also consistent with the internal structure of the beliefs. Recall that children with higher agency beliefs and control expectancy also had higher beliefs in the causal importance of effort in each sociocultural setting. Moreover, these two profiles are independent from one another (i.e., the self-oriented dimensions are uncorrelated with the non-self-oriented dimensions) (see, e.g., Little & Lopez, 1997). Such relations indicate that both profiles consistently emerge across these diverse sociocultural settings.

The relations for ability, on the other hand, were not as consistent across these sociocultural settings. In both the Moscow and Los Angeles samples, the individual-differences links showed complete correlational independence. The East and West Berlin samples, on the other hand, showed positive correlations with school performance, suggesting that ability, as a means to good school performance, is a strongly emphasized contingency in these sociocultural settings (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenberger, et al., 1994; see also Figure 11.1A). Regarding the non-self-oriented causes of school performance (luck, teachers, and unknowns), the maladaptive relationships were nearly universal in both direction and magnitude: The more that children endorsed luck, teachers, or unknown factors as important causal processes in school performance, the less well they did (accounting for about 8 percent of the reliable variance).

In addition to the motivational influences reflected in our cross-cultural data sets, general cognitive-developmental processes can be seen. Nicholls
and others have suggested that effort and ability are undifferentiated concepts in younger children (see Chapman & Skinner, 1989; Nicholls, 1978; Nicholls & Miller, 1983). Because young children are less cognitively mature, they are unable to grasp the idea that if two children of the same ability experience different outcomes then differential effort can produce the differences. If cognitive maturity is a general influence on children’s conceptual understanding that effort and ability are distinct causes of school performance, then the individual-difference relations between effort and ability should show general and systematic correlational differentiation (Little & Lopez, 1997). That is, the correlations should decrease with age. As shown in Figure 11.2A, this pattern is precisely what has emerged. In addition to the general influence of cognitive maturity, the consistent difference between the East and West Berlin settings and the other four sociocultural contexts (i.e., Los Angeles, Moscow, Prague, and Tokyo) indicates that sociocontextual influences also have an impact on the overall magnitudes of the correlations. For example, in the two Berlin settings, both effort and ability are strongly emphasized as the contingent processes by which good school performance can be achieved (Little & Lopez, 1997). This emphasis on both dimensions is consistent with the generally higher magnitudes of correlation in each age cohort.

Another notable similarity in the means–ends dimensions that is related to cognitive-developmental influences, motivational influences, and sociocontextual influences is the pattern of mean-level differentiation among the causality-related conceptions. In Figure 11.2B, these developmental patterns are generally uniform in their age-related dispersion. Relative to the ratings of the older children, in second grade the five causal dimensions are closer together in their rated importance; only effort was distinguished in this youngest age cohort. However, in the sixth grade, the causal dimensions show greater separation. These older children rated effort as the primary cause of school outcomes, followed by ability, unknowns, teachers, and, finally, luck. The increased importance of effort and the decreased importance of the non-self-oriented dimensions indicates that the adaptive utility of effort, as a central component in achievement, becomes more clearly understood and differentiated with each successive age cohort (see Heckhausen, 1984; Little & Lopez, 1997). Second, Figure 11.2B shows that teachers were viewed as quite important in the second and sixth grades; however, the trajectories across the sociocultural settings follow a quadratic path, reaching a low point in the fourth grade. This U-shaped quadratic trend for the role of teachers may be related to cognitive changes during this age range (Little & Lopez, 1997). In this regard, the omnipotent powerful other

Figure 11.2. Sociocultural similarities in the development of the causality-related means–ends beliefs. (A) The correlational differentiation between children’s ratings of the importance of effort and ability for school outcomes. (B) The range of the developmental trends in mean-level differentiation among the five causality-related beliefs in East Berlin, Los Angeles, Moscow, Prague, and West Berlin. (Note: Because of the relatively unique trajectories in the Tokyo sample, their developmental trends are superimposed on the range, or bandwidths, for the other sociocultural settings. Unless otherwise noted in text, the basic shape of the trajectory for each sociocultural context within a bandwidth was generally the same. The differences in slopes and locations are significant: \( p < 0.01 \).) (Source: Data from Little & Lopez, 1997.)
in the early years may lose his or her status as children realize that teachers are people too (i.e., as children develop greater social understanding). However, the more subtle power that teachers actually do possess, as the controllers and guides of the classroom environment, may be recognized in the later years (i.e., understanding a teacher’s position may require well-developed perspective-taking skills). Relatedly, teachers’ behaviors may change during the elementary school years. Early on, teachers may institute highly structured social-play activities. As children become more familiar with the general rules of interaction, less structured social activities emerge. Gradually, however, an increased focus on highly structured educational activities comes to the foreground in the latter elementary school years. In either case, the factors influencing the children’s high ratings of the teacher’s importance in the early elementary years may be different from those in the later elementary years, and both may be dependent upon children’s cognitive-maturational advances as well as the behavior of teachers.

Children’s discriminations among the outcome-relevant causes of school performance may reflect adaptive self-regulatory acquisitions. For example, research on the motivational consequences of children’s performance-related attributions indicates that a child’s reliance on the self-oriented causal dimensions of effort and ability leads to better adaptation and adjustment in school settings (Graham, 1991, and Chapter 5, this volume). Moreover, evidence suggests that the distinction between the self-oriented (effort and ability) and non-self-oriented causes (luck, teachers, and unknowns) enhances performance (Boggiano & Katz, 1991) because it allows children to develop accurate, consistent, and self-enhanced views of themselves and their performance outcomes.

Both the mean-level and correlational patterns for effort and ability relative to luck, teachers, and unknowns are consistent with this view (see Little & Lopez, 1997, for more details). For example, the correlational differentiation between effort and ability is consistent with the proposition that such a distinction contributes to the emergence of achievement motivation (Dweck & Elliott, 1983; Heckhausen, 1984). Moreover, effort increases in importance and ability remains at least stable during this middle childhood era in each sociocultural setting, while the non-self-oriented dimensions generally decrease with age (except for the importance of teachers during the fifth and sixth grades; see Figure 11.2B). These mean-level trajectories may reflect the adaptive benefits of the self-oriented causal processes relative to the non-self-oriented processes (Boggiano & Katz, 1991).

The motivational implications of the patterns of relations in these causality-related beliefs presupposes sociocultural uniformity for the motivational basis of these developmental trends. Such an assumption, however, may not always be tenable. For example, in contrast to the other sociocultural settings, the development of intrinsic motivation in school contexts may occur sooner in Japanese children (Azuma, 1996; Hess & Azuma, 1991; Holloway, 1988). Given that the non-self-oriented dimensions showed distinct, stable, and highly differentiated patterns in the Tokyo sample, some motivationally based mechanisms may already be in place when the Japanese children begin their formal schooling (Little & Lopez, 1997). Ample evidence indicates that Japanese parents emphasize preschool experiences to prepare their children for formal schooling (Azuma, 1996). These early experiences may indeed prepare Japanese children to cope adaptively with the demands of education upon entrance into the formal setting. In contrast, evidence suggests that, at least for schoolchildren in the United States, these motivationally based processes appear to be acquired later, perhaps through learning experiences during the elementary school years (Boggiano & Katz, 1991).

The relations for ability also showed distinctive mean-level and correlational patterns that suggest that the motivational influence of ability perceptions may be tied to the values and contingencies embedded in the children’s sociocultural contexts. In the Berlin samples, for instance, the emphasis on ability as a constituent of school performance showed up as higher mean levels relative to the other sociocultural contexts and as moderately positive correlations with both actual performance and the children’s self-related beliefs about performance. In the other sociocultural settings, these correlations were essentially zero or slightly negative (see Dweck, Chapter 10, this volume).

In summary, the causality-related means–ends beliefs showed many sociocultural similarities. The general mean-level profiles for these dimensions were mostly similar in each sociocultural setting. The ability profile was distinctive in the East and West Berlin samples, and the non-self-oriented dimensions were distinctive in the Tokyo sample. The general correlation profiles for these dimensions were also quite similar across the sociocultural contexts. The two Berlin samples again showed distinctive patterns on the ability dimension. In contrast to the general similarities for the means–ends dimensions, the children’s personal beliefs in their access to these school-relevant means have shown sizable cross-cultural variability, in terms of both the mean levels and the correlations with actual school performance.

Self-Related Agency Beliefs and Control Expectancy. A basic expectation in our research has been that the children’s self-related beliefs (the
agency dimensions and control expectancy) would show sizable mean-level differences and striking magnitude differences in the correlational link between these beliefs and actual school performance. Children’s agency and control-expectancy beliefs, being self-related conceptions, should be readily influenced by unique contextual features such as differences in feedback practices and instructional formats. As mentioned, school contexts and their associated organizational features are embedded in the overarching sociocultural fabric of a given society. In addition to their unique influence, school contexts serve as carriers of the distal sociocultural features (Hofstede, 1991; Oettingen, 1995; Stetsenko, Little, Oettingen, et al., 1995) and therefore provide the proximal context in which children’s self-perceptions of their academic competence are formed. Accordingly, our interpretations have focused on variable school-related features of sociocultural settings instead of on general distal characteristics such as societal values. Two such school-related attributes, which admittedly are a posteriori classifications, are degree of curriculum dimensionality and manner of performance feedback (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenberger, et al., 1994; Stetsenko, Little, Oettingen, et al., 1995).

Degree of dimensionality refers to the general distinction between unidimensional teaching structures (Mac Iver, 1987, 1988; Rosenholtz & Rosenholtz, 1981). Unidimensional curricula involve standardized and uniformly applied daily activities for all children in a classroom, whereas multidimensional formats involve generally individualized and often nonstandard daily activities that are geared to the specific learning needs of individuals or small groups within the larger classroom. Manner of feedback refers to varying aspects of feedback such as social transparency (public versus private feedback) (Oettingen, Little, Lindenberger, et al., 1994) and directness (critical and realistic feedback versus esteem-protective and supportive feedback) (see Ames, 1992; Ames & Archer, 1988; Boggiano & Katz, 1991; Deci & Ryan, 1987; Dweck, 1986; Stipek, 1992).

Figure 11.3 depicts the sizable variability across the various sociocultural settings in the degree to which school-related factors such as these may have contributed to the mean levels of children’s self-related agency and control-expectancy beliefs and the degree of correspondence between these beliefs and actual school performance. The top line reflects the percentage of the highest possible score in terms of the children’s self-related agency and control-expectancy beliefs. Higher scores reflect greater personal empowerment; in this regard, children in East Berlin and in Los Angeles reflect opposite ends of this distribution. The bottom line in Figure 11.3 reflects the correspondence between these self-beliefs and the teacher-assigned school grades. Again, East Berlin and Los Angeles children represent opposite ends of this distribution.

The publicly communicated and highly critical feedback typical in East Berlin classrooms, coupled with a highly unidimensional teaching format, appear to have lowered the East Berlin children’s subjective self-beliefs. These influences are consistent with the high correspondence between the action-control beliefs and actual school performance of the children from East Berlin (i.e., 63 percent) (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenberger, et al., 1994). For the Los Angeles children, the privately communicated and esteem-protective feedback they typically receive, coupled with a generally multidimensional teaching format, appear to have led to a level of subjective self-beliefs that is the highest of the sociocultural contexts that we have examined. These influences are also consistent with the very low beliefs–performance correspondence (i.e., 28 percent) (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenberger, 1994).

Compared to other sociocultural contexts, the Los Angeles setting reflects a culturally specific constellation of teaching factors that may have affected the children’s action-control beliefs (Little, Oettingen, Stetsenko, et al., 1995): relatively more individualized and mastery-focused classroom training and relatively more private and generally esteem-protective feedback.
terms of psychological mechanisms that may be involved, type of feedback (e.g., critical versus esteem-protective) is an important influence on the formation and regulation of self-beliefs (Bandura, 1995; Bandura & Jourden, 1991; Karoly, 1993). The effects of such self-regulatory mechanisms can be found in both the mean-levels of the agency and control-expectancy beliefs as well as the strength of the beliefs-performance correlations. For example, highly supportive (esteem-protective; e.g., the Los Angeles setting) feedback likely enhances children’s assessment of their own performance potential but attenuates the correspondence (correlation) with actual performance (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, 1995; Stipek, 1988). In contrast, teachers’ critical performance-based feedback (e.g., East Berlin) likely lowers children’s personal sense of agency and control expectancy as well as strengthens the generally positive relations between these self-related action resources and actual performance (Ames, 1992; Dweck, 1986; Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenerberger, et al., 1994).

Uni- and multidimensional teaching formats also can influence children’s agency and control-expectancy conceptions and their correspondence with school grades (Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenerberger, et al., 1994). These schooling formats differ in the extent to which they allow for social-comparison opportunities and self-mastery experiences (Bandura, 1995; Butler, 1992; Dweck, Chapter 10, this volume; Frey & Ruble, 1990; Little, Oettingen, Stetsenko, et al., 1995; Oettingen, Little, Lindenerberger, et al., 1994; Ruble, 1983; Stipek, 1988). For instance, multidimensional systems limit comparisons between children because no or few other children participate in the same task at the same time. Multidimensional formats also provide children with comparatively more performance-relevant mastery experiences because teachers attempt to define skill-appropriate tasks at which each child can succeed. When combined with supportive and esteem-protective feedback, multidimensional systems would contribute to higher levels of children’s agency and control expectancy, and to a lower beliefs-performance correlations. Unidimensional teaching formats, on the other hand, provide children with ample daily opportunities to compare their like-task performances with those of others. In addition, unidimensional formats tend to apply the same performance-based goals to all children (Dweck, 1986, 1991; Rosenholtz & Rosenholtz, 1981). Such unidimensional systems would contribute to lower mean levels of agency and control expectancy and higher beliefs-performance correlations.

Although these two extremes are remarkable, each comparison within

Figure 11.3 offers important insights into the nature of the sociocultural influences on the development of children’s action-control beliefs. For example, when we initially compared the East and West Berlin children, we found that these two contexts also produced two opposing mean-level and correlational profiles (Oettingen, Little, Lindenerberger, et al., 1994), although the differences are not as large when they are compared to the profiles of children from Moscow or Los Angeles. For the East Berlin children, the critical and public feedback as well as the unidimensional classroom format produced individual-difference relations between the children’s beliefs about themselves and their actual performance that were higher than those of their West Berlin peers. In addition, the mean levels of the East Berlin children’s beliefs were much lower than those of the West Berlin children (see Oettingen, Little, Lindenerberger, et al., 1994; and Figure 11.3). Because these two samples share a generally common historical-cultural background, the East Berlin–West Berlin comparison demonstrates the powerful influence that differential features of educational environments can have when basic cultural features are similar. That is, in comparison to the other sociocultural contexts, these two settings share a common cultural heritage and a common socioeducational history. For example, both systems traditionally employed generally unidimensional teaching practices and critical feedback, although these features of the educational practices in the former East Berlin were accentuated in comparison to those of their West Berlin neighbors (Oettingen, Little, Lindenerberger, et al., 1994). The accentuation of such practices was in accordance with the educational goal of former Communist regimes, to enhance realistic and accurate self-appraisal (see Oettingen, Little, Lindenerberger, et al., 1994, for details).

Moreover, the basic goals of the educational systems in both East and West Berlin are also similar (Oettingen, Little, Lindenerberger, et al., 1994). For example, near the end of the sixth year of elementary education in West Berlin, parents and children choose the next level of secondary education (e.g., Gymnasium, Realschule, and Hauptschule). This educational choice is available for some children in West Berlin even after the fourth year of elementary education. In conjunction with the general emphasis on realistic and accurate self-appraisal in the East Berlin system, a similar choice is made at the end of the eighth year of schooling. These educational streams are generally tied to the children’s performance capabilities, and the parent–teacher–child triad actively discusses a child’s personal capabilities in the process of choosing the most appropriate educational stream. Given the differentiated educational streams, teachers’ evaluations are likely to carry important decision-making weight. As presented above, such structural
similarities between the educational systems in East and West Berlin are consistent with the children’s high evaluations of ability as a causal constituent of school outcomes, its positive correlations with actual school performance and self-related beliefs (agency beliefs and control expectancy), and its high levels of correlation with “Means–ends: Effort.”

Notably, the developmental trends for agency and control-expectancy beliefs have not shown age-related differences (e.g., Oettingen, Little, Lindenberger, et al., 1994; Little, Oettingen, Stetsenko, et al., 1995; Skinner & Chapman, 1987; Skinner & Connell, 1986; Stetsenko, Little, Oettingen, et al., 1995), indicating that the overall outcomes (Figure 11.3) are not due to moderating developmental patterns. That is, the differences in the sociocultural contexts are evident as early as the second grade and remain stable at least during middle childhood. In addition, agency and control-expectancy beliefs have consistently exhibited a high positive manifold that is generally invariant across these ages.

A final point of comparison shown in Figure 11.3 is the location of the Moscow children within these patterns. Moscow children shared a political system and educational policy similar to those of children in East Berlin, but differed in their cultural heritage and socioeducational history (Oettingen, 1995). Because Moscow schools were predominantly collective-oriented (as compared to the individual-oriented teaching practices of Western schools), teachers would typically emphasize the interests of the collective rather than the individual, teaching students in the context of a group with a curriculum and pace anchored to the overall group (i.e., moderately unidimensional). Therefore, although educational reforms toward more cooperative educational formats were afoot in Moscow schools, individual needs were generally taken into account to a lesser extent than in Western schooling contexts but more so than in East Berlin (see Stetsenko, Little, Oettingen, et al., 1995). Moreover, the Moscow system did not employ differentiated educational streams. Although certain schools were considered better than others, these schools were not integrated into the educational practices such that all children would progress through them; instead, these schools were often available only to the children of favored political party members. Such features of the educational context in Moscow are consistent with the outcomes for those children: They had higher mean levels of subjective self-beliefs and lower beliefs–performance correlations than did the children in the Berlin settings.

Potential Moderator Effects. In a further comparison of East and West Berlin children (Oettingen & Little, 1993), we addressed the role that intelligence might play in moderating the East–West Berlin differences (Figure 11.3; Oettingen, Little, Lindenberger, et al., 1994; see also Oettingen, 1995). Specifically, when we examined these relations by level of Raven intelligence, a powerful interactive effect emerged: The mean-level differences were centered primarily in the low- and moderate-Raven children and nonexistent in the high-Raven children (see Figure 11.4A). The correlational patterns followed a similar pattern (see Figure 11.4B). The low-Raven children in East Berlin had a very high correlation between their self-beliefs and actual performance while their low-Raven compatriots in West
Berlin had a quite low correlation between beliefs and performance. The two middle-Raven groups were closer to one another, but still different, and the high-Raven groups showed an identical beliefs–performance correlation.

Such strong interactive effects with level of Raven intelligence are consistent with the differences in the educational practices within these two settings. East Berlin had a stronger emphasis on accurate self-appraisal and, accordingly, teachers provided appropriate feedback to their pupils. Such practices, in addition to learning conferences within teachers candidly discussed each child’s performance capabilities in front of the other children, had their greatest impact on the low-Raven group. These children showed nearly a 90 percent overlap between their self-related beliefs and their actual performance, and reported the lowest levels of personal empowerment.

**How Our Findings Compare with the Literature on U.S. Children.** The patterns of similarity found in the children’s causality-related beliefs indicate that many basic commonalities exist across educational settings in the United States and Europe. In addition to cognitive-developmental influences and basic motivational assumptions, core aspects of the formal educational environment appear to be general influences across sociocultural settings. However, because the outcomes for the Los Angeles sample are clearly within the patterns found in previous research on samples from the United States (Findley & Cooper, 1983; Multon, Brown, & Lent, 1991; Stipek & Weisz, 1981), the variable sociocultural patterns suggest that the majority of work on the self-related beliefs about school performance among children in the United States is restricted to U.S. settings (Little, Oettingen, Stetsenko, et al., 1995).

Given that these general patterns were replicated in our Los Angeles sample, two conclusions can be drawn. First, the sizable cross-cultural variability in the nature of these action-control beliefs and their connection to school performance are not an artifact of our theoretical and measurement framework, nor of our analytic system. Instead, these comparative outcomes reflect comparable constructs that are now solidly linked to the plethora of studies based in the United States (e.g., Multon, Brown, & Lent, 1991). Second, the U.S. pattern represents one extreme of the distributional profiles found among these sociocultural contexts. The Los Angeles children evinced the highest mean levels of agency and control-expectancy beliefs and the lowest correlations between these beliefs and actual school grades. The opposite extreme is found in the East Berlin children, who displayed the lowest sense of personal agency and control expectancy and the highest degree of beliefs–performance correspondence. These differences in the beliefs–performance correlations are sizable in terms of the variance explained (63 percent in East Berlin, 28 percent in Los Angeles; see Figure 11.3).

**Future Directions and Life-Span Implications**

Because the explanatory possibilities that we have used in our work are a posteriori, they must be explored more thoroughly; however, independent of how accurate our explanations are, the diversity of the outcomes raises several new research challenges. That is, not only are the mean levels of the children’s self-related agency and control-expectancy beliefs affected by sociocultural differences, but so too are the correlations between these beliefs and actual school performance. As a result, these comparative findings may serve as a catalyst for gaining better insights into the sizable plasticity of children’s action-control systems and the ways in which action-control beliefs optimally relate to both immediate performance and long-term development.

Although discussion has emerged concerning the most functional levels of beliefs (Baumeister, 1989; Taylor & Brown, 1988), surprisingly few studies have addressed how children’s competence systems optimally contribute to future development gains and produce agentic and successful individuals within adult society (see Little, Oettingen, Stetsenko, et al., 1995). Given that these complex relations likely differ across sociocultural, individual, and domain contexts, the answer to such questions may center on gains and losses (P. B. Baltes, 1987). The gains associated with present functioning may yield losses in future capacities, and vice versa; the gains in one domain may yield losses in another domain, and vice versa; or the gains in the mean levels of children’s self-beliefs may yield losses in their beliefs–performance correspondence, and vice versa. Perhaps, by focusing on the gains and losses between the level of personal agency and its correspondence to actual performance, future research may be able to determine the optimal balances that lead to maximum performance gains and contribute to enhanced self-evaluations at each phase along the life span.

Whether the profile differences presented here reflect benefits or detriments to children’s future (life-span) performance gains is difficult to address (Little, Oettingen, Stetsenko, et al., 1995). On the one hand, some outcomes could be viewed as developmental risk factors for these children. For example, the self-related agency and control-expectancy beliefs of children in East Berlin may be too low and too rigidly tied to actual performance to
enable them to maximize their life-span developmental potential. Such a pattern may inhibit these children from engaging in new challenges and may contribute to general feelings of ill-being and unempowerment that hamper motivation and goal pursuit throughout the life span. Conversely, the children in the United States may be too agentic and reflect dysfunctionally low levels of beliefs–performance correspondence. Such a pattern may contribute to unrealistic expectations that, if brought in line with the reality of one’s performance capabilities, could lead to feelings of disappointment and apathetic attitudes toward education, perhaps even contributing to behaviors such as dropping out of school (see e.g., Lerner, in press) and to a continuing life-span cycle of low aspirations and personal failures.

One could also evaluate the outcomes for these children as protective factors. For example, the East Berlin children’s self-related agency and control-expectancy beliefs may indeed be realistic and accurately tied to their actual performance capabilities. Such a pattern may facilitate these children’s choices of realistic and achievable goals and contribute to greater feelings of self-worth and well-being, thereby providing realistic action-control resources that may be called upon throughout development. Conversely, the Los Angeles children’s belief profile may provide a self-belief buffer that protects their feelings of personal agency. Such a pattern may allow them to persist in the face of challenges and disappointments or to choose seemingly unattainable goals that, because of the additional personal resources of their self-beliefs, are indeed attainable (see, e.g., Seligman, 1991).

The optimal profile that provides the greatest opportunity for future growth and development may lie somewhere between these extremes or involve combinations such as the high mean levels of the Los Angeles sample coupled with the high beliefs–performance correspondence of the East Berlin sample. However, what is optimal and adaptive in one sociocultural context or a given developmental phase may not be for another. Is there developmental continuity in how and which of one’s personal action-control resources best serve to facilitate successful adaptation to developmental challenges (Brandstädter, in press; J. Heckhausen, 1998)? Do these developmental processes generalize to other sociocultural contexts? More research is necessary in order to determine what is most adaptive for immediate performance and long-term developmental gains.

More specifically, one goal of future research might be to understand the mechanisms that have produced the high mean levels of agency and control-expectancy beliefs and the low correlations with actual performance among children in the United States – especially in light of the generally higher beliefs–performance correlations and lower mean levels found in other sociocultural settings. To gain such understanding, researchers would need to include many school settings within a given sociocultural context and also explicit measures of the processes that likely contribute to the formation of these action-control beliefs. Conceptualizing relatively amorphous cultural differences as a set of individual-difference variables would allow researchers to examine the nature of these influences in terms of both within-culture and between-culture variability (Little & Lopez, 1997) as well as to examine whether the sources of cultural variability have differential influences at different phases of the life span.

A second goal of future research might be to determine the long-term symbiosis between action-control beliefs and performance attainments as well as how they function in other life contexts. Here, following particular cohorts longitudinally, it would be necessary to detail the antecedent conditions that optimally lead to performance gains and successful development (M. M. Baltes & P. B. Baltes, 1987). To attain this goal, researchers need to incorporate additional and more broad-based outcome measures (e.g., affective, behavioral, and cognitive) to obtain more information about the developmental consequences of actions and their interpretations and to examine broader age ranges across the life span. Moreover, research such as this must begin to move beyond the relatively circumscribed domain of school performance to more ill-defined yet commonly encountered domains of functioning such as friendships, work, family, and community (see, e.g., Diewald, Huinink, & Heckhausen, 1996; J. Heckhausen, 1998; J. Heckhausen & Hundertmark, 1995; Lopez & Little, 1996).

Notes

1. The data reviewed were collected as part of a collaborative cross-cultural project that examined children’s action-control beliefs about school performance, directed by Todd D. Little, Gabriele Oettingen, and Paul B. Baltes at the Max Planck Institute for Human Development and Education, and the Performance Beliefs Project, codirected by Hiroshi Azuma, Takahiro Miyashita, Mayumi Karasawa, and Mari Mashima at Shitayuri College. Other cooperating members include Anna Stetsenko, now at the University of Berne, and the late J. Kotaskova from the University of Prague.

2. The CAMI and related instruments (e.g., Multi-CAM) are available upon request.

3. Although many comparisons and analyses are yet to be performed, only those findings from analyses that have been conducted are presented. As an overview, however, the samples to which I refer – and which were
successively collected after the initial comparison between children from East Berlin and children from West Berlin (Oettingen et al., 1994) – are as follows: East Berlin, spring 1990 (N = 313), East Berlin, spring 1991 (N = 297); East Berlin, spring 1992 (N = 422); West Berlin, spring 1991 (N = 517); West Berlin, spring 1992 (N = 452); West Berlin, spring 1993 (N = 516); Los Angeles, spring 1992 (N = 657); Moscow, fall 1990 (N = 551); Prague, spring 1991 (N = 768); Tokyo, winter 1993 (N = 817).

References


