Long Strides on the Journey Toward Self-Authorship: Substantial Developmental Shifts in College Students’ Meaning Making

James P. Barber, Patricia M. King, Marcia B. Baxter Magolda

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This article reports on a study that examined the subset of qualitative cases in the Wabash National Study of Liberal Arts Education where students experienced substantial self-authorship shifts over the first three college years (N = 30 students, 90 narratives). Engagement in experiences and roles demanding more sophisticated, internal meaning making promoted substantial developmental shifts.

Postsecondary education aims to enable learners to become critical thinkers and effective citizens. For example, AAC&U’s (2007) Liberal Education and America’s Promise project identifies learning outcomes keyed to work, life, and citizenship that include a combination of knowledge, intellectual and practical skills, personal and social responsibility, and integrative learning to apply all of these in addressing complex problems of the 21st century. Yet recent reports (Arum & Roska, 2011; Pascarella, Blaich, Martin, & Hanson, 2011) provide evidence from major national studies that many students make very small shifts in critical thinking and reasoning skills during college. Similarly,
many prominent studies describe personal development (including cognitive, intrapersonal, and interpersonal meaning-making capacities) in early adulthood as unfolding slowly and in small increments (Baxter Magolda, 1999; Kegan, 1994; Kegan & Lahey, 2009; King & Kitchener, 1994; Perry, 1970).

Many scholars argue that college learning outcomes such as critical thinking and intercultural competence require complex developmental capacities to understand multiple perspectives, identities, and relationships (Baxter Magolda, 2004; Kegan, 1994; King & Baxter Magolda, 2005, 2011). Specifically, learning “includes developing a frame of mind that allows students to put their knowledge in perspective; to understand the sources of their beliefs and values; and to establish a sense of self that enables them to participate effectively in a variety of personal, occupational, and community contexts” (King & Baxter Magolda, 2011, p. 207). The complex challenges college graduates face are not just technical challenges that require skill acquisition but adaptive challenges that require transforming one’s mindset to a more complex way of making meaning (Heifetz, 1998; Kegan & Lahey, 2009).

For example, intercultural competence or maturity is a growing demand for college graduates and a common collegiate learning outcome. Educators hope that students will understand and respect multiple cultural perspectives (a cognitive capacity), be able to articulate and engage in challenges to their cultural perspectives (an intrapersonal capacity), and engage in interdependent relationships with diverse others grounded in an appreciation for difference (an interpersonal capacity) (King & Baxter Magolda, 2005). Research on college students’ meaning making suggests that students early in college often rely on authorities for knowledge based on the assumption that there is one right perspective (Baxter Magolda, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Kitchener, 1994; Perry, 1970). Making meaning of the world in this way is insufficient for taking a cultural perspective different from one’s own, a key component of intercultural competence (Bennett, 1993). Relying on authority for knowledge is often accompanied by lack of awareness of one’s values and social identities, which results in viewing differences as a threat to one’s identity (Helms, 1995; Kegan, 1994; Phinney, 1990; Torres, 2003). Finally, these cognitive and intrapersonal capacities are often accompanied by early interpersonal capacities in which students engage in dependent relations with similar others (Bennett, 1993; Chickering & Reisser, 1993; Kegan, 1994). Thus students who use these early developmental capacities are not equipped to meet the adaptive challenges posed by intercultural maturity. Meeting these challenges requires an evolving awareness of uncertainty and
eventually the ability to use multiple cultural frames (cognitive capacities), an evolving sense of identity and eventually the capacity to create an internal sense of self that considers one’s social identities (intrapersonal capacities), and an evolving willingness to refrain from judgment when interacting with diverse others and eventually a capacity to fully appreciate human diversity (interpersonal capacities) (King & Baxter Magolda, 2005). These complex forms of meaning making that support intercultural maturity are components of self-authorship, or the internal capacity to define one’s beliefs, values, identity, and social relations (Baxter Magolda, 2001, 2009; Kegan, 1994), thus taking responsibility for one’s actions and life decisions, not simply relying on the advice or actions of others.

If achieving learning outcomes requires shifting frames of mind from authority dependence to ways of understanding one’s experience that reflect more complex meaning-making capacities, identifying educational practices that help college students succeed and achieve desired learning outcomes involves discovering what experiences promote these developmental capacities. National studies (e.g., Kuh, Kinzie, Schuh, Whitt, & Associates, 2005) have identified high-impact practices, such as engaging in research, service learning, intergroup dialogue, and active learning pedagogies, that enhance learning. One national study, the Wabash National Study of Liberal Arts Education (hereafter, WNS), explored experiences students reported as significant to their growth from the vantage point of the influence of those experiences on developmental capacities (King, Baxter Magolda, Barber, Kendall Brown, & Lindsay, 2009). That study found that students’ approach to interpreting and understanding their experiences (in other words, their meaning-making capacities) was strongly related to what they learned from experiences. This article, also drawn from the WNS, examines the experiences of students who made substantial shifts in meaning-making capacities to learn more about the characteristics of personal and educational experiences that contribute to considerable growth toward self-authorship.

As described above, meaning making is an important component of student learning; this is demonstrated in extensive research on student learning and development that establishes the necessity of complex meaning making for complex learning (Baxter Magolda, 2001, 2007). Thus, since the achievement of higher order learning outcomes is associated with complex meaning making, those students who more quickly adopt increasingly complex forms of meaning making will be advantaged in learning. Students who make these shifts toward desired outcomes are therefore of great interest to educators and scholars alike: Understanding the factors that trigger these substantial shifts could help
faculty design more powerful learning experiences, could help administrators make decisions about supporting educational initiatives, and could help scholars understand sources of variability in the typical slow pace of development. In addition, given the national interest in identifying high-impact practices (Brownell & Swaner, 2009; Kuh, 2008), identifying the experiences of those students who experience extensive growth may help identify additional high-impact practices.

**Theoretical Framework**

We employ the self-authorship model as our theoretical framework. Self-authorship is a holistic model describing how individuals grow and change and has frequently been investigated in the context of higher education (Meszaros, 2007). Research portrays a developmental trajectory toward self-authorship from a reliance on externally derived ways of thinking to more internally derived views (Baxter Magolda, 1999, 2001; Kegan, 1994).

The work of early developmental researchers, including Jean Piaget, provided a foundation for the work of Robert Kegan (1994), who argued that the complexity of adult life in modern America called for increasingly complex forms of education and methods for organizing our experiences and thoughts. Kegan employed Piaget’s notion of constructive-developmentalism to illustrate that this theory is both constructive, dealing with how people construct meaning, and developmental, indicating evolution in their ways of making meaning.

Kegan’s framework describes how he envisions human consciousness unfolding and developing over the course of a lifetime. His model consists of five “orders of consciousness” or phases that people move through as they grow and change in the ways that they think about the world, themselves, and their relationships with others. The term “self-authorship” was coined by Kegan to describe the fourth order of his framework, where individuals begin to carry out such mental tasks based upon internal criteria rather than external approval or formulae. Baxter Magolda (2001) applied this theory to postsecondary pedagogy and stated that “constructive-developmental pedagogy is essential for a multi-layered approach that prepares college graduates to be lifelong learners who can keep pace with the evolution of knowledge” (p. 233).

Self-authorship as conceptualized by Kegan (1982, 1994) and Baxter Magolda (1999, 2001, 2008, 2009) comprises three dimensions of development: the epistemological or cognitive dimension (i.e., how one makes meaning of knowledge); the intrapersonal dimension (i.e., how one views one’s identity); and the interpersonal dimension (i.e.,
how one constructs one’s relationships with others). Individuals who are “self-authoring” consider multiple perspectives, reflect on their own values and motivations, and utilize goals and perspectives that are internally grounded and evaluated as a foundation for meaning making.

Research has demonstrated that most college students do not evidence self-authorship by the time they graduate (Baxter Magolda, 1999, 2001; Kegan, 1994). However, noteworthy exceptions to this pattern have been found in research with populations who have experienced marginalization and who demonstrated self-authoring approaches (Abes & Jones, 2004; Pizzolato, 2003; Torres, 2010). Learning about what sparks these less common shifts is particularly important, and this data set offers an opportunity to carefully explore this phenomenon.

Kegan (1994) has asserted that growth in meaning making on these three dimensions, or movement from authority-dependence to an internal framework or self-authorship, is crucial to critical thinking. Many argue that increases in critical thinking and effective reasoning (as well as in other outcomes) extend beyond skills to encompass fundamental changes in the ways learners think about the nature of knowing and their role in knowledge construction (Baxter Magolda, 2004; King & Baxter Magolda, 1996; Meszaros, 2007; Mezirow & Associates, 2000). Thus learning and personal experiences that promote critical thinking and effective reasoning are likely those that also promote complex forms of meaning making. Qualitative data from the WNS longitudinal study also offer the possibility that particular teaching and learning experiences can yield substantial growth in meaning-making capacities that undergird critical thinking and reasoning. Since the WNS explored meaning making (Barber, 2009, 2012; Baxter Magolda, King, & Drobney, 2010; Baxter Magolda, King, Taylor, & Wakefield, 2012; King, 2007; King et al., 2009), we now have the opportunity to investigate substantial shifts in this subsample.

**Methods**

The research reported here is drawn from the WNS, which uses a longitudinal concurrent mixed methods design in which students from one cohort of entering college students completed several assessments over four years. The broad purpose of the WNS is to examine both the institutional practices and student experiences that are related to growth on self-authorship and seven liberal arts outcomes: integration of learning, inclination to inquire and lifelong learning, effective reasoning and problem solving, moral character, intercultural effectiveness, leadership, and well-being (King, Kendall Brown, Lindsay, & VanHecke, 2007).
**Institutional and Interview Sample**

Researchers used a two-step sampling strategy to select participating institutions. In the first step, we selected 19 institutions from more than 60 colleges and universities that responded to a national invitation to participate in the WNS; this decision was based on their vision of liberal arts education and the practices they implemented in the service of this educational goal. They were also selected to reflect a variety of institutional characteristics, including institutional type (e.g., liberal arts college, research university) and control (public or private), size, and location, among others. These institutions comprise the survey portion of the study. We randomly selected students from among first-time, first-year, traditional-age students attending these institutions; all completed a series of surveys and assessments. In the second step, the WNS research team selected six of these institutions to also participate in the interview phase of the study. They were selected to reflect a range of institutional types and locations and with student bodies that were sufficiently diverse to increase the likelihood of obtaining an adequate sample of students of color. The six institutions included four small liberal arts colleges, one mid-sized and one large university, two Hispanic-serving institutions, and one that enrolls approximately 50% African American and 50% White students. At the outset of the study, the majority of participants made meaning of their experiences by relying on the views of parents, professors, and others whom they perceived as knowing how to act better than they did themselves (Baxter Magolda et al., 2012). This approach reflects what Baxter Magolda (2001) referred to as “following formulas” (p. 40) and is consistent with early developmental phases of the journey toward self-authorship where external influences tend to determine beliefs and actions.

We selected interview participants from students at the six institutions who completed the quantitative survey component of the study and indicated their willingness to participate in an interview, oversampling males and students of color to yield a more balanced distribution. The study team interviewed 315 students early in the fall of 2006 (hereafter, Year 1). About one-third of these students identified as African American, Hispanic, or Asian/Pacific Islanders \( n = 27–35 \) per group; the remainder identified as White. About 10% were born in countries other than the U.S. The sample was 54% female. We were able to contact and reinterview 228 of these students in the fall of 2007 (Year 2) and 204 in the fall of 2008 (Year 3).

**Data Collection**

Trained interviewers conducted individual interviews that lasted 60
to 90 minutes; these were audio recorded and transcribed verbatim. Participants received a stipend of $30. The interview was organized into three segments to give respondents maximum freedom to identify relevant content yet elicit information about the practices and conditions that foster growth on the seven outcomes and self-authorship (Baxter Magolda & King, 2007). The main segments of the interview were constructed in situ—as the conversation unfolded (Patton, 2002). The opening segment focused on how students’ entering characteristics (i.e., ways of constructing knowledge, self, relationships; personal history) affect achievement of or development toward self-authorship. The second (and primary) segment of the interview addressed the educational experiences students regarded as key to their development and how they make meaning of these experiences. The third segment elicited the respondents’ synthesis of their experiences and patterns in their meaning making.

Data Analysis

Working from the complete interview transcripts, trained team members created summaries of each interview that consisted of three major elements: 1) an overview of the student’s background characteristics; 2) a description of each experience the student identified as important, its effect on the student (i.e., what the student learned from the experience), the relationship of the effect to liberal arts outcomes, whether and, if so, how it contributed to the student’s development, and illustrative quotes from the student; and 3) an assessment of the student’s developmental meaning making in cognitive, intrapersonal, and interpersonal dimensions—as well as an overall assessment across dimensions illustrated with verbatim excerpts (Baxter Magolda & King, 2012). Initially we used our theoretical framework and contemporary research to identify three widely accepted meaning-making structures (i.e., external, mix of external and internal, internal) to ground our initial interpretations of students’ meaning making. This broad continuum enabled us to balance using a priori theory appropriately with an inductive approach to allow nuances to emerge from our diverse participants. Longitudinal analysis of these data revealed finer distinctions within the three broad structures and led to the increasingly refined continuum of ten positions (Baxter Magolda & King, 2012) used in this analysis. Our process mirrors Perry’s (1970) description of the evolution of his developmental positions. We adopt his use of the term position because it reflects the particular structure a person uses to construe knowledge, identity, and relationships at a particular point in time. As is the case with Perry’s nine positions, our ten-position continuum reflects a nominal scale. Each position
reflects a more complex meaning-making structure than the prior position; however these positions evolve gradually, vary in duration, and progress on the continuum is better characterized as a helix than a line.

To guide self-authorship assessment, team members used a ten-position continuum (Baxter Magolda & King, 2012). Using “E” to symbolize external voice and “I” to symbolize internal voice, the system includes three positions within solely external voice [Ea, Eb, Ec], two positions within predominantly external voice (what we call entering the crossroads) [E(I), E-I,], two positions within predominantly internal voice (what we call leaving the crossroads) [I-E, I(E)], and three positions within solely internal voice (i.e., self-authorship) [Ia, Ib, Ic]. This ten-position continuum reflects the gradual movement of external forces to the background and the internal voice to the foreground (see Table 1 for a fuller description). We used this longitudinal data analysis protocol to analyze all interviews. Because the focus of this article is on change over time, we conducted a procedural check on interpretation by reviewing summaries that reflected an unusual amount of growth or regression; this allowed us to verify that substantial change in developmental assessments reflected a dramatic shift in the student’s meaning making rather than inconsistent interpretation.

The determination of developmental impact is particularly important for understanding factors that affect developmental change. Here, we followed the approach introduced by King et al. (2009) to identify those cases where a student reported that as a result of an experience, she or he now used a more complex approach to understanding knowledge, oneself, or relationships. For example, Brandon (a participant in the pilot phase of the WNS but not included in the subsample for this analysis) reported that serving on the campus judicial board (his “experience”) increased his understanding of factors such as victims’ privacy and safety concerns that affect why certain cases are not made public (“the effect”). He said:

\begin{quote}
Listening to their testimonies and being there and being a part of the decision-making was eye-opening as to why certain things are done administratively that way. Because I was always part of the group, “Oh, why aren’t they letting us know about this stuff? Why are they hiding this?” . . . I see why they do this now. It made sense. It clicked for me. (King et al., 2009, p. 113)
\end{quote}

The effect of this experience was to promote the complexity of his understanding and thus the development toward self-authorship. King et al., (2009) called these “developmentally effective experiences” (hereafter, DEEs) to reflect their positive developmental impact. The experi-
<table>
<thead>
<tr>
<th>Developmental Position</th>
<th>Key Characteristics</th>
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<tbody>
<tr>
<td>Ea: Solely External</td>
<td>Consistently and unquestioningly rely on external sources \textit{without recognizing} possible shortcomings of this approach.</td>
</tr>
<tr>
<td>Eb: Solely External</td>
<td>Consistently rely on external sources but \textit{experience tensions} in doing so, particularly if external sources conflict; look to authorities to resolve these conflicts.</td>
</tr>
<tr>
<td>Ec: Solely External</td>
<td>Continue to rely on external sources but \textit{recognize shortcomings} of this approach.</td>
</tr>
<tr>
<td>E(i): Entering the Crossroads</td>
<td>Continue to rely on external sources despite \textit{awareness of the need} for an internal voice. Realize the dilemma of external meaning making, yet are unsure how to proceed.</td>
</tr>
<tr>
<td>E-I: Entering the Crossroads</td>
<td>Begin to \textit{actively work on constructing} a new way of making meaning, yet “lean back” to earlier external positions.</td>
</tr>
<tr>
<td>I-E: Leaving the Crossroads</td>
<td>Begin to \textit{listen carefully} to internal voice, which now edges out external sources. External influence still strong, making it hard to maintain the internal voice consistently.</td>
</tr>
<tr>
<td>I(E): Leaving the Crossroads</td>
<td>Actively work to \textit{cultivate} the internal voice, which mediates most external influence. Consciously work to not slip back into former tendency to allow others’ points of view to subsume own point of view.</td>
</tr>
<tr>
<td>Ia: Solely Internal</td>
<td>\textit{Trust} the internal voice sufficiently to refine beliefs, values, identities, and relationships. Use internal voice to shape reactions and manage external sources.</td>
</tr>
<tr>
<td>Ib: Solely Internal</td>
<td>Trust internal voice sufficiently to craft commitments into a \textit{philosophy of life} to guide how to react to external sources.</td>
</tr>
<tr>
<td>Ic: Solely Internal</td>
<td>Solidify philosophy of life as the \textit{core of one’s being}; living it becomes second nature.</td>
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</table>

ence Brandon had as a member of the judicial board resulted in a new, more complex way of seeing the world that allowed him to view the decision-making process from multiple perspectives. When the effect described by the student implied increased complexity (e.g., seeing the basis for multiple points of view) and the summarizer concurred that the difference reflected development and not just change, it was coded as a DEE. Such experiences are useful for understanding the characteristics of experiences that transformed students’ meaning making and the psychological mechanisms underlying development.

**Trustworthiness.** We addressed issues of trustworthiness and quality in several ways. Extensive training for all interviewers and summarizers included instruction in the constructivist-developmental foundation that guided the interview construction and analysis, in-depth discussion about the purpose of the interview, practice interviewing with feedback, an analysis of interviewer subjectivities, and practice summary writing with feedback.

The sheer size of the interview sample (approximately 800 interviews) prohibited using the traditional approaches to trustworthiness (e.g., member checking) due to funding considerations and logistical difficulties (the size of the interview sample and because our face-to-face contact was limited to the annual interview weeks on each campus). Instead, we implemented a rigorous process to establish the credibility of the interview analysis. Our process for establishing trustworthiness of the developmental assessments evolved as the assessment system became more complex. During Year 2 analysis, many summarizers participated in an ongoing process of “workshopping” summaries during two seminar courses, each led by one of the principal investigators, as well as weekly research team meetings. Summarizers were asked to identify examples for which they were struggling to make an assessment to share with the other summarizers. The group then engaged in conversation until they came to consensus about the developmental assessment. As such, the research team developed trustworthiness throughout the process, in addition to the initial summarizer training session. Over time, we expanded and refined our understanding of the assessment through pooled judgment rather than relying solely on individual assessments. The principal investigators continued to review approximately three summaries from each new summarizer throughout the course of the study; they also reviewed experienced summarizers’ work upon request.

As we moved into Year 3 assessment, we strengthened our summarizer training by sending each summarizer the same two interview tran-
scripts before the training session and asking them to review and assign
a developmental assessment for each dimension (cognitive, intraper-
sonal, interpersonal) and overall, identifying quotes from the transcripts
to support the assessments. Then at the training session, we discussed
our assessments, reconciled differences, and shared details about the
process each used to arrive at the assessment. We continued peer re-
views after training; experienced summarizers reviewed new members’
first summaries and provided feedback to ensure quality and consistency
across summaries.

In many of the analyses of WNS data, including this one, multiple
researchers review the original summaries. Through this process, the
interpretations are confirmed and reconfirmed over time as more analyses
are completed. All of the interviews in the subsample used in the pres-
ent analysis have been independently reviewed by at least two research-
ers. The interviews had already been assessed for self-authorship, and
the review by the authors of this article were in effect the second (or, in
some cases, third) read of the particular interview. We concurred with
the original identification of DEEs and assessments of self-authorship.

We enhanced credibility through prolonged engagement with the
participants: The individual interviews typically lasted over an hour
and occurred annually. Rapport building was built into the first part of
the interview so that participants would be comfortable with the inter-
view process and share their experiences in an authentic way, and we
attempted to use the same interviewer in subsequent interviewers for
continuity. The high return rate of 72% between Years 1 and 2 also sug-
gests that participants were comfortable sharing their experiences. Ad-
ditionally, these students had the opportunity to give feedback about the
interview process at the conclusion of each interview. Participants were
offered copies of the verbatim transcripts and invited to fill in words
that were inaudible, correct factual errors, and offer comments or ad-
ditional insights to a team member after receiving the transcript. We en-
hanced transferability through the use of thick description of the narra-
tives whenever possible.

**Subsample Selection.** The analytic sample for this article was com-
posed of 30 participants who had substantial developmental growth be-
tween Years 1 and 3. These students participated in all three interviews,
yielding a total of 90 narratives used for this analysis. Among this sam-
ple of 30, the shift was 5, 6, or 7 positions; by contrast, among the 204
participants who participated all three years, the most common change
was 2 positions. (The Appendix provides a list of the self-authorship
assessments by year for each individual in this subsample.) Among the
subsample used for this article, 14 (47%) were female and 9 (30%) were students of color (4 students identified themselves as Asian/Pacific Islander, 3 as African American, and 2 as Hispanic).

We next reviewed the three-year sets of longitudinal interviews for each of these participants and conducted a theme analysis of the DEEs, looking for the qualities of these experiences that appeared to help students transform their meaning making to be more internally grounded. Next, we employed a purposeful sampling strategy to identify 11 “information rich” (Patton, 2002, p. 40) cases to analyze in greater depth. We selected these specific cases by reviewing the DEEs and choosing individuals who provided clear and detailed descriptions of their experiences across their three interviews. We sought students who discussed the same experience over multiple interviews to provide a touchstone for comparison of student meaning making about a particular experience from year to year. We continued to narrow the subset by seeking strong illustrative cases across the six campuses as well as across student background characteristics (gender, race, ethnicity, and citizenship); this approach allowed us to identify a diverse set of cases for this purpose. The rich cases included seven women and four men, two of whom are students of color. We read the full summaries of these students’ three interviews to examine the nature and quality of their experiences in the context of the overall interview. We then conducted a separate theme analysis using the 11 information-rich cases.

To summarize, we began with 315 students who participated in the WNS interview in Year 1; 228 returned for an interview in Year 2, and 204 were interviewed in Year 3. Of these students, 30 showed substantial development over the first three years of college. We reviewed the DEEs from all 90 interviews with these students for our analysis. In addition, we identified 11 of these 30 students who met our criteria for information-rich cases to review independently and in greater detail (Patton, 2002).

Although our study provides insights into the experiences of students who experienced substantial development in their first three years of college, our work has its limitations. In particular, our sample is limited to students from a small number of institutions that were chosen for their work in promoting liberal arts education, and although each of these institutions embraced education’s potential to transform lives, the kind of transformation we explore here occurred in only a small portion of the students interviewed. We discourage readers from generalizing these findings for all college students. Further, our data set is limited to experiences that students found memorable and chose to share; these
The focus of this inquiry is on experiences that promoted substantial development; accordingly, these analyses do not include experiences that had the potential to result in dramatic transformation of meaning making but were not successful in this regard. Last, although we can make some well-grounded claims about the validity of Kegan’s (1994) overall theory of self-evolution, and although the positions on the continuum we used to assess self-authorship were empirically derived, our work on validating this finer-grained continuum of the development of self-authorship is still in progress.

**Findings**

Over their first three years of college, the 30 participants who experienced substantial shifts in self-authorship reported 149 experiences that met the criteria for being developmentally effective. Our analysis of these 149 DEEs revealed six themes, and our analysis of the subset of 11 information-rich cases yielded seven themes. Although different members of the research team independently conducted the two theme analyses, there was noteworthy alignment between the resulting themes using the two different approaches. Table 2 presents the emergent themes from each analysis; similar themes that overlapped in both analyses are presented side-by-side to illustrate the alignment.

One concept appeared throughout the experiences of students with substantial shifts: engagement in meaningful roles and experiences that demanded an internal voice. Accordingly, we have positioned this concept as an overarching theme for the entire analysis. In terms of understanding the characteristics of these students’ experiences in order to better understand the source of their growth, we observed that in each of the themes, students stepped into roles that demanded the kind of internal voice emblematic of self-authorship. This overarching theme was woven throughout the varied experiences that comprised the other six themes.

Dissonance was a key component across themes: discrepancies between how participants viewed the world coming to college and what they encountered in college that demanded their attention. Students reported conflicts among perspectives as others introduced them to new information and beliefs that were inconsistent with their original views. Faculty and staff expected students to question authority, learn how to critique information, craft their own views, and take personal responsibility in academic work, leadership roles, and personal relationships.
Participants found support to meet these demands through structure in classes that scaffolded how to critically analyze and choose among knowledge claims, faculty relationships in which guidance was present, and through peer relationships (e.g., friends, organizations, and living groups). Many of the DEEs stemmed from intentional practices and conditions, including courses, undergraduate research and internships, study abroad, leadership roles, and campus structural diversity. Students also encountered key developmental experiences through informal practices and conditions, including interactions in organizations and residential life, friendships, tragic events, and personal challenges.

In considering these practices and conditions, we turn first to the five “synthesized” themes that were identified by both the analysis of the DEEs and the information-rich cases regarding the nature of experiences that positively affected students’ developmental journeys. These themes crossed multiple contexts of students’ lives, including the curriculum, co-curriculum, and their personal lives, and we discuss each

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Triangulation of Data from Theme Analyses</th>
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</thead>
<tbody>
<tr>
<td>Analysis of Developmentally Effective Experiences (DEEs)</td>
<td>Analysis of Information-Rich Cases</td>
</tr>
<tr>
<td>Refined identity based on dissonance</td>
<td>Pressure to take ownership of identity and beliefs</td>
</tr>
<tr>
<td>Explicit challenge to evaluate knowledge claims and craft own beliefs</td>
<td></td>
</tr>
<tr>
<td>Belonging was major source of support on campus</td>
<td>Searching for support through peers and organizations</td>
</tr>
<tr>
<td>Broadened perspectives as a result of encounters with diverse others</td>
<td>Challenge to reevaluate personal stereotypes</td>
</tr>
<tr>
<td>Learning to navigate a new culture</td>
<td></td>
</tr>
<tr>
<td>Necessity to rethink perspectives due to tragedy or intense personal challenge</td>
<td>Involvement in life circumstances that required perspective-shifting</td>
</tr>
<tr>
<td>Developing ability to negotiate complex relationships</td>
<td></td>
</tr>
<tr>
<td>Engagement in meaningful roles that demanded internal voice</td>
<td>Learning to balance multiple roles and commitments</td>
</tr>
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</table>

Substantial Developmental Shifts 879
individually below. A sixth theme, negotiating complex relationships, emerged only from the theme analysis of the information-rich case subset.

A more in-depth description of each of the themes follows, including illustrative quotes from students. The purpose of the exemplary quotes is not to illustrate development per se, but rather to demonstrate the characteristics of the DEEs we observed in the theme analyses.

**Experiences that Fostered Identity Development**

Experiencing dissonance in academic coursework, leadership or work roles, and relationships with others prompted identity exploration and refinement. For example, some participants recounted critically analyzing their religious beliefs and the role these played in refining their identities, others were prompted to reevaluate the role athletic involvement played in their identities, and others reformulated their career identities. Many participants reported exploring and refining their social identities, including sexual orientation, race, and ethnicity; for example, some White participants reshaped their identities after learning about White privilege. Questioning one’s initial beliefs, considering the multiple perspectives encountered in the college environment, and working to define one’s own beliefs influenced reshaping identity around their evolving belief systems.

Chris, a student at a religiously-affiliated university in the Midwest, described in his third year interview how he had refined his career identity by changing his major from computer engineering to computer science. He had engaged in a significant amount of reflection since originally deciding on a major as an underclassman. Over time, Chris began to take ownership of his major and career path. Previously, he simply followed what he was good at, but by his junior year, he was investigating his major and career with a more critical eye; he wanted to incorporate his own values and beliefs within his identity. Chris discussed how he realized that he valued the applied nature of computer science and was increasingly drawn to this field over computer engineering because of the opportunities to use the technology “in real life,” such as testing new construction and demolition techniques in a virtual environment without risk of human injury. He explained his decision as follows:

I’ve pretty much been thinking about doing this [changing majors] for a long time, but if I had done it at any point in the past two years, it wouldn’t have actually immediately changed anything... At this point, it actually made a difference to change it and I have, so I feel like I’ve directed myself where I want to go in a more permanent way.
In clarifying his values and more closely aligning his major and career direction with his values, Chris took more control over how he saw himself, a key characteristic of development in the intrapersonal dimension of self-authorship.

**Being Challenged to Evaluate Knowledge Claims and Take Ownership of Beliefs**

Participants encountered explicit challenges to recognize multiple perspectives, engage with complex views, evaluate knowledge claims, craft their own opinions, and defend their beliefs. This took place primarily in academic coursework, both in routine course-related activities as well as major projects. Faculty taught students analytic processes to critically evaluate information and decide what to believe; to support this challenge, they conveyed that students were capable of this work (see the example of Jade, next). Exploring multiple perspectives and trying to craft their beliefs typically involved introspection about one’s views (e.g., reconsidering stereotypes after a racism workshop) and reflection on one’s behavior (e.g., deciding whether to eat meat after learning about animal rights). Participants reported eagerly engaging these challenges despite conflicts with their entering expectations.

Jade, a student at a religiously-affiliated Midwestern institution, was initially surprised by the different approach to learning she found there and described how in high school the formula for success was memorizing facts, whereas in college, “it’s weird how the ideas presented are much more presented as ideas rather than as facts you need to know for the test.” As a first-year student, Jade discussed how she was surprised to be given the opportunity to express her own opinion for a paper in theology class:

So far the papers I have been writing [are] so much less writing for what the teacher wants, which is what I have really done up until now; it’s really writing the argument that you find. I think they [the faculty] really encourage that as they give you lots of different prompts and they are pretty ambiguous and they are hard to start with, but then you really find a point that you actually want to make and it’s much more interesting to write about.

Classroom discussions in this course provided Jade with an opportunity to see many different views of her peers, which further motivated her to craft her own beliefs. As a sophomore, she commented,

I’m still exploring a lot of the ideas, but one idea I definitely decided is that there was no golden age of the family. . . . And the more I talk to people in my class and the things that we read, it seems like there’s always been changing
in families and there’s such different families around . . . it’s interesting to look at other families that are very differently structured and see that they really work well, too. What I, in my little suburban life, assumed was the norm is really not the norm and it’s certainly not the only [family structure]. And that makes me appreciate my family even more, but it makes me even more curious about how other people live, their families and function, the relationships that they form with their parents.

Jade’s exposure to multiple perspectives, coupled with her professor’s prompting to, and guidance in, evaluating the perspectives appears to have contributed to Jade’s substantial gain in self-authorship.

**Belonging as a Major Source of Support**

College peers emerged as major sources of support in participants’ DEEs. Peers included friends, roommates/housemates, athletic teammates, fellow fraternity/sorority members, and members of many other student organizations. These were the people with whom students processed dissonance and found support to stand up for themselves in relationships, including challenging family relationships. Although faculty members were explicitly included in participants’ stories about classroom challenges, peers were by far the most clearly identified source of support.

Students transitioned from external to internal forms of support as they adopted more complex levels of meaning making. For example, students who used external meaning making often relied on membership in structured organizations (e.g., fraternities or sororities and organized religious groups) for a sense of belonging; some students at more complex levels rejected previous affiliations in groups that they no longer found compatible with their evolving personal values systems. Participants reported this most often in terms of religious affiliation and church attendance.

Joining a fraternity was an important experience for Steve, a student at a private Midwestern liberal arts college. In his sophomore-year interview, he firmly stated that the fraternity was the reason he stayed at the institution for a second year. The fraternity had been his residence as well as his social group and was the context for discussions that contributed to his critical thinking about religion. He said that he met men at the fraternity with different religious views from his, and that the in-depth discussions he had engaged in about different faith beliefs took place “almost completely in my house and my fraternity.” Steve’s fraternity brothers served as an important sounding board for him as he questioned his existing ideas about religion and politics and processed
new, conflicting ideas that emerged in his courses and personal discussions. He recounted,

I'll just sit and listen to two other people debating over what they think is right. We have a pretty good spread of very conservative to very liberal people in my house, so it's kind of cool to listen to their arguments and be like, maybe what I thought for so long isn't so good. At the same time, you have to understand there are two sides to every coin, so I don't try to just take what I hear. . . . I might look it up or try to think about what I think myself.

In addition, Steve's fraternity brothers were a vital source of support for one another following the death of a fellow member of the organization when Steve was a junior. There appeared to be a shift in Steve's sense of belonging over time from an affinity for the organization itself to an appreciation of a smaller group of close friends within the fraternity with whom he exchanged views and debated ideas.

**Encounters with Diverse Others and New Cultures that Promoted Reevaluating Perspectives**

Direct experience with diverse others called values and beliefs into question for the group of students who experienced substantial shifts in self-authorship. Participants reported a wide range of contexts that afforded these opportunities. Many studied or traveled abroad, which provided experiences that introduced them to new perspectives and opportunities to rethink their views of the world. Encountering diversity on campus also led to interactions with others whose views differed from theirs. Classes that dealt specifically with diversity and participation in organizations with diverse students offered opportunities to explore multiple perspectives in structured and supportive settings. Roommate conflicts often offered a context for negotiating multiple perspectives. Participants reported their interactions with diverse others as mostly positive and leading to greater awareness of and acceptance of multiple perspectives. However, many participants seemed to stop short of a complex appreciation of diversity because they were just beginning to reformulate their beliefs based on these experiences.

Susan enjoyed the diversity of her West Coast liberal arts college, particularly in comparison to her hometown in the Midwest. In her new college environment, she learned about people who had different backgrounds and values than her own. Living in a more diverse community helped Susan learn to discern points of similarity and difference between people and also appreciate the value in a range of perspectives. During her junior-year interview, she recalled,
I think it’s [the diverse environment] shown me that even in a situation where you think two people have the same views on something, there’s always nuances. I’ve come to view it as someone could have a really, really different opinion or background or whatever than I do, or someone could have a very similar [opinion], but I’m better at recognizing the small differences between the person who seems similar and the similarities you wouldn’t necessarily see at first in someone that seems to be very different.

Susan has embraced the more diverse community she has encountered on the West Coast, and as a result of her experiences both on and off campus, she has the ability to see a range of perspectives. Despite living in her new setting for three years, Susan has not lost sight of her original perspective, and remarked, “I still even now have moments like where I’m just like, ‘What? That wouldn’t happen in Ohio!’”

**Exposure to Tragedy or Intense Personal Challenge that Required Shifting Perspectives**

The realities of college and personal life routinely disrupted participants’ initial views of the world, themselves, and relationships with others. Many reflected on how deaths of friends or family members prompted them to rethink their values and approaches to relationships. Other students experienced cancer diagnoses of themselves or family members. Relationship breakups, an experience many participants shared, also prompted reevaluation of how to balance one’s needs with those of others. Obstacles to academic success and physical injuries that thwarted athletic success yielded consideration of appropriate majors and the role of athletics in one’s life. Unexpected health challenges, disagreements with family stemming from evolving perspectives, and tragedies also called students’ beliefs into question. All of these experiences required students to reevaluate knowledge, identity, and relationships in light of these situations. As with feeling support through belonging, students reported relying primarily on friends for guidance or support to face these personal challenges.

Darcy’s mother died when Darcy was a senior in high school. As a result, she relished the opportunity to form relationships with other women and valued the friendships she gained through joining a campus sorority at her West Coast liberal arts institution. She shared during her second-year interview,

Having strong female relationships in my life is really, really important to me, and my [sorority] sisters are really amazing, strong women. I don’t want to say it [the sorority] replaced that [her relationship with her mother] in my
Substantial Developmental Shifts

life. But it definitely—there was a gap, and I think it does, to some extent, fill it for me, in a way.

Darcy discussed how her mother’s death affected her several times over the course of our three annual interviews. This tragedy had a strong impact within the interpersonal dimension of development for Darcy, and she placed a high value on the female relationships in her life (e.g., sorority sisters, aunts, grandmother, roommate) following her mother’s passing. She had a sense of obligation to her family, heightened by her mother’s death, and often traveled across the country for family visits. Darcy was challenged to shift perspectives frequently between her college life and her familial ties.

Working Through Complex Personal Relationships

Students in college balanced the demands of building new relationships in college (e.g., roommates, romantic connections, faculty members) with maintaining or renegotiating existing relationships (e.g., family members, high school friends). This theme was the only one garnered exclusively from the rich-cases analysis. The relationship dynamics described here differ from those discussed in the previous theme in that these experiences did not meet the criteria for a developmentally effective experience in a single year (and therefore did not appear in our analysis of the DEEs). Rather, these relationships emerged as important over multiple years and became apparent only when reading the full interview summaries for the information-rich cases. This finding illustrates the capacity of the case study approach for providing a more nuanced and connected image of a student’s development over time.

Gia, a Hispanic woman from a public university on the West Coast, spoke often over the three-year series of interviews about the importance of relationships in her life and the challenges of navigating them successfully. In her first year, she struggled to obey her mother’s rules when she returned home from college. Gia stated,

She [Gia’s mother] doesn’t like me to get into other people’s cars; she doesn’t like me walking by myself. So, when I go back home in the summer, I know I’m going to die because now I’m not used to... having to do things my mom’s way.

Gradually, Gia perceived she could make her own decisions and pursue her own way of living. However, her way of living still did not align with her mother’s expectations, and Gia did not know how to address the conflicts. Not knowing what to do, she compartmentalized her life-
styles and bent herself to conform to her mother’s way when returning home.

Although Gia learned a great deal from peer and romantic relationships in college, she continued to struggle with her parental ties. Not much had changed on the surface between her first-year and third-year interviews. As a junior, Gia shared, “I really don’t have a balance when it comes to that with my parents. It’s like when I go home, I’m in their rules again.” The marked differences between her independent lifestyle and her behavior when returning to her parents’ home created dissonance for Gia, and the way she made meaning of this relationship evolved over time. In her junior-year interview, Gia demonstrated a greater sense of mutuality with her parents and made an effort to understand their perspectives. For example, she discussed her understanding of their objections to her participation in ROTC.

As much as I know that they don’t want me to do it, it’s not because they don’t believe in me, it’s that it’s their fear of something happening to me, and which is—I understand completely. I am their only child, so I guess I can see where my parents are coming from.

Although Gia remained unhappy about the strict guidelines under her parents’ roof, she showed an ability to appreciate their point of view that she had not revealed in previous conversations. Her broader way of making meaning that could now encompass divergent views had been affected by working through her relationship with her parents over time.

Discussion

The six themes that emerged in this analysis provide a window into the daily challenges faced by college students who experienced substantial shifts in self-authorship. The overarching theme in the analysis, engagement in meaningful roles and experiences that demanded an internal voice, was widespread among the students in our subset. Participants found opportunities to engage in meaningful roles that demanded internal voice in a wide variety of contexts, including undergraduate research, internships, relationships, and leadership or work roles. Supervisors in these contexts expected autonomous thinking, problem-solving, effective collaboration with others, and internal voice in decision-making. In responding to these demands, participants gained confidence in themselves (Jade), learned to work effectively with others (Susan), and refined their career goals (Chris). In contrast to their experiences in formal coursework, participants offered little indication of any structure
Substantial Developmental Shifts

provided by supervisors, advisors, or student affairs educators to support meeting these challenges. Instead, the nature of the roles students took on prompted them to develop their internal voice in order to survive and succeed. These roles had an impact on students in that they required a response and carried consequences. Students realized that their actions (or inaction) in the roles of student, organization member, son/daughter, friend, and so on, made a difference for themselves and for others—and affected both what they learned and who they were (or who they became) in these roles.

The extreme personal challenges that the students with substantial developmental shifts reported must be acknowledged. Several students in the sample suffered the death of a loved one or close peer (e.g., Darcy’s mother and Steve’s fraternity brother). Students learned to cope with these setbacks, often with thorough reflection and increased introspection. Situations such as these that cause discomfort often prompt students to action, leading to substantial developmental advancement (Barber & King, in press). As noted above, populations who have experienced marginalization (Abes & Jones, 2004; Pizzolato, 2003; Torres, 2010) were more likely to demonstrate self-authoring approaches than other student populations. Similarly, our finding that students experiencing intense personal challenge or tragedy showed substantial shifts toward self-authorship is a reminder that powerful developmental experiences can arise from tragedy as well as intentionally designed educational experiences.

The experiences described in this article prompted students to clarify their personal values, and shift their perspectives accordingly. This is a skill that calls for the examination of interests, desires, and goals emblematic of a growing internal voice. For example, Jade was prompted by her professors to express her own ideas about the world in her writing assignments. Through this process, she was pressed to take ownership of her beliefs and identity and shift her perspective from what others want to what she envisions.

Implications for Research

As Feldman and Newcomb (1969) noted over 40 years ago, it is important to differentiate simple change (a difference over time) from growth (having more of an attribute, such as holding an opinion more strongly) and development (increased capacity in how one organizes one’s thoughts; here, increased capacity for self-authorship). Similarly, although there are valuable purposes served by documenting change and growth over time, conducting research on development involves assessing evolving capacities. Conducting research on developmental im-
**pact** also involves accounting for entering developmental level, monitoring change over time, and assessing the environmental characteristics posited to affect development, such as key features of the experiences from which students learn. The themes reported in this article provide a provocative starting point for the more systematic analysis of the role of learning experiences that individually or collectively created conditions for high impact (defined here as those that positively affected the capacity for enhanced self-authorship). Much could be learned through the systematic investigation of the features and educational strategies embedded in these themes, such as how they are implemented in different contexts, whether their impact varies by developmental complexity, and how educators who intentionally use these strategies learn to do so.

The deeper case study analysis of a subset of 11 interview sets \((n = 33\) interviews) added another level to the analysis by introducing experiences that provided students a challenge and an opportunity to reflect but had not yet resulted in articulated change in meaning making required for classifying an experience as developmentally effective. In the theme “Working Through Complex Relationships,” Gia’s narratives exemplified how increased complexity in meaning making unfolded over time as she discussed the challenges of interacting with others. Although her experiences associated with negotiating expectations and agreements with her parents was not classified as developmentally effective in any one of the interviews, an examination of the set of interviews revealed that attempting to resolve the conflict she felt with her parents motivated her to work on her own understanding of their relationship. By Year 3, she was able to do this in a way that allowed her to be true to herself *while* acknowledging their perspective, a capacity associated with developing an internal voice. By better understanding the impact of experiences that unfold slowly over time, scholars may be able to clarify how students combine discrete experiences that happen in smaller, shorter units but that, taken together, constitute a developmentally effective experience. In addition, studying how students respond to the challenge presented by working with complex relationships may yield additional insights about the dynamics of dealing with relationship issues that contribute to substantial shifts over time.

The two analytic approaches selected for this article (the thematic analysis of experiences coded as developmentally effective and the analysis of a subset of information-rich cases) provided a useful starting point for understanding the qualities of experiences of students who experienced substantial shifts in the journey toward self-authorship. Future research could employ a more in-depth examination of the experiences of the information-rich case subsample using a formal case study
approach. The preliminary analyses using these information-rich cases revealed experiences that presented students with challenges and opportunities to reflect but that had not yet resulted in articulated change in meaning making required for classifying an experience as developmentally effective. Such a change in meaning making may be evident in a future interview or may suggest another category of transformative experience that falls outside the current “developmentally effective” coding criteria. A comparison of findings using all of these (and perhaps other) approaches could yield important differences and points of triangulation in future research.

In the course of our analysis, we noted that 9 of the 30 students (30%) who achieved substantial shifts were students of color. Although the focus of this article is on experiences that contribute to high growth toward self-authorship, not on the characteristics of the students who demonstrated substantial developmental shifts, this finding may help explain Pizzolato’s (2003) and Torres and Hernandez’s (2007) findings that students from marginalized groups demonstrate self-authorship earlier than those from non-marginalized groups. The diversity in our subsample is important given the paucity of student development research on students of color and merits further investigation. This work may be enhanced by the use of new theoretical resources that position individual and group characteristics in larger frameworks and contexts (e.g., intersectionality and critical race theory).

**Implications for Practice**

Based upon the findings in this analysis, we advocate restructuring existing educational practice to intentionally promote students’ use of an internal voice. First, we recommend revising the nature of existing campus experiences and roles so that they challenge students to evaluate knowledge claims and take ownership of their beliefs and values (Themes 1 and 2). Many potentially meaningful roles already exist in classroom experiences, undergraduate research, internships, study abroad, service learning, and leadership or work roles. However, participants in these roles are not always expected to engage in evaluating knowledge claims, problem-solving, effective collaboration with others, and owning their beliefs and values in decision-making. Our data suggest that when they are effectively engaged in these experiences, unusually large shifts in development occur. Findings from the pilot phase of the WNS (King et al., 2009) affirm that developmentally effective experiences respect students’ current meaning making and simultaneously invite students to consider new perspectives. The challenges our participants reported to recognize multiple perspectives, engage with
complex views, evaluate knowledge claims, craft their own opinions, and defend their beliefs were structured in ways that respected their initial perspectives. Revising existing experiences entails drawing out students' current constructions of their beliefs and values, helping them articulate how they arrived at those perspectives, encouraging them to reflect on experiences that call these perspectives into question, teaching them how to evaluate those perspectives, and supporting them in refining their perspectives. This process applies to both curricular and cocurricular contexts as well as experiences students encounter in their lives beyond the campus.

Second, we recommend intentionally shaping encounters with diverse others and new cultures to emphasize reevaluating and shifting perspectives (Theme 4). Encounters with diverse others and multiple perspectives only promote more complex intercultural meaning making if appropriate support is present to help students make sense of these experiences (King, Baxter Magolda, & Massé, 2011). These experiences already exist in the form of service learning, study in diverse contexts, diversity courses, and everyday interactions with diverse others on campus. The support crucial to make these experiences developmentally effective entails the same process described above. Ortiz and Rhoads' (2000) Multicultural Educational Framework offers an excellent model for respecting students' current meaning making and offering a gradual process through which to invite creating a more complex perspective.

Third, we recommend intentionally structuring increased support for students as they face challenges inherent in their college and life experiences. As revealed by our participants, a sense of belonging played a crucial role in developmentally effective experiences (Theme 3). Again, the existence of peer groups and organizations is insufficient to ensure a sense of belonging. Helping students select groups that match their values yet challenge them to think differently can yield supportive environments in which to grow. Educators advising student organizations, class project groups, or residential units can guide leaders to use the process for articulating, analyzing, and refining perspectives that we advocate here.

Both peers and educators can play a major role in supporting students in making sense of tragic experiences (Theme 5) and complex relationship issues (Theme 6). These experiences were inherent in our participants' lives. What made these experiences developmentally effective was the nature of support participants encountered. Supportive others respected and helped them articulate their feelings and thoughts about these experiences, encouraged reflection on the meaning of these ex-
Substantial Developmental Shifts

experiences, and assisted students in making their own interpretations of how to view themselves and relationships in light of these experiences. The key to support in developmentally effective experiences is to respect students’ current meaning making, encourage reflection and interpretation, and assist students in making their own sense of experiences (Baxter Magolda, 2004; King et al., 2009). It is especially important to recognize the important role of reflection in promoting learning and development; building this into learning provides a vehicle for students to engage in the kind of “figuring out” (e.g., personally weighing interpretations or knowledge claims, wrestling with dissonance) reported here. Baxter Magolda and King (2008) provided examples of questions that promote deep reflection to help students learn from their experiences through reflective conversations with advisors. As shown in this study, learning from one’s experiences rather than simply having them helps college students take responsibility for their academic and personal life choices.

Collectively, our recommendations emphasize demanding and supporting the evolution of students’ internal voices across their college experience. We build on prior work that emphasizes learning partnerships in which educators respect and engage students’ current meaning making and participate in mutual construction of new perspectives with students to encourage internal voice (Baxter Magolda & King, 2004, 2008; Meszaros, 2007). We also build on the notion that developmentally effective experiences stem from intentional, cumulatively designed curricula that move along with students as they shift toward more complex perspectives (Bekken & Marie, 2007; Kegan, 1994; Taylor & Haynes, 2008). Collectively, our data suggest making better use of existing college experiences by intentionally designing our interactions with students to promote their internal voices.

This study contributes to the body of literature on college student development, specifically on self-authorship theory. It is important to understand why some students have substantial shifts in self-authorship when the majority of individuals progress slowly so that educators can use this information to design developmental experiences that promote self-authorship. Much research has been conducted on the journey toward self-authorship, and findings indicate that between one-half and two-thirds of the adult population of the United States does not reach the self-authorship capacity of meaning making (Kegan, 1994). This is disappointing given the benefits (both personal and civic) associated with self-authorship and the correspondence between these capacities and collegiate learning outcomes (Baxter Magolda, 2001, 2007). Hav-
ing identified and illustrated experiences of those with substantial developmental shifts in meaning making, we are hopeful that our study will inspire further ideas for promoting self-authorship in higher education settings.

Notes

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1 Due to the longitudinal nature of this study, these methods have appeared in prior publications.

2 For additional details about the composition of the sample, see Description of Research Methods and Sample, Years 1, 2, and 3, Interview Portion, Wabash National Study at http://sitemaker.umich.edu/liberalartstudy/home.

3 Participants were given the opportunity to select their own pseudonyms.

References


Substantial Developmental Shifts


## APPENDIX

### Changes in Developmental Positions Over Time (Years 1, 2, and 3)

<table>
<thead>
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<th>Student</th>
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<th>Y2</th>
<th>Y3</th>
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