

Autonomy and Competence Drive High School Seniors' Academic Intentions

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Debunking the myth that all seniors experience extreme levels of disengagement in their last year of high school, seniors ($N = 138$) from two urban schools completed three activities designed to measure their sense of responsibility for their own education. The resulting beliefs, desires, and reported actions, were elicited using surveys, focus-group discussions, and open-ended writing, and were subject to third-person analyses to reveal individuals' differences in seniors' intentions. Students offered many more positive statements about constructive educational aspirations, goals, and responsibilities than is reflected in the senioritis myth. Learning more about how to help seniors celebrate their achievements and welcome them into new levels of independence may also reduce disaffection that sometimes dominates seniors' school behavior.

INTRODUCTION

Public and private stereotypes about high school seniors suggest that they show high levels of disaffection during this very busy year. Seniors' reputation for arriving late, completing the minimum amount of work required for graduation, or skipping school altogether are described as symptoms of *senioritis*. This popular notion of a disengaged senior has been reinforced in studies reporting marked declines in adolescents' motivation for schoolwork, declines that start with the transition from primary to secondary school and deepen across high school (Chouinard & Normand, 2008; Otis, Grouzet, & Pelletier, 2005; Roeser & Eccles, 1998). Yet, high school students can also represent their motivation in complex and sophisticated ways that belie the senioritis stereotype (Nicholls, Patashnick, & Nolen, 1985; Thorkildsen, Golant, & Richesin, 2007; Thorkildsen, Reese, & Corsino, 2002). A more direct evaluation of seniors' understanding of the senioritis stereotype, one that comprehensively characterizes their behavior and psychological states, can offer a clearer account of the mixed messages apparent in available research.

An Intentional Systems Theory:

When generalizations about high school seniors' motivation are shared, it is easy to overlook the fact that the same actions can occur for a variety of reasons. Seniors exhibit a wide range of behaviors, and their motivation is commonly depicted either as a general disposition or as states that emerge at individuals' command (Bandura, 1995; Dweck & Leggett, 1988; Eccles et al., 1993; Nicholls, 1989; Weiner, 1995). The details of their intentions or reasons for behavior are often missing from broad accounts of seniors' motivation, yet knowledge of intentions strengthens the accuracy of such depictions.

Intentions may be known to the actor or inherent only in the action itself. Many adolescents remain unaware of why they do what they do, but their folk theories convey some level of self-understanding. Inviting seniors to reflect on the beliefs, desires, attributions, and actions that comprise their intentions also strengthens their self-control (Nicholls, Patashnick, Cheung, Thorkildsen, & Lauer, 1989; Weiner, 1995). Intentional

theorists use these regulatory abilities to explore how individuals predict their own and others' actions.

An intentional stance that is beneficial to educators involves a third-person evaluation of how adolescents combine their beliefs, desires, and actions to cause specific outcomes. Such analyses are completed by inviting adolescents to report the details of their intentions and comparing and contrasting these details to identify patterns in the aggregated results (Dennett, 1989). Adolescents may use various forms of executive functioning to review and label the features of their intentions (Barkley, 2001). Adults who work with adolescents benefit from knowing more about common trends across groups.

Motivation in this way is depicted as a dynamic process governed by individuals' intentions. Beliefs, desires, and actions are not always predictably aligned, but each can be generated, revised, and modified using multiple forms of executive functioning (Thorkildsen, 2013). For example, individuals who rely on intuitive forms of functioning act without forming goals and rely on nonverbal, momentary cues to influence their behavior. Such preintentional understanding, although prevalent in children and adults alike, is very difficult to capture accurately in a research setting.

In contrast, individuals who act reflectively combine their capacity for planful thought, inhibitory control, working memory, and language to inform their decisions (Hughes, 1998). Reflective functioning involves the use of representational knowledge to plan, set goals, and act in deliberate ways (Favre et al., 2009; Garner, 2009). Self-report measures such as surveys, personal interviews, or essays are used with the hope that respondents will employ a reflective mindset to report on their beliefs, desires, and actions.

A third way in which individuals' executive functioning drives their motivation is iterative. Recursive-reflective functioning is such that feedback from one set of experiences informs another. Individuals can use knowledge of their recursive-reflective experiences to detect changes in their own beliefs, desires, and actions (Tomasello, Kruger, & Ratner, 1993). Recursive-reflective functioning is highly likely during collabora-

tive activities in which individuals can construct a dialogue between their own and others' intentional states and actions. Situational events like those occurring in small groups also stimulate a range of feedback loops and language functions that work together in this dynamic system (Fuhs & Day, 2011; Miller, 2009; Thelen & Smith, 1994). Group discussions invite participants to use recursive-reflective functioning by establishing a context for sharing, acknowledging, and critically accepting others' interpretations and for the evaluation of one's own perspective. Recording seniors' responses using multiple modalities allows for the identification of common themes in seniors' intentions.

Adolescents' Perceptions of Change in Their Motivation:

When adolescents are portrayed as individuals who lack volition, it is easy to make unfair claims about the intentions that compel their actions and the duration of this motivational challenge. The senioritis stereotype suggests that adolescents spend most of their final year of high school in this state of ennui and that this reflects a change in their academic intentions.

Even though longitudinal and cross-sectional studies have documented declines in students' academic performance, achievement goals, and/or subject matter interest, other aspects of adolescents' sense of responsibility are missed (Benner & Graham, 2009; Meece, Anderman, & Anderman, 2006; Shim, Ryan, & Anderson, 2008). Age-related changes in adolescents' reports of their educational experiences show discontinuity as often as a linear progression. Likewise, average persistence scores may decline as students move from elementary to high school, but level off in the rate at which the decline occurs during late adolescence (Fredricks & Eccles, 2002; Frenzel, Dicke, Pekrun, & Goetz, 2010; Gillen-O'Neel & Fuligni, 2013). Such aggregated findings, while important for some purposes, obfuscate marked individual differences in adolescents' intentions (Thorkildsen et al., 2002, 2007). Inviting adolescents to directly depict their intentions and reflect on whether their motivation has changed across high school can offer a more accurate representation of their motivation.

Articulating Educational Responsibilities:

Although motivation is a psychological process, it can be elicited when individuals focus on internal or external aspects of their experience. Likewise, accurate depictions of seniors' intentions should include references to internal and external information sources. General depictions of students as motivated or unmotivated will not uncover such subtleties. Similarly, global evaluations offer little insight into how well adolescents accept responsibility for their education. To extend work on such broad trends, therefore, we probed seniors' understanding of internal and external factors, discerning how they evaluated their intentions.

Internal forces. Seniors who accept responsibility for their education align personal goals, needs, outside expectations, and behavior. They are more likely to attribute their successes and failures to internal, controllable forces such as effort, persistence, and interest (Graham, 1997; Weiner, 1995). They are less likely to blame the situation or people when confronted

with negative feedback or consequences stemming from their actions. Seniors who understand their intentions also tend to fare better academically and socially.

Although seniors know that actions such as completing assignments on time and achieving good grades affect the outcomes of college and job applications, they also learn more about their social position in the world. As they finish high school, most seniors develop increasingly complex knowledge of their abilities and limitations as well as how educational opportunities are distributed across learners (Oyserman, Bybee, & Terry, 2006; Thorkildsen, 1993). Most seniors realize that not everyone who plans well, sets realistic goals, and uses beneficial strategies for achieving their goals will attain their dreams. With such awareness comes stress and the disaffection associated with senioritis may offer temporary relief from such stress. By detecting how seniors define stress and describing their efforts to mitigate it, the internal qualities of their transition to life beyond high school can be better understood.

External forces. Students' intentions are inextricably linked to their understanding of the context in which they function. Two lines of evidence validate this assumption. First, self-reflective studies using surveys and interviews have confirmed students' awareness of internal and external motivational factors. Some findings convey the values students attach to school and school related activities (Nicholls, et al., 1989; Thorkildsen, 1993, 2013). Other findings convey students' perceptions of the school environment and of the external supports they receive from their peers, families, and communities for ensuring their academic success (Benner & Graham, 2009; Murdock, Miller, & Kohlhardt, 2004; Thorkildsen, Sodonis, & White-McNulty, 2004). Stress has been explored by illustrating how competitive classroom environments, dependence on grades, and differentially favorable treatment for high achieving students correlate negatively with students' academic and social-emotional development (Butler & Shibaz, 2008; Weinstein, Marshall, Brattesani, & Middlestadt, 1982; Zusho & Barnett, 2011). All studies show evidence of adolescents' thoughtful evaluations of institutional effects on their motivation.

A second research direction evaluated how variance in high school programs is associated with students' college aspirations. Structural supports as well as advice from teachers, counselors, and other non-familial adults have a significant effect on whether students actually translate their educational aspirations into action (Hill, 2008). Students benefit when they are encouraged to take the steps necessary to apply to specific colleges (Roderick, Coca, & Nagaoka, 2011), yet not all students have access to these supports. These studies help justify our decision to conduct this project in two urban schools with distinct missions, each serving ethnic minorities from low- and middle-income families. Differences attributable to school culture should be apparent if students' intentions are shaped by the opportunities available in their schools.

Debunking the Myth:

Third-person evaluations of individual and group responses were compared within and across settings to convey

the varied ways in which seniors represented their academic intentions. We expected to find optimistic intentions as well as disaffection. If seniors fully embrace personal responsibility for their education, their written and spoken accounts should focus on intrapersonal beliefs and desires. If seniors' intentions emerge as an artifact of a school's culture, they should write and speak elaborately about the external forces that support or hinder their motivation. Collectively, a more accurate depiction of high school seniors' approach to schooling emerged from these analyses than would have been predicted by the senioritis label or in studies focusing on only some aspects of their intentions.

METHODS

Participants:

High school seniors ($N = 138$, 64 males) who attended one of two urban, public high schools in a large Midwestern school district responded to measures of their goals, needs, motivational states and situational influences. Of these 68 were African American, 61 were Latino, 2 were Native American, and 7 were dual-ethnic. To control for curricular experiences, participants were enrolled in one of six Advanced Placement classes, three in each of the two schools. Only those students who completed all of the research activities were included in this study.

Classes were recruited with the help of a teacher and an academic coach working in schools with notably different academic missions and structures. One neighborhood school included all students in Advanced Placement classes and celebrated the ethnic cultures in the nearby community. The 64 students attending this school were encouraged to explore vocational careers as well as college opportunities. A second magnet school had an explicit college preparatory mission. The 74 students attending this school received formal academic, social, and emotional supports as they navigated the process of college admissions. Grades and scores on standardized tests were used to determine entrance into the Advanced Placement courses in this college-preparatory school, and everyone completed applications for college and financial aid as part of a special study skills program.

Procedures:

Three female high school seniors from a third suburban math-science academy led all six classes through three activities. These interns began by introducing themselves and the project as they informed participants of their rights as research volunteers. The introduction included stories about life in the intern's suburban school and a rationale for posing questions about students' motivation in their senior year. Next, participants completed a brief paper-and-pencil survey that required them to reflect on their beliefs about the role of school in their lives, and on the influence of their psychological needs on their academic motivation. Participants assigned an individual code to their survey and completed the activity in about 10 minutes.

Once the survey was completed, interns led audio-taped, recursive-reflective classroom discussions. For about 30 minutes, intact classes discussed a series of themes

depicting their intentions. Two graduate students and the three high school interns started these conversations by sharing their own educational experiences from within the U.S. as well as from China and India. These facilitators explained that the purpose of this activity was to understand whether *senioritis*, a popular term used to characterize motivational disaffection among high school seniors in the U.S., was a reality for many of the students. Guiding questions focused on students' present and future educational and vocational goals; their needs for belonging, competence, and autonomy; and the external supports they received from their peers, parents, teachers and schools. This recursive-reflective dialogue encouraged participants to hear and understand diverse perspectives, re-evaluate their viewpoints in light of new information, and articulate their beliefs about their educational responsibilities.

Ending the session, interns distributed blank sheets of paper and asked students to supply the same identifying code that they put on their survey. Guided by three prompts written on the classroom's white board, each of the students wrote about their intentions. Participants noted whether their values had changed from freshman to senior year, the nature and quality of any changes, whether they experienced senioritis, and how their current motivation was guided by their beliefs about school. This open-ended task also allowed participants to add any additional thoughts that they wanted to share with the research team.

Instruments:

This mixed-method study involved three instruments described here in the order in which they were administered. Tasks were crafted to elicit different forms of executive functioning. Methods of recording information were similarly varied. Instruments differed in whether researchers or participants structured the responses.

Reflection survey. A combination of survey items were selected from the *Motivation for School and Life* measures to convey seniors' understanding of the role of school in their lives (Thorkildsen, Golant, & Cambray-Engstrom, 2008). Using a 5-point scale ranging from "all the time" (5) to "never" (1), seniors evaluated one internal and one external belief about the purpose of school (2 items, $\alpha=.81$, "An ideal school should teach students how to be successful adults" and "An ideal school should help sort people into the right professions"). They also used a Likert scale to evaluate selected goals in school (5 items, $\alpha=.90$) and for the future (3 items, $\alpha=.83$).

A 5-point scale ranging from "all the time" (5) to "never" (1) was also used to evaluate a cluster of three internal and external excuses someone might use to justify any disengagement (3 items, $\alpha=.73$, e.g., "How often do you use the following excuses? Everyone is a little lazy sometimes; I should not? have to study if teachers do their job right."). With this same frequency scale, seniors reported their beliefs about how well school helped them meet their basic needs for autonomy, belongingness, and competence, (11 items, $\alpha=.78$, e.g., "I stay motivated in school if I... set my own schedule; have teachers who care about me; feel I can complete difficult tasks."). Seniors

Themes noted	% of total sample	School mission			
		Culture-focused (<i>n</i> = 64)		College-preparatory (<i>n</i> = 74)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Goals					
In school	99%	.16	.06	.15	.05
For the future	65%	.08 ^a	.07	.10 ^a	.06
Needs					
Autonomy	66%	.09	.08	.10	.07
Belongingness	35%	.05	.06	.05	.06
Competence	67%	.08 ^a	.07	.11 ^a	.06
Internal states					
Action	75%	.13	.07	.10	.07
Cognition	97%	.16	.06	.15	.04
Emotion	39%	.06	.08	.05	.07
External supports					
Parents	4%	.00	.02	.01	.02
Peers	17%	.03	.05	.02	.04
Teachers	13%	.02	.05	.01	.04
Schools activities	97%	.16	.06	.15	.04

Table 1: Proportion of Ideas Embedded in Seniors' Reflection Essays. Note: Totals were calculated by counting the number of participants who referred to each theme in their essay. Proportions were calculated separately for each participant and then averaged.

also reported their plans for college and demographic information.

Recursive-reflective class discussions. Six whole-class discussions were audio-taped using at least two recorders strategically situated in different parts of the classroom and monitored by two graduate students. All seniors within intact classes participated in these discussions. Three high school interns asked a series of nine questions, using participants' answers to direct the order in which new themes were introduced. Discussion leaders made sure to invite all willing participants to share their ideas. These audiotaped discussions were later transcribed into six transcripts for content analysis.

Three questions captured participants' need for autonomy or self-determination. These included, "Do you feel speaking your mind makes a difference at your school?", "How important is it for you to be able to make your own decisions?", and "To what extent do you feel that you are in control of your schoolwork?"

Three questions focused on participants' need for belongingness. These included, "Do you feel the need to compete with other students academically?", "Do your peers distract you from schoolwork or do they motivate you?", and "Does your parents' involvement in your life affect your school work?"

The remaining questions captured seniors' need for competence. These included, "Do you feel you are capable of doing most of your schoolwork?", "Do you have clear plans for life after high school?", and "Has your school prepared you for the future?"

Extended response essay. After the group discussion, each volunteer wrote an extended response essay. They were asked to write down whether their values had changed from freshman to senior year, how and why any changes occurred,

whether they experienced senioritis, and any other thoughts they wanted to add.

Analysis plan:

Responses from individual extended-response essays and surveys as well as recursive-reflective group discussions conveyed seniors' understanding of their intentions toward school. Themes apparent in individual responses were compared with those apparent when content analysis of the group discussions was evaluated. Using third-person analytical approaches, seniors' intentions were then compared with those central in the senioritis stereotype. Finally we compared the intentions of seniors attending two district schools to establish whether seniors' beliefs were affected by the messages embodied in the school's mission.

Individual-level analyses. At an individual level, two assessments offered converging evidence. Extended response essays were subject to content analysis. Raters determined if each respondent reported a change in their motivation from freshman to senior year and if the essays made reference to those facets of intentions included in Table 1. Inter-rater reliability scores ranged from 1.00 to .92, ($M = .99$, $SD = .02$), and discrepancies were resolved by a discussion between raters. To control for the fact that some seniors wrote more than others, the total number of themes was tallied for each respondent, and we computed the proportion of that total represented by each theme.

Survey responses were categorized and averaged into six subscales. These included indices of goals for school and the future; needs for autonomy, belongingness, and competence; beliefs about the purpose of school; and internal and external excuses for justifying behavior (Table 2).

	School mission			
	Culture-focused		College-preparatory	
	(n = 64)		(n = 74)	
Survey responses	M	SD	M	SD
Purposes of school	4.38	0.75	4.26	0.74
Goals in school	4.30	0.43	4.44	0.47
Goals for the future	4.22 ^a	0.53	4.49 ^a	0.49
School supports needs	4.02 ^a	0.55	4.24 ^a	0.39
Internal excuses	2.98	0.88	2.70	1.04
External excuses	2.13 ^a	1.12	1.62 ^a	1.02

Table 2: Proportion of Ideas Embedded in Seniors' Reflection Essays. Note: Totals were calculated by counting the number of participants who referred to each theme in their essay. Proportions were calculated separately for each participant and then averaged.

The proportions for each theme apparent in seniors' reflection essays and mean scores for each component of the surveys were included in separate within-subjects ANOVAs as dependent variables and school was used as an independent variable. Differences in school mission were largely unrelated to students' individual beliefs, desires, and reported actions, but predictable levels of variance were evident in these analyses.

Group-level analyses. Transcripts of the focus group discussions were subject to content analysis using the same set of themes used to evaluate seniors' reflection essays. Each transcript was divided into question and answer units, and the themes raised in the discussion were counted. Three raters independently evaluated these documents using the software Atlas-ti to track their classifications. Inter-rater reliability scores ranged from .97 to .58, ($M = .77$, $SD = .14$), and discrepancies were resolved via discussion between raters. Tallies for each category were converted into a proportion of speech acts to control for differences in how loquaciously each group spoke.

Themes noted	Freq. of references	School mission			
		Culture-focused		College-preparatory	
		(n = 3)		(n = 3)	
		M	SD	M	SD
Goals					
In school	68	.06	.00	.06	.01
For the future	184	.15	.02	.16	.05
Needs					
Autonomy	126	.10	.02	.11	.03
Belongingness	87	.08	.03	.07	.01
Competence	198	.16	.02	.18	.03
Internal states					
Action	105	.11	.01	.08	.02
Cognition	137	.12	.01	.12	.03
Emotion	60	.05	.02	.06	.04
External supports					
Parents	6	.01	.01	.01	.01
Peers	28	.03	.02	.02	.01
Teachers	19	.02	.01	.02	.01
School activities	138	.12	.01	.12	.03

Table 3: Mean Proportions of Themes Raised in the Group Discussions by School. Note: There were no differences between the schools or across classes within schools.

RESULTS

Evidence from three types of data converged to show that participants detected changes in their motivation from freshman to senior year and defined their educational responsibilities in personal terms rather than by blaming external sources. Furthermore, seniors in both schools reported similar intentions.

Awareness of Motivational Change:

In written essays, most participants reported that they had changed from freshman to senior year. Of the 84% ($n = 116$) who agreed they had changed, 48% said they were less motivated as seniors, 40% said they were more motivated as seniors. The remaining 12% said they were simply ready to move beyond high school.

Similar variance was apparent in the themes raised in personal essays and in group discussions. As depicted in Tables 1 and 3, most participants described a wide range of beliefs, desires, and actions when representing their motivation.

Specific comments from the group discussions included symptoms of disaffection, optimism, and detachments. Seniors' reports of their intentions showed traces of ennui as well as enthusiasm. Some individuals clearly described disaffection as feeling bored, lazy, stressed, tired, or otherwise disinterested in school. These seniors also noted that schoolwork sometimes lacked meaning or a practical connections with real life. They expressed confusion about the value of the senior year in helping them gain college admission or employment.

In contrast to signs of disaffection, participating seniors enthusiastically spoke about the ways in which academic experiences helped them sustain motivation. Justifying their desire to graduate, some individuals emphasized a sense of accomplishment as the primary merit of the senior year. Elaborating on dreams of the graduation ceremony itself, prom, and life after high school, seniors depicted these activities as incentives for sustaining high levels of motivation.

When participants described neither the positive nor the negative value of school, they noted that the senior year was a much needed, well-deserved break after an intense junior year filled with standardized tests and college application pressures. Some of these participants also noted that they no longer felt like a student.

Articulating Educational Responsibilities:

Offering participants multiple ways to represent their educational responsibilities revealed the complexity of their intentions. Their responses formed a mixture of common actions and complex beliefs and desires.

Valuing school. Pro-school values were highly salient in seniors' reflection essays and their group discussions (Table 1). Predictable school differences were apparent only in how seniors attending the college-preparatory school described their goals relative to seniors attending the culture-focused school, $F(1, 136) = 5.32$, $p < .05$, $\eta_p^2 = .04$. Seniors in both schools wrote more about their goals in school and for the future, competence, and autonomy than about other school-focused themes, but those attending the college-preparatory

school wrote slightly more about their future goals and need for competence than seniors attending the culture-focused school. There were no school differences in the content of the group discussions (Table 3).

Survey responses confirmed that most participants had optimistic beliefs about school and a range of plans for their future. When all six scores were included as dependent variables with school as an independent variable in a within-subjects ANOVA, most seniors strongly agreed with school-focused goals, but seniors attending the college-preparatory school were more optimistic about their future life goals (Table 2), $F(2.96, 401.92) = 6.39, p < .001, \eta_p^2 = .05$. Seniors typically agreed that they sustained motivation when their needs for autonomy, belongingness, and competence were met in school, but again those attending the college-preparatory school reported more optimistic beliefs than those attending the culture-focused school. The final confirmation of this difference was apparent when internal excuses were isolated from the external excuse of blaming teachers for school failure. Most seniors disagreed with all excuses, but those attending the college preparatory school were more likely to strongly disagree with this justification for not doing well in school.

These pro-school values were further apparent in seniors' reports of their post-high school plans. Most participants planned to extend their education beyond high school, seeking vocational (17%), four-year college (44%), or graduate-level degrees (36%). Relatively few seniors (3%) in each school reported no educational plans beyond high school.

Locus of causality. Testing the assertion that internal sources of causality foster a stronger sense of responsibility than external sources, we evaluated the extent to which participants evaluated their internal states and external features of their environments. Seniors' written essays as well as comments in the group discussions referred to internal actions, cognition, and emotions as well as to external supports from parents, peers, teachers, and school activities (Tables 1 and 3).

Differences across schools in seniors' depictions of their internal states were not significant, but seniors wrote and spoke more often about their thoughts and actions than about the qualities of the people in their lives. The essays conveyed that seniors accepted responsibility for their academic outcomes such as grades, assignment deadlines, attending school, and staying engaged in the classroom, and these were also mentioned in the group discussions. However, using probing questions in the group discussions to extract information about internal and external influences on motivation, participants talked about autonomy and action more often than about how outside forces influenced their motivation. As one student put it, "it is big because like you are shaping up your future, so it should depend on what you do (not what your parents or peers say)."

In a fairly small part of both the written essays and group discussions, seniors expressed gratitude as they acknowledged the role that their parents, peers, teachers, and school administrators played in nurturing their sense of belonging.

Some individuals expressed the value of parents and family in ensuring their continued commitment to maintaining high grades. Others mentioned the role of peers in forming study groups, or how teachers supported their student community through collaborative projects.

More commonly, autonomy themes dominated the group discussions and did so more often than in the written essays. Seniors elaborated on the benefits of being allowed to make their own decisions, feeling in control over their academic outcomes, and having adult supervision as they formulate educational goals. Seniors also emphasized autonomy when they noted impediments to selecting courses according to their personal interests or teachers' preferential treatment of popular students. As one participant put it, "(our school) is completely mapped out for you!" and, "whether or not teachers listen to students' claims of unfair rules depends on who is saying... like teachers have pets....if a good or geeky person might say it then teachers might be like ok I'll change it but if I went and said then...(laughter)." Seniors' need for control was also apparent in how they represented their spontaneous actions such as "ditching school," avoiding tests, becoming engaged in civic-minded agendas, and organizing peer groups to confront perceived institutional injustices.

Deviating from a strong internal focus, seniors also offered elaborate descriptions of their school mission and how it was enacted. Central in the group discussions, seniors elaborated on the details of how particular activities aligned to their school's mission. Participants from the culture-focused school praised the school for being a "social school" that encouraged group work, student solidarity, and collaboration rather than competition and grades. Participants from the college-preparatory school expressed value in being able to organize peer groups to confront seemingly unfair administrative policies. Seniors in both schools noted tension emanating from stringent security measures and a lack of flexibility in school policies, but comments were consistent with other indicators of a quest for personal control rather than disrespect for education. These findings do not support stereotypes about disaffected adolescents, even though most participants admitted to having low motivation on some days and high motivation on others.

School Mission and Intentions:

Having established that seniors were aware of a motivational change and were willing to represent the qualities of this change in intentional terms, we compared findings from schools with two very different missions while using enrollment in Advanced Placement as a curricular control variable. Additional details from the group discussion reveal that school-level differences in seniors' reported beliefs, desires, and actions aligned with differences in the schools' missions.

Seniors attending the culture-focused school, for example, spoke about their involvement in a school-wide walkout designed to protest a national immigration policy. They noted how school activities served to reinforce community values rather than further divide community members. Some seniors also noted that their school had suffered a "bad reputation" in

the past, how they were reluctant to attend prior to admission, and how they experienced a strong sense of solidarity with their peers and the community itself. Seniors in this school also critiqued some of their teachers for failing to make classes interesting or continuing to teach in a monotone. They noted the importance of overcoming such environmental challenges to continue to learning.

Seniors from the college-preparatory school reported confidence in administrators' willingness to acknowledge student grievances and engage in a conciliatory dialogue with the student representatives. These seniors noted the many ways in which their school offered supportive resources for college and financial aid applications and prepared the for life beyond high school. They also described how educators left individuals with the impression that they even had more control over external events than might be reasonable. As one participant noted, "In the freshman year, they said, 'OK, you choose what classes you want to get into but these are all the classes you have to take.' And, that was seven out of eight so we really didn't have a choice about where we wanted to go."

Seniors in both schools noted how critical discourse between students and the school was encouraged, and that student voice was recognized as a legitimate source to be heard and valued. Students also expressed equally balanced sentiments of pride, enthusiasm, and conflict in thinking about their school climates. When directly asked, they declared that signs of senioritis did not fall under the jurisdiction of the school, consistently noting their own fluctuating sense of responsibility. As one participant summarized, "I think academically [school] does [prepare you for life], but at the end of the day it depends on you as an individual, your work ethic, or how you manage your time, that's big. And, staying focused. I don't think that is something that school can necessarily teach."

DISCUSSION

In marked contrast to the stereotype of urban adolescents as angry individuals who blame society for their failures, more than half the sample refused to acknowledge such decline. Seniors in two very different schools reported a notable tendency to balance internal and external explanations for their successes and failures. Thus, the term "senioritis," so commonly used to depict adolescents' behavior in the final year of high school seems to be, at best, an exaggeration. Depicting the inevitable stress seniors experience as a disease, no matter how humorous in intent, masks the complex transition they face when accomplishing one set of goals and moving on to new choices and opportunities. The derogatory, disease-laden connotation is in marked contrast to the feelings of accomplishment experienced by many seniors and their families.

When questioned about the awareness of their own and others' motivation through high school, seniors admitted to experiencing negative emotions and engaging in the problem behaviors that foster this stereotype. It is easy to detect ways in which this angst is transformed into negative stereotypes about seniors' abilities and future prospects, especially those living in

the urban communities such as the one in which this study was conducted (Yaeger et. al, 2014). To debunk one myth, we controlled for some of the variance in seniors' academic abilities by sampling students who were all scheduled to take Advanced Placement exams shortly after our visit. We added ecological validity to the design by working with volunteers from urban schools adhering to different missions. Without denying the challenges faced by these seniors, our findings complement studies of adolescent development that depict seniors as being autonomy driven, eager to learn, and ready to control many academic outcomes (Ryzin, Gravely, & Roseth, 2009; Thorkildsen et al., 2008).

Although we were not able to track these students through the process of completing their exams and discovering their final college placements, our direct conversations about unfortunate myths of this sort may have helped them remain confident in the face of this next round of academic challenges. Seniors' emphasis on internal, controllable explanations for their achievements, while ideal for most types of learning, may also make them more vulnerable in the face of negative ethnic and environmental stereotypes (Alberts, Martijn, & deVries 2011; Steele, 1997). Open discussions of the type used in this project fit with research recommendations for mitigating the power of stereotype-threat in achievement settings (Steele, 2010). Helping seniors identify accurate explanations for the outcomes of their behavior and imagine long- and short-term consequences of their actions fosters a useful skill set. Rather than generating a one-size-fits all generalization, it may be enough to regularly talk with seniors about the stress of leaving high school (Yeager & Walton, 2011). Reminding seniors of the need to remain patient with themselves and others during this exciting transition can encourage them to celebrate their achievements while addressing any signs of disaffection.

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REFERENCES

- Alberts, H. J., Martijn, C., & de Vries, N. K. (2011). Fighting self-control failure: overcoming ego depletion by increasing self-awareness. *Journal of Experimental Social Psychology*, 47, 58-62. doi: 10.1016/j.jesp.2010.08.004

- Bandura, A. (1995). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.
- Barkley, R.A. (2001). The executive functions and self-regulation: An evolutionary neuropsychological perspective. *Neuropsychological Review*, 11, 1-29. doi: 10.1023/A:1009085417776
- Benner, A. D., & Graham, S. (2009). The transition to high school as a developmental process among multiethnic urban youth. *Child Development*, 80, 356-376. doi: 10.1111/j.1467-8624.2009.01265.x
- Butler, R., & Shibaz, L. (2008). Achievement goals for teaching as predictors of students' perceptions of instructional practices and students' help seeking and cheating. *Learning and Instruction*, 18, 453-467. doi:10.1016/j.learninstruc.2008.06.004
- Chouinard, R., & Normand, R., (2008). Changes in high school students' competence beliefs, utility value and achievement goals in mathematics. *British Journal of Educational Psychology*, 78(1), 31-50. doi: 10.1348/000709907X197993
- Dennett, D. C. (1989). *The intentional stance*. Cambridge, MA: MIT Press.
- Dweck, C. S. & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273. doi: 10.1037/0033-295x.95.2.256
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & McIver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48, 90-101. doi: 10.1037/0003-066x.48.2.90
- Favre, T., Hughes, C., Emslie, G., Stavinoha, P., Kennard, B., & Carmody, T. (2009). Executive function in children and adolescents with major depressive disorder. *Child Neuropsychology*, 15, 85-98. doi: 10.1080/09297040802577311
- Fredricks, J. A., & Eccles, J. S. (2002). Children's competence and value beliefs from childhood through adolescence: Growth trajectories in two male-sex typed domains. *Developmental Psychology*, 38(4), 519-533. doi: 10.1037//0012-1649.38.4.519
- Frenzel, A. C., Dicke, A. L., Pekrun, R., & Goetz, T. (2012). Beyond quantitative decline: Conceptual shifts in adolescents development of interest in mathematics. *Developmental Psychology*, 48(4), 1069 – 1082. doi: 10.1037/a0026895
- Fuhs, M. W., & Day, J. D. (2011). Verbal ability and executive functioning development in preschoolers at head start. *Developmental Psychology*, 47, 404-416. doi: 10.1037/a0021065.
- Garner, J. K. (2009). Conceptualizing the relations between executive functions and self-regulated learning. *The Journal of Psychology: Interdisciplinary and Applied*, 143, 405-426. doi: 10.3200/JRLP.143.4.405-426
- Gillen-O'Neel, C., & Fuligni, A. (2013). A longitudinal study of school belonging and academic motivation across high school. *Child Development*, 84, 678-692. doi: 10.1111/j.1467-8624.2012.01862.x
- Graham, S. (1997). Using attribution theory to understand social and academic motivation in African-American youth. *Educational Psychologist*, 32, 21-34. doi: 10.1207/s15326985ep3201_
- Hill, L. D. (2008). School strategies and the "college-linking" process: Reconsidering the effects of high schools on college enrollment. *Sociology of Education*, 81, 53-76. doi: 10.1177/003804070808100103
- Hughes, C. (1998). Executive function in preschoolers: Links with theory of mind and verbal ability. *British Journal of Developmental Psychology*, 16, 233-253. doi: 10.1111/j.2044-835x.1998.tb00921.x
- Meece, J. L., Anderman, E.M., Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57, 487-503. doi: 10.1146/annurev.psych.56.091103.070258
- Miller, S. A. (2009). Children's understanding of second-order mental states. *Psychological Bulletin*, 135, 749-773. doi: 0.1037/a0016854
- Murdock, T. B., Miller, A., & Kohlhardt, J. (2004). Effects of classroom context variables on high school students' judgments of the acceptability and likelihood of cheating. *Journal of Educational Psychology*, 96, 765-777. doi: 10.1037/0022-0663.96.4.765
- Nicholls, J. G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Nicholls, J. G., Patashnick, M., Cheung, P. C., Thorkildsen, T. A., & Lauer, J. (1989). Can theories of achievement motivation succeed with only one conception of success? In F. Halish, & J. van den Bercken (Eds.), *International perspectives on achievement and task motivation* (pp. 187-208). Lisse, Holland: Swets & Zeitlinger
- Nicholls, J.G., Patashnick, M., & Nolen, S.B. (1985). Adolescents' theories of education. *Journal of Educational Psychology*, 77, 683-692. doi: 10.1037//0022-0663.77.6.683

- Otis, N., Grouzet, M.E., & Pelletier, L. G. (2005). Motivational change in an academic setting: A 3-year longitudinal study. *Journal of Educational Psychology*, 97, 170-183. doi: 10.1037/0022-0663.97.2.170
- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91, 188-204. doi: 10.1037/0022-3514.91.1.188
- Roderick, M., & Coca, V., & Nagaoka, J. (2011). Potholes on the road to college: High school effects in shaping urban students' participation in college application, four-year college enrollment, and college match. *Sociology of Education*, 84, 178-211. doi: 10.1177/0038040711411280
- Roeser, R. W., & Eccles, J. S. (1998). Adolescents' perceptions of middle school: Relation to longitudinal changes in academic and psychological adjustment. *Journal of Research on Adolescence*, 8, 123-158. doi: 10.1207/s15327795jra0801_6
- Ryzin, M. J. V., Gravely, A. A., & Roseth, C. (2009). Autonomy, belongingness, and engagement in school as contributors to adolescent psychological well-being. *Journal of Youth and Adolescence*, 38, 1-12. doi: 10.1007/s10964-007-9257-4
- Shim, S., S., Ryan, A. M., & Anderson, C. J. (2008). Achievement goals and achievement during early adolescence: Examining time-varying predictor and outcome variables in growth-curve analysis. *Journal of Educational Psychology*, 100, 655-671. doi: 10.1037/0022-0663.100.3.655
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629. doi: 10.1037/0003-066x.52.6.613
- Steele, C. M. (2010). *Whistling Vivaldi and other clues about how stereotypes affect us*. New York, NY: Norton.
- Thelen, E., & Smith, L., (1994). *A dynamic systems approach to the development of cognition and action*. Cambridge, MA: MIT Press
- Thorkildsen, T. A. (1993). Those who can, tutor: High ability students' conceptions of fair ways to organize learning. *Journal of Educational Psychology*, 85, 182-190. doi: 10.1037/0022-0663.85.1.182
- Thorkildsen, T. A. (2013). Motivation as the readiness to act on moral commitments. In K. Heinrichs, F. Oser, & T. Lovat (Eds.), *Handbook on moral motivation: Theories, models, applications* (pp. 85-99). Boston, MA: Sense Publishers. doi: 10.1007/978-94-6209-275-4_6
- Thorkildsen, T. A., Golant, C. J., & Cambray-Engstrom, E. (2008). Essential solidarities for understanding Latino adolescents' moral and academic engagement. In C. Hudley, & A. E. Gottfried (Eds.), *Academic motivation and the culture of schooling in childhood and adolescence* (pp. 73-98). Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780195326819.003.0004
- Thorkildsen, T. A., Golant, C. J., & Richesin, L.D. (2007). Reaping what we sow: Cheating as a mechanism of moral engagement. In E.M. Anderman, & T. B. Murdock (Eds.), *The psychology of academic cheating* (pp. 171-202). San Diego, CA: Elsevier. doi:10.1016/b978-012372541-7/50012-7
- Thorkildsen, T. A., Reese, D., & Corsino, A. (2002). School ecologies and attitudes about exclusionary behavior among adolescents and young adults. *Merrill-Palmer Quarterly*, 48, 25-51. doi: 10.1353/mpq.2002.0004
- Thorkildsen, T. A., Sodonis, A., & White-McNulty, L. (2004). Epistemology and adolescents' conceptions of procedural justice in school. *Journal of Educational Psychology*, 96, 347-359. doi: 10.1037/0022-0663.96.2.347
- Tomasello, M., Kruger, A., & Ratner, H. (1993). *Cultural learning*. *Behavioral and Brain Sciences*, 16, 495-552. doi: 10.1017/s0140525x0003123x
- Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York: Guilford Press.
- Weinstein, R.S., Marshall, H.H., Brattesani, K.A., & Middlestadt, S.E., (1982). Student perceptions of differential teacher values in open and traditional classrooms. *Journal of Educational Psychology*, 74, 678-692. doi: 10.1037//0022-0663.74.5.678
- Yaeger, D. S., Purdie-Vaughns, V., Garcia, J, Apfel, N., Brzustoski, P., Master, A., Hessert, W. T., & Williams, M. E. (2014). Breaking the cycle of mistrust: Wise interventions to provide critical feedback across the racial divide. *Journal of Educational Psychology*, 143, 804-834. doi: 10.1037/a0033906
- Yeager, D. S., & Walton, G. M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research*, 81, 267-301. doi: 10.3102/0034654311405999
- Zusho, A., & Barnett, P. A. (2011). Personal and contextual determinants of ethnically diverse female high school students' patterns of academic help seeking and help avoidance in English and mathematics. *Contemporary Educational Psychology*, 36, 151-164. doi.org/10.1016/j.cedpsych.2011



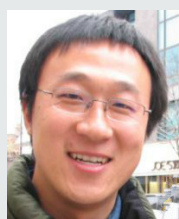
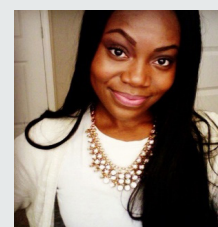
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