

Grown Unschoolers' Experiences with Higher Education and Employment: Report II on a Survey of 75 Unschooling Adults

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Abstract *A sample of 75 adults, who had been unschooled for at least the years that would have been their last two years of high school, answered questions about their subsequent pursuits of higher education and careers. Eighty-three percent of them had gone on to some form of formal higher education and 44 percent had either completed or were currently in a bachelor's degree program. Overall, they reported little difficulty getting into colleges and universities of their choice and adapting to the academic requirements there, despite not having the usual admissions credentials. Those who had been unschooled throughout what would have been their K-12 years were more likely to go on to a bachelor's program than were those who had some schooling or curriculum-based homeschooling during those years. Concerning careers, despite their young median age, most were gainfully employed and financially independent. A high proportion of them—especially of those in the always-unschooled group—had chosen careers in the creative arts; a high proportion were self-employed entrepreneurs; and a relatively high proportion, especially of the men, were in STEM careers. Most felt that their unschooling benefited them for higher education and careers by promoting their sense of personal responsibility, self-motivation, and desire to learn.*

Keywords unschooling, homeschooling, grown unschoolers, educational freedom, self-determination, self-directed education, creativity

Introduction

This is the second of a pair of articles reporting on a survey of adults who had been “unschooled” during all or part of (at least the last two years of) what would otherwise have been their K-12 education. Unschooling refers to the educational practice of not sending children to school or requiring them to do school-like activities at home, but, instead, allowing them to take charge of their own education. Unschoolers generally believe that most learning occurs naturally, in everyday life, and that activities undertaken specifically for learning should be chosen by the learners, not imposed on them. Parents in unschooling families

facilitate their children's education in many ways—such as by providing materials, answering questions, engaging in discussions, serving as models, and connecting them with resources outside the home—but do not impose a curriculum or pressure their children to study particular subjects or submit to academic tests. For legal purposes, unschooling is a variety of homeschooling, but in this pair of articles we distinguish between the two by using the term homeschooling to refer only to parent-directed, curriculum-based schooling at home.

In the first article of this pair (Gray & Riley, 2015), we reviewed previous research on unschooling. We then described the methods of our survey and those results pertaining to the respondents' memories of their unschooling experiences, their social lives as unschoolers, their evaluations of their unschooled education, and their plans concerning the education of their own children. Our concern in this article is with questions about higher education and employment. Do unschoolers go on to college? If so, how do they get in without standard admissions credentials and how do they adapt to the academic requirements there? With or without college, what sorts of careers do unschoolers go on to? How do they describe their occupational choices and goals?

A considerable body of research has shown that conventional homeschoolers typically perform well in higher education (Bagwell, 2010; Cogan, 2010; Gloeckner & Jones, 2013; Lattibeudiere, 2000; Ray, 2013). Indeed, many colleges and universities, including some of the most elite schools, actively recruit homeschooled students (Cooper & Sureau, 2007). However, there is little a priori reason to assume that this observation would generalize to unschoolers. One researcher (Grunzke, 2012), on the basis of reports from homeschooling and unschooling mothers, concluded that the family lives and educational experiences of curriculum-based homeschoolers appears to be more like that of students in traditional schools than like that of unschoolers. To our knowledge, there has been no previous research into unschoolers' higher education or careers, though a number of case reports can be found in which individual grown unschoolers describe their own experiences with these (for a collection of such reports, see Desmarais, 2015).

Potentially relevant to these questions about unschoolers are the results of a follow-up study, conducted many years ago, of the graduates of the Sudbury Valley School, a radically alternative school in Massachusetts, where students from age 4 through high-school age are entirely in charge of their own education (Gray & Chanoff, 1987). The students at that school are free, all day, every school day, to play, explore, socialize, and in other ways follow their own interests, as long as they don't violate school rules, which are made democratically and have to do with maintaining peace and order, not with learning. In the follow-up study the graduates who had chosen to go on to higher education reported that they had no particular difficulty getting admitted to the schools of their choice and adapting to the academic requirements. Collectively, they were pursuing the whole range of careers

that are valued by our society, but especially careers that require high levels of creativity and self-initiative. They believed that their self-determined education had led to a number of lasting benefits, including a continued passion for learning, a high sense of personal responsibility, and a continued drive to live in self-determined ways. Subsequent follow-up studies, conducted by the school itself, resulted in similar findings (Greenberg & Sadofsky, 1992; Greenberg, Sadofsky & Lempka, 2005).

Also potentially relevant is a relatively large body of research concerned with the developmental effects of (or at least correlates of) increased autonomy in childhood. For example, in one classic longitudinal study, children whose parents allowed them more freedom at home were subsequently judged by teachers, in grades 6 and 9, to be more creative, resourceful, curious, independent, and confident than children who had experienced less freedom at home (Harrington, Block, & Block, 1987). Other research has related increased autonomy to better performance on tasks involving creativity or mental flexibility, to more satisfying interpersonal relationships, and to measures of psychological well-being, resilience, and life satisfaction (reviewed by Ryan, Deci, Grolnick, & LaGuardia (2006). More recently, a correlational study revealed that young children who were permitted more time by their parents to do as they chose rather than engage in adult-structured activities, performed better on a standard test of self-directed executive functioning—a test that had previously been shown to predict future real-life problem-solving ability—than those who had less free time (Barker et al., 2014).

All such findings might suggest that unschoolers, who as children have almost unlimited freedom to structure their own activities (Gray & Riley, 2013; 2015), would grow up to be unusually creative, innovative, resourceful, and self-determined adults. However, any attempt to equate unschooling with the conditions of the studies just noted, or to make predictions about the consequences of unschooling from those studies, must be treated cautiously. Traditionally educated students who experience more-than-average autonomy at home nevertheless experience a highly adult-structured environment at school. Students at Sudbury Valley may be like unschoolers in being in charge of their own education, but unlike unschoolers, they are immersed in the democratic structure of the school and surrounded regularly by other students and a variety of staff members from whom they can learn and gain inspiration.

Brief review of methodology of the present study

For details of our methodology, we refer readers to the first article of this pair (Gray & Riley, 2015). Briefly, our method was to recruit survey participants via the Internet, send each of them a questionnaire, and analyze their responses to open-ended questions using a grounded-theory qualitative approach. The questionnaire began with factual questions about their age, gender, and history of schooling,

homeschooling, and unschooling, and then continued with open-ended questions about their experiences as unschoolers and subsequent experiences with higher education and employment (the whole questionnaire is included as an appendix in the first article of this pair, Gray & Riley, 2015). To qualify for the study, respondents had to be at least 18 years old and had to have been unschooled for at least what would have been their last two years of high school.

Seventy-five people who qualified for the study filled out the questionnaire—65 from the US, six from Canada, three from the UK, and one from Germany. Fifty-eight of the respondents were women, 16 were men, and one self-identified as genderqueer. For purposes of comparison, we divided the respondents into three groups according to the last grade they had completed of schooling or homeschooling. Group I were entirely unschooled—no K-12 schooling at all and no homeschooling. Group II had some schooling or homeschooling, but none beyond sixth grade; and Group III had at least some schooling or homeschooling beyond sixth grade. Respondents were placed into Group II even if they had only one year of schooling or homeschooling prior to sixth grade, and into Group III even if they had only one year of schooling or homeschooling sometime after sixth grade and before eleventh grade. As shown in the top rows of Table 1, the three groups were quite similar in number of participants, median age, and percentage female, but, of course, differed in median number of years of schooling plus homeschooling.

Findings concerning higher education

Question 5 of the survey read, *“Please describe briefly any formal higher education you have experienced, such as community college/college/graduate school. How did you get into college without having a high school diploma? How did you adjust from being unschooled to being enrolled in a more formal type of educational experience? Please list any degrees you have obtained or degrees you are currently working toward.”*

Overall, 33 (44%) of the 75 participants had completed a bachelor’s degree or were fulltime students in a bachelor’s program at the time of the survey. Although we did not ask for the names of the colleges attended, some volunteered that information. The named colleges included several state universities (e.g. UCLA, University of South Carolina, University of New Mexico), an Ivy League college (Cornell), and a number of small private liberal arts colleges (e.g. Bennington, Earlham, Marlboro, Mt. Holyoke, Prescott). Of those who had completed a bachelor’s degree, 13 were enrolled in or had completed a post-graduate degree program.

Of those who had not enrolled in a bachelor’s program, 29 had pursued some other form of higher education, either for vocational training (in such realms as the culinary arts, business administration, massage, EMT, practical nursing, and sign language interpretation) or to gain specific other useful or desired skills. Thus, in

all, 62 (83%) of the respondents had pursued some sort of higher education. As shown in the fifth data row of Table 1, this percentage was similar across the three groups of participants.

Table 1 Differences Among the Three Groups of Participants

Group:	I. No schooling ^a	II. No schooling ^a past 6 th grade	III. Some schooling ^a past 6 th grade
Number of participants	24	27	24
Age: Median (range)	24 (18-35)	25 (19-37)	24.5 (18-49)
Years of schooling ^a : Median (range)	0 (0-0)	5 (1-7)	8 (1-11)
Gender: Percent female	19/23 = 83% ^b	20/27 = 74%	19/24 = 79%
Some formal higher education	18/24 = 75%	23/27 = 85%	21/24 = 88%
Has or is working on BA or higher	14/24 = 58%	12/27 = 44%	7/24 = 29%
Work matches childhood interests	21/24 = 88%	19/27 = 70%	18/24 = 75%
Career in creative arts ^c	19/24 = 79%	9/27 = 33%	8/24 = 33%
Entrepreneur	15/24 = 63%	14/27 = 52%	11/24 = 46%
STEM career	3/24 = 13%	9/27 = 33%	10/24 = 42%

^aThe term *schooling* in this table includes homeschooling as well as attendance at a school.

^bOne participant in Group I self-identified as genderqueer and was not classed as either male or female.

^cThe difference across groups in percentage in creative arts is statistically highly significant ($p < .001$, by a chi square test). No other differences across groups, concerning higher education or careers, were statistically significant ($p > .05$ in each case).

Interestingly, however, as shown in the sixth data row of the table, the likelihood of pursuing a bachelor’s degree or higher was inversely related to the amount of previous schooling. Those in the always-unschooled group were the most likely to go on to a bachelor’s program, and those in the group that had some schooling past 6th grade were least likely to. This difference, though substantial, did not reach the conventional level of statistical significance (chi square test, $p = .126$).

Most of the respondents who had not pursued any formal higher education at the time of the survey indicated that they felt no need for it. Their career choices did not demand it, and they were confident that they could continue to learn what they needed or wanted to know without formal schooling. For example, one wrote, “I’ve continued to unschool into adulthood and will continue throughout my life. I think internships and apprenticeships would be the natural extension of unschooling into

the traditional workplace.” Another wrote, “As an adult, I realize that unschooling helped me see that college wasn’t necessary to have a successful, fulfilling life.” Some others, however, mentioned plans to enter a degree program later. As many of the respondents were still in their late teens or early twenties, it seems likely that a higher percentage will eventually pursue higher education.

Getting into college

How did the 33 respondents who went on to a bachelor’s degree program get admitted without a standard high-school education or curriculum-based homeschool education? Seven of them reported that they had received a general education diploma (GED) by taking the appropriate test, and three reported that they had gained a high-school equivalency diploma through an online procedure. The rest apparently gained admission with no official diploma at all. Only seven reported taking the SAT or ACT (standard college admissions tests) as part of their route to college admission. By far the most common stepping-stone to a four-year college was community college.

Twenty-one of the 33 reported that they took one or more community college courses before applying to a four-year college and used their community college transcript as a basis for admission. Most found that their local community college would allow them to take courses without a high-school diploma or any sort of equivalent to a diploma. Some began to take such courses at a relatively young age (age 13 in one case, age 16 more typically) and in that way gained a head start on their college career. By transferring their credits, some reduced the number of semesters and the tuition cost required to complete a bachelor’s degree.

Several of the respondents mentioned interviews and/or portfolios as playing a major role in their college admissions. Admissions officials, looking for diversity and for indices of creativity and self-determination, may have paid special attention to them precisely because of their unconventional educational backgrounds. As illustration, here are quotations concerning college admissions from four different respondents, all of whom were in Group I (unschooled throughout K-12) and were admitted to highly selective colleges:

I set an appointment to talk with someone in the admissions department, to find out what I would need to do to apply as an unschooler. After I talked briefly about myself, my achievements, and my style of education, and after he read a sample of my writing, he said, “I can’t see any reason why you shouldn’t be here,” and proceeded to hand me the forms to become a student.

I applied to eight colleges and was accepted at all of them... I interviewed at all eight colleges; for most of them I was their first ‘unschooled’

applicant. Several colleges told me I was accepted at the conclusion of the interviews, right after they informed me that I was “surprisingly” well spoken and bright. I did take (and did very well on) both the SATs and the ACTs, which probably offset the lack of transcripts.

I went to ___ College. At the time they were interested in driven alternative students and I was looking for a place where I could study multiple art forms in a connected way. I talked my way in. They saw in me someone who would thrive there and took the time to make sure I provided all the extra things they needed.

I asked the admissions office what they wanted and they weren't sure. They suggested sending in my “curriculum” (which I didn't have). ... My mom and I wrote up a “curriculum,” which was mostly a booklist and talking about how I learned math from cooking, doing my parents’ taxes and stacking bales of hay in a loft. ... I also included all the volunteer work I had done, clubs I had started or joined, and awards I had received. ... On top of accepting me, they offered me a half-tuition scholarship and put me into their freshman honors class.

Adjusting to college

Overall the participants reported remarkably little difficulty adjusting to the academic requirements in college and reported that the benefits of their self-directed education greatly outweighed any handicaps relevant to that adjustment.

We coded the responses concerning adjustment to college as Advantaged or Disadvantaged, depending on whether their responses indicated that unschooling was, overall, more of a benefit or more of a handicap in that adjustment. Of the 33 who had gone on to a four-year college, 23 were coded as Advantaged, three as Disadvantaged, and the remaining seven as Neither (either because they did not describe advantages or disadvantages or did so in a way that did not allow us to judge which was greater).

By far the most common advantages expressed had to do with motivation and self-regulation. The respondents generally said that they were at an advantage compared with their schooled classmates because it was their own choice to go to college (in contrast to classmates who felt compelled to be there), they had not been “burned out” by previous schooling, they had chosen courses of study that they loved, and they were used to taking responsibility for their own lives and learning. A few did mention some initial difficulty adapting to the formalities of courses, but indicated that such problems were quickly overcome and did not hold them back. Three respondents also mentioned that they felt frustrated and constrained in college, by requirements that made it difficult for them to pursue their own

questions in their own ways.

Seven of those who had pursued bachelor's degrees wrote that they were surprised and/or disappointed to find that most of their classmates had little interest in the subject matter of the courses or in critical or original thinking. These respondents had gone to college hoping to be immersed in an intellectually stimulating environment and, instead, found their fellow students to be more interested in parties and drinking. Several wrote that although they had no difficulty adapting academically, they were unhappy with the social life of college, where everyone was roughly the same age and more or less cut off from the world beyond the college campus. Some wrote about taking part-time jobs not only to help earn their way through college, but also to maintain contact with the larger world. For example, one young woman joined the local Unitarian Universalist church and served as religious educator there, while still in college, as a way of achieving a more normal social life.

The best way to convey the college experiences of the respondents is through their own words. What follows are quotations from eight participants, all different from the ones quoted previously, selected because they express themes that emerged for the sample as a whole and because, collectively, they express disappointment as well as satisfaction with the college experience. The first five participants quoted here were in the always-unschooled group, the next two were unschooled after 2nd grade, and the final one was unschooled after 7th grade.

I found that because I had not been in school before attending college, I was much less burnt out than my peers and had a very fresh perspective. I learned basic academic skills (essay composition, research, etc.) very quickly... I struggled some with time management, but eventually developed a means of staying organized.

In contrast to [my classmates], I found great inspiration from my teachers. At ___ College the teachers must also be practitioners in their fields of study, so I was working with people who were actively interested and participating in their areas of expertise as a teacher and as an actor, writer, director, translator, and so on. Having someone with such a wealth of knowledge looking over my shoulder at the work I was doing was revolutionary. It was not something I wish I had earlier, not something I felt had been lacking my whole life, but it was something that inspired me for my four years at school.

I definitely felt strange going into a formal school, especially being in an honors program. I spent long hours studying and doing my homework—way more work than my classmates were doing. After I got straight A's

for the first half of my first semester I started to relax a little more, and I realized I was working way too hard. So I learned how to learn like my fellow classmates were—by memorizing everything just before a test. I still kept getting straight A's but was doing hardly any work at all. Eventually I learned how to balance it—actually delving into material I enjoyed and memorizing the stuff I wasn't interested in. It wasn't hard; it mostly just made me really appreciate the fact that I hadn't been in school my whole life.

I loved college—it stands out as one of the most focused and fulfilling periods of my young life! When I began community college, I was younger than other students, and I was concerned that I would fall behind, but I didn't. I didn't like taking tests, and I still feel a lot of anxiety about tests to this day, but I excelled in most ways and graduated [from the four-year college] with a high GPA.”

I remember being very restless for the first one to two years of college. I didn't feel very challenged by the core classes I was enrolled in and was itching to move on to my major and minor classes. ...College was fun, but I was stunned to realize that the majority of the other students didn't work or pursue any other areas of their lives apart from their studies and partying. I supported myself throughout my four-year degree typically working at least two jobs while taking well above the minimum class-load requirements so that I could graduate in time. Two years into my degree I took a full time job in the creative department of the local newspaper, where I continued to work after graduation.

I enrolled at ___ College, where I have just completed my freshman year. I maintained a 3.9 GPA through the whole year, and I am returning there in the fall. ...I think that unschooling actually prepared me better for college than most of my peers, because I already had a wealth of experience with self-directed study. I knew how to motivate myself, manage my time, and complete assignments without the structure that most traditional students are accustomed to. While most of my peers were floundering and unable to meet deadlines, I remained on top of my work because I have always been an independent learner. I know how to figure things out for myself and how to get help when I need it.

The transition was a difficult one for me, not for the academics, but for the feeling of being trapped within a system. The college bubble felt tiny to me and I was in a constant state of simmering frustration at being told

even simple things like which classes to take and when. As someone who had made those choices myself for years, I felt disrespected that it was assumed that I didn't know what level of study I was ready for. It took most of the first year for me to come to a place of acceptance, remembering that this, too, was a choice that I made that I could change if I wanted to. I never loved college like many people do and never felt as free as I had before college or in the time after I graduated.

I think unschooling helped me adjust to college; I was so used to being able to study whatever I wanted that it seemed natural to take classes that interested me. And unschooling also follows the premise that if a child has a goal, they'll learn whatever they need to in order to meet it. For instance, I don't like math, but I knew I would need to learn it in order to graduate. So that's what I did.

As noted above, only three of the respondents who pursued bachelors' degrees indicated more disadvantage than advantage in college adjustment as a result of unschooling. Two of these were among the only three respondents, in the entire sample, who wrote negatively about their unschooling experience as a whole. They wrote of growing up isolated, with negligent parents, and of learning gaps that hindered their ability to pursue a higher education. More is said about them in the first paper of this pair (Gray & Riley, 2015). The third coded as Disadvantaged received that code only because she described an adjustment problem that may have resulted from unschooling and did not explicitly say anything about unschooling being an advantage. She wrote:

My first year at college was rough, though it was partly because of the brutality of the foundation (first-year) program, which has a high workload. All of a sudden I had to worry about my grades and GPA, and I wasn't a fan of making art for grades. I was also a huge procrastinator, and all of a sudden I had deadlines that I had to meet—I'd be docked marks every week a project was late. ...The second semester was easier, and ever since then I've enjoyed learning in a formal setting.

Findings concerning employment and careers

Question 4 of the survey read, "*Are you currently employed? If so, what do you do? Does your current employment match any interests/activities you had as an unschooled child/teen? If so, please explain.*" Our analyses of responses to this question led us to generate a brief follow-up questionnaire, which we sent to all of the participants, in which we asked them to list and describe the paying jobs they had held, to indicate whether or not they earned enough to support themselves, and

to describe any career aspirations they currently had in mind. Sixty-three (84%) of the original 75 participants responded to this follow-up questionnaire. The findings described in the remainder of this paper derive mainly from our analyses of the responses to Question 4, supplemented where useful with information gained from the follow-up questionnaire.

With the exception of some of the full-time students and some mothers of young children, nearly all the respondents said they were gainfully employed at the time of the survey. Of those who responded to the follow-up questionnaire, 78% said they were earning enough to be financially self-sufficient, though a number of these added that their income was modest and they were financially independent largely because of their frugal lifestyle.

Our analyses of these unschoolers' career paths revealed that many had pursued careers that were extensions of interests they had developed in childhood; that they tended to choose careers that were enjoyable and meaningful over potentially more lucrative careers; that many had gone on in the creative arts; that many were entrepreneurs; and that a substantial number of them, especially of the men, had gone into STEM careers (careers in science, technology, engineering, or math). Here we describe these generalizations one by one.

Careers as extensions of childhood interests

In response to the question about the relationship of their adult employment to their childhood interests and activities, 58 (77%) of the participants described a clear relationship. As shown in data row 7 of Table 1, the percentage exhibiting a close match between childhood interests and adult employment was highest for those in the always-unschooled group, though this difference did not approach statistical significance. In many cases the relationship was quite direct, as illustrated by the following examples:

- A 26-year-old woman who had always been unschooled wrote that she became enamored with circuses at age three, enrolled in an after-school circus program at age five, and then performed in circuses continuously until age 17 and more sporadically after that. From age 19 to 24 she and a friend ran their own contemporary circus company. In order to work as a trapeze artist she had overcome her fear of heights. As her circus career waned, she became interested in tall ships, and at the time of the survey was employed as a tall-ship rigger/bosun, where her job included maintaining the rigging and sails as well as assisting in piloting the ship. She wrote: "Working on the ocean is a very captivating experience and it employs the skills that I learned in the circus nearly every single day—skills like balance, hand-eye coordination, and even getting along with people in cramped living arrangements."

- A 20-year-old man, always unschooled except for kindergarten and ninth grade, had developed an early passion for film. By age 11 he was making YouTube videos with friends. Beginning at age 16 he took some community college courses in mass communication. At age 18 he was invited to be a local production assistant for a major film that was being produced in the city where he lived. His bosses liked him so much that, when the work in his city was done, they invited him to Los Angeles to continue working with them. One thing led to another, and at the time of the survey he had a higher-level job helping to produce another major film. In response to our question about whether he earned enough to be financially independent, he wrote, “very much so.”
- A 21-year-old man, who left school after first grade, had started a business of taking artistic photos of wilderness scenes from the air. He wrote: “Growing up with so much freedom was awesome! I did lots of outdoor activities including skiing in the winter and hiking/camping in the summer. If I hadn’t done it this way, I’m not sure I would have been able to combine the three things I really enjoy—outdoors, flying, and photography—into a business.” He wrote, further, that he started his own photography business, and also started paragliding, when he was 15 years old. The paragliding led to an interest in flying fixed-wing aircraft, and then he combined all three of his passions into a single business.
- A 29-year-old woman, who was unschooled for all of K-12 and had gone on to a bachelor’s degree in theatre arts, was, at the time of the survey, the production manager of a large theater company in New York City. She wrote: “The tools I learned as a child—to pursue new ideas/interests/knowledge, to creatively solve problems, to actively participate in my community, and more—have helped me greatly. It’s actually pretty much what I still do, just in the context of a grown-up life. The organizing, lighting design, dancing, making things is exactly what I was doing as a child and teen.”

Choice of meaningful and enjoyable careers

The generalization that these unschooleders tended to choose careers they found to be meaningful and enjoyable over potentially more lucrative careers is illustrated by the examples, just given, of people turning childhood passions into careers. It is also illustrated by cases in which the career choices reflect not so much the specific activities of childhood as a set of ideals, or social concerns, that began to take root in childhood.

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For example, a 28-year-old woman, who had refused to go to school after age 13, and so was unschooled after that, was a Greenpeace activist and community organizer. As a child she had immersed herself in art, but was also interested in “revolutions and wildlife.” Another woman, at age 30, had founded a construction company, which put into practice ideals and skills that she had developed as an unschooled youth, including, in her words, “democracy in the workplace, environmental stewardship, construction and building, facilitation, and project management.”

The survey responses also revealed a general willingness, even eagerness, to change employment as interests changed. Many said that they were still exploring, playing, and learning, and that as their lives evolved their jobs would change too. A 23-year-old, always-unschooled woman—who was currently earning her living by teaching drama, running an education program for school groups at a museum, and helping to run an after-school care program—put it this way: “I am already doing the things I love and plan on continuing to live my dreams for the rest of my life. I hope to do many more exciting things in my life, but I do not think of them as ‘careers’. They are natural parts of my life—as natural and inseparable as learning.”

The extreme of employment mobility in our sample was represented in a 39-year-old man who described himself as a self-employed polymath. He had experienced a mix of schooling and unschooling until he had left school permanently after tenth grade. He wrote, “As a polymath, what I do now is very much what I have always done; I do anything and everything that catches my attention. Life is about learning, growing, and sharing your discoveries with others who want to learn and grow too.” His list of jobs held over the years includes (but is not limited to) research and development consultant for a medical manufacturing company, clinical hypnotherapist, neurolinguistic programmer, director of tutoring services for a community college, wilderness survival and bushcraft trainer, PADI (scuba diving) instructor, martial arts instructor, and author of two published children’s books (with more on the way).

Careers in the creative arts

Thirty-six (48%) of the 75 respondents were, by our coding, pursuing careers in the Creative Arts—a category that includes fine arts, music, crafts, photography, theater, and writing. Remarkably, 19 (79%) of the 24 participants in the always-unschooled group were pursuing such careers (see Table 1, data row 8). The observation that the always-unschooled participants were more likely to pursue careers in this category than were the other participants is highly significant statistically (chi square test, $p < .001$).

Entrepreneurship

Respondents were coded as Entrepreneurs if they had started their own business and

were making a living at it or clearly working toward that. This category overlapped considerably with the creative arts category, as many were in the business of selling their own creative products or services. Overall, by our coding, 40 (53%) of the 75 respondents were entrepreneurs. As can be seen in data row 9 of Table 1, this percentage, too, was greatest for those in the always-unschooled group (63%), but in this case the differences across groups did not approach statistical significance. Many of the case examples presented above are also examples of entrepreneurship. Here are two more, which illustrate the combination of artistic and entrepreneurial endeavors.

- A 28-year-old woman, who was homeschooled to age ten and unschooled after that, had two jobs at the time of the survey. One was that of self-employed web designer, a business she had maintained for about ten years. The other was that of self-employed piano and violin instructor, which she had been doing for about seven years. Concerning the latter, she wrote: “This is my career path, and I have built it all myself.... I currently have 31 students. I teach one-on-one private lessons, teaching pieces/songs, theory, ear training, music history, composition, technique, performance, and share my passion for music.” She wrote, further: “I love my current career as a music teacher, but I am also aspiring to perform with my band as a second career path. I play bass and sing in this band, and next week we are heading in to the studio to record a full-length album that we raised the money for through a Kickstarter campaign. ... We are continuing to work toward our goals with this record, making touring plans and looking over an offer from a record label.”
- A 21-year-old woman, who was unschooled through all of K-12 and had pursued no higher education, wrote: “I’m a self employed artist/crafter, I sell online and locally. ... I’ve always been making things, I love what I do.” In response to our question about financial independence, she wrote: “Yes, I became financially independent at age 19. It is very important to me to make a good living and I feel very proud watching my income rise little by little each year.”

STEM careers

The high percentage choosing artistic careers led us to wonder if unschoolers tend to avoid STEM careers. To code for this category, we used the definition of STEM published by the National Science Foundation (Gonzalez & Kuenzi, 2012), which includes social sciences as well as natural sciences, technology, engineering, and math. However, we only included people in the social sciences if they were conducting research in that realm and/or were doing applied work that made use of

technical aspects of a social science.

Overall, by this coding, 22 (29%) of the 75 participants were pursuing STEM careers. When we broke the data down by gender (leaving out the one person who did not wish to be classified as male or female), we found that 13 (22%) of the 58 women and 8 (50%) of the 16 men in the sample were coded as having STEM careers. Despite the relatively small number of men in the sample, this difference in ratio is statistically significant (chi square test, $p = .030$). Apparently, the tendency for men to go into such careers at a higher rate than women, which has been well established for the general population (US Dept. of Commerce, 2014), occurs among unschoolers as well.

The majority of those in STEM in our sample were in some aspect of engineering or computer technology, but the sample also included an archaeologist, field biologist, math and science teacher, intelligence analyst, and four involved in various aspects of medical technology.

Concluding thoughts

Because of the self-selected nature of our sample, we cannot draw strong conclusions about the success in higher education and careers of the whole population of unschoolers. However, the study does show clearly that unschooling is not incompatible with such success. The majority went on to higher education and to careers that they found satisfying. They claimed that their experiences as unschoolers prepared them well for further education and employment by promoting a high degree of self-motivation, continued enjoyment of learning, capacity for self-direction, and sense of personal responsibility (for more on this, see the first article of this pair, Gray & Riley, 2015).

Concerning higher education, it is noteworthy that those who were in the most unschooled group, who had skipped all of K-12, were also the most likely to pursue a bachelor's degree or higher. Some of them had rarely or never been previously in a classroom, or read a textbook, or been required to study a topic that they wouldn't have chosen to study, or taken an academic examination, yet found themselves getting A's and earning honors, both in community college courses and in bachelor's programs. Apparently, the lack of an imposed curriculum had not deprived them of the background knowledge and skills needed for college success. Consistently, they reported that the attitudinal and motivational benefits they had acquired in unschooling more than outweighed any handicap that might have resulted from their not having taken the standard high-school courses that are supposed to prepare people for college.

The study also indicates that college admissions officers, at least in the United States, are more flexible in the criteria they employ in selecting applicants for admission than may be generally believed. None of the participants in this study had a conventional high-school diploma or conventional high-school education, but they

were admitted into bachelor's programs on the basis of such criteria as portfolios they had developed, interviews, and, quite often, community college courses they had already taken.

Concerning employment and career choices, the high percentage in the creative arts and the high percentage who were entrepreneurs may well be generalizable to the larger population of unschoolers and to others who experienced a high degree of autonomy in childhood. These findings are similar to those of a previous follow-up study of young people who had charge of their education at a democratic school (Gray & Chanoff, 1986), discussed in the introduction to this article. They are also consistent with other research (discussed in the introduction) indicating that increased autonomy in childhood predicts increased creativity and self-direction later on in life.

It seems likely that the freedom entailed in unschooling would promote creativity. Essentially all of learning and life, for unschoolers, is in a sense creative, as unschoolers must choose or create their own pathways. The especially high proportion of creative careers for the group that were unschooled from the beginning may reflect the reality that, for them, the creative drives present in all young children were never interrupted by a period of adult-directed schooling. However, because of the correlational nature of this research, there is no way to know to what degree creativity resulted from unschooling or unschooling resulted from creativity. It may well be that parents are more likely to unschool a child who shows high creative initiative from the beginning than one who does not. It might also be that highly creative parents are particularly prone to unschool their children, and the children are creative because their parents are. All of these factors may contribute to the observed correlation, both in this study and in previous studies relating autonomy in childhood to subsequent creativity.

Sociologists who have studied work satisfaction have found that the kinds of jobs and careers that are most satisfying to people are those that involve a great deal of occupational self-direction (Galinsky, Bond, & Friedman, 1993; Kohn, 1980). One thing that is eminently clear from the survey responses is that these grown unschoolers had, overwhelmingly, chosen careers very high in this quality. Many of them were self-employed, and even those not self-employed were largely in occupations that permitted or required much self-direction. Self-direction is the essence of unschooling, so it is perhaps no surprise that grown unschoolers would go on to such careers. Related to this, it may likewise be no surprise that the grown unschoolers seemed to value meaningful and enjoyable careers over potentially more lucrative ones. A central tenet of the unschooling philosophy is that learning is intrinsically rewarding, not something one does for extrinsic rewards such as grades, and this may generalize to all of life. Moreover, as noted in the first article of this pair (Gray & Riley, 2015), previous studies of unschooling families suggest that unschooling parents are less concerned with high income, and more concerned

with a living in ways that are meaningful to them, than are homechooling or traditionally schooling parents.

With all its limitations, this is the first research study to explore, in any systematic way, the adult lives of people who had chosen, or whose families had chosen, unschooling as their deliberate mode of education during all or part of their K-12 years. Because the participants were not a random or normative selection of all unschoolers, the findings described in this article and the previous one (Gray & Riley, 2015) might be regarded as hypotheses rather than conclusions concerning the unschooling population in general. We hope these hypotheses will help to stimulate further research aimed at understanding more fully, and more generally, the developmental consequences of the unschooling choice and the conditions in which unschooling is most or least conducive to subsequent life satisfaction.

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