The Impact of Historical Expectations on Women's Higher Education

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Abstract

This paper explores ways in which gendered approaches have limited women's experience of higher education. Using a historical lens with primary examples from the United States and Britain, it demonstrates how beliefs about women over time led to three expectations about their educational participation: initially, that women were not interested in schooling; later, that they were not capable of advanced education; and throughout the 19th and 20th centuries, that they were best educated in segregated settings with separate curricula.

The power of these beliefs has led to three continuing misinterpretations of women's historical behavior: first, that they "feminized" certain fields, driving men out; second, that they have been minor and unsuccessful participants in science; and third, that in the early post-World War II era their educational participation was merely incidental. In many ways, when women's performance defied expectation, people tended to see what they expected rather than analyzing what the behavior actually meant, and women's momentum in higher education remains inhibited by these earlier beliefs.

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In any examination of the status of women's rights and leadership, the issue of education – particularly at the collegiate level – inevitably rises to the fore. Education often provides an important key to expanding women's opportunities, and women's accomplishments are frequently tied to their increased levels of schooling. As a historian of education, I would argue that any examination of current concerns must account for what we know historically; specifically here, ways in which early expectations about women's educational participation have impacted their opportunities and have influenced our ongoing interpretations about their performance.

The educational history of girls and women is one of continually trying to move from the margins to the mainstream. This long-term exclusion is most obvious on the advanced level, where, even though women always constituted a large part of the collegiate population, they were rarely viewed as central players. For younger girls, education in the basics was long valued, but its importance as preparation for girls' futures was much less potent.

This argument about indifference toward women in colleges and universities may seem surprising today, when women constitute 60% or more of students on most campuses.[1] In fact, this current participation rate is often cited as a problem, as if women's greater presence automatically disadvantages men or as if their predominance equates to men's exclusion. This paper will examine earlier eras when women's educational participation raised questions and

[1] For the United States, see *Digest of Education Statistics, 2005*. See http://nces.ed.gov/programs/digest. For an interesting discussion, see Robin Wilson, "The New Gender Divide," *The Chronicle of Higher Education*, January 26, 2007 (Volume 53, Issue 21), A36.

when their curricular choices seemed to mean feminization at men's expense, suggesting that such viewpoints must be tempered with an understanding of their wider contexts.

I would argue that there have been many times in the past when, if women's performance defied expectations, people saw what they expected to see rather than analyzing what women actually did and what that behavior meant. The momentum of women's achievement in higher education continues to be affected even today by the influence of these past beliefs.

This paper will explain three longstanding expectations about girls, women, and their futures which, over the last two centuries in both the U.S. and Britain, created gendered approaches to their education. The first expectation, which predominated until the 1860s or so, was that women were not especially interested in education because there was so little opportunity for them to use anything beyond basic training. The second, which overlapped the earlier notion but lasted until the early 1900s, was that women were not capable of advanced education. A particular concern here was that the strains of collegiate schooling would harm women's health. The third expectation – which evolved only after their participation was assured – was that women were best treated in segregated settings and with specialized curricula. Although coeducation eventually dominated both the school and college landscapes, this notion of separate treatment has had a long effect on women's participation.

After discussing these expectations, this paper turns to three misinterpretations that have developed around women's educational history, generally as a result of these earlier understandings. These include, first, a longstanding belief – which we see in current worries that women constitute "too large" a percentage of the college population – that women "feminized" certain fields and institutions by choosing them in large numbers, thereby driving out the males. Second is the misconception that women have always lagged behind men in the pursuit of science, math, and technology, creating the current "achievement gap." Third is a belief that, since World War II, women have been only minor participants in both the workforce and higher education. The common image is "Rosie the Riveter," unfairly pushed out of the mainstream. Overall, I will suggest that a clearer understanding of how women's educational participation has progressed will help us better comprehend the origins, nature, and prognosis for assessing women's status.

Expectations Of Women's Educational Participation

1) Women have little use for education.

Until the middle of the 19th century, women and girls had little involvement in formal schooling. In citing this fact, we must remember that formal education was rather irrelevant for most of the American and British populations. In a primarily agricultural country like the United States, advanced training was of little importance to daily life. Even as industry and business expanded, college education remained largely immaterial. For instance, only about 2% of the U.S. male age group attended college at the time of the U.S. Civil War; by 1900, the rate was barely above 4%.[2] Some boys, and a few girls, attended local seminaries and academies, these being stepping-stones to college in the decades before high school became common. Boys studied practical subjects such as bookkeeping, navigation, and writing. Those few whose families saw college as the way for sons to enter medicine, law, or the ministry chose schools that focused on more traditional languages, arts, and sciences, but such education was not widespread.[3]

Where were girls and women in these developments? Until about the 1840s, most girls – and the majority of boys – received only rudimentary training that would allow them to read and cipher. Children were often trained in what were called "dame schools" where a local woman educated in her home neighborhood children of various ages. Until the American Common School Movement of the 1840s and 1850s (sparked by reformers like Horace Mann), little consistency existed in curriculum, costs, or expectations for attendance. As the school movement spread, it pushed for universal education of boys and girls (at least until the age of 12 or 13) with a basic curriculum geared more toward forming character than preparing scholars. Schooling was a way to mold citizens rather than to pose intellectual challenge.

No U.S. college was even open to a woman prior to 1834 when Ohio's Oberlin College opened its doors. Beyond coeducation, Oberlin had the further distinction of being the first college to admit African American students.[4] Oberlin's opportunity was unique, however. The only other American site where young women could receive advanced education was in the

[2] *Historical Statistics of the United States: Colonial Times to the Present* (U.S. Dept. of Commerce, 1975). See also http://www.census.gov/prod/www/abs/statab.html.
[3] See, for example, John R. Thelin, *A History of American Higher Education* (Baltimore: Johns Hopkins University Press, 2004).
[4] On Oberlin, see Cally L. Waite, "The Segregation of Black Students at Oberlin College after Reconstruction," *History of Education Quarterly* (Vol. 41, No. 3, Autumn 2001), 344-364.

scattered academies, which often offered girls a far weaker curriculum than boys received.[5]

Rather than resulting from outright prejudice, however, this lack of attention to women stemmed from a belief that they had little or no use for advanced education. Since women could not enter the ministry, nor could they practice law or medicine, what need had they for advanced schooling? Since women's "proper sphere" (a frequent 19th century term) was the home, tending to children and husbands, why waste time and resources on their education beyond the basics?[6]

One answer that arose during the 19th century ultimately focused and changed expectations for women's educational choices. This was the recognition that women – as the primary and best influences on young children – might harness their "natural" expertise into school-teaching. American women like Catherine Beecher, Emma Willard, and Mary Lyon connected the belief that women were best suited by nature for raising children with the new opportunities that were appearing in the growing common school movement.[7] These reformers created seminaries and colleges explicitly focused on preparing women for teaching; Beecher, through the Board of National Popular Education, recruited new female teachers to bring education and Christian values to the frontier areas of the expanding United States.[8] By emphasizing the importance of preparing women for teaching as a career – as well as the economic advantage of paying them about one-third of what male teachers earned – Common School reformers succeeded in making teaching a "woman's profession" by the end of the 19th century. From the early 1800s, when all formal teachers were men, we find women filling about three-quarters of American school-teaching posts by the 1870s.[9] The first belief, then – that

[5] Many U.S. institutions have claimed to be the "the first" college for women because their origins as academies or seminaries predated Oberlin College. However, because of the vast differences in educational quality and curricula among such early institutions, as well as the fluid definition of "college" before the mid-1800s, historians have generally agreed that Oberlin was the first to admit women to an actual college. For further discussion of these early institutions, see Barbara Miller Solomon, *In the Company of Educated Women: A History of Women and Higher Education in America* (New Haven: Yale University Press, 1985) and Kimberly Tolley and Nancy Beadie, eds., *Chartered Schools: Two Hundred Years of Independent Academies in the United States, 1727-1925* (New York: Routledge Falmer, 2002).

[6] On "women's proper sphere," see, for example, Nancy F. Kott, *The Bonds of Womanhood: "Woman's Sphere" in New England, 1780-1835* (New Haven: Yale University Press, 1997).

[7] Good discussions of Beecher, Willard, and Lyon can be found in Edward T. James, Janet Wilson James, Paul S. Boyer, eds., *Notable American Women, 1607-1950: A Biographical Dictionary* (Cambridge, Mass: Harvard University Press, 1974) and in Maxine Seller, *Women Educators in the United States: A Bio-bibliographical Sourcebook, 1820-1993* (Westport, CT: Greenwood Press, 1994).

[8] See Kathryn Kish Sklar, *Catharine Beecher: A Study in American Domesticity* (New Haven: Yale University Press, 1973).

[9] Christine A. Ogren, *The American State Normal School: "An Instrument of Great Good"* (New York: Palgrave Macmillan, 2005), and Nancy Hoffman, *Woman's "True" Profession: Voices from the History of Teaching* (Cambridge, Mass.: Harvard Education Press, 2d ed., 2003).

women had no particular use for education – was overturned as teaching became an acceptable, even coveted, opportunity for middle-class women.

2) Women are not capable of higher learning.

Until women began to succeed in academies and colleges, most people doubted that they had sufficient mental acuity for advanced learning. Well into the 18th century, advocates argued that women could manage higher-level thinking.[10] Once women's success obviated this argument, educators and the public began to raise concerns about the potential negative impact of schooling on women's health. Because a scholarly life seemed incongruous with expectations for women's maternal role, physicians and educators began to worry about the effect of studious work on women's reproductive capacities. The most famous of these challenges came from Harvard-educated physician Edward Clarke, who in 1873 published *Sex in Education; Or, a Fair Chance for the Girls.*[11] In this book (actually based on a small number of cases) Dr. Clarke heightened concern for women's health by outlining the physical and mental deterioration he saw among collegiate females who were spending considerable time on their studies. He found that they became weak and listless, contracting more than their share of diseases. What's more, Clarke argued that female students' reproductive capacities were impaired. In a time when women's menstrual cycles were poorly understood, the belief was that energy devoted to "brain work" was energy diverted from reproductive organs.

Clarke's findings assumed a greater threat when a group of studies over the next few decades found that college-educated white women were marrying and producing children at a much slower rate than less-educated women, especially immigrants. During an era filled with worry about assimilating thousands of non-English-speaking European immigrants, these studies provoked a concern for what was called "race suicide." Educated white women were blamed for a very threat to America's racial security.[12]

Many educators, and women themselves, challenged these medical warnings and the blatant suggestion that they were harming race and nation. M. Carey Thomas, later a famous

[10] A good recent discussion of Americans' beliefs about women's capacities – and how women exceeded them – is Margaret A. Nash, *Women's Education in the United States, 1780-1840* (New York: Palgrave Macmillan, 2005).
[11] Edward H. Clarke, *Sex in Education; Or, a Fair Chance for the Girls* (Boston: J.R. Osgood and Co., 1873).
[12] For a discussion of the impact of Clarke's book, see Sue Zschoche, "Dr. Clarke Revisited: Science, True Womanhood and Female Collegiate Education," *History of Education Quarterly* (Vol. 29, No. 4, Winter 1989), 545-569. Barbara Miller Solomon discusses "race suicide" in *In the Company of Educated Women*.

president of Bryn Mawr College, wrote that Dr. Clarke's book was a "gloomy specter" always "rattling its chains" in the minds of young college women.[13] Eventually, new studies such as those sponsored by the Association of Collegiate Alumnae demonstrated not only that women could maintain their health throughout college, but also that they were marrying and bearing children at increasing rates. However, the long-lasting concern remained that advanced education did not suit expectations for motherhood.[14]

3) Women should be segregated with specialized curricula.

If you believe that females have different needs for education, you might recommend providing their schooling in separate venues with a specialized curriculum. The issue of segregated education has played a continuing role in women's education over two centuries.

In the 1970s and 1980s, when scholars began to address the apparent access and achievement gaps for girls and women, several studies showed that successful women (such as those in "American Men of Science") had attended women's colleges. Such findings provoked a question of whether girls and women receive more favorable treatment and support in single-sex settings.[15]

Yet, in many ways, this issue of single-sex schooling occurred less because educators wished to offer women special support and encouragement, but rather because women frequently were ostracized from mainstream settings. American education has a long history of admitting newcomers first in segregated settings. African Americans, Latinos, Asians, and immigrants have all experienced this approach, and women were no different when they began seeking college education in the mid-nineteenth century.[16]

Until the rise of public universities late in the 1800s, women most often attended all-female seminaries, academies, and colleges. Even at Oberlin women studied in the "Ladies

[13] See Thomas in Barbara M. Cross, *The Educated Woman in America* (New York: Teachers College Press, 1965). A good biography is Helen Lefkowitz Horowitz, *The Power and Passion of M. Carey Thomas* (New York: Alfred A. Knopf, 1994).
[14] A good discussion of these developments is in Solomon, *In the Company of Educated Women*.
[15] See M. Elizabeth Tidball and Vera Kistiakowsky, "Baccalaureate Origins of American Scientists and Scholars," *Science*, 193 (1976), 646-652; Mary J. Oates and Susan Williamson, "Women's Colleges and Women Achievers," *Signs: A Journal of Women in Culture and Society*, 3 (1978), 795-806; M. Elizabeth Tidball, "Women's Colleges and Women Achievers Revisited," *Signs: Journal of Women in Culture and Society*, 5 (1980), 504-517.
[16] Harold S. Wechsler, "An Academic Gresham's Law: Group Repulsion as a Theme in American Higher Education," *Teachers College Record*, summer (1981), 567-588, and Lynn D. Gordon, *Gender and Higher Education in the Progressive Era* (New Haven: Yale University Press, 1990).

course." At most state institutions, female students studied either a normal course (that is, teacher training) or home economics. Dr. Ellen Swallow Richards, the first woman to graduate from the prestigious Massachusetts Institute of Technology, earned a doctorate in chemistry, but could find a teaching job only in home economics.[17]

Colleges were slow to accept coeducation, although public universities admitted women more easily than the older private universities. In the United States, the prestigious Ivy League institutions on the East Coast remained all-male until the 1960s; those that allowed women an earlier place generally did so in "coordinate" arrangements like Radcliffe College to Harvard University or Barnard to Columbia. Likewise in England, Cambridge and Oxford universities were the slowest to accept coeducation. Other British institutions accepted women before 1900, but not until 1920 could women receive full degrees from Oxford, and only in 1959 did Oxford's female colleges achieve full status and an equal role in governance.[18]

On the pre-college level, the issue played out quite differently. Coeducation remained contentious in England and in Europe at both the school and college levels; however, in the United States, mixed education proceeded in the schools rather easily. As David Tyack and Elisabeth Hansot have observed, Americans' comfort with younger children studying together assumed that girls would "civilize" the boys, and that their propensity to behave better and study harder would raise the academic bar.[19] Yet by high school, separate curricula organized by expectations for students' futures kicked in. Generally, the older the students, the more likely they were to experience segregated settings and differentiated curricula.[20]

The strength of these three expectations for women's involvement has led, over time, to some misinterpretations of historical data. In many ways, our assumptions about how women and girls should use education often have affected our understanding of certain historical developments. The first of these is a concern over "feminization," that is, a fear that women's increasing choice of a particular curriculum or institution automatically threatens men's opportunities.

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[17] Linda Eisenmann, *Historical Dictionary of Women's Education in the United States* (Westport, CT: Greenwood Press, 1998).
[18] Judy Batson, *Her Oxford* (Nashville, TN: Vanderbilt University Press, forthcoming).
[19] David Tyack and Elisabeth Hansot, *Learning Together: A History of Coeducation in American Public Schools* (New York: Russell Sage Foundation, 1992).
[20] William J. Reese, *The Origins of the American High School* (New Haven: Yale University Press, 1995).

Misinterpretations

1) "Feminization."

A major fear over feminization occurred just after 1900 as the comprehensive high schools were becoming popular throughout the United States. Early high schools were specifically geared toward students expecting to attend college. But, as the high school grew in prominence, it expanded into the now-familiar mix of general, technical, and scholarly tracks that tried to offer something for every teenager. The plan worked, but with one sticky issue: more girls than boys attended and graduated from high school. Girls were especially drawn to the commercial track because, first, it promised a job; and second, unlike boys who could find acceptable work without much educational preparation, girls could enter the safe world of clerical or store jobs only with some training.[21]

As girls continued to outnumber boys, educators focused on what they called "the boy problem," trying whatever they could to enhance the appeal of high school to males. They expanded the commercial and technical tracks away from areas that appealed to girls, they increased school sports, and they generally put resources into convincing young men that high school was not a girls' institution. In many ways, the current concern over women's predominance in college mirrors this early high school issue, a century later. As women begin to use education for the increasingly helpful credential it provides, their success is seen as threatening men and feminizing the institution.

While the early high school dealt primarily with male/female participation rates, collegiate concerns over feminization played out around curricular choices. Boys had long predominated in the humanities, seeing there the best preparation for professional careers. When girls entered colleges, they often pushed for equal access to the humanities, especially the classics, seeing there not so much new access to the law or the ministry, but rather, good preparation for careers as teachers. They also saw success in the humanities as a marker of their educational and intellectual equality.

As women pursued such choices, male educators often lamented that the languages,

[21] See John L. Rury, *Education and Women's Work: Female Schooling and the Division of Labor in Urban America, 1870-1930* (Albany, NY: SUNY Press, 1991), and Reese, *The Origins of the American High School*.

English, and the classics were becoming "feminized." Psychologist G. Stanley Hall, for instance, advanced the idea of "sex repulsion," explaining that, as women advanced into a field – whether in schooling or the professions – their presence "naturally" repelled men.[22] Such thinking led to quotas in colleges and universities. Stanford, Cornell, Michigan, and Pennsylvania State universities all limited the number of women as students; Stanford, for instance, established a limit of one woman to every three men.[23] This fear of feminization generally stemmed more from an assumption, rather than hard evidence, that women's presence would drive out men and devalue the educational experience and credential.

2) Women's performance in science.

Contrary to our current concern that women lag in scientific fields, females have pursued science education in significant numbers since the 19th century. In fact, as Kimberly Tolley and Nancy Beadie have found, more girls than boys studied science at 19th-century academies.[24] In both the early academies and the colleges, boys frequently studied classical languages and philosophy both to challenge themselves intellectually and to mark their educated status. For girls, science provided the equivalent discipline. Girls could use the sciences to make critical observations, apply theoretical principles, and pursue logical thinking. They were especially drawn to natural philosophy (later the equivalent of physics), botany, chemistry, and astronomy. Advertisements for academies actually emphasized science as a core element to girls' training and more an "add-on" for boys. Since science often required extra fees, it is striking that girls' parents invested in this curriculum.[25]

Many colleges, especially all-female institutions, were strong in science. Margaret Rossiter has shown that women's colleges specialized in certain fields, such as Vassar in astronomy and physics, and Wellesley in botany and psychology, and that their faculties created what she called "protégée chains – an early equivalent to the "old boys' network" where established professors hand-picked their successors. By 1900, nearly 30% of all doctorates received by women were earned in the sciences. Only later did lack of employment begin to

[22] Eisenmann, *Historical Dictionary of Women's Education in the United States*, pp. 367-368.
[23] See Solomon, *In the Company of Educated Women*.
[24] Tolley and Nancy, eds., *Chartered Schools.*
[25] Kimberly Tolley, *The Science Education of American Girls: A Historical Perspective* (New York: Routledge Falmer, 2003)

affect women's participation in scientific fields.[26] With limited opportunities in academe, industry, and government throughout the mid-1900s, women's involvement in science training waned. Then, science became big business around World War II, enhanced by federal grants and the growth of "big science" on university campuses. Just at a time when women might have assumed an important role, they found themselves poorly placed to take advantage of the new opportunities. The sense, then, that women have always lagged in the sciences is countered by historical examples.

3) "Incidental students" in the post-War era.

A third instance of expectations outweighing analysis occurs around women's post-World War II educational involvement. A little-known fact about women's collegiate attendance – often overlooked in the current concern over their numbers – is that in 1920, women constituted nearly half (47.3%) of college students. Their proportion declined during the Depression, but was strong again during the Second World War, when women's attendance kept many institutions afloat while men turned to military service.[27] However, the power of such images as "Rosie the Riveter" being unceremoniously dropped in favor of returning male veterans has colored not only our current understanding of women's postwar participation, but those of contemporary observers, as well.

It is true that women's collegiate participation rate dropped after the war. From a high of 49% during wartime, women held only one-third of enrollments over the next decade. The impact of the postwar GI Bill, which paid for veterans' education, led to male-oriented colleges. Further, the cultural spirit of the times lauded domesticity over careerism. Women, who had performed so patriotically during the war, were now encouraged to reestablish normalcy through marrying, raising families, and defending the nation through defending the home.[28]

Women did not, in fact, abandon college during this era; their numbers grew, even if their proportion declined. But, given the attention focused on male veterans, the rise of the Cold War, and the growth of research universities, women became increasingly incidental to higher

[26] Margaret Rossiter, *Women Scientists in America: Before Affirmative Action, 1940-1972* (Baltimore: Johns Hopkins University Press, 1995.)
[27] See data in Solomon, *In the Company of Educated Women*, and Linda Eisenmann, *Higher Education for Women in Postwar America, 1945-1965* (Baltimore: Johns Hopkins University Press, 2006).
[28] Eisenmann, *Higher Education for Women in Postwar America.*

education. [29] A few educators addressed women's needs, and some even identified females as important resources for American's scientific and technical needs – an important concern during the Cold War. Dael Wolfle, for instance, cited women's potential contributions in *America's Resources of Specialized Talents*, a study of postwar economic planning.[30]

More often, however, colleges focused on providing curricula geared to women's apparent futures as wives and mothers, or, if as workers, those who would contribute only temporarily to the workforce. One influential contemporary analysis was *Educating Our Daughters* by Mills College president Lynn White, Jr. White, the male leader of a women's institution, worried that women were pursuing courses irrelevant to their futures as homemakers.[31] Like many functionalist social scientists of the era, White argued that attention to their domestic role was women's most important challenge, as well as the best hope for stabilizing American postwar life.[32] Educators like White encouraged a basic liberal arts education that, they argued, would prepare women for a range of potential futures, but most importantly, would allow them to broadly educate their sons and be good companions to their husbands.

Some women did, of course, persist with advanced schooling, crafting strong careers in academe, industry, and government. My own work suggests, however, that these women were treated as exceptions rather than as models, and that the primary approach to women's issues throughout the postwar era was of careful individual decision-making, rather than thinking about structural explanations and collective solutions. An important group like John F. Kennedy's President's Commission on the Status of Women argued in 1963 that women should use their freedom to make responsible decisions, but always mindful of the primary importance of their families.[33] Once again, the power of expectations colored contemporary educational planning, as well as the analysis of women's success.

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[29] In fact, not until 1967 – two decades following the conclusion of World War II – did women again reach 40% of the total collegiate enrollments. See Eisenmann, *Higher Education for Women in Postwar America*. p. 55.
[30] Dael Wolfle, *America's Resources of Specialized Talent: A Current Appraisal and a Look Ahead* (New York: Harper and Bros., 1954).
[31] Lynn White, Jr., *Educating Our Daughters: A Challenge to the Colleges* (New York: Harper and Bros., 1950).
[32] Betty Friedan attacks the group she calls "functionalist" social scientists, like Talcott Parsons, for their narrow views of women's lives and goals in *The Feminine Mystique* (New York: Dell Publishing, 1963/1983).
[33] For a discussion of the President's Commission, see Eisenmann, *Higher Education for Women in Postwar America*, chapter 5; see also Margaret Mead and Frances Balgley Kaplan, eds., *American Women: The Report of the President's Commission on the Status of Women and Other Publications of the Commission* (New York: Charles Scribner's Sons, 1965).

Turning an historical lens on women's education helps demonstrate that discrimination against them – sometimes overt and other times quite unawares – has led to limited expectations for where, how, and why women should participate in education. The belief that they would not be able to use advanced schooling led to concerns that their movement into certain fields was inappropriate or unfair to men. The belief that they could not manage the intellectual strains of schooling posed barriers to their participation in rigorous fields like science and technology. The belief that they should be educated in separate settings matching their future roles as wives and mothers excluded them at times when domestic concerns prevailed.

Our present understandings of women's education bear the mark of these historical legacies. As make educational plans for women and assess their success, we would be wise to remember the potential impact of longstanding misperceptions and expectations. Women and men alike deserve equal access, equal participation, and equal opportunity to use the advanced education that they choose.

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