

**Women's College Coalition  
Literature Review  
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**Scholarly Sources Informed Primarily by Quantitative Analysis:**

*Cultivating intellectual development: Comparing women-only colleges and coeducational colleges for educational effectiveness.* Kim, M. M. 2002. Research in Higher Education. Vol. 43, No. 4, pp. 447-481.

This article compares the effectiveness of 4-year women-only and co-educational colleges in cultivating women's students "intellectual development" operationalized as: 1) intellectual self-confidence, 2) critical thinking ability, and 3) analytical and problem-solving skills. The author uses self-reports from survey data and conducts descriptive and inferential statistical procedures (HLMs, chi-square tests, correlation analysis) to investigate her topic. Her findings suggest that women-only colleges have a significantly greater positive impact on development of intellectual self-confidence (women who are not only intellectually capable, but also confident about their abilities). Further, students tend to have more intellectually stimulating experiences at women-only colleges than at co-educational institutions (i.e., leadership, diversity programs, honors program, campus demonstrations, and campus work).

"...the student population at women-only colleges still seems to come from a higher socioeconomic background in terms of parental income and educational level than the female population at private, coeducational colleges. However, analyses of national data presented here suggest that entering students' academic preparation (i.e., high school GPA, institutional selectivity) does not significantly differ between the two types of institutions. Analysis also suggests that women-only colleges have a higher proportion of non-white students than coeducational institutions."

"Women in a women-only college environment are not only a numerical majority, but also hold positions of power and leadership. Without intentional effort by coeducational institutions, women students may continue to lack confidence compared with male counterparts and women in women-majority settings. Specially focused efforts by members and leaders of all coeducational institutions are necessary because we live in a society in which gender equity is still an incompletely attained goal. Policymakers and the public should recognize the importance of supporting women-only colleges and the potential benefits of creating women-only environments at coed institutions."

*Models of excellence: The baccalaureate origins of successful European American women, African American women, and Latinas.* Wolf-Wendel, L. E. *Journal of Higher Education* 1998. Vol. 69, No. 2, pp. 141–186.

A remarkably insightful and eloquently argued article (based on Wolf-Wendel's dissertation research) with an elaborate methodological design based upon the theoretical/methodological framework that informed previous baccalaureate origin studies (i.e., Tidball, Rice and Hemmings, and others). Unlike previous studies, Wolf-Wendel went to great lengths to control for institutional size, institutional type (including both gender and ethnicity/race), time period, and institutional selectivity to respond to criticisms to earlier studies. One of her main contributions is that she moves away from the conceptualization of "women achievers" as a homogeneous group since she conducts separate analysis for women of different racial and ethnic groups to examine which types of colleges (HBC, women's colleges, coeducational and Hispanic-serving) serve various subgroups best. Her unit of analysis is not the individual woman achiever, but the institution, and her main question revolves around institutional factors that facilitate the success of women students from various racial/ethnic groups ("Which institutions and institutional types graduate the largest proportions of successful women from different racial/ethnic groups?").

Her findings show that, for white women achievers, women's colleges continue to graduate significantly higher proportions of "successful" white women than did coeducational institutions (success defined, once again, as membership in Who's Who listings and doctorate). For African American women, her findings reveal that "historically black women's colleges outproduced not only the coeducational and single-sex predominantly white institutions, but also historically black coeducational ones" (p. 172). In other words, African American women did better at black women's colleges than at coed black colleges, predominantly white women's colleges or co-ed colleges, thus highlighting that both institutional gender and institutional race are key factors.

Finally, according to her study, "Hispanic-serving women's change colleges (those colleges that used to be women exclusive until 1965, but that have become coed since then) significantly outproduced all other institutional types in graduating successful Latinas" (p. 173). Given that there are no women exclusive Hispanic-serving institutions (by the way these are not Hispanic exclusive since Latino students only represent 35% of the total student population), here the comparison is between predominantly white co-ed institutions and Hispanic serving institutions alone. Interestingly, white coeducational institutions graduated the smallest proportion of Latinas.

In sum, the author concludes that predictors of institutional success differed significantly according to the population under study. For European American women, institutional gender (single sex) was the best predictor as well as institutional selectivity (more selective), mean enrollment (smaller), and institutional control (private). Institutions with these characteristics graduated the largest proportions of successful white women. Conversely, for African-Americans and Latinas, the most powerful predictors of institutional success are institutional race (and ethnicity, my own contribution – Latino

origin is not a racial category) and institutional gender. Interestingly, for Latinas in this study, the most selective the institution the less likely it was to graduate a large proportion of successful Latina alumnae.

Some key quotes:

“ [...] the results of this study argue for the continued existence of special focus colleges as both educational options for students and as potential templates for other institutions to emulate.” (p. 175)

“...some special focus institutions, which have relatively few resources and not much prestige, are worthy of more accolades and material support than they have received in the past because of their ability to disproportionately graduate women who have achieved a measurable degree of success.” (p. 176)

“...the public must understand that that just because special focus institutions lead to positive outcomes for their students does not mean that all institutions should dedicate themselves exclusively to a particular group. Special focus colleges and universities should be maintained as educational options, as should mainstream, coeducational institutions.” (p. 177)

“Conclusions drawn from baccalaureate origin studies, therefore, highlight the existence of potential problems associated with mainstream, coeducational institutions. For example, African American women may not achieve at predominantly white coeducational colleges not because the women are deficient, but because the institution does not have sufficient role models or a critical mass of African American students. Whatever the reason, an institution’s ability to facilitate the success of its students is based on an interaction between institution and the student rather than only on individual student characteristics.” (p.178)

“In response to those who say that separate education is ‘unnatural’ and therefore insufficient, the studies on special focus institutions suggest that sometimes putting students in an ‘unnatural’ environment is just what they need to eventually deal successfully with the ‘real world.’ Unnatural or not, the present study demonstrates that special focus colleges, historically black women’s and coeducational institutions, and Hispanic-serving institutions graduate disproportionate numbers of women who earn doctorates and who are listed in Who’s Who books. These institutions produce higher proportions of successful women than comparable predominantly white, coeducational institutions.” (p. 178)

“The present study suggests that college is a time when students who feel on the margin may flourish in safe, protective environments where they feel supported, where they feel welcome, and where there are others around who look like them.” (p. 178)

*The Value of Attending a Women's College: Education, Occupation, and Income Benefits.* Riordan, Cornelius. *The Journal of Higher Education*. July 1994. Vol. 65, No. 4, pp. 486-510

This article examines the effects of women's college attendance on several outcome measures (educational achievement, occupational attainment, and income). The attendance variable ranges from zero (women who only attended coeducational schools) to six years of attendance at one or more women's colleges. The data demonstrate a significant occupational achievement benefit for each year of attendance at a women's college; that is women who attended a women's college for only one year were more likely to pursue additional education than women who did not attend a women's college at all. It also argues that women colleges, like families, may provide some degree of social capital to help in the production of human capital. Riordan sees social capital as a useful way to conceive the value of women's colleges.

Riordan lists ten theoretical rationales supporting women's colleges as more effective institutional models for the educating female students. These include: 1) providing more successful role models, 2) providing greater number of leadership opportunities, 3) reduction in sex differences in curriculum opportunities, and 4) accommodating gender differences in learning (styles).

“Colleges must also provide encouragement, attention, security, comfort, trust and identity [...] With regard to female students, research has shown repeatedly that co-educational colleges are lacking in these dimensions of social capital.”

“The data demonstrate a convincing human capital ‘return’ to those students in whom women's colleges ‘invested’ yearly doses of social capital. [...] For each year of attendance, students attain significantly greater amounts of occupational prestige and personal income. There are no consistent educational attainment differences, although women who attend a women's college for only a single year are significantly more likely than those women who never attend to achieve more education.”

“The results of my own analysis and many other studies [...] show that the structure of schooling has different effects on the educational outcomes of males and females. These studies indicate that females, especially, do better academically in single sex-schools, across a variety of cultures.”

*Women's Colleges and Coed Colleges: Is there a Difference for Women?* Smith, D. G. *The Journal of Higher Education*. Ohio: Spring 1990. Vol. 61, No.2, pp.181-197.

Confirms previous research on benefits to women of attending women's colleges (Astin, 1977; Tidball, 1973, 1974, 1976). Examines the ways that attending a women's college or co-educational college relates to measures of satisfaction, perception of institutional goals, attaining a degree and educational aspirations. According to the author, students who attend a women's college fare better in diverse measures of student satisfaction,

perceived changes in skills and abilities, and educational aspirations and educational attainment. (The only caveat is “social life satisfaction.”)

“...Students at women’s colleges are more satisfied with the overall quality of instruction, courses in the major, courses in the social sciences, opportunity to talk to professors, campus regulations, career counseling and advising, housing, contact with the faculty and administration, relations with the faculty and administration, and opportunity to attend films and concerts.”

“Women’s college students rated their institutions higher (than students at co-ed institutions) on the importance placed on conveying an appreciation of the liberal arts, increasing self-directed learning, developing clear thinking, developing creative capacities, gaining a deeper level of understanding, providing for emotional development, developing responsible citizens, and providing tools for living [...] Students are also more likely to earn the degree: 65 percent from women’s colleges earned the degree compared with 50 percent from coed schools[...] These findings are strikingly similar to Astin’s earlier work (1977), even though the times and circumstances of women’s colleges have changed dramatically.”

*Gender roles in transition: Research and policy implications for higher education.* Astin, H. S. and Kent, L. *Journal of Higher Education.* 1983. Vol. 54, pp. 309-324.

Found that informal interactions with faculty, more common in women’s colleges, enhanced female students’ self-esteem and sense of belonging. Given that the literature shows that leadership opportunities build confidence, Astin and Kent’s study concluded that having leadership experiences in college positively impacted female students’ social self-confidence and/or self-esteem.

“...leadership abilities seem more beneficial to women than to men, at least insofar as increased self-esteem is concerned.” (pp. 320)

*Four Critical Years: Effects of college on beliefs, attitudes and knowledge.* Austin, Alexander W. 1977. San Francisco: Jossey-Bass.

*What Matters in College? Four Critical years Revisited.* Austin, Austin W. 1993. San Francisco: Jossey-Bass

Landmark publication that examined longitudinal data on thousands of college students. Although he explored many institutional types, his findings were pivotal for women’s colleges. His findings suggested that single sex-education offered more than co-education in the areas of academic development, including interaction with faculty, increased verbal skills, and higher intellectual self-esteem. Despite controlling for a variety of background characteristics, including socioeconomic status (parental education and income) and institutional selectivity, he found that women’s colleges still had positive effects on overall academic development, cultural awareness, writing skills, critical thinking ability, and foreign language skills.

“Students at single-sex colleges are more satisfied than students at co-ed colleges with virtually every aspect of college life: student-faculty relationships, quality of instruction, curricular variety, student friendship, and the quality of the science program; and that women are more likely to attain positions of leadership and to become involved in the student government, to develop high aspirations, and to persist to graduation if they attended a women’s college.” (1977, pp. 323-333)

Astin’s publications on the topic extensively documents how women’s colleges offer a warmer and more favorable campus climate, which results in female students having higher self-confidence, more involvement outside and inside the classroom, higher satisfaction with their undergraduate experience and higher occupational aspirations. There is a positive relation between attending a women’s college and leadership development. In fact, attending a women’s college had positive effects on all leadership outcomes measured in his most recent work (1993). Students reported growth in leadership and public speaking skills, participation in protests, and a commitment to promoting racial understanding. Women who attended women’s colleges were more likely to be elected to a student office (1993).

*Taking Women Seriously: lessons and legacies for educating the majority.* Tidball, M.E. et al. 1999. Phoenix, AZ: Oryx Press.

This volume is a thoroughly documented review of the body of literature that examines the impact of women’s colleges on women’s achievement. The book examines a vast array of quantitative and qualitative analyses on the impact of college by institution type, concluding that women’s colleges disproportionately promote women’s achievement across a broad range of databases and outcome measures. The book includes brief histories of six women’s colleges (Mount Holyoke, Salem, Saint Mary-of-the-Woods, Mills, Spelman, and Sweet Briar) which shared common features: founded by women, with prominent feminine role models in their histories and traditions, and with clearly established institutional missions addressing the need to educate women as their most important priority. Tidball et al. argue that it is this institution-wide conscience about the education of women what explains the disproportionate success of these women’s colleges in promoting women’s achievement.

In chapters 3 and 4, the authors review findings from quantitative analyses using national databases (i.e., CIRP surveys of freshman, NLS surveys) and conclude that graduates of women’s colleges have higher educational aspirations, are more likely to attain a graduate a degree, are more likely to pursue a nontraditional career, and are more likely to achieve prominence in their field. Later, in subsequent chapters, they conduct case studies of Bennett College (NC) and Bryn Mawr College (PA) through interviews with students, faculty, alumnae, administrators and participant observation on site. The authors conclude that, despite their differences (Bennett is historically Black, and neither prestigious nor resource-rich as Bryn Mawr), both colleges success in fostering students achievements can be traced to institutional practices that combine: “high expectations, support, presence of role models, critical mass of high-achieving students (supportive peer culture-my own), opportunities for extracurricular involvement, inclusion of women

in the curriculum, and recognition of the social realities facing women in the real world” (p. 101). In fact, Tidball et al. emphasize that while both colleges are successful, they go about providing for their students in different ways. None of the characteristics described above alone explains the high success rate of these colleges, but it is the combination of all parts that supports women’s achievements.

Although a bit dated (1999), this book is indeed one of the most comprehensive resources on the contribution of women’s colleges to the education of women. The authors’ key argument is that coeducational institutions fall short of promoting the best educational outcomes for women and that lessons learned from women’s colleges can inform the practices of other educational institutions.

Key quotes:

“Differences in race, ethnicity, socioeconomic status, and life experience influence what students need and how colleges should respond... [...]. It is important to understand that the whole of these institutions [women’s colleges] is greater than the sum of their parts – one cannot just take a single element and look at it in isolation. Instead, it is the combination of characteristics, the aura of these institutions what makes them unique and makes them able to facilitate the success of their students.” (p. 101)

“This is continually told to you from the time you step on the campus to the day you leave. And, I truly believe that we speak life and we speak death to one another by saying ‘I am this’, ‘I am that.’ If you are continually told that you are stupid or ignorant, you will begin to perform in that capacity. If you are told you are phenomenal, excellent, then you will perform on that level. And, I truly believe that is what these young women hear night and day. ‘You are phenomenal women,’ ‘you are exceptional,’ ‘you operate in a spirit of excellence.’ This is continually told to them, and I think that puts them in the mind-set to see them that way. It sets the tone.” (pp. 86-87/ From a women’s college administrator)

“It is assumed that coeducation means the equal education, side-by-side, of women and men. Nothing could be further from the truth.” (Adrienne Rich, 1979 cited in p. 105)

“[...] what works for women resides within the wholeness of the environment, originating from a mission in which women are taken seriously (M.E. Tidball, 1996). It has to do with creating a community in which women have a clear sense of ownership, knowing that they make a difference and knowing that they matter and that they truly belong and always will. What is essential is not to be found in quantifiable categories except for that which has heretofore not been quantified by those who assess the vale of various institutions, namely, to what extent is there a critical mass of women as trustees, administrators, faculty, staff, students, graduates, guests, and friends... [...]... That is to say, the majority of those things that are most important, most essential, for the education of women are not countable. Examples of these include high expectations for excellence in all dimensions of community life; a wealth of spaces and places where women’s voices are heard; personal responsibility as exemplified in the operation of an honor code, along

with a large measure of trust and responsibility; the celebration of traditions and institutional history that tie the present to the originating events, thereby assuring a future with depth and meaning; and an ethic of service that grows from a larger purpose beyond self.” (pp. 140-41)

*Women’s Colleges and Women Achievers: An Update.* Rice, Joy K. and Hemmings, A. 1988. *Signs: Journal of Women in Culture and Society.* Vol. 13, No. 3, pp. 546-559.

Rice and Hemmings attempted to replicate Tidball’s prior findings (see entries above) with a random sample of recent women achievers who were listed in the 1979-80, 1980-81, and 1983-84 editions of *Who’s Who of American Women (WWAW)*. Although the authors expected to replicate Tidball’s findings, they anticipated that, in proportion to the total number of women graduates, the relative number of women achievers who graduated from women’s colleges and coed institutions in recent years would be about the same for a number of reasons (i.e., migration of capable women to coed institutions, the growing diversification of the student body of women’s colleges as more minorities have poured in).

The authors’ sample included 1,307 women achievers (approximately 2% of the 61,600 names in *WWAW*), drawn from 72 women’s colleges and 438 coed institutions. Their findings provide partial support for Tidball’s results since, during the 1940s and 1950s, in proportion to the total number of graduates, significantly more women achievers graduated from women’s colleges than from coeducational colleges. In contrast, they found no statistically significant difference in the proportion of women achievers coming from distinct institutions for the 1960s and 1970s. Yet, despite the lack of statistically significant difference through the 1970s, women’s colleges had one-half times the number of achievers to number of graduates as did coeducational institutions in this same period (similar to Tidball’s findings for the earlier decades). The authors believe that this increase “may reflect the recent renaissance and stabilization of the women’s college movement.” (p. 556)

The authors also raise some very important points. First, they denounce the methodological flaw of considering women’s colleges monolithic; that is of considering them equally beneficial or comparable. They point out that “historically, the original Seven Sisters were the only women’s colleges that were funded on a specific and coherent philosophy of education for women.” (p. 557) Next, they take issue with the notion that all women faculty/administrators, just by nature of being female, will act as mentors /support systems to other women. Then, they highlight that women’s achievements might be due to an interaction between various variables (i.e., the environment, the presence of same sex role models and the admissions selectivity of various colleges) and not just to one given factor. Obviously, women who choose women’s colleges suffer already from self-selectivity bias. Last, they challenge the definitions and measures of success and achievements as defined by all the existing studies on the topic. *WWAW* may not be the best or most adequate sampling frame for women achievers since it undersamples women who might be achievers/leaders in non conventional ways and by “nonmale standards of success.” (All excellent critiques – it

would be interesting to test Tidball's thesis with a different sampling frame, drawing from various sources [i.e., grant recipients, awardees in different fields including business, arts, community service] so as to be more inclusive in the notion of "achievers.")

"...a true picture of what the students gains from attending such colleges [women's colleges] will only emerge from research that disentangles the components of the 'experience' of attending a particular kind of women's college [Catholic women's college versus southern schools versus others]." (p. 557)

"Women's colleges offer a 'room of one's own,' a supportive garden in which to grow and be nurtured, and as such they provide a singular experience for women students and a unique alternative to women seeking higher education."

*Single-sex versus coeducational environments: A comparison of women students' experiences at four colleges.* Miller-Bernal L. 1993. *American Journal of Education*. Vol. 102, No. 1, pp. 23-54.

The author examines three common measures of positive college experiences for women students in women-only institutions (female faculty role models, students' college activities and leadership roles, supportiveness of college environments to women students) across four colleges (one single sex, a coordinate of a men's college, and two co-eds). Miller-Bernal conducts a panel study of 260 women total (1984 to 1988 with data taken at three points in time) to test existing explanations of why alumnae of women's colleges succeed more than graduates of coeducational colleges. Her findings showed that students from the women-only and coordinate college were more likely than the coeducational college students to have women faculty as role models, to be active in college activities, and to experience their colleges as supportive – all of which affected students' self-esteem. Miller-Bernal's findings suggest that "students' identification with women faculty is not sufficient to produce beneficial outcomes, but what is important is for students to study a curriculum that makes women a central concern." (p. 48)

"Students at ...[women-only and coordinate colleges] reported having more women faculty role models, participating more in classes, holding more leadership positions in campus activities, perceiving college personnel to be more concerned with their needs, and taking more courses focusing on women." (p. 48)

"Students appeared to be more likely to develop higher self-regard if they had taken many courses dealing with women, if they had spoken up frequently in classes, and if they perceived their college to be concerned with women student's needs." (p. 48)

*Institutional Effectiveness of Women-Only Colleges: Cultivating Student's Desire to Influence Social Conditions.* Kim, M.M. 2001. *The Journal of Higher Education*. Vol. 72, No. 3, pp. 287-321.

Based on national longitudinal surveys, Kim demonstrates the effectiveness of women-only colleges (over coeducational institutions) in cultivating students' desires to influence

social conditions. This effectiveness is mainly attributed to the socially active and altruistically-oriented student climate of women-only colleges. Kim's study presents a quantitative model (a modification of Astin's I-E-O model) for studying institutional effectiveness where a multilevel hierarchical linear model analysis can be also integrated. Last, the author notes that "institutional location" (in the eastern US) and "black college" were significant positive predictors for the development of students' values (altruism, social justice, social conscience).

"The student and faculty climate at women-only colleges seems to be more socially active, altruistic, and community oriented than at coeducational colleges. In addition, women-only colleges not only tend to have a strong faculty diversity orientation, but also emphasize women's studies and minority studies in their curriculum more than coeducational institutions. These findings are somewhat consistent with Astin's report (1993) that women-only colleges have a strong diversity orientation and the findings of Smith et al. (1995) that students in women's colleges perceived that their institutions tend to emphasize multiculturalism. This climate assessment suggests that women-only colleges have special and unique socialization effects." (p. 308)

"...the strong influence on women's students' desire or value development seems to result not from the higher proportion of female faculty but rather from the institutional climate." (p. 309)

"A student is more likely to develop her desire to influence society if she is around peers who are socially active and altruistically oriented, if she associates with peers from high socioeconomic status families, and if she participates in diversity programs and campus demonstrations. The positive effects of students' participation in diversity programs could be a justification and incentive for colleges to develop such programs and to encourage students to participate in them..." (p. 310)

"The findings of this study could partially explain why women-only colleges produce an unusually high proportion of women politicians and influential leaders in the United States. The public and policymakers may have to reconsider the assumption that coed is natural and beneficial to both male and female students." (p. 311)

*Women's colleges: Results of a single-sex environment on salaries, advanced degrees, and leadership positions.* Hatfield, Carla Gale. Proquest Dissertations And Theses. 2004. 93 pages; [Ed.D. dissertation]. United States – Tennessee: Tennessee State University.

Short, but relevant to our case. This is a solid piece that looked at the effect attendance at single-sex college had on career success (salary, leadership positions) and advanced degrees of graduates. A survey questionnaire was sent to alumnae of a coeducational institution and a single-sex institution who attended during 1990-1995 (N= 1,51 but only 45% response rate → N= approx. 740). The questionnaire consisted of six categories: salary, current educational level, leadership positions in college, leadership positions after college, year graduated, and ethnicity.

From the abstract: “Results of Chi-square tests revealed alumnae who attended Converse Women’s College (single-sex) held more degrees at master's (22% versus 8.23%) and doctoral (1.27% versus (42%) levels compared to Mars Hill. Converse Women's College had more doctoral students (1.98%) than Mars Hill College (.14%). The results of a Mann Whitney U indicated that 36% of Converse Women's College alumnae earned more income (\$30,000 to \$39,000) than 35% Mars Hill College alumnae (\$20,000 to \$29,000) (at a .01 significance level). A Mann Whitney U was conducted regarding leadership positions in college and outside college. Converse Women's College alumnae on average held 1.8 leadership positions in college, compared to 1.0 from Mars Hill. Similar results were found in leadership positions held outside college. On average Converse Women's College alumnae held 1.7 positions outside college, compared to Mars Hill alumnae who held 1.2 leadership positions outside college on average.”

In sum, women fared much better in single-sex college environments in all counts. Less technical, but more informative are the following paragraphs from the actual manuscript, which might be quotable:

“There was a significant difference between women alumnae salaries and type of institution attended between 1990-1995. The study revealed that women alumnae who graduated from a single-sex institution have a statistically higher mean income compared to women alumnae who attended a coeducational institution.” (p. 60) (consistent with Riordan’ study (1994))

“The results of this study indicated that women alumnae who attended a single-sex institution have more advanced degrees than women alumnae who attended a coeducational institution. In a competitive labor market that historically has been stacked against women, applicants with advanced degrees have an advantage by offering more to an employer. Women with graduate degrees should find themselves in a better position to attain career success and advancement.” (p. 61)

“Findings from Whitt, 1994; Rice and Hemmings, 1998; Tidball, 1980 were consistent with this study that women colleges provide more opportunities for women to pursue leadership positions in organizations. This study indicated women who attended Converse Women’s College [single- sex] held more multiple leadership positions than women who attended Mars Hill College [coeducational college]. The results of this study indicated that women alumnae who attended Converse Women’s College held more leadership positions after college than women alumnae who attended Mars Hill College.” (pp. 62-63)

“The results of this study seemed to indicate that attending a single-sex institution can provide opportunities for increase salaries, degrees and leadership positions for women...[...] These opportunities for women alumnae who graduated from a single sex environment translate into leadership development skills and management skills. A single-sex environment can in essence, create a wonderful training field for women who have hopes in ascertaining corporate positions.” (pp. 64-65)

**Contributions of Women's Colleges to the Education of Women: Scholarly Sources (peer-reviewed journal articles, keynote speeches, books, etc.)**

“*What's the Point of Women's Education?*” – June 2004. Keynote Speech, Amartya Sen (on the social significance of women's education in the contemporary world, but with a focus on basic education)

On the cumulative widespread effects of women's education on larger social processes, decision-making for different groups, and as facilitator of radical social and economic changes badly needed in our problem-ridden world. Accrued social capital of educated women maximizes their social agency as they enhance women's well-being and as advance/promote social justice /gender equity goals.

“...a young woman's voice in family decisions tends to be significantly enhanced by her being educated and articulate, being familiar with the world outside the home, having friends and allies in the outside world, and having the opportunity of getting economic employment outside the home (which in turn is helped by her education).

“..the education of women not only influences the lives of the particular families to which they respectively belong, but also the lives of other families with which they are in contact.”

“...some people are born small, some achieve smallness, and some have smallness thrust upon them. In the schooling of children, we have to make sure that we do not thrust much smallness on children in the vital years in which their identities are, to a great extent, shaped. That issue is important even for the curriculum of colleges, including women's college [...] but in their entire coverage of educational institutions, including schools where children begin to decide who exactly they are.”

*Women's Colleges then and now: Access then, equity now.* Langdon, Emily. Peabody Journal of Education. 2001. Vol. 76, No.1, pp. 5-30.

Excellent article (primarily based on her dissertation work) with a top notch literature review on the benefits to women of attending a women's college. The focus of the piece is on women's colleges' “contemporary contributions towards educational equity for women”; in particular in the areas of “positive role modeling and mentoring, leadership, achievement in the male-dominated major fields such as math and science, and pedagogical and curricular innovations.” (pp. 6)

“Women's colleges offer students an educational environment qualitatively different from the coeducational experience.” (Astin, 1977; Sebrechts, 1999; Smith, 1990; Whitt, 1994)

“My dissertation [...] showed that women's college graduates, on graduation, were significantly more satisfied than co-educational college graduates with their college experiences (with the exception of social life). On further exploration, the women's

college alumnae satisfaction was correlated more closely to the faculty...” (pp. 13) “My study suggested that the answer to why these women’s college alumnae are so much more satisfied with their undergraduate experience is in the environment (Langdon, 1997)”.

“The factors that contribute to a more women-centered climate are many, and perhaps not all have been identified [...] The contemporary dialogue suggests that these contribute to a positive learning environment for women:

- Providing successful role models for female students and an emphasis on mentoring
- Fostering diverse and challenging leadership opportunities for women
- Expanding the curricular opportunities for women by encouraging participation in male-dominated fields such as math, sciences, and engineering.
- Recognizing gender differences in learning so that the pedagogy strives to serve women as leaders” (pp. 16)

“Women’s college students were also found to believe that their institutions cared about multiculturalism. The institutions that were perceived as holding student-centered values such as these were more likely to produce students who were actively involved in their academic and co curricular endeavors.” (pp. 24)

“The students at women’s colleges do not only see more women teaching their classes, they see more women running their colleges [...] Therefore, women’s colleges do not just provide opportunities for students. They provide environments where women are more likely to serve as leaders among the faculty and where women are more likely to be the key decision-makers.” (pp. 17)

*Women’s Colleges in Massachusetts: Responses to Enrollment Declines.* Guevara, J. 2001. *The Review of Higher Education*. Vol. 24, No.4, pp. 351-368.

On strategies (successful and unsuccessful) women-only colleges used in response to enrollment declines. Beyond the scope of our literature review.

*Women-friendly campuses: What five institutions are doing right.* Wolf-Wendel, L.E. 2000. *The Review of Higher Education*. Vol. 23, pp. 319-345.

In her study of five campuses (Pomona, Bryn Mawr, Bennett, Tougaloo, Incarnate Word) Wolf-Wendel described the various structural and normative features of successful institutions that encourage the post-baccalaureate success of women students (with attention to African American and Latinas as well). The author showed that the women’s colleges in her sample designed and developed opportunities for students to practice their leadership skills so that they could build confidence in single-sex environments before they needed to compete with men. Findings from this study suggest that experimenting with leadership roles and competencies in same-sex groups allowed women to be

successful in leadership positions in mixed-sex groups. The author also emphasizes that lack of female role models in institutions of higher education is detrimental to students' educational development because it sends a negative message for their future career aspirations. Wolf-Wendel notes that women's colleges' commitment to women's learning is a unifying intangible philosophy underlying all women-centered institutions.

"...environments conducive to the success of men might be different from environments that enhance the success of women. My study here addresses the need for more research to determine the hallmarks of the 'uniquely supportive climate for women' found at women's colleges and to study those coeducational institutions that demonstrate themselves to be 'women-friendly.'" (p. 320)

"...there is evidence in the wider literature that having a focused mission, high expectations, a supportive environment, role models, a supportive peer culture of high-achieving students, opportunities for extracurricular involvement, and the inclusion of women and people of color in the curriculum are all traits associated with institutions that facilitate students' success. What sets these five institutions apart from other student-friendly institutions is the purposefulness with which they the needs of their women students [...] These environments are not only favorable to women, but empowering: a critical mass of women faculty, nurture and challenges for women students, and campus discussions dominated by women's issues" (p. 342)

"What these campuses do that sets them apart from other campuses is that they are purposeful in adopting structures, policies, practices, and curriculum that are sensitive to the needs of women. These are campuses that are proactive about taking women seriously." (p. 342)

*Binge Drinking among American college women.* Dowdall, G.W., Crawford, M., and Wechsler, H. *Psychology of Women Quarterly*. 1998. Vol. 22, pp. 705-715.

The authors looked at binge drinking and alcohol-related behaviors among female college students and concluded that those attending women's colleges were less likely to engage in binge drinking. Further, women's college students reported fewer alcohol-related consequences (i.e., suffering from hangover, missing class) and were also less likely to suffer from the negative alcohol-related behavior of others (i.e., property vandalized, riding with someone under the influence). Overall, the authors' findings suggest that women's college social environment might be safer and healthier than that found in coeducational institutions. This finding alone might be good marketing material for parents since women's colleges might provide a safer learning environment for their daughters.

*Paths to success: factors related to the impact of women's colleges.* Smith D.G., Wolf, L.E. and Morrison, D.E. *Journal of Higher Education*. 1995. Vol. 66, pp. 245-266.

According to the authors, women's college students are more likely to perceive that their institutions care about students, learning, and civic involvement. Further, their findings

suggest that women's colleges have a direct, positive effect on women's academic involvement.

Smith et al. reported that, although in their study and others women's college students were usually less satisfied with their social lives, students also perceived their institution to care about their growth and development, which neutralized the negative impact of dissatisfaction with social life.

*Women-only colleges: Some unanticipated consequences.* Kim, M. M. and Alvarez, R. 1995. *Journal of Higher Education*. Vol. 66, pp. 641-668.

Findings from this article suggest that women-only colleges have an advantageous effect on students' academic ability and improve students' social self-confidence (self-esteem) by providing better opportunities to be actively involved and exercise leadership in student organizations. Kim later suggests that this "social self-confidence" may be either a basis for or a result of students' intellectual development (see Kim's later article on the effectiveness of women-only colleges at cultivating students' intellectual development, 2002). Yet, contrary to Tidball's findings, the authors found that the higher ratio of female faculty in women-only colleges was not a direct positive predictor of several dimensions of women students' development.

*"I can be anything!"* Whitt, E. J. 1994. *Journal of College Student Development*. Vol. 35, pp. 198-212.

Whitt conducted a qualitative study of leadership development at three women's colleges and concluded that women learned to lead primarily through role modeling, high expectations, and plenty of opportunities to practice leadership skills. By giving women considerable responsibility on campus, women college students developed substantive leadership competencies, which they might not have developed in male-dominated environments.

*How college affects students: Findings and insights from twenty years of research.* Pascarella, E.T. and Terenzini, P.T. 1991. San Francisco: Jossey-Bass.

In this book, the authors review 20 years of research on college students and conclude that entry into nontraditional careers, achievement of prominence in a field, and educational aspirations were all concomitant effects of attending a women's college.

"women's colleges ...have tended to enhance the educational attainment of undergraduate women...The evidence tends to support those who claim that a women's college provides a uniquely supportive climate for women to experience themselves and other members of their gender in a wide range of intellectual and social leadership roles." (p. 383)

*College environmental influences on student educational aspirations.* Pascarella, E.T. 1984. *Journal of Higher Education*. Vol. 55, pp. 751-771.

*Students' affective development within the college environment.* Pascarella, E.T. 1985. Journal of Higher Education Vol. 56, pp. 640-663.

In earlier studies, Pascarella (1984, 1985) showed that role modeling for women is provided by not only female faculty and administrators (and parents), but by women peers as well. Given that there are more women in the peer group at women's colleges, the full effects of a positive, women peer group impacts the educational achievement of students.

*Women of influence, women of vision: A cross-generational study of leaders and social change.* Astin, H.C. and Leland, C. 1991. San Francisco: Jossey-Bass.

Astin and Leland examined the qualitatively distinct ways in which women lead in the public, reporting that one half of the female leaders they identified as instigators (those involved in initiating the women's moment) were educated in women's colleges. Their findings support the notion of "women's ways of leading" in the public arena.

"*Women's colleges and women's career attainment revisited.*" Stoecker, J. and Pascarella, E. 1991. Journal of Higher Education. Vol. 62, No. 4, pp. 394-406.

Rebuttal to Tidball's pioneering study where authors contest her findings given that Tidball could not control for important pre-collegiate characteristics such as academic preparation and family socioeconomic status. Because of this, Stoecker and Pascarella highlight that results remain unclear because it is impossible to tell what proportion of these results could have been attributed to the impact of women's colleges, to students' SES, or to other institutional traits of colleges.

*Perspectives on academic women and affirmative action.* Tidball, M.E. 1973. Educational Record. Vol. 54, pp. 130-135.

In her seminal study (1973), Tidball identified the baccalaureate origins of women who appeared in Who's Who in American Colleges and Universities showing that women's college alumnae were more likely to have become women achievers. Her findings also suggested a positive relation between women achievers and the percentage of women on the faculty of their undergraduate institutions. Tidball concluded that women's colleges produced more women achievers than coeducational institutions, primarily because of the proportion of women role models. Tidball's findings were contested by many subsequent studies, mainly because her sample did not control for students' socioeconomic background. In fact, later studies (Oates and Williamson, 1978) suggested that achievers status might have been derived more from high SES background and attending a prestigious college than from attending a women's college. Tidball's most valuable contribution has been her documentation of the statistically significant relation between high-achieving female students and the percentage of women on the faculty, most true in women's colleges, which typically provide twice as many women faculty members.

*Women's Colleges and women's achievers revisited.* Tidball, M.E. 1980. *Signs: Journal of Women in Culture and Society*. Vol. 5, pp. 504-517.

*Baccalaureate origins of entrants into American medical schools.* Tidball, M.E. 1985. *Journal of Higher Education*. Vol. 56, pp. 385-402.

In these two later articles above, Tidball reports that graduates of women-only colleges were more than twice as likely to have received research doctorates as were women graduates of coeducational institutions (1980). Later on, she reports that women-only colleges constitute the undergraduate base that produces the highest proportion of female doctoral scientists (1985).

*Single-sex and co-educational schooling: Relationship to Socioemotional and Academic Development.* Mael, F. 1998. *Review of Educational Research*. Vol. 68, No. 2, pp. 101-129.

Synthesis of the existing literature on single sex versus co-ed schooling with an emphasis on performance during high school. The article summarizes sources and arguments that inform the current debate, including data from studies conducted in other countries. Nevertheless, there is no primary data collection, just synthesis of opposing frameworks and theories with no assertions or findings that might support the benefits of attending women only colleges. Not relevant to our search.

*Institutional Culture and the Advanced Degree Aspirations of Students Attending Women's Colleges.* Ridgwell, Diana, Elizabeth Creamer. *College Student Affairs Journal*. Chapel Hill: Fall 2003. Vol. 23, Iss. 1; p. 77.

This article is not entirely within the scope of our literature review, but it discusses differences between the various cultures of women's colleges, challenging the assumption that all women's colleges are alike in their commitment to women's professional advancement. Authors interviewed a purposeful sample of 58 women at two Southern women's colleges to determine how they felt their college experience had impacted their aspiration for an advanced degree. Students at the two colleges perceived different levels of institutional support for the value of advanced graduate study and found that conflicting messages about women's roles in society had a negative impact on their aspirations for an advanced degree. Not entirely relevant to our argument. A relevant quote below:

“Despite women's college mission statements that tend to support nontraditional educational and life goals for women, campus traditions may conflict with contemporary, empowering roles for women. This study indicates that there are very distinct differences in the cultures of women's colleges. While the institution's missions and statistical descriptions may be similar, differences between women's colleges are deeply ingrained in both formal and informal institutional values. These values not only inform daily student life, but impact student lives for years to come. While students can appreciate institutional cultures that support traditional or contemporary views of women, it is

conflicting messages of these views that negatively impact student lives. Future research explicitly designed to create a typology that identifies factors that distinguish women's colleges will help students to make informed choices about what college to attend. It will also serve to further delineate elements of the college environment that are supportive of the growth of women.”

### **Contributions of Women’s Colleges to the Education of Women: Periodicals (Non-scholarly)**

For Women Only: The Benefits of Single-gender Education. Thornhill, Jocel.  
Azizah Atlanta: Fall 2001. Vol. 1, Iss. 4, p. 65.

Favorable article – supports the concept of women-only colleges although it warns that these types of colleges are not for all female students.

“Today, women's colleges rank consistently among the top liberal arts institutions in the country, and many enjoy a strong tradition of academic excellence. According to the U.S. News & World Reports' academic ranking of America's Best Colleges 2001, women's colleges make up 16 percent of the top 25 colleges (including the number fourth ranking) and 12 percent of the 162 most selective national liberal arts colleges in the country. Along with academic distinction, class size is another factor students consider carefully when choosing an institution. In women's colleges, a smaller class size provides an opportunity for more individual attention and contributes to a positive learning environment. In the same U.S. News & World Reports ranking, women's colleges make up 54 percent of the top 13 national liberal arts colleges with the highest proportion of classes with fewer than 20 students.”

“Perhaps the greatest benefit of women's colleges is the empowering freedom from gendered expectations, competition and the ‘sexual politics’ of the classroom. Students and alumnae of women's colleges often share the common belief that an all-female environment is a nurturing experience – one that supports dynamic personal growth and develops high self-esteem. Sandra El-Amin, a senior administrator at the Clara Mohammed Elementary School in Atlanta, Georgia, attended Smith College in Northampton, Massachusetts in the late sixties. She says of an all-female environment, ‘There's a lot more focus on training women to feel that they can compete on any level with men or anyone else. There is a focus on developing confidence that women have in themselves and in their own ability. Many women claim the absence of men in their classes makes them less inhibited to speak out in class and share ideas.’ ‘If you don't understand something,’ says Samia, ‘there are no barriers. I am able to express myself more openly. I can ask as many questions as I want of my professors and not feel uncomfortable.’”

To Be and Not To Be Co-ed. Clift, Elayne. Women's Feature Service. New Delhi: Oct 6, 2003. p. N/A

Periodical article that addresses the topic of single sex education in rather broad terms, and without a focus on women's colleges, but on single sex education in general (high school, elementary). The brief article presents both sides of the single sex debate.

“Dr. Judith Shapiro, President of Barnard College [...] sees women's colleges as ‘liberated zones for women’ offering them a place where they can discover who they are and focus on their strength. Women's schools, she says, can be reliably counted on to help women flourish.”

“While the academic and scientific communities continue to examine this issue empirically, anecdotal evidence speaks unambiguously to the benefits of single-sex education for girls. Dr. Robin Robertson, an anthropologist at The Milton Academy in Massachusetts, has testified that ‘as a college professor I could identify the students from girls' schools with 90 per cent accuracy on the first day of class. They were the young women whose hands shot up in the air, who were not afraid to defend their positions, and who assumed that I would be interested in their perspectives.’”

Is sisterhood more powerful at a women's college? Navarro, Marisa. Hues. Duluth: Jul 31, 1998. Vol. 4, Iss. 3, p. 14

Eloquent article by a Smith graduate. One good quote below:

“Even if Smith isn't the ideal feminist community I dreamed of four years ago, it's still a very meaningful place. Feminism has become the status quo and at times I forget that sexism even exists. I've realized that whether or not the women here care about feminism, we're all living its realities by going to a women's college. Like it or not, we see feminism in action every day. Women run the school, dominate discussions and plan to become doctors, professors and yes, even activists. After tasting a different world, we're less tolerant of ‘real world’ issues like sexism and homophobia, and frankly, that's a good thing [...] I don't know if I'm more ‘liberated’ having gone to a woman's college. Sure, I've become jaded with feminism and sometimes I miss the smell of aftershave lotion. I've also watched hundreds of women reject traditional beauty standards and shave their heads and met many more who believe that women can do anything. I would never give up those experiences just to sit next to a boy in class. So to answer the ever-important question: was it worth it in the end to go to a women's college? Yes.”

Can She Stand Up for Herself? Steiner, Andy. Daughters Duluth: Sep/Oct 2005. Vol. 10, Iss. 5, p. 1.

The article deals primarily with assertiveness training for young women. The quotes below seem relevant:

“Sometimes even the most confident girls can have a hard time standing their ground against the teasing and aggressive classroom behavior of boys. Leigh Mansberg, English department chair at St. Mary's Episcopal, an all-girl college preparatory school in Memphis, Tennessee, says single-sex education can help young women feel more confident with the public expression of their naturally assertive sides. ‘When I taught at a co-ed school, the girls there would defer to the boys even when I knew they knew the answer,’ Mansberg says. ‘At a girls' school, they aren't deferring to anyone.’”

But not all parents can afford to send their girls to private school – and many believe that exposure to boys is a part of life that can't be ignored. Mansberg believes that even limited all-girl experiences – like Girl Scouts or book clubs or athletic teams – can be essential to boosting girls' confidence, because a boy-free environment gives girls an equal chance to take on leadership and be valued for their contributions. Working closely with a group of other young women, she says, gives girls an important time free of the social pressures and expectations that can come with the presence of boys.”

Insidious oppression: All-girls education without feminist vision. Angie Young. *Off Our Backs* Washington: Sep/Oct 2003. Vol. 33, Iss. 9/10, pp. 26-28.

Interesting article, but beyond the scope of our topic. The author relates her ordeal in an all-girls school and argues that without a feminist vision, a single-sex education can be an extremely oppressive and patriarchal experience. She claims that a lack of feminist vision prompts young women to become “the next generation of stilted, unhappy and silent bearers of patriarchy's torch.” Some eloquently written paragraphs below:

“The teachers taught their subjects with vigor, and we, the future six-figure housewives of America, dutifully learned them, but there were no answers to the questions I didn't yet know I had – no lectures about why a woman's education was a truly special thing, other than that girls were too shy to compete with boys in a classroom. In other words, there was no feminism. And therefore, even though I attended an all-girls school, I still felt the burden of the word I didn't yet have a name for: patriarchy”

“[...] Sure, you could argue that high school sucks for everybody. And maybe I should stop complaining. After all, thanks to the school, I was admitted to a prestigious college and now have a promising future ahead. But the thing is, there was such a fantastic opportunity for my experience with an all-girls education to be an empowering and enlightening one – an education that could have taught me to love myself and my fellow women, to ask critical questions, to be a young radical-in training. But without a feminist vision, a single-sex education can be an extremely oppressive and patriarchal experience that does little to encourage independent thinking.”

Are all-girls schools best? The continuing controversy over single-gender education. Lamb, Lynette. *New Moon Network* Duluth: Oct 31, 2000. p. 1.

The article reviews the debate on the merits of single sex education presenting data from both the AAUW 1998 report *Separated by Sex: A Critical Look at Single-Sex Education*

for Girls and The National Coalition of Girls' Schools report *Achievement, Leadership & Success: A Report on Educational, Professional, and Life Outcomes at Girls' Schools in the United States*. In a six-page survey, the NCGS polled more than 4,000 alumnae from the classes of 1983, 1987, 1991, and 1995 at 64 NCGS schools. Some of the relevant findings below:

“Most alumnae (85 percent) rated their schools as excellent or very good, and 88 percent would repeat the experience. Three-fourths agreed that girls' schools are more relevant to young women's personal and social needs; while 90 percent said such schools were more relevant to their academic needs. Nearly three-fourths of the alumnae felt they were better prepared for college than were their counterparts from coed high schools, while 85 percent believed they were better prepared academically. Further, girls' school alumnae enter college with higher test scores and once there, major in science and math at a higher rate than females or males nationwide, the NCGS report found.

Finally, once they enter the work world, NCGS graduates are overwhelmingly found as leaders at work and in their communities, with more of them (78 percent versus 62 percent nationwide) pursuing managerial and professional fields, and far more volunteering in community organizations (86 percent versus 39 percent of adults nationwide). Fully 80 percent held leadership positions, especially in college and in the workplace”

“Studies are important, of course, but perhaps the words of Tony-award winning playwright Wendy Wasserstein (*The Heidi Chronicles*, *The Sisters Rosensweig*) might make a bigger impression on the girl in your life. After writing in *The New York Times* that girls' school students strike her as ‘not only fearless, but also genuinely interested in one another,’ and that ‘the security of a single-sex environment gives young women the confidence to create their own image instead of buying into a cookie cutter world,’ Wasserstein, a graduate of a single-sex high school and college, concludes with this resounding line: ‘I truly believe the reason I have enough confidence in my own voice to write or even raise my daughter is because I went to girls' schools.’”

*Gender Outlaws: Challenging Masculinity in Traditionally Male Institutions.* Vojdik, Valorie K. *Berkeley Women's Law Journal: Symposium 2001* Berkeley: Jan 31, 2002. Vol. 17, p. 68.

Interesting article about resistance to admission of women in traditionally male military institutions from a legal analysis framework (i.e., legal basis for discrimination, Constitutional Law). Falls beyond the scope of our topic.

“Rather than focus on the systematic exclusion of women throughout history, the U.S. Supreme Court's gender jurisprudence has focused primarily on the wrong of stereotyping. The Court scrutinizes the asserted objective to determine whether it reflects “‘archaic and stereotypic notions’ about men and women. Classifications may not be used to exclude or protect members of one gender because they are presumed ‘to suffer from an inherent handicap or be innately inferior.’ Even if the objective is legitimate,

courts scrutinize the relationship between the asserted state objective and the classification to ensure that the classification is the product of ‘reasoned analysis’ rather than ‘the mechanical application of traditional, often inaccurate assumptions about the roles of men and women.’ Consistently, the Court has invalidated statutes based upon stereotypical beliefs about the proper roles, abilities, or interests of men and women, regardless of whether there is any empirical support for the classification.”

Let's Expect More. Zion, Cathy. Today's Woman Louisville: Jul 2005. Vol. 15, Iss. 7, p. 4.

Not relevant to our search. Brief article on Ann Tisch’s decision to leave a career with a national TV network to follow her heart and head. After interviewing a distraught teenage mother, Ann felt compelled to change the academic status quo in New York City. She set out to establish an all-girls public school that focused on science and math; a project that was very successful. So much so that all her original students (low SES, African –American) went on to college. Nowadays, the Young Women's Leadership School instructs around 400 young girls, from seventh to twelfth grades with a concentration in science and math. A somehow relevant quote below:

“The backbone of the school is based on the following core values: single-sex environment, leadership development, college preparatory, focus on results and high expectations. High expectations was the mantra heard frequently and fervently from the girls who participated in a brief video which accompanied Ann's presentation.”

Using Political and Community Activism to Develop Leadership Skills In Women  
Galambos. Colleen M., Hughes, Sherri Lind. Race, Gender & Class. New Orleans: Oct 31, 2000. Vol. 7, Iss. 4, p. 18.

This article does not deal with our topic of interest, but touches on key aspects of the debate on the contributions of single sex environments to the education of women. The authors examined socialization influences and participation in political and community activism on the personal development of female social work students at a small liberal arts college. From a qualitative perspective, the study explores the influence of these activities on women's development in the areas of leadership, influence, use of power, and collaboration. A couple of relevant quotes below:

“The most common opportunity for the women to participate in exclusively female groups was through organized athletics. Athletics provided girls and women with a consistent arena in which to experience collaboration, teamwork, and coaching. Efforts should be made to encourage a larger proportion of girls to participate in these activities. This encouragement may come from parents, families, coaches, and other members of the community. In addition, it is important to develop similar experiences for girls unable or unwilling to participate in athletics. Community service organizations and special interest groups may be expanded to support this same kind of development. Girls need encouragement to participate in a variety of female social groups including formal opportunities such as scouting. It would also be valuable to expand their opportunities to

participate in informal feminist groups that allow them to better explore and understand women's experience.”

“Exposure to and discussion of women's experience in high school curricula was often haphazard and reflective of a particular instructor's interests unless participants had attended single-sex high schools. Therefore, efforts should be made to insure that women's issues and experiences are fully integrated into high school curricula. Although the students in this study gained more of that understanding through college courses, many women do not have the opportunity to participate in higher education.”

“This research suggests a number of ways that individuals and institutions can enhance women's success and comfort with leadership. By altering family roles and interactions, curricula and classroom experiences, and organizational structures, we can socialize girls to become more effective in their use of power and influence. Using community activism is one such approach that can be applied to strengthen their self-efficacy for leadership roles and activities in their families, classrooms, workplaces and communities.”

Three cheers for a school of their own. Patricia McGuire. U.S. Catholic. Chicago: Sep 2003. Vol. 68, Iss. 9; p. 24.

Despite the arguments that sex segregation in education reinforces discriminatory behavior against girls, McGuire argues that single-gender institutions should continue to be an option for they offer female students more opportunities for leadership, promote greater female achievement in math and science, and foster greater interest in lifelong education, among others. Some relevant quotes below:

“Numerous studies find that girls' schools and women's colleges, compared to coeducational environments:

- offer female students more opportunities for leadership;
- insist that girls and women discover "their own voices" and speak out often;
- promote greater female achievement in math and science;
- foster greater interest in lifelong education;
- provide significant role models of women's achievement for students to emulate;
- have a higher rate of completion of bachelor's degrees;
- lead to higher percentages of Ph.D. attainment and proportionately more women graduates working in Fortune 500 executive positions.”

“[...] in response to the argument that women need to learn to compete with men in order to be successful in life, women's schools cite the track records of their graduates in the coed workplace: 20 percent of the women in Congress are graduates of women's colleges, as are 33 percent of the women on Fortune 1000 boards and 36 percent of the highest paid women officers of those companies, according the Women's College Coalition. Women's college graduates are twice as likely as their counterparts in coeducational

universities to receive doctoral degrees or to enter medical school. A survey by the National Coalition of Girls' Schools reveals that a higher percentage of girls' school graduates hold managerial positions than the national average for women (78 versus 62 percent) while 80 percent of girls' school alumnae held leadership positions in college and the workplace.”

“Women and girls, men and boys-all should have opportunities to attend educational institutions that foster their success. Girls' high schools and women's colleges have proved to be successful platforms for lifelong career advancement and personal fulfillment for their graduates and have produced some of the most significant women achievers in our nation's history.”

Bastions of learning for women are vital still female-only colleges: demand is waning but same-sex colleges have influential supporters, including ex-US secretary of state Madeleine Albright. Jon Boone: LONDON 1ST EDITION. Financial Times London (UK): Aug 20, 2005.

Short newspaper article reporting that Madeleine Albright, former US Secretary of State, has thrown her support behind a campaign to boost the endowment of New Hall college, one of two surviving women-only colleges in Cambridge [England]. For Dr. Albright, herself the product of Wellesley, a woman-only college, women-only institutions are vital for catapulting women into positions of leadership. The article notes that the education she received at the small liberal arts college in the late 1950s was "remarkable" and gave her a "great sense of motivation." She puts much store by her experience as news editor of the college newspaper. "It was staffed by women and we were the ones that put the paper to bed and did all kind of things."

For Dr. Albright, single-sex education is not segregation, but a different learning environment that should be available to girls if they want it. The article notes that, throughout her career, Albright has used other "girls clubs" to help women get on, even starting a club of fellow women foreign ministers when she was Bill Clinton's Secretary of State. And Boone goes on to quote her when she states: "When some of the men complained that diplomats from Barbados or Liechtenstein, for example, had speedier access to my office than they, I said there was a simple solution. They could have themselves replaced by women. They never complained again."

Mills Students Provided Eloquent Testimony to the value of Women's Colleges. Hartman, Mary S. The Chronicle of Higher Education. Washington: Jul 5, 1990. Vol. 36, Iss. 42, p. A40.

Insightful article on how the Mills' students strike, opposing their college becoming co-ed, sparked the debate (and served as eloquent testimony) on the value of women's colleges. Some of Hartman's (former dean of Douglass College of Rutgers University) most powerful quotes below:

“While quantifiable data are important in making the case for our [women-only colleges] institutions, we need to give more attention to what we know matters most to our enthusiastic women students: the transforming quality of environments attuned to women’s different voices, places that support and push women students to achieve excellence [...] Emphasizing these advantages is important, because many young women applying to colleges overlook them. After all, the obstacles still confronting women as a group tend to present themselves at later stages in their lives – when they are seeking career advancement, juggling the demands of marriage and the workplace, or dealing with inequities in a society that still regards them as primary care givers. Since studies show that high-school girls and boys have comparable levels of self-esteem, but that women’s self-confidence drops sharply during college, teen-age girls may not see the advantage of considering institutions that can enable them to preserve that self-esteem.”

“...the message of Mills to every woman contemplating college, and to every parent of a college-bound daughter, is to ask lots of questions at all the colleges they investigate about how women fare there. At coeducational institutions, find out about any special programs that are offered for women: ask about the gender distribution of awards and scholarships among entering students; find out how many tenured female faculty members they have and whether women of color are well represented; and inquire about efforts to hire faculty women in fields where they have been underrepresented.”

“I also recommend that every woman include at least one women’s college among the institutions she investigates. The mainstream institutions have more of a ‘real world’ atmosphere. But since that is so, it is worth considering at least one institution with an environment that is counter-cultural. Such environments, presenting controlled, temporary, and, yes, artificial alternatives to the real world, are the very places where women together can more readily envision and then create alternative perspectives and programs to build a more livable and whole world – for women and men alike.”

Who Says a Woman Can’t Be Einstein? Amanda Ripley. Time. New York: Mar 7, 2005. Vol. 165, Iss. 10, p. 51.

Ripley’s article in response to Harvard President Larry Summer’s speech on gender disparities. The article is a review of existing theories/studies on differential brain development for men and women, and how this affects distinctly sequenced cognitive development/learning (and concomitant career outcomes) for both. Interesting, but beyond the scope of our project.

The Odd Couple. Sax, Leonard. The Women’s Quarterly. Arlington: Jul 31, 2002. p. 14.

Insightful article about the ongoing debate on the merits of single sex versus coeducational environments. Although at odds with prevalent feminist messages, it supports the provision of single-sex choice (and federal funding) within the public school system. The following quotes seem very relevant:

"The Association tanked its own study" [Separated by Sex, a report on single-sex education for girls], the Journal concluded. The introductory essay was by Pamela Haag, director of research for the AAUW's Education Foundation, who wrote that "published studies that use subject preferences and girls' attitudes toward math and science as indicators have concluded uniformly that single-sex environments have a positive effect for girls." Cornelius Riordan, professor of sociology at Providence College and an authority on single-sex education, was emphatic: "Single-sex schools work. They work for girls and boys, women and men, whites and non-whites." "The [beneficial] effects of single-sex schools are greatest among black or Hispanic females from low socioeconomic homes," he emphasized.

"Why should the AAUW and the feminist establishment oppose single sex education? And why does Clinton support it? The answer to both questions has to do with school vouchers and school choice. Over the past ten years, the weight of evidence demonstrating the benefits of single-sex education has become overwhelming. Studies from the United States and from around the world have found that both girls and boys who attend single-sex schools do better in school, have a better attitude toward school, and may be less likely to get involved in drugs and alcohol. (You can review many of these studies at SingleSexSchools.org.) All those studies pose a problem for those who stubbornly oppose school vouchers. If single-sex education is so effective, why should it be available only to those kids whose parents can afford private school tuition? Shouldn't kids from poor families have the chance to benefit as well? Acknowledging the benefits of single-sex education would – in the eyes of the AAUW and likeminded organizations – inevitably fuel the school voucher movement.

Vital to the Mission and Key to Survival: Women's Studies at Women's Colleges. Claire L Sahlin. NWSA Journal Bloomington: Summer 2005. Vol. 17, Iss. 2, pp. 164-170.

The article discusses the example of Women's Studies at Texas Woman's University, which is by far the largest university primarily for women in the nation and one of only three public universities of its kind in the US, which in a way embodies Adrienne Rich's implicit vision for Women's Studies at women's colleges. Sahlin also discusses the case of Trinity University, where "Women's Studies" saved "the institution when it faced closure in the midst of an enrollment crisis." She remarks that although frequently struggling for greater institutional acceptance, women's studies programs can clearly enhance and strengthen the unique educational opportunities that women's colleges provide for women. Beyond our research focus, but interesting.

Making the case women's colleges. Glynis O'Leary. Off Our Backs Washington: Sep/Oct 2003. Vol. 33, Iss. 9/10, pp. 29-30.

O'Leary recounts her experiences while studying at Mount Holyoke College, arguing that "living and learning in a female-dominated environment completely warped her world in the best way possible." The author claims that "living and working in an environment where female is the norm and male is unusual, and where women have all the privilege traditionally held by men, has enabled her to fully inhabit her gender."

“Women's studies is not a department, but a frame of mind. Every class, without fail, relates itself to women, and what is most striking is the fact that I only notice this interwovenness when I step away from my environment. It's become second nature to me – something I never would have included in my ‘reason's I chose a women's college’ speeches.”

Education: Women's Colleges in Co-ed Pressure Cooker. Brooke Linville for WOMENSENEWS. Global Information Network. New York: May 27, 2005. p. 1.

On how some women colleges have adapted to survive financially. One such college, Sweet Briar, has added to its undergraduate programs, especially in economics and business, and also has created co-educational graduate programs: Master of Arts in Teaching and Master of Education in Differentiated Curriculum and Instruction. Both programs began last fall. They have also changed their marketing strategy to show "liberal arts in action" and the way that a Sweet Briar education continues post-graduation. One excellent quote below:

"Sweet Briar taught me to be confident and capable," said Kelli Bergmann, who graduated in 2004 from Sweet Briar and served as president of the student government during the time of the decision. She also says that it helped her relate better with women and not feel threatened by them or their successes, a problem she sees throughout the corporate world. "At a co-ed college, they tell you that you must work hard in order to be successful as a woman," said Bergmann. "At a women's college, they tell you that you will be successful because you are a woman."

For women only: After years of decline, women's colleges gaining popularity. Phillip, M. C. Black Issues in Higher Education. October, 1993. Vol. 10, pp. 26-32.

This is a rather general professional publication targeted to educational administrators. The article didn't have much in terms of empirically-based findings except for a few notable quotes and a nice table listing the percentages of women graduates across disciplines by various types of institutions (coed versus single sex broken down by women's colleges with best results).

“Advocates point out that one out of every seven women in state government attended a women's college; and so did 24 % of the women in Congress and 36% of the highest paid officers and directors of the 1990 Fortune 1000 companies.” (p. 26)

“If women's colleges didn't exist, we would have to invent them. [...] With a workforce that is increasing in people of color and women, colleges for women have a vital role to play in preparing individuals to contribute, compete and succeed in the world of today and tomorrow.” (Dr. Johnetta Cole, former President of Spelman College)

“Women's colleges have always educated women scientists, employed them and encouraged them at a time when social policy was to exclude them from such pursuits. Studies have shown that women are three times more likely to earn a baccalaureate

degree in economics, and one and a half times more likely to earn a baccalaureate degree in life sciences, physical sciences and mathematics at a women's colleges.” (p. 27)

Single Sex versus coeducational environment and achievement in adolescent females.

Monaco, Nancy M, Gaier, Eugene L. *Adolescence*. Roslyn Heights: Fall 1992. Vol. 27, Iss. 107, p. 579.

Monaco et al. explored the differential benefits of single-sex and coeducational schooling (focus on high school) in relation to a woman's achievement and personal fulfillment. Monaco et al. are exclusively interested in exploring how single-sex or coeducational institutions (high schools) interact with learning variables to influence achievement behaviors. Their focus on this stage responds to the fact that “for women, the range and type of experiences during high school take on special significance, since it is during this period that they often weigh their various roles and adjust their levels of aspirations accordingly. If the high school environment is successful in reducing the discrepancy between what are often seen as conflicting roles, women may place greater emphasis on achievement and set higher levels of aspirations.” (p. 580)

There is no collection of original data, but a review of some of the psychological literature on differential achievement motivation and career development for males versus females. The authors hypothesize on various factors that might contribute to making single-sex education more beneficial to adolescent women than coeducation.

Their literature claims:

- Women appear to rely more on the support of family and others (models) in order to achieve
- Women in coeducational settings often obtain higher grades than do males, but demonstrate less confidence and self-regard
- Women more often report conflicts with respect to social and achievement needs
- Men and women have different patterns of group interaction and social interaction
- Men and women attribute different causes to success and failure
- The factors influencing the career development of men and women are different
- Demographic variables interact with the psychological variables in affecting achievement motivation
- Women in single-sex settings are exposed to more leadership experiences than are women in coeducational settings, and these experiences are generally of a higher quality.” (p. 592)

Not entirely relevant to our topic but interesting given that high school sets the stage for the college years.

Single-sex education benefits men too. Watts, Claudius E. III. Wall Street Journal (Eastern Edition). New York, N.Y.: May 3, 1994. p. A14.

Not really on our topic albeit related. Watts, president of the Citadel, Charleston SC, discusses single-sex education. Watts says the Citadel is “not trying to keep women out of the Corps of Cadets by protecting machismo; the Citadel is trying to preserve an environment that molds young men into grown men of good character, honor and integrity.”

“The benefits of single-sex education for men are clear,” says Harvard sociologist David Riesman. “Not only is single-sex education an optimal means of character development, but it also removes the distractions of the ‘mating-dating’ game so prevalent in society and enables institutions to focus students on values and academics. In short, the value of separate education is, simply, the fact it is separate.”

Single-sex schools: The answer? Taflinger, Laura, Douglas, Carol. Off Our Backs. Washington: Jan 1998. Vol. 28. No. 1, p. 7.

Very general, brief and not relevant to our topic. On various pilot single-sex high school programs in CA.

### **Contributions of Women’s Colleges to the Education of Women: Dissertations**

Undergraduate experiences at women's single-sex and coeducational colleges. O'Donnell, Patrice. Proquest Dissertations And Theses. 2005. 168 pages; [Ph.D. dissertation]. United States – Massachusetts: Boston University.

O’Donnell’s dissertation compares the experiences and perceptions of women in single-sex institutions with those of women and men in similar coeducational colleges. She had 212 students (115 women's college students; and 59 female and 38 male students from coeducational colleges) complete surveys at three single-sex and three mixed-sex colleges chosen for similarity in size, selectivity, and students' socio-economic status. She compared first year and senior students' college grades, choice of major, experiences with faculty, classroom experiences, and involvement in college activities, self-concept and gender role orientation.

Women's college students, especially first year women, reported higher grades and more positive experiences when compared with the same cohort of women and men at coeducational institutions. Seniors reported more positive experiences than first year students. However, first year students at women's colleges more closely resembled seniors in this regard. Men reported lower grades and a less positive college experience than women at single-sex or coeducational colleges, demonstrating the fewest differences between first year and senior groups. All groups showed similar self-concept and attributional style. The two groups of women demonstrated no differences in gender role orientation. While all three groups reported generally positive experiences, the data suggest that women

attending single-sex institutions may benefit from earlier and more positive communication with faculty.

Despite the findings above (perhaps a function of her small sample or the fact that her participants provided self-reports of their experiences or other confounds), O'Donnell's dissertation does little to support the merits of single sex education for women. The argument that women attending coeducational institutions suffer from a negative social comparison with male classmates is not supported in her study – the men in her sample reported the least positive experiences of all three groups. Personally, I found myself confused with some of her findings and argumentation going back and forth. In other words, I believe her findings are not generalizable by any means to larger populations and we need to steer away from them.

“...first year women at single-sex institutions resembled upper level students more closely, seeming to experience more positive feedback, closer faculty relations, and more ease in classroom participation than first year students at coeducational colleges. They enjoyed early advantages that the coeducational students did not experience until later in their undergraduate education. This suggests that women choosing the single-sex colleges may be more likely to persevere to graduation than their coeducational peers, confirming one of the benefits of attending a women's college reported by the Women's College Coalition...” (p. 110)

“Women at single-sex institutions reported feeling more comfortable discussing educational issues with faculty than either women or men at coeducational colleges in the first year, and the coeducational men in the senior year...[...]. Women's college students also scored higher than coeducational women on the experiences with faculty scale, and reported more faculty encouraging future academic goals in the senior year.” (p. 112)

“Women at single-sex institutions scored significantly higher on the class participation scale than women in coeducational institutions and reported a higher frequency of volunteering in the senior year...[...]. In regard to involvement in college life outside the classroom, women at single-sex colleges were more likely to hold a leadership position than women at mixed-sex institutions in the first year, but no differences were seen in the two groups of women.” (p. 116)

Fostering Intellectual Leadership. Davis, Erin Elizabeth. Proquest Dissertations And Theses. 2001. 204 pages; [Ph.D. dissertation]. United States – Indiana: Indiana University.

Davis' dissertation research looks at the concept of intellectual leadership in the context of a Catholic women's college. Because the abstract advertised the study as “an investigation into the development of leadership skills in women college students,” I took a chance with it. As it turned out, her dissertation was a

qualitative case study of only one small liberal arts college (interviews with 33 students and 33 faculty members) and the ways in which this college setting fostered “intellectual leadership” in women students. Her findings confirmed existing research that women only colleges promote enhanced leadership outcomes.

Davis also shows that intellectual leadership involves a cluster of concepts: confidence, independence, getting students engaged and involved in their educational process, and effective communication skills. Davis’ key argument is that women’s colleges, by nature of their small class sizes/sense of intimacy/closer faculty-student interaction/sense of community, are superior to coed institutions (although the author never states this and her methodological design is not set up to compare institutional types) because they allow women to develop their “leadership” skills and confidence levels more effectively. Personally, I feel the author is only confirming existing studies with this “intellectual” leadership tweak (i.e., Whitt, Bernard-Miller).

Qualitative analysis of alumnae's perceptions: Psychological conceptions of self, gender-role prescriptions, achievement strivings, and the impact of experiences at a women's college. Petrill, Kathleen Ann. Proquest Dissertations And Theses. 2001. 213 pages; [Ph.D. dissertation]. United States – Ohio: The University of Akron.

In her dissertation research, Petrill examined reported achievement advantages for females educated in the single-sex environment of a women's college. Petrill surveyed alumnae (final N = 119 – only 17% response rate of 807 questionnaires) from a Midwestern women’s college, claiming that her participants recalled the positive impact of their interactions within the single-sex college milieu on their resolution of the competence/femininity conflict and their self-perceptions of competence, agency, and worth. The study is rather obscure and framed from a psychological and phenomenological perspective so that it is, at times, rather difficult to follow and interpret. The alumnae narratives captured in the study portray the psychological changes experienced in the college milieu and, “through the reported changes, it is possible to see psychological phenomena important for a woman’s perceptions of competence and agency to her rejection of gender-role stereotyped assumptions.” (p. 170)

In all, Petrill’s findings support the merits of single sex college education for women given that this nurturing and secluded setting allowed students to engage in a self-discovery journey and exposed them to agency and empowerment in other women role models. Below some interesting/relevant quotes:

“Together the analysis of women’s narratives and Mulqueen’s (1992) theory illustrate how the all women’s college milieu not only facilitates but also engenders the female student’s resolution of the psychological conflict between wanting to have a positive sex-role identity and needing to develop an innate urge for competence.” (p. 166)

“All my women professors were strong, intelligent, successful women – a great inspiration. I’ve learned from them a history of women that I would not have in a coed college, unless maybe I took an extra class. That history is a foundation that I can work from.” (From an alumna, p. 119)

“Also, it was very nice not to have to compete with men. There was no pressure during class time to play games about how you looked or how smart you were, etc. It was nice to hear what other women had to say and that they were listened to.” (From an alumna, p. 135)

Ways of knowing, ways of leading: Leadership development in women college students. Clark, Margaret Elizabeth. Proquest Dissertations And Theses 2002. 180 pages; [Ph.D. dissertation]. United States – Illinois: Loyola University of Chicago. Publication Number: AAT 3039276.

Misleading title. Not relevant because the study was conducted at a coed private institution, albeit the surveyed participants were only female.

A vision for girls: A story of gender, education, and the Bryn Mawr School. Hamilton, Andrea Dale. Proquest Dissertations And Theses 1997. 349 pages; [Ph.D. dissertation]. United States – Louisiana: Tulane University. Publication Number: AAT 9816769.

Historical research study of the emergence, vision, and evolution of Bryn Mawr School (and its leaders) through the centuries. Does not touch at all on the benefits of single sex college education.

Single-sex schooling and its effect on achievement, attitudes and behaviors. Gilroy, Marcia K. Proquest Dissertations And Theses 1990. 201 pages; [Ph.D. dissertation]. United States – Michigan: University of Michigan. Publication Number: AAT 9034425.

Focused on secondary education – according to abstract, not entirely relevant.

It's all about the girls: The essence of the single-sex school. Carstensen, Kathleen M. Donahue. Proquest Dissertations And Theses. 1999. 171 pages; [Ed.D. dissertation]. United States – Nebraska: The University of Nebraska – Lincoln. Publication Number: AAT 9951285.

This dissertation builds on the debate of single sex education, but focuses on the environment provided early on from grades 9 through 12 at Hawaiian institutions. Not relevant to women colleges and their contribution to women’s education. Yet, it should be noted that the author concluded that the single-sex school environment is beneficial to both young girls and their teachers. For the young women, “the essence of their all-girls school experience gave them invaluable opportunities to develop the confidence, competency, and connectedness that defined their identities and prepared them for the real world. For the teachers in

this study, the essence of the all-girls school experience afforded them the freedom, connectedness, and purpose that defined their identities as teaching professionals.”