How The Servicemen’s Readjustment Act of 1944 (GI Bill) Impacted Women Artists’ Career Opportunities

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Abstract

The GI Bill educated millions of veterans after World War II, and in the second half of the 1940s, higher education enrollments doubled. Colleges and universities recruited professional artists to teach these returning GIs; many of whom were 1930s W.P.A.-educated and economically supported men. Males dominated enrollments and hires, as significant numbers of females were denied admission in art schools and employment as artist educators. Expected by society to be wives and mothers, women artists often experienced gender inequity and prejudice which prevented them from teaching art at universities and colleges. The few women hired in higher education often faced gender-biased tenure and promotion decisions by tenured male faculty. By the mid 1950s, those who did not paint in the style of Abstract Expressionism were excluded from teaching in art programs at universities, colleges, and academies. This paper concerns the impact of the GI Bill on women artists’ careers in the years 1944 to 1970.

Nationwide, only 36 percent of assistant professors and 29 percent of associate professors are female. However, only about 17 percent of full professors. ... are women. On average they earn 91 percent of the salary of men. Over all, women can expect to make 76 cents to a man’s dollar. (Madden, 2005)

One major factor to consider in relation to discrimination of women artists and women art faculty was the influence of the GI Bill. The benefits from the GI Bill facilitated education of millions of men and insured them a place in higher education at a time when very few women were being hired in tenure track positions. After the Second World War, colleges and universities frequently denied admission to non-veteran men and women to make room for mostly male veterans to go to school. Beginning in the 1950s until retirement, these veterans were the artist-educators administrating and teaching at the university level.

Two government programs—The Works Progress Administration programs of the 1930s and the GI Bill of the 1940s—impacted careers of women artists and women artist-educators. The WPA provided women employment as artists, while the GI Bill limited women’s careers as artist and artist educators, particularly during the 1950s and 1960s. Women encountered cultural practices and policies that disadvantaged their education and careers as artists and artist educators. In this paper, I document gender discrimination practiced in the 1950s and 1960s with statistical data on salaries, hires, and admittance into art school according to gender. Additionally, I interviewed and corresponded with art faculty educated or hired in the two decades following WWII asking them about the composition of faculty and student body, and whether they had been employed by the W.P.A., and/or used GI Bill benefits for veterans. Further, I combed the literature regarding the impact of the GI Bill on education of artists.

Artists have always needed patrons. During the Great Depression the major patron for over 5,000 artists was the Federal Arts Program. This patronage ended abruptly during World War II because the funds were needed in the war effort. It was replaced after the war by a different form of federal patronage, the GI Bill. The benefits of this bill could be used to finance higher education of all sorts, but for the purposes of
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In this paper, I will focus on how it was used to educate artists. The financial support this bill provided to veterans facilitated a cultural change in practices of education for artists from the old master/apprentice system of the art academies to a new modern style of art education within the context of colleges and universities. These programs generally privileged male artists and created a network of male artists and administrators who altered the education of artists and artist-educators for decades. The former role of art as a vocational subject related to craft and its perception as a feminine subject was dramatically changed in the process as the arts were integrated into the liberal arts with a new identity as a masculine subject associated with visual research.

During this same time period, the male-controlled New York School art style called Abstract Expressionism became the official American avant-garde, launched in part with federal monies from the Congress for Cultural Freedom (Guilbaut, 1983). By mid-20th century, both (male) artist and university patronage networks were firmly entrenched. College degrees in art were required to teach art in accredited schools. Gender prejudice and social attitudes concerning women’s roles as wives and mothers prevented many women from obtaining college degrees in art. Of those women who attended college during the mid-forties, 60% dropped out of college to marry (Friedan, 1963). Many women had been conditioned to accept that truly feminine women did not want careers, higher education, or political rights.

W. P. A. Supplies Professional Artists to Teach GI’s

A great many of the artists who were teaching art in colleges and universities after World War II had survived the Great Depression working on federally sponsored W.P.A. (Works Progress Administration) projects and with the Federal Arts Program. These programs were predominantly supportive of male artists, many of whom were children of immigrants and from social classes not privileged by wealth and higher education. Colleges and universities recruited these professional artists to meet the expanding need for artists to teach art to the veterans in the 1940s and 50s. In 1962, Frederick M. Logan, a professor of art and art education in the School of Education at the University of Wisconsin, recalled how this happened:

Many college and university art departments include some senior faculty members of full professorial rank whose prestige is not based on academic degrees. These staff members were recruited from the ranks of outstanding professional artists in the late thirties and again during the last half of the forties, the period of gigantic growth in student enrollments following the passage of the G.I. Bill. In some institutions they were originally designated as artists-in-residence and were assimilated in the regular faculty ranks from those positions. (Logan, 1962, p. 430)

Ironically, these artists without credentials trained the first generation of artist-educators who would need graduate work and college degrees to further their own careers. The GI’s became their students and the Master of Fine Arts degree (M.F.A.) became the terminal degree for artists in academia.

The University of Iowa’s practice of the hiring artists previously employed by the W.P.A. and supported with a G.I. Bill, shares a similar history with many other art programs. For example, a Woodstock, New York resident and a member of the W.P.A. from 1934 to 1937, Emil Sanso became the first artist-in-residence in higher education at the University of Iowa (UI) in the late 1930s. Grant Wood, another muralist, taught at UI; and W.P.A. muralist Philip Guston also moved from Woodstock to teach at UI in 1941. Other W.P.A. artists followed them to the University of Iowa during the 1940s. Eugene Ludins, also a W.P.A. sponsored artist who had resided in Woodstock, taught over 30 years at UI. Similarly, Stuart Edie, a W.P.A. artist from Woodstock taught over 30 years at UI, as did James Lechay and Humbert Albrizio, both from New York City and previously employed by the W.P.A. Albrizio taught sculpture at the University of Iowa from the 1930s to the 1960s.

The University of Iowa’s School of Art and Art History, established in 1936, was the first in the nation to grant advanced degrees based on graduate student exhibitions of art instead of a thesis requirement. For several decades hundreds of students graduating from the program became professional artists and teachers. The University of Iowa School of Art and Art History has consistently ranked in the top 10 schools for artist education since its inception (Pradarelli, 2002).
The tenured positions in art programs were being literally “manned” by graduates from hundreds of similar programs in the United States. These men held this status for decades, for once they were granted tenure and assimilated into the rank of full professors, they tended to remain until retirement.

Will Barnet, in his reflections about 60 years teaching at the Art Students League of New York noted that GI’s were his best students and many became his life-long friends. He explains:

The relationships with my students very often extended into social relationships. Most of my students, especially during the GI Bill became close friends. We had gatherings in and out-side the League. I became involved in their professional possibilities. ... I encouraged some of them to have exhibits. (Pellettieri & Cassidy, 2004, p. 11)

Women were generally excluded from this old boy network of professional friendships.

Veterans Influenced by Hans Hofmann’s Promotion of Abstract Expressionism

While most veterans looked to the best schools in higher education or the academies for their art education, many studied with individually well-known artists, like Hans Hofmann. During WWII, most of his students were women. After the war, his classes were largely composed of men. Frank Stella described Hofmann as the “greatest art teacher of the twentieth century” (Stella, 1999, p. 14). Hofmann promoted Abstract Expressionism and his ideas of the push and pull of colors for abstract and unnamed expressions was the style practiced by those veterans who studied with him. This movement, famous for its dynamic style of vigorous mark making on gigantic canvasses and populated by the legendary drinking, brawling, womanizing, bar-hopping males, developed into an international art movement and the style of choice at most colleges and universities from the 1940s until the 1970s. After World War II, the C.I.A. formed the Congress for Cultural Freedom (CCF). With millions of dollars channeled through private cultural foundations like Rockefeller’s Museum of Modern Art, this group adopted the Abstract Expressionists in their culture war with communism. CCF sponsored the “Masterpieces Festival” of modern art and “Twelve Contemporary American Painters and Sculptors” exhibitions, which were shown in the United States and then toured Europe. Art historian Williams (2000) noted that within a fairly short time Abstract Expressionism had come to be thought of as a “university stye,” capable of being taught through a reliance on speech, itself one of the key ingredients in art education of the past several decades (p. 1). He thought it was this “drive to verbalize the workings within the studio that best defines the training of artists since the 1960s” (p. 1).

**History of the GI Bill**

The Servicemen’s Readjustment Act of 1944 was created to help war veterans by giving them benefits to make up for time and opportunities lost. The GI Bill was a major factor in motivating colleges and universities to create art departments and to offer majors in art. Federal funds were given to individuals and to schools which competed for the money. The “old master” apprentice system was transformed into the Bachelor of Fine Arts and the Master of Fine Arts degree programs in the “visual” arts. A few schools also offered the Doctor of Art degree.

At the time when many GI Bill veterans graduated with an M.F.A., this degree became the preferred academic credential for university art faculty positions. It was as valuable as a strong and prestigious exhibition record for getting jobs, yet the opportunity for exhibitions was derived from the same male-dominated networks which tended to exclude women from higher education faculty opportunities.

Since the 1950s, most U.S. artists received their education in colleges or in academically inclined art schools, rather than in studios or academies (Mattick, 2000). According to Mattick (2000), many artists returned to those institutions later to make a living as teachers. Because of the need for credentialed instructors, the attraction of the non-accredited programs declined during the second half of the 20th century.

Federal programs prior to the GI Bill had placed male artists in an advantageous position, and it continued in post-war years. When they left the service, both women and men could go to a university or attend a vocational school of their choice with the cost of tuition, fees, books,
supplies, and living covered by the GI Bill. The Bill paid $500 per year in tuition to any school at a time when Harvard cost $400 per year. Canaday (2003) points out that the design and implementation of the GI Bill primarily benefited white middle-class heterosexual men. (See Appendix A for a list of W.P.A. trained artists who later taught in colleges and universities after WWII.)

Many of these men chose the top institutions and rushed to the Ivy League schools, the state universities, and the better liberal arts colleges and technical schools (Olsen, 1974). Fifty-two percent of the veterans went to private institutions (Bennett, 1996). In the 1950s, there were only several hundred schools instead of the 3,500 colleges and universities created since WWII. These few schools struggled to serve the swelled enrollments due to government funded higher education for war veterans.

In the late 1940s, an unmarried GI college student received $50.00 in support and, if married, a veteran was granted $75.00 a month. If the veteran had children, an additional $15.00 was granted. These amounts were later raised to reflect the needs of the families (Bennett, 1996).

Bennett (1996) reported that 88,000 veterans were enrolled in 1945. By the fall of 1946 their numbers had jumped to 1,013,000. Enrollment in colleges and universities increased from 1.6 million in 1945 to 2.1 million students in 1946. More than one million or 48.7 percent of the 2,078,095 students and 71.5 percent of all the males enrolled in universities and colleges were veterans (Bennett, 1996). Harvard University’s enrollment almost doubled in 1946. As veterans continued to enroll over the next five years, the total enrollments in colleges and universities continued to increase. The deadline for vets to enroll was July 15, 1951. The number of graduating seniors in higher education jumped from around 160,000 in 1940 to around 500,000 ten years later. This increase is especially interesting considering that only a quarter of a century earlier the total number of degrees awarded (to primarily wealthy young men) in the United States was 53,515 (Bennett, 1996).

The infusion of mature married men eager to start their careers provided a clear contrast to the wealthy younger male students, many of whom had more interest in social activities and sports events than in their collegiate studies. GI Joe in his fatigues would certainly have presented a different image than Joe College in a raccoon coat. Unlike later war veterans, these victors received a glorious welcome home. They were survivors of a group of about 50 percent of the males who had passed the armed services induction physicals. A large percentage of those married and started families on their return from WWII. They lived in rapidly constructed married student quarters as the colleges and universities tried to accommodate the growth in their student population. The veterans expected college to be like the accelerated training they had received in the military. They were focused on a career path and dominated the honor rolls receiving the highest grades in all their classes (Bennett, 1996).

Many non-veterans were challenged by these over-achievers whom they dubbed “grinds.” A general perception was that the vets felt superior and that they liked to run things. One area of criticism was their vocational orientation. Many faculty and administrators in academia were concerned that this vocational emphasis would be damaging to the liberal arts.

The GI Bill’s Impact on the Education of Women Artists

The GI Bill was tailored primarily to help men. Rosenberg, (1999) commenting on the 1945-1970 period, stated that “a combination of the GI Bill, a celebration of domesticity, and persistent sexism made these flush times for men, not for women” (p. 1). Friedan (1963) also noted this trend:

When the war ended, of course, GI’s came back to take the jobs and fill the seats in colleges and universities that for a while had been occupied largely by girls. For a short time, competition was keen and the resurgence of the old anti-feminine prejudices in business and the professions made it difficult for a girl to keep or advance in a job. This undoubtedly sent many women scurrying for the cover of marriage and home. (p. 185)

Many of the approximately 350,000 women who served in the military were eligible for all GI Bill benefits but only 2.9 percent of the
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veterans who attended college were women (Bennett, 1996). A 1985 Harris Survey of women veterans discovered that many women were not aware that they had been eligible (cited in Bennett, 1996). June Willenz, in her role as Executive Director of the American Veterans Committee (AVC), interviewed women veterans of World War II as research for her book published in 1983. She explained how the Ford Foundation helped the AVC investigate government agencies’ response to women veterans. It revealed to her how much of their history had been left out.

Not only wasn’t there any academic research on this group, nor any government statistics available on them, but library research using the computer shows nothing. ... Not only were they forgotten: they were invisible. In books on veterans women are not mentioned. (Willenz, 1983, p. xi)

Willenz’s interviews showed that a lack of knowledge about veteran benefits was pervasive among the World War II women veterans and quotes one as saying:

When I got out, I had the understanding that the GI Bill was only for those who did not have college degrees. ... I went to college for teaching credits, which I paid for myself, because I did not know that I could go under the GI Bill. If I knew then what I know now. (Willenz, 1983, pp. 199-200)

Willenz reported that most women didn’t use their benefits. Those who married and raised families told her they did not have the time or the energy to go to school. Eligibility for the benefits expired before many could use them. Single women veterans were self-supporting and could not leave work in contrast to many male veterans who had wives helping to send them to school by working part time (Willenz, 1983).

One of the most critical effects of the GI Bill was that the percentage of women in college dropped 15 percent after the war. Even though women were attending college at this time, many other women were denied admission so that colleges and universities, by law, could enroll the vast numbers of male WWII veterans who were applying for admission. Formerly all female schools became co-ed in order to admit the male veterans or merged with all-male or co-educational institutions, or closed due to declining enrollment and financial problems related to the increased competition for funding in higher education (Greenberg, 1997; Rosenberg, 1999). For example, Florida State University was a women’s college until 1947, when it changed to accommodate the returning GIs (Dodd, 1958). Friedan (1963) reported that in the years that followed World War II:

Many male presidents, scholars, and educators left women’s colleges. Colleges and universities began to be skeptical about the value of investing in any female’s education. Some women’s colleges went out of business. Some professors, at coeducational universities, said one out of three college places should no longer be wasted on women. (p. 151)

After the war when the men returned home, it was tacitly understood that women would leave their jobs and become wives and mothers. Participating in one of the women’s service corps during World War II did not change the roles of women in U.S. society. The potential was there, but:

There was a distinct message that we should now let the men take over the real world and we should silently return to our kitchens. Unfortunately, many of us did and we should have known better, for we really were a pioneering, adventuresome lot. (Willenz, 1983, p. 153)

Educational Practices Affecting Women Artists

Before the GI Bill, higher education in the United States was restricted to its wealthiest citizens and those living within an educational family culture. “College,” as Les Faulk (Falcocchio) recalled fifty years later, “was for teachers’ kids and the preachers’ kids. For the rest of us, with names like Tarantini and Trkula, it was a distant dream” (Bennett, 1996, pp. 195-196). Bennett said that before the GI Bill “the nation’s colleges and universities … had been the almost exclusive preserve of white
Anglo-Saxon Protestants (WASPs)” (Bennett, 1996, p. 260). This would change with 250,000 African-Americans attending college for the first time under the GI Bill.

In 1943, only a little more than half of the students in high school were graduating. Attending secretarial school and learning to be an office worker was about the only way children of the working class and middle class could better their social standing. Only among their wealthier contemporaries was the concept of getting a college degree considered desirable or even possible. Pursuing education to be an artist was not considered a practical vocational choice for either men or women.

The respect or lack of respect for “women’s work” or “men’s work” influences the ranking of any activity, including subjects for study in schools and stereotypical associations of gender with particular school subjects linger into the present time. Stankiewicz (1983) infers from her studies of the history of art education that classrooms in the U.S. became feminized in the late 19th century. When veterans graduated from universities with undergraduate art degrees, many were employed in K-12 schools. By the 1950s, it was common that male art teachers replaced retiring women art teachers, although societal impressions that art was a feminine subject matter lingered. Art was seen as a feminine subject and artists were considered to be less than fully masculine in the 19th century. The artist “type” criticized by the College Art Association early in the 20th century was described as displaying “feminine” behavior in his attention to outward appearance that they noted was deliberately unkempt with scraggly beard and baggy clothing (Singerman, 1999). Psychological and educational testing from the 1930s to 1960s, using polarized concepts of gender, typically determined that artists were among the most feminine of professional groups and a male artist had to deal with this feminine image as he defined his own self-image. This may explain some of the over-the-top macho behavior of the Abstract Expressionists asserting their manhood (Singerman, 1999).

In the beginning of the 20th century, women’s colleges were about the only places offering faculty positions to women since there were few opportunities in coeducational institutions. As women faculty retired from the women’s colleges, men replaced them. For a time, the expansion of the land-grant colleges before World War II provided positions to women (Carter, 1981). However, women were seldom hired at the most prestigious schools. And, 60% of all women faculty hired were for positions in the home economics department. Some men were reluctant to hire and promote women believing that the association with women would be harmful to their professional status and felt that male faculty would attract the best male students (Rossiter, 1982).

If a woman was married, the significant commitment of almost a decade to prepare for a professional career conflicted with her assumed responsibilities of raising a family. Nepotism rules which were in effect at this time, prevented many wives who had the credentials to teach art in college from doing so if their husband was teaching at the same school. Therefore, women artists often taught in elementary or secondary schools in their communities.

Many of the college studio-art departments emerged from teacher education programs at teachers’ colleges or “normal schools” as they were named when they were created in the late 19th century and early 20th century. Singerman (1999) explains that the institution of the M.F.A. degree served to segregate the college artist from the art teacher along gender lines as women studio students were urged out of B.F.A. and M.F.A. programs and counseled into art education programs and degrees. David Manzella shares a perception common in the 1950s and 1960s: “the usual art educator [is] a nice young woman of unexceptional abilities and little ambition” (cited by Lanier, 1977, p. 15).

When enrollments began to grow in the late 1950s and 1960s, the male artists/educators were moving up in the ranks. By the time of the baby-boomer 1960s, many were in administrative positions as unit heads of studio areas, department heads and directors of schools of art, galleries, museums and deans of fine arts colleges. The American Federation of Art’s Directory listed only fourteen women serving as chairs or heads of art programs in 1964 (AFA, 1964). By 1976, Who’s Who in American Art listed 153 females and 1,620 males as artist/educators (WWAA Directory, 1976).

Not only was the training of artists being moved into the male arena, but art teacher education was also being masculinized. Prior to 1950, it was common for women to head art education programs. As programs adjusted to include both the training of teachers and the educa-
tion of research professionals, the gender of the heads of art education programs shifted from female to male (Smith, 1996).

A focus on professionalism of art education began with the founding of the National Art Education Association (NAEA) in 1947 and the institution of a doctoral degree in art education. More than 75 percent of the degree programs in art education were started after 1940. Men completed 75 percent of all art education dissertations during the years 1947-1975, and held 80 percent of the leadership positions in the NAEA during this period (Michael, 1977).

Men were hiring and voting on promotions and tenure. They determined which students would be admitted, retained, and graduated. In general, their preference was for male students in studio programs and women students in art education. The granting of scholarships, assistantships, and fellowships was under their control and these awards enhanced the resumes of many male alumni when they applied for teaching positions. Graduates from art programs wrote the textbooks, catalogs, selected the exhibitions at galleries, museums, wrote the reviews and determined what they considered great art both in the past, the present, and for the future. Collins and Sandell (1984) maintain that not only were women in art education systematically excluded from leadership positions, but that curriculum models were being developed out of aesthetic principles that reflected male sensibilities, which assume hierarchies and dominance, as opposed to female sensibilities, which value integration and connectedness.

With fewer options for education or employment during the war, no female role models, and little financial support it must have been a questionable decision for a woman to aspire to become an artist. June A. Willenz (1983) in her book, *Women Veterans America’s Forgotten Heroines*, profiled Audrey Archer-Shee, whose father was an artist and she his only child, desired also to be an artist. She studied at the Academy of Design in New York City, and when she finished her studies, it was a shock to her to find out there were no jobs in art for women. Even a woman mural painter had turned her down because she was a woman. She could not understand why her gender disqualified her from practicing her art for which she was well trained. After the war, Audrey and her husband decided to study at San Miguel de Allende located about three miles from Mexico City. Their plans were changed when they found out that the VA had blacklisted the school because it had invited a communist muralist to lecture there. They did not want to go anywhere else, so Audrey did not use her GI benefits. She and her husband raised turkeys on a farm in Maryland. Audrey was the only artist mentioned in Willenz’s survey.

**Gender Inequality Continues in the Careers of Women Artists in the United States**

Generational differences and consciousness raising and a questioning of traditional sex roles occurred in the generation who entered college in the 1970s. Milton Greenberg (1997) comments,

Contrary to popular belief, the “women’s liberation” movement did not have its origins in the post war period. Most women of that generation became homemakers and mothers, subordinate in many ways to the ambitions of the sixteen million men who served in the armed forces. Preference in jobs and college admissions went to males. It would be the daughters of that post war generation who sought to emulate the success of their fathers. (pp. 97-98)

The barriers facing women who would be artists were formidable. Many were denied an education, employment, gallery and museum support, patronage, and/or family encouragement in pursuing their ambitions. In the decades after the GI Bill, the old warriors circled the wagons to defend their academy after the first wave of attacks by the Feminist Movement. The GI Bill played a key role in fostering and maintaining the male network that dominated the art programs in higher education in the United States. Gender inequality continues in the careers of many women artists.
References


Appendix A

This list below shows a relationship of the Art Students League of New York and the W.P.A. with the Abstract Expressionists who became teachers.

Gorky, Arshile: 1930s W.P.A.; 1931 taught Grand Central School and had private classes.
Gottlieb, Adolph: 1930s student ASL, Parsons, Cooper Union; 1936 W.P.A.; 1958 taught at Pratt and University of California, Los Angeles.
Hofmann, Hans: 1930s taught University of California Berkeley and Chouinard Art Institute. 1933 Taught ASL; 1934-58 taught at his own school.
Kline, Franz: Taught 1952-54 at Black Mountain College, Pratt, and Philadelphia Museum School of Art.
Motherwell, Robert: 1948 co-founder Subject of the Artist School, 1950 taught at Black Mountain College, 1951-59 taught at Hunter College.
Neuman, Barnett: Student ASL 1948, co-founder Subject of the Artist School, 1959 taught at the University of Saskatchewan.
Pollack, Jackson: student ASL and W.P.A.
Reinhardt, Ad: 1931-35 student Columbia University, 1936 student National Academy,
1936-37 student of Carl Holty, 1937 W.P.A., 1946-50 student at the Institute
of Fine Art, 1947-67 taught at Brooklyn College, 1959-67 taught at Hunter
College
Rothko, Mark: 1925 student ASL, 1936-37 W.P.A., 1948 co-founder Subject of the Artist
School
Still, Clyfford: 1935-40 taught Washington State University, 1946-48 taught California
School of Fine Art San Francisco, 1948 co-founder Subject of the Artist
School.

About the Author

John Warren Oakes, professor of art at Western Kentucky University (1966-2006),
teaches courses in painting and drawing and created and taught a course “Women in
Art” in a joint appointment with the Women’s Studies Program. In 2001, he was a par-
ticipant in “At Home: A Kentucky Project with Judy Chicago and Donald Woodman”
at Western Kentucky University and with associate Andee Rudloff, designed a travel-
ing exhibition documenting that project. In 2002, he was the recipient of the Katherine
Coogan Ward Feminist Action Award. He and wife Dr. Elizabeth Oakes curated the
2001 exhibition “KentuckyWomen Artists 1850-1970” shown at the Kentucky Mu-
seum and the Owensboro Museum of Art. His sabbatical in 2004 involved the “Role
of Gender in Art Production and Criticism.” He is an exhibiting artist in national and
international exhibitions. Current research interests continue to be gender in art and
also the art historical influences in Pablo Picasso’s Les Demoiselles d’Avignon. Publica-
tions include: Kentucky Women Artists 1850-1970 (catalogue, 2001); Electronic Art Lab
Manual (Acorn Press, 1997, revised in 1999); Art by Computer (Acorn Press, 1991);
Action Amiga: Computer Graphics, Animation and Video Production (University Press
of America, 1988); Instant Projects: A Handbook for Teachers (Polaroid Corpora-
tion, 1986); Minimal Aperture Photography Using Pinhole Cameras (University Press
(AMIGAworld, May-June, 1986).

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