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WOMEN AND PHOTOGRAPHY IN ONTARIO, 1839-1929: A CASE STUDY OF THE INTERACTION OF GENDER AND TECHNOLOGY*

Diana Pedersen** and Martha Phemister+

The course of technological change, historians have recognized, is frequently influenced by traditional values and prevailing attitudes which may, in their turn, be modified in response to the introduction of new technologies. A new technology, however, can also be manipulated to reinforce rather than challenge traditional values. The process by which this happens has not been so well studied or understood by historians. In recent years, feminist historians have turned their attention to the interaction of new technologies with the social construct 'gender,' examining both the ways in which women have responded to and have been affected by new technologies, and the effect of new technologies on prevailing ideas about women.[1] This paper will argue that despite the enthusiastic response of nineteenth-century women to the new and potentially gender-neutral technology of photography, this technology was initially used in accordance with pre-existing gender roles and, consequently, came to reinforce those gender roles. An examination of women's relationship to photography in Ontario between 1839 and 1929 demonstrates that in the early decades of photography, contemporary sex-role stereotypes combined with the nature of the technology to limit women's active participation as photographers and encouraged a more passive 'feminine' role as consumers of the products of photography. Later in the century, when simplified, more accessible photographic technology and changing standards of appropriate behaviour for women appeared to offer new opportunities for women as photographers, the advertising and marketing strategies of the new consumer-oriented photographic industry acted to reinforce the notion that women's relationship to photography was appropriately that of rank amateur and passive consumer. Women photographers remained marginal in the profession and the successful achievements of a few did not in any way challenge the widely held view that women were technological incompetents.

The case of women and photography in Ontario allows us to examine simultaneously several aspects of women's relationship to technology that have been largely ignored in the burgeoning scholarship in the field. In her pioneering article, which asked

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the question 'Was the female experience of technological change significantly different from the male experience?', Ruth Schwartz Cowan outlined 'four significant senses in which the relation between women and technology has diverged from that of men': women as bearers and rearers of children, women as workers, women as homemakers and women as anti-technocrats.[2] In a review essay surveying the literature which has appeared in the United States since Cowan first wrote, Judith McGaw notes that the bulk of scholarship on women has concerned itself with the technology of homemaking and the technology of the non-domestic workplace. Less attention has been devoted to areas falling outside Cowan's four fields such as, for example, 'technology as a tool for enhancing sex differences and reinforcing sex-role stereotypes through clothing, cosmetics and hairdressing; the technological preconditions for and consequences of women's increasing importance as consumers; and the differential impact on women of technologies generally examined only from a masculine perspective.'[3] This study will address itself to some of these neglected areas.

As a technology used by both women and men in the nineteenth and early twentieth centuries, photography suggests the complex relationship of technology to social conventions and attitudes in a way that studies of domestic or 'female' technologies do not. This preliminary examination of women and photography in Ontario[4] suggests that in the early years, women's responses to photographic technology clearly differed from those of men and that they did so in a manner which reflected social convictions about women's scientific and artistic abilities, women's role in the family, women's relationship to other women and women's economic importance as consumers. Later, promoters of photography simply elaborated on these themes in their marketing of new forms of photographic technology. Not only did they use different promotional strategies to reach female camera buyers but they also employed women in advertisements as an effective strategy for conveying the impression that cameras were easy to use. Thus, even where women and men used the identical technology in a similar fashion, their activities were frequently perceived differently and the products of their efforts valued unequally. Not only did gender influence or limit access to the new technology of photography but women and men were assigned distinct roles in its development, production and dissemination, indicating the pervasiveness of contemporary assumptions about sex roles. It is hoped that these tentative findings about women's relationship to photography will demonstrate the importance of relating technology to gender and sex-role stereotypes.

For the first three decades following the invention of photography in 1839, few women became photographers in their own right. Photography in its early period was not the popular recreational pasttime that it would later become. It was dominated by professionals and a small group of dedicated amateurs who practised it as a scientific pursuit. Societal conventions and attitudes dictated that the membership of these groups would be predominantly male and that women's enthusiastic response to the new process would be channelled into less active forms of involvement with photography. Women's place in the photographer's studio during the early years of photography was,

for the most part, in front of the camera rather than behind it.

News of the invention of the daguerreotype, named for its originator Louis Jacques Mande Daguerre, reached Toronto on 3 May 1839 when *The Patriot* reprinted a letter written by Samuel Morse from Paris.[5] Vastly superior to earlier processes such as photogenic drawing, the daguerreotype captured the public imagination and had profound social consequences, particularly in North America where it remained the dominant process for the next fifteen years.[6] It is not known when the first daguerreotypes were taken in Ontario but the first extant Toronto advertisement for 'photographic likenesses' appeared on 27 July 1841.[7] Price wars in Toronto sometimes resulted in the advertising of daguerreotype portraits for as little as one dollar. The editors of *The Independent* observed, on the opening of a new daguerrean portrait studio in 1850, 'Our citizens should not lose so good an opportunity of having their likenesses taken "to the life" both for their own and their friends satisfaction, particularly when they can do so at so trifling a cost.'[8] Despite the fact that the brilliance and clarity of the well-made daguerreotype has not, in some respects, been surpassed by modern processes, the 'mirror image' had some significant defects, notably the inability of the daguerreotype process to produce duplicate images which led ultimately to its demise. By 1860 it was almost obsolete.

In the mid-1850s, photography was revolutionized by the introduction of the collodion process which was as fast as daguerreotypy and produced superb negatives on glass, thus allowing the duplication of images. The new process involved cleaning a glass plate, coating it with iodized collodion -- guncotton dissolved in ether and alcohol -- sensitizing it in a silver nitrate bath and then exposing and developing the plate before it had a chance to dry out. Hence it became known as the 'wet-plate' process. Collodion positives on glass, actually negatives laid on a black backing, were known as ambrotypes and replaced the daguerreotype as the most popular form of photography in Canada in the late 1850s.[9] The wet-collodion process dominated photography in Ontario until the mid-1880s. Requiring less skill and a modest investment in apparatus and materials in comparison with the daguerreotype process, it was practised by butchers, hairdressers, tobacconists, dentists and itinerant photographers who set up operations at the beach and fairground, making the photographic portrait accessible to most sectors of the population, including those who would never enter a studio.

During the early years of photography, social conventions were not particularly conducive to its adoption by the upper and middle-class women who had the necessary leisure and financial resources to pursue it as a hobby. In particular, the close association of photography with science mitigated against serious involvement by women. In an age which was fascinated by the wonders of science and technology, photography was described by a British observer in 1855 as 'par excellence THE scientific amusement of the higher classes.'[10] Nineteenth century women of the upper and middle classes were not totally ignorant of new developments in science, but their knowledge of the physical sciences was not generally sufficient to encourage or permit an interest in photography. It is true that the new

girls' academies, seminaries and colleges increasingly featured science, especially natural history, as part of the curriculum, that a growing number of books and magazine articles about science were directed at women and that women made up a substantial proportion of audiences at public scientific lectures. Nevertheless, this instruction wsa rudimentary compared with that received by boys of the same class, and it was frequently rationalized on the grounds that it would make women more stimulating companions to men and would fit them to instruct their children in scientific matters. Women were encouraged to become '"cultivators" of science, not necessarily "practitioners."'[11] In addition, it was felt that women's interest in science was most appropriately expressed through the healthful pursuit of natural history -- perhaps an expedition to the seaside to collect shells or fossils, or a romp through the fields with a butterfly net.

Photography, in contrast to the more ladylike study of natural history, demanded a considerable chemical expertise during the daguerreotype and wet-plate eras. Early photographers were, of course, responsible for developing and printing their own images, requiring the possession of a home darkroom stocked with the many chemicals necessary for every stage of the operation. The wet-collodion process which demanded that the plate be developed immediately following exposure made photography in the field a formidable undertaking for women who were hampered not only by extremely restrictive clothing but also by notions of female frailty and delicacy. Outdoor photography required, in addition to a portable darkroom -- a tent-like structure which collapsed into a large box -- chemicals for coating, sensitizing, developing and fixing glass plates, dishes and tanks and a container for water and of course the camera, plateholders and tripod.[12] As a later article on photography for 'lady amateurs' observed in 1884:

> For many years photography was a sealed book to any but those of wealth and leisure, or making it their profession. A donkey-load of apparatus and some most fearfully poisonous ingredients were required. The baths left ineffaceable stains on the fingers; the whole apparatus was cumbersome, heavy and costly.[13]

Photography during its early years was complicated, awkward, expensive and intimidating; it was also dangerous. As one student of the phenomenon of 'Death in the Darkroom' has observed about the nineteenth century: 'For good reason, this can be called the Heroic Age of photography.'[14] Photographers routinely worked with volatile chemicals such as ether in poorly ventilated darkrooms heated with gas or an open fire, frequently producing lethal explosions. Attempts to retrieve valuable silver from used silver nitrate baths often resulted in the accidental production of nitro-glycerine, with fatal consequences. Collodion, made from explosive gun-cotton, was frequently ignited by inflammable ether vapours. The most vulnerable photographers were 'those who knew just enough chemistry to prepare standard solutions from well-tried formulae but not enough to safely

experiment with new processes.'[15] Many other photographers were killed or incapacitated by their frequent contacts with poisonous mercury compounds and ether fumes; still others, as well as unsuspecting members of their families, died as a result of accidentally ingesting such compounds as potassium iodide, silver nitrate or potassium cyanide. Photography was, and was widely known to be, a highly dangerous pursuit. Upper and middle-class women who wished to engage in it risked being regarded as eccentric, if not lunatic, by families and friends who regarded photography as an activity which was totally inappropriate for a refined and respectable woman.

The constraints imposed by the technology of early photography thus combined with social conventions about femininity to channel women's enormous enthusiasm into a passive rather than active participation in the new process of making photographs. Women flocked in droves to the photographer's studio where they were promised by one Toronto photographer that they might 'have an opportunity of seeing their beautiful selves transformed by living light into pictures of Silver, set in *Caskets of Gold*.'[16] Like their male contemporaries, women were impressed with the low price of the photographic likeness in comparison with the painted miniature. They marvelled at the realism of the photographic portrait although they also expressed a certain ambivalence about its unfailing truthfulness, sometimes less flattering than the paintedlikeness. Acknowledging the importance of their feminine clientele, photographers offered specific instructions to their female subjects as to how they might obtain the most satisfactory product:

> ... a lady, inclined to stoutness and of extra height, should select a color for the principal robe which disguises these deviations from the "juste milieu." Black, which *absorbs* all luminous rays, has the effect to *diminish* the apparent bulk, and black, therefore, is her appropriate color .... A *pale* complexion is improved, by a *pale-green* head-dress into a delicate pink hue, through the operation of the principle of *harmonious contrast in colors...*; while one of *lemon-yellow* would heighten this paleness to very ghastliness.[17]

To attain the desirable small 'bee-stung' mouth considered essential to the beautiful face, women were asked by nineteenth-century photographers not to smile or say 'cheese' but to repeat such words as 'peas,' 'prunes' or 'prisms.'[18]

The thousands of surviving studio portraits attest to the enthusiastic interest of Ontario women in the new technology of photography and their desire to use it for purposes of their own by participating in the making of images which had a particular significance to them.[19] Women appear in hundreds of portraits of proud families presenting themselves at their best for the photographer, and historians are now searching these images for patterns which will shed light on the dynamics of relationships within the family.[20] Equally common are portraits of women with

Ill. 1. Advertisement for Toronto photographer L.W. Dessauer, *The British Colonist*, 20 September 1844. Note male photographer and female customer. Courtesy: PAC, PA-118715.

their husbands, most frequently standing slightly in profile with one hand on the shoulder of their seated husband -- a pose that may have indicated deference or perhaps the desire to show a best dress to full advantage. Many women made regular visits to the photographer's studio for a portrait with their children, something which it appears that nineteenth-century fathers rarely did. Groups of women visited the studio as an affirmation of their participation in the group and in celebration of their accomplishments -- clubs, sports teams, co-workers, classes of schoolgirls, participants in theatrical productions, members of voluntary organizations. The evidence of the photographs, confirming literary documentation of the strength of nineteenth-century women's friendships, suggests that ties between women were extremely strong.[21] It was very common for female friends to visit the studio together, and sisters or mothers and daughters often regrouped as a unit at the photographer's studio even after marriage had separated them. Women frequently visited the studio alone to obtain a likeness for their own satisfaction or perhaps to present as a gift to friends and relatives, choosing a costume which particularly pleased them or which had some special significance, such as a uniform, a theatrical custome or even a new hat they had trimmed themselves. Finally they used photography to observe important rituals and rites of passage -- most frequently marriage, but also christenings, confirmation, 'coming out' in society, graduation, wedding anniversaries and widowhood.

Another instance of women's indirect but significant support for the new process of photography was their enthusiastic participation in several photographic crazes which swept Europe and North America in the 1850s and 1860s. In the same way that women had been encouraged to express their interest in natural history by collecting and labelling fossils and butterflies, rather than by pursuing serious academic studies of their subjects, so too did they learn that it was more appropriate

for them to collect photographs than to make them. The invention of stereo photography led to the acquisition of a stereoscope by virtually every upper and middle-class family. Looking at stereo views, which give an impression of three-dimensionality considered quite novel at the time, became a popular form of parlour amusement.[22] A stereoscope with one dozen views could be purchased for as little as twenty-five cents in Toronto in 1860, and one dealer advertised a wide range of views of the United States, Europe, Asia, Canadian cities, portraits of the Royal Family and other celebrities, mythical and scriptural subjects, ghost pictures and stereoscopic valentines.[23] After 1861, which saw the spectacular launching of 'cartomania,' women avidly collected, following the example of Queen Victoria herself, *carte de visite* portraits -- small photographs mounted on a card measuring approximately 2½ x 4 inches -- of friends, relatives and celebrities. When the obvious need for some means of storing and organizing all these portraits led to the marketing of the photograph album, women, as the traditional record-keepers of the family, generally assumed responsibility for maintaining it.[24] Looking at photographs and albums, and perhaps sharing and exchanging images with their friends, came to be seen as activities that were particularly appropriate for leisured women, ranking with novel-reading, letter-writing and fancy needlework. In fact, it was common for photographers, in selecting props appropriate to their subject, to pose female subjects much more frequently than males with a photograph album, a stereoscope or holding photographs in their hands.

Despite the constraints and conventions which limited active female participation in photography during the daguerreotype and wet-plate eras, some women did manage to achieve success as serious amateur and professional photographers. Upper and middle-class women were sometimes able to engage in amateur photography, despite its close association with science because of the 'double aspect' of early nineteenth century photography reflected in the two kinds of photographers who produced the earliest images. While one group consisted of 'chemists, optics engineers and all those who liked to dabble in science,' photography was also practised by a significant number of former painters and art students.[25] In fact, a debate raged throughout the nineteenth century over whether photography constituted a science or a fine art.[26] Early female amateur photographers, almost without exception, perceived photography as demanding sensitivity, an appreciation of beauty and a highly developed artistic ability. In the *London Quarterly Review* in 1857, Lady Elizabeth Eastlake, wife of Sir Charles Eastlake, the first president of the Photographic Society, defended the practice of taking a picture slightly out of focus to enhance its artistic beauty, dismissing the objections of the devotees of scientific photography:

> As soon could an accountant admit the morality of a false balance, or a seamstress the neatness of a puckered seam, as your merely scientific photographer be made to comprehend the possible beauty of "a slight *blurr*". His mind proud science never taught to doubt the closest connexion between cause

> and effect, and the suggestion that the worse photography could be the better art was not only strange to him, but discordant.[27]

It was but a short step from here to the argument that women's sensitivity and artistic talents made them particularly suitable for certain kinds of photography, notably portraiture. Such reasoning helps to explain the success of a few isolated individuals, outstanding among whom was Julia Margaret Cameron in England who became internationally famous for her portraits of royalty, literary figures and other celebrities.[28]

The rather more significant numbers of women who succeeded as commercial, rather than amateur, photographers in the early decades belonged to a third group of practitioners whose members dominated the field after the 1850s. The tradesmen-photographers brought a 'mercantilist attitude' to the practice of photography; for them, the problem of whether photography constituted an art or a science 'caused no anguish.'[29] In the face of the necessity of earning a living, early women photographers of the 'tradesmen' class were presumably less troubled than their more affluent sisters by notions of female scientific and technical ineptitude. It is increasingly being recognized by historians of photography that women, although a minority, were more active in the early years of the profession than has been acknowledged to date. Several thousand women operated as successful commercial photographers in the United States during the nineteenth century.[30] Probably the first female daguerreotypist in Canada was a Mrs Fletcher who described herself in a Montreal newspaper in 1841 as 'Professor and Teacher of the Photogenic Art' and modestly announced that she was 'prepared to execute Daguerreotype miniatures in a style unsurpassed by an American or European artist.'[31] The identity of the first woman photographer in Ontario is not as yet known to us but it appears that there were at least twenty of them operating throughout the province by the 1860s.[32] One of the earliest must have been Mrs William H. Coombs of Kingston who advertised herself as a 'daguerrian artist' in the *Daily British Whig* in 1854.[33] Another pioneer was a Miss Kelly, daughter of a prominent local merchant, who set herself up in business in Kemptville in 1855.[34] In most cases none of the images produced by these early women professionals have survived. We know of their existence mainly through their listings in local business directories, a source which is not always reliable as some directories listed male but not female photographers, perhaps because of a prejudice against women in business.[35]

William C. Darrah, a noted American historian of photography, has observed that the careers of these early women photographers sort themselves into several patterns -- patterns which appear to hold true for women photographers in Ontario as well.

> (1) Widows who continued to operate the studio after the death of the husband, or established their own, sometimes for many years ...
> (2) husband and wife teams, with the imprint indicating both were operators;

Ill. 2. Mrs Charles Lamb, professional photographer, Athens, Ontario. Self-portrait, ca. 1905-1910. Courtesy: Ontario Archives, 13484-30.

(3) sisters or daughters who learned photography in the family business and struck out on their own;
(4) assistants and colorists who acquired skills and found employment as camera operators, often in branch galleries; and
(5) women who paid for instruction in photography in order to find employment in the field or establish their own business.[36]

The little that we do know with any degree of certainty about early women photographers in Ontario tends to confirm Darrah's observations and suggests that, for the most part, women acquired their expertise and equipment through close male relatives, usually fathers or husbands.[37] Elvira Lockwood, for example, was the daughter of pioneer photographer, Joseph Lockwood and, while still in her teens, took over his Ottawa studio on his death in 1859. She combined a successful business in photography with the teaching of oil and china painting, her photographs bearing the imprint 'Artist' or 'Photographic Artist.'[38] She never married but operated the studio until sometime in the early 1890s. A few women operated as part of a husband and wife team, like the Mr and Mrs Miller who ran a studio in St Catharines in 1865.[39] Some of the single women were the daughters of druggists, suggesting that their familiarity with the handling of chemicals had prepared them for a career in photography. Lilly Koltun has uncovered the activities of several Toronto women photographers in the pre-Confederation era. A Miss Elizabeth Crewe and a Mrs Fitzgibbon were both active in Toronto in 1865 and 1866. A Mrs Meyer, who ran a Ladies' School and may have been the wife of photographer Hoppner Meyer, entered and won in the professional artists' categories at the exhibitions in Toronto and in 1859, at the Union Exhibition, received first prize for 'Best Collection of Photographs.'[40] The *Semi-Weekly Leader* in March 1855 reprinted the outline of a speech by American feminist Lucy Stone who held up the example of a woman who became a 'daguerrean artist' and 'ere long was earning thousands of dollars by her profession.'[41] As Koltun has observed, however, women who were hired as photographer's assistants were not so lucky, advertisements for assistants or operators in the 1860s offering wages of between $400 and $500 per annum.[42]

Despite this activity on the part of a few women photographers, women during the daguerreotype and wet-plate eras remained marginal in the profession. We know of none who were landscape photographers. Most female commercial photographers specialized in portraiture and it was widely believed that as women, being more tactful and patient, they were more adept at photographing uncooperative children. At any rate, their activities did little to counter the public image of the serious photographer as male. As late as 1880, the imprints of a Miss Dukelow of Iroquois, Ontario, described her as the 'only Lady Photographer in Canada,' a claim that was patently false.[43] This brazen falsehood, however, tells us clearly that women photographers in Ontario were indeed perceived as a rarity if one could make such a claim and expect it to be believed. In the public mind, women were consumers, not producers, of photographs and photography remained an activity for which most women were considered

neither suited nor qualified.

During the 1880s and 1890s a number of important changes occurred both in the technology of photography and in the prevailing beliefs about what constituted appropriate behaviour for women. Photography became less complex, less expensive and much more accessible to the non-professional. Women, at the same time, were entering the labour force and institutions of higher learning in greater numbers than ever before, challenging many of the traditional constraints on their activities, and generally becoming much more visible in the world outside the home.[44] As a result, significant numbers of women began to participate more actively in photography as photographers rather than as mere consumers of photographs. Their activities, however, did not lead to a new respect for the woman photographer nor to a rejection of traditional ideas about woman's inability to cope with complex technology. On the contrary, the promotion of the new simplified photographic technology helped to reinforce both the widespread perception of women as technically incompetent and the association of serious photography with men.

The first major technological breakthrough occurred in the early 1880s when the invention of the gelatin dry plate opened up photography to the amateur. These commercially-manufactured glass plates were delivered from the factory ready to use, already coated with a durable sensitized emulsion. This meant that the photographer no longer had to prepare the plates in the darkroom and could develop them at leisure, eliminating the need for a cumbersome portable darkroom. Lower cost, too, made photography increasingly accessible with the dry-plate process. A complete outfit, consisting of a bellows camera with lens, plate holder, tripod and carrying case could be had for ten dollars and a set for printing, toning, fixing and mounting prints was available for less than five dollars.[45] The lighter-weight cameras and greater convenience of the new process resulted in an enormous increase in the number of amateur photographers. In the early 1880s a flood of new equipment and photographic manuals aimed at these amateurs, many of whom were women, appeared on the market.[46] Dry-plate photography was more easily reconciled to prevailing standards of appropriate female behaviour; it did not challenge them, however, as evidenced by the author of *How to Make Pictures: Easy Lessons for the Amateur Photographer*, who enquired in 1882: 'Can the gentler sex resist an accomplishment which henceforth may combine the maximum of grace and fascination?'[47] He did not consider the grace of male amateurs engaging in their newfound passion worthy of remark.

The popular perception of the woman photographer, from 1890 on, was that of a rank amateur who carried a Kodak. The marketing of the first Kodak camera in 1888 completed the process of opening up photography to the amateur and to the chemical ignoramus in particular. These lightweight and uncomplicated box cameras, which sold for about twenty-five dollars, did not use heavy glass plates but instead used the first commercially-produced transparent roll film, made possible by improvements in the manufacture of celluloid.[48] The revolutionary Kodak system, developed by George Eastman, provided the first complete

developing and printing service. For a fee of ten dollars, the camera was returned to the factory, unloaded and reloaded with film sufficient for an additional one hundred exposures and returned with the processed prints to the consumer.[49] The philosophy of the Kodak system was explained by Eastman himself in *The Kodak Primer:*

> ...We furnish anybody, man, woman or child, who has sufficient intelligence to point a box straight and press a button ... with an instrument which altogether removes from the practice of photography the necessity for exceptional facilities, or, in fact, any special knowledge of the art. It can be employed without preliminary study, without a darkroom and without chemicals.[50]

As the famous slogan proclaimed, 'You press the button, we do the rest.'

Eastman pioneered many modern mass marketing techniques and what we refer to today as lifestyle advertising. Potential consumers were urged to remember the Kodak at Christmas time, at weddings and most especially at vacation time. Eastman was the first to develop and market a camera specifically for children. Less than a year after the launching of the Brownie, which sold for a mere dollar, a 1901 Kodak trade circular reported that 'the Brownie cameras already sold have made more than 100,000 film consumers,' confirming Eastman's shrewd judgment that the Kodak fortune was to be made not on the sale of cameras but on the sale of film.[51] In keeping with these marketing techniques, Kodak ads made frequent use of female models, a common practice of the day. As American historian Judith Papachristou has observed about the late nineteenth century:

> Representations of women dominated the abundant printing -- advertising products, decorating calendars, and gracing postcards. Like flowers, birds, cherubs, and flaming sunsets, female faces and figures were commonly used by artists and photographers. As decorative elements, they were attached to products as diverse as jewellry, tobacco, soap powder, sailboats, and books, used to catch attention, please, and sell.[52]

Female models, unlike the rare males who were occasionally used in advertisements for cameras, attempted to charm the potential consumer, but for Eastman they served an additional useful purpose. His objective was to demystify photography, and female models, especially little girls who were perceived as lacking any technical abilities, simply reinforced the message of the simplicity of the Kodak system. If they could use a Kodak camera or operate a home developing machine, then surely anybody could.[53]

In keeping with modern advertising techniques, Eastman also targeted women as a distinct market for photographic equipment and supplies which he set out to capture by identifying photography with an image or lifestyle that would appeal to women,

Ill. 3. Kodak promotional photograph, ca. 1924. Courtesy: Eastman Kodak Archives, Rochester, New York, 924-10.

specially young women. In 1901, he launched the Kodak Girl Campaign in a successful attempt to create a symbol which identified photography with leisure, glamour and femininity.[54] The Kodak Girl image was intimately linked to the popular conception of the New Woman, a product of major social changes affecting women, particularly young unmarried women, large numbers of whom were seeking higher education, taking employment and thus gaining financial independence from their parents, and becoming much more physically active than nineteenth-century conventions had permitted. The Kodak Girl followed in the tradition of another New Woman symbol -- the Gibson Girl, an enormously successful cartoon character created in the 1890s by the American Charles Dana Gibson.[55] Both the Gibson Girl and the Kodak Girl functioned as symbols which captured the idealized essence of contemporary young womanhood -- modern, active, elegant, sophisticated, independen,t but not so bold as to be thought unrespectable. Although Eastman was certainly not the only camera manufacturer to make use of women in advertising, no other campaign rivalled the enormous popular appeal of the Kodak Girl.

In targeting women as a distinct market for Kodak cameras, Eastman also catered to what were perceived as feminine tastes and concerns. Ads directed at women tended to describe the cameras as simple to operate, lightweight, stylish and elegant. In 1926, Kodak introduced the Petite -- according to the ads, a diminutive camera, gay and joyous to the eye and available in five charming hues. This was followed in 1928 by the Vanity Kodak, a camera and matching case embossed with gold and lined with silk, available in shades of Bluebird, Cockatoo, Jenny Wren, Redbreast and Seagull. Later that year, both Kodak and Ansco marketed, for the height of fashionable elegance, a coloured camera and vanity case with matching lipstick holder, compact, mirror and change pocket. The 'feminine' camera, however, turned out to be less than successful as a marketing ploy, as some colours proved more popular than others and women would frequently leave at home a camera whose colour didn't match their ensemble of the day. By 1934, popular cameras had reverted to basic black.[56] It should be noted that the only serious attempt by Kodak to link its cameras with the prevailing image of masculinity occurred during the First World War. Soldiers were encouraged to buy the Vest Pocket Kodak camera, advertised as 'The Soldier's Kodak camera,' and to 'Make your own picture record of the War.'[57] There never was, however, anything resembling a Kodak Boy.

Whether or not women were responding to Kodak's appeals to their feminity, they took up photography with a vengeance. After the turn of the century cameras gradually became accessible to a much wider range of women, including many working women, than had been true in the past.[58] The evidence of the photographs suggests that young women responded most readily to the new popularity of photography and that they were most likely to use their cameras in the types of situations suggested by the ads. Young working women recorded their expeditions to the park or the beach with their friends. Schoolgirls took a camera to summer camp, and it is rare to find a group portrait at camp that doesn't contain several cameras somewhere in the picture. One summer camp in Algonquin Park in 1911 featured its own adolescent camp counsellor on photography who produced high quality images of life at camp in her own darkroom.[59] The Toronto Girl Guides introduced a photographer's badge in 1916

Ill. 4. Unidentified Ottawa 'snapshooter,' ca. 1910.
Courtesy: Ottawa City Archives.

for which a Guide required 'a knowledge of the theory and use of lens and the construction of cameras and the action of developers' and, in addition, had to 'take, develop and print 12 separate subjects; 3 interior, 3 landscape, 3 instantaneous action photos, and 3 portraits.'[60] College students used their cameras to record the more pleasant aspects of student life such as making ice cream or playing hockey.[61] Women who worked as 'farmerettes' during the First World War often compiled albums which recorded their experiences, again with the emphasis on fun and friendship.[62] It was only rarely that women used their cameras to record the more mundane aspects of their daily life and work. To a certain extent, this phenomenon resulted from the technical limitations of these simple cameras which made indoor photography difficult. More probably, however, it resulted from the concerted effort by the industry, especially by Kodak, to associate photography with leisure, glamour and youth. Photography was not only intimately associated with leisure activities; it had become a recreational pastime in itself.

This flurry of activity on the part of women with Kodak and other popular cameras did not necessarily mean that they were being taken seriously as amateur photographers. The launching of popular photography by Kodak had resulted in a backlash reaction on the part of those who called themselves 'serious' or 'true' amateurs. These photographers continued to use the dry-plate process and work in the darkroom, regarding with the contempt the hordes of 'bicycling Kodakists' and 'hand-camera fiends,' and suffering under the 'reproach brought upon them by the obtrusive and impertinent conduct of thousands who think that the whole art of photography chiefly consists in pressing a button.'[63] As a defensive measure they organized themselves into clubs in cities across the country, although activities were concentrated in Ontario. The clubs were dedicated to the promotion of amateur photography and its recognition as an art, and recent research has revealed the wide scope of their activities:

> These organizations provided forums where both amateurs and professionals could meet to exchange experiences, and to hear lectures on photography. They could consult photographic manuals and periodicals, use club darkrooms and workrooms, and participate in photo excursions and a variety of social events. Moreover, by organizing annual public exhibitions and by fostering contacts in the United States and the United Kingdom, clubs introduced Canadian amateur photography to a wider audience.[64]

Women participated in these clubs, sometimes serving on the executive and frequently taking prizes at competitions and exhibitions. They were often relatives, frequently daughters, of male club members. May Ballantyne belonged to a family of photographers and was the daughter of James Ballantyne, one of the original members of the Ottawa Camera Club founded in 1894. She herself served as Vice-President of the club in 1898-1899.[65] Jessie Dixon was an active member of the Hamilton Camera Club and frequently took prizes at club competitions. Her high-

Ill. 5. Jessie Dixon, active member of the Hamilton Camera Club, and friends, ca. 1905. Note that Dixon, top right, is activating the shutter release. Courtesy: Hamilton Public Library, Special Collections.

quality images reveal her familiarity with the pictorialist technique favoured by serious photographers of the day.[66] Nevertheless, women remained a minority of club members. Their initial admission to the clubs frequently aroused considerable controversy and they were not necessarily accorded the same status as the male members. The Toronto Camera Club, for example, denied lady members the use of its rooms during the evenings, except on the first and third Mondays of each month.[67] It also appears to have been the general rule that women members served on club executives only in the capacity of vice-president, perhaps indicating that this post was more decorative than responsible.

The dry-plate process which had encouraged more women to participate in photography as serious amateurs, also resulted in increasing numbers of female professionals. As more young women entered the labour force in the decades around the turn of the century, photography won increasing acceptance as an appropriate alternative to more traditional occupations. An 1894 British publication entitled *What Our Daughters Can Do For Themselves: A Handbook of Women's Employments* listed photography, between pharmaceutical chemistry and poultry-keeping, in its lengthy catalogue, offering advice on how to acquire training and the amount of capital required to set up operations.[68] This did not necessarily imply, however, an increased awareness of women's technical abilities, as those who advocated photography as a profession for women did so on the grounds of women's supposed artistic sensibilities. In 1895, one writer in the *Canadian Photographic Journal* observed 'that women have a great deal of natural artistic talent, and if they once conclude to start out and become photographers, there is no doubt that they will succeed in it. The business pays well and by its very nature seems to invite women, as there are no unpleasant features about it.'[69] Similarly, the American author of a 1910 manual of advice for female job-hunters, noted that women 'are successfully managing photograph galleries in all our cities, towns and other places. Owing to their skill in grouping and their instinct for effects, they are producing more acceptable work than the men.'[70]

By the turn of the century, there were over one hundred women photographers in business in Ontario, but they remained, nonetheless, a minority within the profession.[71] Access remained difficult due to the need for capital to set up a studio and the high fees required for a period of apprenticeship to a professional photographer. A 1919 vocational guidance manual prepared for use in Ontario school libraries warned prospective female photographers of the need for training, special gifts, and a good business sense.[72] In the same year, an article in *Saturday Night* on 'Photography as a Profession for Women' advised on how to overcome some of these difficulties, promising in the end 'not only a pleasure, but also a remunerative profession -- one which places you high in the ranks of the world's workers, and which gives you an honorable standing among artists the world over.'[73]

For most women who sought employment in photography, however, the opportunities were considerably less glamorous. Throughout

the nineteenth century, women with artistic training were often hired or operated independently as photographic colourists who painted over photographs with watercolours, oils or Indian ink. A Mrs W. K. Sargent advertised in *The Globe* in 1858 that 'Photographs sent from a distance if accompanied by a correct description of hair, eyes, complexion, etc., can be coloured, and the likeness accurately preserved.'[74] In factories, women performed the bulk of the operations involved in the retouching of negatives, and the finishing, colouring and mounting of photographs; they covered and gilded daguerreotype cases in the first New England factories, and assembled and boxed cameras in the Kodak factory in Toronto in the early 1920s.[75] A 1919 Canadian advice manual for girls listed the following opportunities for women who wished to pursue a career in photography:

> Requirements: Average intelligence and education.
> Terms: Gallery Assistant, $7.00 per week. Spotter, $8 to $10 per week.
> Producer in spotting, $10.00. Retouching negatives, $12.00 to $20.00.
> Artists, $26.00. Studio work -- in Reception room, $16.00 to $18.00. (Good knowledge of human nature required.) Operators, $20 to $25.00. (As high as $40.00 has been given.)[76]

We know little about the conditions under which these women worked. The employment of women in the photographic industry and the fact that they were assigned certain operations in particular has not generally been considered worthy of analysis by historians of photography.[77] Much of this work, however, must have involved prolonged exposure to dangerous chemicals in a poorly ventilated setting. One young Ottawa woman, Elizabeth Archibald, took up photography as a trade when in her early twenties, going to work in the studio of the renowned society photographer, William Topley, in the late 1880s. She remained in the studio for ten years during which time she also began to take her own photographs and develop them at home. While we cannot know for certain what caused the gradual deterioration of her health during those years and her untimely death in 1897 at the age of thirty-one, the members of her family have always believed that she was poisoned by the chemicals with which she worked.[78] If so, she was probably not the only female casualty of the photographic industry.

The employment of women workers in the photographic industry and the achievements of some women as serious amateur and professional photographers did not lead to any revision of the widely held ideas about women's scientific ineptitude and inability to cope with complex technology. It was the Kodak Girl, not the serious amateur with her dry-plates and tripod, who came to symbolize the woman photographer. The popular image of the female photographer was shaped not by the activities of individual women but by the photographic industry which reinforced traditional views of femininity in order to sell cameras. Ads for cameras and supplies consistently implied that women were vain and preoccupied with fashion, that they were lacking in technical expertise, and that they used their cameras for peculiarly feminine purposes. While women were increasingly

welcomed as consumers of film and camera equipment, their status within the profession remained marginal. An illuminating example of the societal attitudes which mitigated against women achieving commercial success in photography is an article on the work of Minna Keene, 'How a Woman Found Fame With a Camera,' which appeared in *MacLean's Magazine* in 1926.[79] Keene, a 'home-loving wife and mother, of Oakville, Ontario' had won international recognition for her pictorialist studies and was a Fellow of the Royal Photographic Society, the only woman in Canada and one of only six women to have earned this honour. The author of the article, Alan Maurice Irwin, waxes rhapsodic over Keene's talents as an artist -- one would never realize from the article that she must have worked with chemicals and fairly sophisticated camera equipment -- and simply cannot restrain his frequent expressions of admiration for this 'charming hostess' and 'home lover.' He concludes: 'Artistically, she is a success. Commercially? There is too much of the artist in this woman, who is first of all a successful wife and mother, to worry about commercial recognition.' He neglects to point out that a male photographer with similar talents would not have had to feel himself demeaned by achieving commercial, in addition to artistic, success.

This study of women and photography in Ontario, it is hoped, helps to illuminate somewhat the complex nature of the relationship between gender and technology, and shows that the introduction of a new and potentially gender-neutral technology does not necessarily lead to the revision of traditional attitudes and beliefs about sex roles. Indeed the technology can help to reinforce the existing belief structures. Women responded enthusiastically to photography but their active participation as photographers was constrained by conventional ideas about femininity and their work was not accorded the same respect as that of male photographers. Indeed most photographic images produced by women during these years remained invisible, for women were excluded from the control of the industries which determined how photographs were used. Photographic images of women abounded, in advertising, in the press, in periodical literature, in pornographic publications, in books; yet most of those who produced these images were men, as were almost all of those who exercised the power of selection. Images made by women and images reflecting women's perceptions of themselves and their experiences remained private images so long as women lacked access to the technologies of dissemination. Photography provided some women with a new career alternative and many others, both serious amateurs and female 'snapshooters,' with pleasure, enhanced self-esteem, and an opportunity to create visual records of their own experiences. Yet ironically, both those photographic images which achieved widespread public visibility and the advertising of photographic equipment and supplies contributed to the perpetuation of traditional negative stereotypes about women's natures and capabilities.

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NOTES

1. The most important of these studies is Ruth Schwartz Cowan's *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York, 1983). Its bibliographic essays are an invaluable introduction to the literature of the field.

2. Ruth Schwartz Cowan, 'From Virginia Dare to Virginia Slims: Women and Technology in American Life,' in Martha Moore Trescott, ed., *Dynamos and Virgins Revisited: Women and Technological Change in History* (Metuchen, NJ and London, 1979), 30-44. An earlier version appeared in W.B. Pickett, ed., *Technology at the Turning Point* (San Francisco, 1977).

3. Judith A. McGaw, 'Women and the History of American Technology,' *Signs* 7:4 (1982), 798-828.

4. Despite a burgeoning international literature on the history of photography, the question of women's response to this new technology is not one which has received any significant attention to date, the first signs of interest being shown by historians in the USA. See, for example, Amy S. Doherty, 'Women in Focus: Early American Women Photographers,' *Picturescope* 31:2 (1983), 50-56. In Canada, a few early women photographers who left substantial bodies of work have recently attracted some attention and have even been made the subject of a travelling photograph exhibit. The most substantial study of an early Canadian woman photographer is Claire Weissman Wilks, *The Magic Box: The Eccentric Genius of Hannah Maynard* (Toronto, 1980). For brief biographical accounts and examples of the work of some other Canadian women photographers, see *Canadian Women's Studies/ Les cahiers de la femme* 2:3 (1980), a special issue on photography. See also the exhibit catalogue by Laura Jones, *Rediscovery: Canadian Women Photographers, 1841-1941* (London Regional Art Gallery, 1983).

5. Lilly Koltun, 'Pre-Confederation Photography in Toronto,' *History of Photography* 2:3 (1978), 249. The standard reference work on the history of photography in Canada is Ralph Greenhill and Andrew Birrell, *Canadian Photography, 1839-1920* (Toronto, 1979), a revised and expanded version of Greenhill's *Early Photography in Canada* (Toronto, 1965). See, in addition, Lilly Koltun, ed., *Private Realms of Light: Amateur Photography in Canada 1839-1940* (Toronto, 1984). Also useful are Andrew Birrell 'Private Realms of Light: Canadian Amateur Photography, 1839-1940,' *Archivaria* 17 (Winter 1983-4), 106-44; Jim Burant, 'Pre-Confederation Photography in Halifax, Nova Scotia,' *Journal of Canadian Art History* 4:1 (1977), 25-44; Koltun, 'Pre-Confederation Photography,' and Joan Schwartz, ed., 'The Past in Focus: Photography and British Columbia, 1858-1914,' a special issue of *BC Studies* 52 (Winter 1981-2).

6. See, in particular, Beaumont Newhall, *The Daguerreotype in America*, 3rd rev. ed. (New York, 1976), Richard Rudisill, *Mirror Image: The Influence of the Daguerreotype in American Society* (Albuquerque, 1971) and Robert Taft, *Photography and the American Scene: A Social History, 1839-1889* (New York, 1964).

7. Koltun, 'Pre-Confederation Photography,' 250.

8. 16 January 1850. Cited in Lilly Koltun, 'Pre-Confederation Photography in Toronto,' a checklist compiled for the National Photography Collection, Public Archives of Canada, 1976 (Finding Aid 40), hereinafter cited as Koltun, 'Checklist.'

9. Greenhill and Birrell, *op. cit.*, 42-3.

10. 'Cuthbert Bede' (The Rev Edward Bradley), *Photographic Pleasures* (London, 1855), 54. Cited in ibid., 42.

11. Deborah Jean Warner, 'Science Education for Women in Antebellum America,' *Isis* 69:246 (1978), 58. See also Sally Gregory Kohlstedt, 'In the Periphery: American Women in Science, 1830-1880,' *Signs* 4:1 (1978), 81-96, and Lynn Barber, *The Heyday of Natural History* (London, 1980), chapter nine.

12. Brian Coe, *The Birth of Photography: The Story of the Formative Years, 1800-1900* (London, 1976), 36.

13. F.J. Erskine, 'Photography for Lady Amateurs,' *Anthony's Photographic Bulletin* XV (November 1884), 511.

14. Bill Jay, 'Death in the Darkroom,' *British Journal of Photography* 127:6271 (3 October 1980), 976-9; 127:6272 (10 October 1980), 1002-7.

15. Ibid., 977.

16. Mr Carleton, photographer, 27 May 1848. Cited in Koltun, 'Checklist,' 82-3.

17. M.A. Root, *The Camera and the Pencil or the Heliographic Art* (1864; reprinted 1971), 72-3.

18. Lois W. Banner, *American Beauty* (New York, 1983), 49.

19. Our conclusions about the responses of Ontario women to photography and about patterns in the images which they made and commissioned are derived from an extensive examination of thousands of photographs held in archives, libraries, museums and private collections across Ontario.

20. See, for example, Julia Hirsch, *Family Photographs: Content, Meaning and Effect* (New York, 1981) and Barbara Norfleet, *Wedding* (New York, 1979).

21. See Alice Echols, 'The Demise of Female Intimacy in the Twentieth Century,' *Michigan Occasional Paper No. VI*

(Ann Arbor, 1978) and Carroll Smith-Rosenberg, 'The Female World of Love and Ritual: Relations between Women in Nineteenth-century America,' *Signs* 1:1 (1975), 1-29.

22. See William C. Darrah, *Stereo Views: A History of Stereographs in America and their Collection* (Gettysburg, PA, 1964) and Edward W. Earle, ed., *Points of View: The Stereograph in American--A Cultural History* (Rochester, NY, 1979).

23. Koltun, 'Checklist,' 118.

24. For an insightful reading of three family albums kept by upper and middle-class nineteenth-century British women, see Alan Thomas, *The Expanding Eye: Photography and the Nineteenth-Century Mind* (London, 1978), chapter three.

25. Ibid., 19.

26. See the views expressed on this question by Lady Eastlake, Charles Baudelaire, Oscar G. Rejlander, John Ruskin, Henry Peach Robinson and others in Vicki Goldberg, ed., *Photography in Print: Writings from 1816 to the Present* (New York, 1981). See also Ann Thomas, *Canadian Painting and Photography, 1860-1900* (Montreal, 1979).

27. Cited in Goldberg, *op. cit.*, 92.

28. See Helmut Gernsheim, *Julia Margaret Cameron, Her Life and Photographic Work* (1948) and Peter Wollheim, 'Julia Margaret Cameron: A Victorian Soul,' *Photo Communiqué* (Winter 1982/3).

29. Thomas, *op. cit.*, 19.

30. William C. Darrah, *Cartes de Visite in Nineteenth Century Photography* (Gettysburg, PA, 1981), 22.

31. *The Montreal Transcript*, 11 September 1841. Cited in Greenhill and Birrell, *op. cit.*, 26.

32. See Mitchell's *Canada Gazetteer and Business Directory 1864-65* (Toronto, 1864), part two, and Mitchell and Co., *Canada's Classified Directory 1865-66* (Toronto, 1866) which together list over twenty women photographers in business in Ontario.

33. Blake and Jennifer McKendry, *Early Photography in Kingston* (Kingston, 1979).

34. J. Anderson, *Kemptville Past and Present* (Kemptville, 1903). It should be noted that there were few photographers, male or female, at this time. Lovell's *Canada Directory* (Montreal, 1850) listed only eleven daguerrotypists in operation for the whole of Quebec and Ontario; there were probably a number of itinerant operators not included in this figure. By 1865 there were 360 listed.

35. For example, the *Dominion of Canada Business Directory 1890-91* (Toronto, 1890), vol. I, mentioned only two professional women in business, 1767-1770. Other potentially useful research tools include census rolls, assessment rolls, local

histories, credit ratings such as Bradstreet's and the Mercantile Agency publications, land registry records, probates of wills, house histories and newspaper obituaries.

36. Darrah, *Cartes de Visite*, 32.

37. Germaine Greer makes a similar point about pre-nineteenth-century women painters. They were invariably related to male artists because women had no other means of access to training. Many male painters, on the other hand, did not belong to painting dynasties. See *The Obstacle Race: The Fortunes of Women Painters and Their Work* (London, 1981), chapter one. Thanks to Deborah Gorham for this observation.

38. J. Russell Harper, *Early Painters and Engravers in Canada* (Toronto, 1970), 199. Some of Lockwood's photographs are held in the Bytown Historical Museum in Ottawa.

39. Greenhill, *Early Photography*, 32.

40. Koltun, 'Checklist,' 90, 101, 128.

41. Koltun, 'Pre-Confederation Photography,' 262.

42. Ibid.

43. Jones, *op. cit.*, 7.

44. For details of the Canadian context, see the essays in Janice Acton *et al.*, eds.,*Women at Work: Ontario, 1850-1930* (Toronto, 1974) and Linda Kealey, ed., *A Not Unreasonable Claim: Women and Reform in Canada, 1880s-1920s* (Toronto, 1979).

45. Greenhill and Birrell, *op. cit.*, 114.

46. Coe, *op. cit.*, 43; Greenhill and Birrell, *op. cit.*, 113.

47. H.C. Price, cited in Greenhill, *op. cit.*, 62.

48. Coe, *op. cit.*, 50-5.

49. Brian Coe and Paul Gates, *The Snapshot Photograph: The Rise of Popular Photography, 1888-1939* (London, 1977), 17-21. On the story of the Kodak enterprise and its profound impact on the structure of the industry, see Reese V. Jenkins' impressive study, *Images and Enterprise: Technology and American Photographic Industry, 1839-1925* (Baltimore, 1975). A brief history of Kodak Canada may be found in *Photographic Canadiana* 1:7 and 1:8 (1976).

50. Cited in Coe, *op. cit.*, 53.

51. Eaton S. Lothrop, Jr., 'The Brownie Camera,' *History of Photography* 2:1 (1978),1-10.

52. Carol Wald with Judith Papachristou, *Myth America: Picturing Women, 1865-1945* (New York, 1975), 4.

53. A similar marketing strategy was employed by the early aviation industry. See Joseph J. Corn, 'Making Flying "Thinkable": Women Pilots and the Selling of Aviation, 1927-1940,'

American Quarterly 31:4 (1979), 556-71.

54. Coe and Gates, *op. cit.*, 34-5.

55. Banner, *op. cit.*, chapter eight, and Edmund Vincent Gillon, Jr., ed., *The Gibson Girl and Her America: The Best Drawings of Charles Dana Gibson* (New York, 1969).

56. Coe and Gates, *op. cit.*, 38, and George Gilbert, *Collecting Photographica: The Images and Equipment of the First Hundred Years of Photography* (New York, 1976), 75.

57. Coe and Gates, *op. cit.*,34.

58. Beginning in 1898, Eaton's stores featured a new department of photography. In that year the catalogue advertised cameras at prices ranging from $4.75 to $27.00, including the Pocket Kodak at $4.75, the Klondike at $5.00 and the Folding Kodak at $9.50. In 1920, Eaton's sold the Buster Brown at $3.50, the Vest Pocket Ansco at $14.00 and the Folding Scout at $15.00-$22.00. Thanks to Judith McErvel at the Eaton's of Canada Ltd Archives, Toronto, for this information.

59. The album of photographs taken by Helen Little and her friend Mary Wright at North-Way Lodge, 1912-1916, was donated to the Ontario Camping Association in 1969 and is held at the Trent University Archives.

60. *Woman's Century* (April 1916), 19.

61. See, for example, the album of Ethel Stockwell, a student at Moulton College, ca. 1907=1909, held at the Canadian Baptist Archives, McMaster University.

62. See, for example, the album compiled by Lois Allan during a summer's work at the jam factory at Winona in 1918. Public Archives of Canada, Lois Allan Papers, MG 30, C173.

63. Arthur Hope, *The Amateur Photographer's Handbook* (Toronto, 1895), 151.

64. Birrell *et al.*, *op. cit.*, 119.

65. Ibid., 123. Some of I. May Ballantyne's photographs can be found in the James Ballantyne Collection (1980-232), National Photography Collection, Public Archives of Canada.

66. A number of Dixon's glass plate negatives are held at the Hamilton Public Library, Special Collections.

67. Public Archives of Canada, Toronto Camera Club Records, MG 18 I 181, vol. 1, 'History,' Minutes, 1 December 1895.

68. Mrs H. Coleman Davidson (London, 1894), 235-8.

69. Napoleon Sarony, June 1895, cited in Jones, *op. cit.*, 2.

70. Elizabeth Ketling, *Helpful Talks with Girls* (New York, 1910), 82.

71. Although Ontario photographers, male and female, must certainly have numbered in the hundreds by this time, it is very difficult to produce an accurate estimate. Turnover was high and careers in photography were often brief. As itinerants, many photographers would not have advertised in business directories or appeared in census records, while many others who practised photography as a sideline would have b been listed under another occupation.

72. Marjory MacMurchy, *The Canadian Girl at Work: A Book of Vocational Guidance* (Toronto, 1920), 90-1.

73. Leslie Horner, *Saturday Night*, 19 April 1919, 25.

74. Koltun, 'Checklist,' 155.

75. Photographs of workers at the Toronto factory were provided to us courtesy of Kodak Canada Inc.

76. Ellen M. Knox, *The Girl of the New Day* (Toronto, 1919), 241.

77. Reese Jenkins' study, for example, contains many illustrations of women workers, but their presence is not discussed in the text.

78. Interview with Joan Crawford, niece of Elizabeth Archibald, Ottawa, 9 January 1985. Copies of prints from an album of photographs by Archibald are held at the Ottawa City Archives.

79. 39:7 (1 April 1926), 72-4.