Women and the development of family photography in Taiwan

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Abstract: For men, taking family photographs provides an opportunity to showcase their technical skills. In the late 19th century, Kodak introduced the handheld camera, which simplified previously complicated camera processes. In the process, cameras were transformed from a type of precision technology to household objects which played a growing role in everyday life. This transformation of photographic technology expanded opportunities for women to come into contact with photography.

Following World War II, Taiwan was transformed into an industrialized developed country and, as disposable incomes increased, so did the rate of camera ownership. The present paper, through the viewpoint of visual culture and gender & technology studies, uses qualitative research to investigate patterns of interaction between married women and cameras, specifically exploring the user experience in the social context of modernization in Taiwan. This study investigates Taiwan consumers have adopted artifacts such as cameras, and whether the historical adoption process has been gender-typed. By surveying the female life history in terms of family photography, this study elucidated the 'coproduction of gender and technology' in cameras. This historical reinterpretation could provide a new reference point for design professionals to avoid passing on preexisting social prejudices in interactions between people and technology.

Key words: Family photography, Gender and technology, Design history, Visual culture

1. Introduction: The Development of Family Photography

Taking family pictures is one of the main uses of cameras, especially in families with young children where they are used to record the growth and development of children over time in the context of family life. While cameras are not considered an essential domestic device for modern life (unlike refrigerators or stoves, for example), but they fulfill a psychological need to record family memories in a symbolic demonstration of the appearance of the 'ideal family' [13,14].

In 1888, the Kodak Corporation produced a lightweight camera called the Kodak. The new camera was not only relatively small and portable, but also featured a single exposure speed and a fixed-focus lens, allowing users to take a picture simply by pressing the shutter button. The company promoted the simplicity and convenience of "snapshot" photography, building a business model based on mass-market photography by offering film developing services. Many scholars consider the launch of this device to be the beginning of amateur photography, with millions of Americans taking up photography by 1905. As the number of amateur photographers grew, the pastime began to appeal to women, younger people and minorities.

The Kodak camera had a significant effect on modern family life, creating a new type of public need, allowing people to capture important family memories through "Snapshot" photography [15]. At this time, cameras began to be regarded as a key daily life technology.

In the process of popularizing personal cameras, Kodak not only provided women with increased opportunities to engage in photography, but also indirectly contributed to women taking over the role of family photographer from men [27].

After World War II, industrialization drove domestic economic growth in Taiwan. As personal and disposable incomes rose, many Taiwan families began to purchase more modern equipment for home use. As shown in Table 1, statistics published by the DGBAS beginning in 1976 on "Family Residences and Appliances" show a rapid growth in the popularity of certain home appliances including cameras.

Table 1: Household Penetration Rates (%)

Year	Telephone	Washing machine	Camera	Car
1976	22.14	38.60	15.28	44.57
1981	60.93	68.88	28.89	67.15
1986	85.25	79.49	37.69	72.83
1991	89.53	89.53	56.16	79.20
1995	96.70	92.83	60.32	79.88

Source: DGBAS Family Income and Expenditure Survey, re-organized by the authors

Similar to western societies, family photography exploded in popularity in Taiwan after industrialization. As cameras became household objects, how have they shaped their social meaning to families? Prior to the present study, no examinations have been made of the transition of family photography from a male to female activity, following a similar phenomenon in the west. As Taiwan's economy began to take off in the 1960s, camera makers failed to include women in their target consumer demographic. Young Taiwanese women had few opportunities to operate cameras, and were not encouraged to do so as children. In addition, women were not the target market for camera manufacturers. Thus, when they married and began a family, these women had no experience in engaging in family photography. Since gender roles have not been explicitly assigned for family photography, how and what kind of techniques they developed to operate this novel technology? How was the

family relationship they built through cameras? Above all, what are the distinctions between married women in Taiwan and in the west regarding camera use? In these circumstances, the experience of married Taiwanese women in the practice of family photography is unique and worthy of further exploration.

2. Literature Review

2.1 Family photography as a form of ritual – the viewpoint of visual culture

Many studies of family photography have pointed out that family photography is not simply a record of family life, but rather is intended to portray the family in a carefree, joy-filled world, or at least one without pain [12,5,21]. In other words, family photography is not a true record of the reality of family life in that it excludes portrayal of conflict or tension between family members [16]. Family photos present a sterile, idealized world in which people hope to construct a happy family story, free of the limitations and pressures that families impose on individual family members [17].

Bourdieu's [3] analysis of photography indicated that family photographs are a kind of indicator for the ideal family image, used to maintain family cohesion. Taking family photos serves to strengthen family unity, with each family member involved in the process, either voluntarily or involuntarily becoming embedded in certain family roles as defined by social norms, thus placing limitations on the individual's range of self-expression [16].

In addition, Halle's [10] analysis of family photographs and family photo albums indicated that family photo albums are generally thematic in that most portray scenes of a happy family. Although photo albums contain many photos which record child development, birthday celebrations and family travel and other happy scenes, overall the contents of each family's photo albums are similar to one another. In discussing the digitization of photographic technology and the future development of family photography, Slater [21] noted that traditional family photography and its presentation is but a mediocre reproduction of the symbolic ideal family. This view faced criticism from feminists, with Kuhn [16] calling it overly reductionist and saying that it failed to explain different experiences of the family being photographed and the meaning imbued in the resulting photographs in terms of photographer gender and family class background.

Thus, how should one arrive at a reasonable interpretation? The cultural geographer [20] took a cross-disciplinary approach in proposing that, to understand the significance represented by a particular image, one must first understand the context in which the image was taken, including the means by which it was obtained, its content, and the interpretation of the viewer. Only when these three aspects are understood can researchers truly grasp the meaning of the image.

If, however, the process by which the image was produced is an important factor in its interpretation, then the technology by which it was produced must be considered, and thus becomes important. From this perspective, the aforementioned literature primarily deals with the presentation and meaning of family photos, but largely ignores the technology involved in producing the images, including the photographer's expertise, the various

operating techniques, and the interaction between the photographer and the subject. In particular, what sort of changes may arise from the application of digital photography technology to family photos?

2.2 The gender implications of the camera – research into gender and technology

Early cameras were quite heavy and required a range of accessories. Given the male advantage of physical strength in moving and handling cameras, photography began as a largely male pursuit. Sontag [22] wrote that the act of photographing a subject is an act of possession, placing the photographer in a particular intellectual and authoritative relationship with the world. The photographic process is often accompanied by the unequal power relationship between the photographer and the subject. The standard roles in photography of the time, in which the photographer was male and the subject female, clearly show the intertwining relationship between photographic technology and gender power relationships.

As such, the present study is concerned with how the extension of camera technology into the home affected use patterns by the minor family members. In particular, does gender emerge as a predefined threshold for the "normal" user, thereby creating an identity gap between the photographer and the subject? Has the revolutionary development of these technologies reinforced gender stereotypes, creating an asymmetrical development of technology and society?

Wajcaman [25] pointed out that, in research on information technology, previous feminists have taken an overly pessimistic view of the relationship between technology and gender. In fact, this relationship is created through the coproduction of gender and technology and is thus uncertain. In other words, although a technology in its early stages may imply a default gender for the user, the user can also change the interpretation of the technology and even change the original market positioning for the technology.

Wajcaman [26] further organized the development direction of feminist studies of technology to avoid technological determinism and gender essentialism from imposing ideological limitations on discourse. Rather than homogenizing various cases, researchers should focus on the development of a specific technology change, and promote an understanding and recognition of the technology from the viewpoint of women.

3. Research Method: Qualitative Research with In-depth/Focused Interviews

Qualitative research refers to research methods which do not rely on statistical or otherwise quantitative methods. Qualitative research may focus on people's lives, lived experience, behaviors, emotions and feelings [4], and rely on in-depth interviews for data collection. Unlike quantitative research which follows standardized procedures, qualitative research commonly uses semi-structured questionnaires; in-depth interviews are characterized by a flexible design [19]. During interviews, status differences between the researchers and the participants may result in different symbolic interaction [6], which may be manifest in the interview results.

Research participants were selected according to the following criteria: women aged between 50 and 60 years, currently or previously married with children, shown as table 2. These women reached marrying age in

the 1980s, coinciding with the broad expansion of camera ownership in Taiwan, and at their current stage, they would have already adapted to the transition to digital photography. Interviewing subjects with this specific life experience helps this study in exploring Taiwan's history of family photography from the time that cameras first began to enter the social context of the family, and further understand the impact of digitalization on traditional film camera users.

Table 2. The research participants

Interviewees(alias)	Occupation	Age
Ah-ling	Company director	52
Mrs. Lai	Proprietor of a restaurant	55
Mrs. Su	Retired	53
Ah-zhen	Retired	54
Ah-chin	Manufacture industry	51
Ah-chiao	Shopkeeper of a grocery	64
Ah-mei	Retired	63
Ah-li	Packaging industry	65
Ah-zhu	Retired	64
Hsiao-Li	Retired	52

Creswell suggested that approximately ten interviews would be adequate for most studies (Lee 2003), and the present study thus conducted formal interviews with ten participants. The triangulation method was used to increase the validity of the study, with data collected not only from interviews with housewives, but also with their husbands and other family members. Four respondents were interviewed separately, accompanied by one or two family members, thus increasing the robustness of the data obtained and improving the quality of analysis. The total time for each interview and the number of the interviewees depended on whether the data collection had achieved theoretical saturation. Interviews were arranged at times and locations convenient to the subjects, and each interview lasted from 90 minutes to two hours.

In addition, the current research adapted Merton & Kendall's "focused interview" from media studies, using related stimuli (e.g., films, broadcasts) to trigger respondent memories and recall, and thus elicit additional feedback [7]. However, given privacy considerations, some respondents preferred not to share their photographs thus making comparison between different photographs unfeasible.

Interview transcripts were organized according to coding methods suggested by grounded theory. Corbin & Strauss [4] suggested that coding could be differentiated as open coding, axial coding and selective coding. Some words of the interviewees were excerpted in the narrative to ensure 'selective plausibilization' [7].

4. Research Results

4.1 Snapshot mothers

Some mothers had a personal interest in photography, having often used cameras prior to marriage, and continuing their interest after marriage to take responsibility for family photography. Mrs. Su explained, "*I'm*

personally interested in photography, and I've already had more than ten cameras – when a new model comes out, if it looks like fun, I want to give it a try. My husband barely touches the camera, so I've always taken our family photos." Similarly, Mrs. Lai said, "*I love taking pictures, unlike my husband – he's really boring. I took all the pictures of our children from when they were born – he was never interested.*" This disinterest in photography on the part of the husband extended to being photographed, thus the mother became the family photographer. Ah-ling said, "*What can I do? My husband really dislikes taking photographs and doesn't like being photographed either. You can see he never smiles in the pictures. Thus, at the time, I figured I'd better do it myself, because these family photos are something I want to keep for myself.*"

The role assignment for family photography in these cases is very fixed: the mother is the director, the youngest child is the star, and the husband is a walk-on extra. Ah-zhen said, "*Taking photos is my job, their job is to be my models, and sometimes they cooperate with my demands.*"

Another type of respondent is a former subject who transitions to photographer. These respondents were generally less interested in photography when they were young or had little interaction with cameras due to economic constraint. Middle age alleviated the responsibility for child rearing, leaving them with more free time to pursue different activities for leisure and self-fulfillment, including photography.

Once they have developed expertise in photography, they not only become actively involved in photography activities, but also become dissatisfied with the pictures taken by their husbands and children, actively taking on the responsibility for family photography. Ah-zhen said, "*The pictures they take are really awful, so I take all the pictures. When they see how involved I am, and how well my pictures come out, they have nothing to say. Initially, my husband encouraged me to develop my interest in photography, but he never imagined I'd be this crazy about it.*"

Once these respondents become photographers, they take great satisfaction in directing the photo shoots. In particular, they show self-confidence in their technical skills, causing their husbands and children to reflexively line up to be photographed. In other words, the respondents have an advantage in photographic technique in that, given encouragement and support from their husbands, they can reassign the various roles family members play in family photography.

4.2 Family photography centered around children

Of the respondents' family photos, nearly half are photos of their children, and most of these were taken from birth to adolescence. Through these photos, these first-time mothers sketch their ideal of family life. In other words, the appearance of children not only is the greatest impetus for the respondents to take family photos but is also the key symbolic factor which completes the construction of their idealized family.

Ah-ling said she'd always wanted to have children after she married: "*I was married for five years before we had children, so I spent my pregnancy very eager for the baby to be born. Nearly everything was ready, and we had to have a camera. Perhaps because we waited so long to have children, I was eager to record every moment of her growing up, so I took so many pictures of her from when she was little.*" On her wedding night,

Mrs. Su had already planned to record the growth of her children: "*After I had children, I very naturally wanted to take pictures of them. The children were so cute when they were little, I was always taking pictures. Besides, I would always take pictures when the whole family was playing together.*"

In the hopes of taking beautiful pictures of their children, the respondents were motivated to develop improved expertise in the operation of their cameras. Ah-mei said: "*I read the instruction booklet, learning on my own about the camera's functions, and how to adjust the exposure and focus.*" In addition, some respondents also learned how to operate their cameras through friends. Through such informal channels, they gradually developed expertise and interest in photography. Ah-chiao noted: "*At the beginning, I just wanted to make a record of my children's lives. Back then, I just hoped to take some pretty pictures of them. If there was something I didn't understand, I'd ask one of my friends to teach me; he owned a photo finishing shop. After a while I learned a little, step by step, and photography became an active hobby.*"

The respondents' creativity and views on family photography are most apparent in the way they organize their family photo albums. For example, in documenting the development of her children, Mrs. Lai planned to classify her photos by stages, organizing an album similar to a development diary. Ah-chiao showed considerable creativity, not only making albums to document the development of her children but also classifying photos into albums to create different senarios and stories, devising individual albums to reflect the role and personality of each of her children.

Given their limited access to cameras in their own childhoods, and having little experience of family photography to draw on, most of these mothers had to independently devise their own styles of family photography which are reflected in the attitude they take towards the family photography and the way in which they organized their family photos. New experiences inspired them to develop their own concepts and ideas for family photography. They used their children as a source of inspiration for the creation of personal artworks, and developed the albums as a means of presenting and preserving memories.

4.3 The meaning of family photography in family activities: a catalyst for closeness

Ah-chiao described the timing of family pictures as follows: "*I've always been very family-oriented, and I cherish the time I spend with my family. When I'm with them, I just naturally pick up my camera.*" Ah-mei additionally noted: "*It's a kind of ritual. Now that I know what I'm doing, I have a better sense of when to take a picture.*" In other words, family photography is a significant product of family harmony with its own meaning and importance, created at the moment the photograph is taken through the interaction of family members.

When Mrs. Su brought her family to visit her parents at the Lunar New Year, her father always smiled when he held her children. Photographing this scene was the first time she had seen her normally very stern father smile – it was an indelible experience for her that caused her to see her father in a new lights. "*I still remember when I took that photograph. My father was holding the children and smiling, and I managed to capture it. I'd always seen him as a very serious person, and had only rarely seen him smile, so at the time I was a little surprised, and it moved me to see him holding my own children. It's something I'll never forget.*"

During the interviews, respondents regularly presented their own photo albums. Their descriptions of the photos elicited special emotions and memories, revealing the significance they had endowed to each photograph. In addition, the significance of these family photos is not fixed but can change over time, and changing with the respondent's evolving understanding of his or her world. Ah-mei noted: "*These photographs are a treasure to me. Each one shows a different stage. When I'm older, my feelings will be different from what they are now.*"

From another angle, family photograph is not only a passive record of domestic life, but is the active formation of an atmosphere. Hsiao Li said, "*My husband is really busy at work, so when he had time off to be home, I used taking pictures as an excuse to get the family to go out and have fun.*" The process of family photography often requires communication between husband, wife and children, and this process of interaction would continually create new experiences for all involved. Ah-ling said, "*When they were little, I'd take pictures of them. As they grew up, they began taking pictures of me, so now it's their job.*"

Family photography briefly condenses family relationships, but thereafter provides constant recollections which adapt to changes in those relationships. Ah-chin said: "*When I argue with them, I take out these photos and think about the past. After a while, I smile and feel better.*"

As the focal point of the respondents' lives shifted from the individual to the family, the members of their family became the most frequent objects of interaction and their experiences of camera use occurred in a context in which they were surrounded by family. The cameras were used by respondents in different ways, due to the circumstance in which they interacted with family members, thus embedding the cameras with different meanings. That is to say, once brought into the home, the camera is no longer a technological object used to take pictures, but becomes interwoven in the user's imagination of her family, and is internalized as a part of family life.

5. Discussion

The previous chapter clarified the process by which cameras became part of family life, the significance of family photography for women and their experience in using cameras. The current chapter addresses these empirical studies in a discussion of the existing literature to deepen the theoretical implications.

5.1 Oscillating between housework and leisure – the opportunity for women's participation in family photography

Photography was initially promoted as a method of formal portraiture, but advances in technology and marketing have gradually transformed photography into a kind of popular leisure activity. As photography entered the home, it became a part of family activities and was transformed into a combination of artistic creation, leisure activity and housework.

Leisure activities serve three functions: providing relaxation, entertainment and self-realization [1]. Tang & Chen [24] interviewed couples about their opinions on leisure, finding that women are more likely than men to define leisure in terms of the private sphere, preferring static activities. Family factors have a key impact on

women's selections of leisure activities, so as to maintain the traditional gender culture in respect to the expectations of women's roles. This viewpoint is frequently raised in relevant research in recognition that factors in women's participation in leisure reflect the oppression of patriarchy [11]. For women, the housekeeper roles and leisure roles are in conflict; the housekeeper role is frequently cited as a factor in the leisure constraints imposed on women [28]. Wearing's research results also revealed that women generally focus their leisure activities around their husbands and children, including cooking, gardening, etc.

In the western social context, the taking and organizing of family photos has developed as something akin to housework, but the nature of this activity has the potential for transitioning from "serious leisure" to "casual leisure" – an immediate, reflective, short-term pleasure activity [23]. However, in the aforementioned mother's experience, family photography is not explicitly assigned as the mother's responsibility, there are no rules for how family pictures should be taken, and family photography is seen as a kind of voluntary "casual leisure" rather than an addition to the mother's housework responsibilities. For example, Ah-mei noted: "I feel it's like a way to help me relieve stress." The different properties of family photography and its multi-level complexity make it difficult to understand simply as a recreational activity, thus lending legitimacy to women's work in family photography.

5.2 The camera as a media of self-empowerment for women

Empowerment refers to an individual having the power to change, usually taking place in a person in a position of relative weakness developing power through education and technological aptitude [9].

A camera makes a woman a photographer, giving her the opportunity to express her personal point of view and ideas. The camera function not only help her to self-witness through the photographs she produces, but also allows her to express herself and her ideas to others, thus adding to her opportunities for acceptance and acknowledgment. Therefore, women use the implications of camera technology to turn the camera into a medium for female empowerment. Thus, in the process of women using cameras, the question then becomes, "empowerment for what?"

First, in the context of family relations, they promote emotional exchange between family members and strengthen mutual recognition.

Secondly, at the personal level, through the process of learning about the technology involved, the photographers develop their own potential and explore their limitations in a male-dominated environment while exchanging views with men. They obtain recognition and awards from other enthusiasts, thus reinforcing this recognition of the role of women, forcing a re-examination to affirm the value of women. Ah-chiao said: "*When I'm holding the camera, I feel like I have a certain ability or skill. This gives me self-confidence.*" Ah-chin said: "*After you learn to use the camera, you can show other people your work, letting them know what you're thinking about. It's something I can control – I can take pictures of whatever I want. It gives me a feeling of greater power.*"

Using camera technology allows women create links with their families, and establish gender identity. In

regards to this issue, Lee [18] studied the experience of young women using the camera function of mobile phones and found that the light weight of the device helped the women create a distinct user culture in which women not only shoot self-portraits as a means of self-exploration, but also share these and their everyday photos with others to obtain recognition and establish relationships with friends. Lee also pointed out that camera phones have become a tool for cultural creation among women, helping them become producers of culture.

5.3 Family photography is a reproduction of the family relationship

Family photos normally present a story of a happy family and have always been a totem of contemporary family beliefs. Under the impact of western industrialization and modernization, traditional social structures and family values have undergone significant change. In the process, the meaning of family has changed, as has photographic technology, but the concept and meaning of family photography has remained static for over a century [17]. Scholars holding this view point out that the presentation content and context of most family photographs is highly similar and resistant to creative development.

However, the actual meaning and importance of family photos is mainly determined by the social context in which they were taken, i.e. the relationship between the photographer and the photographed created through the process of communication and interaction. Benjamin [2] suggested that artistic creation is a type of production with regularity. It is similar to material production and subject to the dialectical development between productive forces and production relationships. The ideas and equipment used in family photography are the concepts and instruments of production, constituting the required production conditions. Photography concepts and camera functions determine the form of family photos. For example, large-format cameras are used for formal family portraits, while lightweight portable cameras are used for informal shots of daily family life. Combining photography concepts and camera functions constitutes the productivity of family photography.

Furthermore, the relationship between the photographer and the photographed constitutes the 'relationship of the production' of family photographs. In taking pictures, productivity affects the production relationship of family photography. For example, early cameras were heavy and complex, requiring a high threshold of competence and the photographer mainly worked as a studio portraitist. The traditional concept of photography developed in this context of formal portraiture, in which the family's role is to passively follow the instructions of the producer/photographer, contributing to the estrangement and alienation. The emergence of compact, lightweight cameras that were easy to use lowered the usage threshold, shifting the photographer's role to parents. The introduction of the snapshot approach opened the photography concept to include family leisure, thus gradually increasing the intimacy of the photographer/parent and the photographed/subject.

Today, with the impact of digital technology, the camera is no longer simply a physical product, but its function has been simplified to allow for its incorporation into a range of other products (e.g., digital cameras, mobile phones, tablet computers, etc.). In particular, photo viewing and sharing via computer processing has given computer-savvy children the opportunity to become producers. As camera technology has changed and become accessible to different types of users, it has created more opportunities for family photograph and

expanded the right of individual family members to express their image of the family.

6. Conclusion: Reflections on Design From the Experience of Married Women About Family Photography

At the end of the 19th century, Kodak introduced a breakthrough in camera technology which not only lowered technical thresholds for camera operation, but also greatly increased the application of photography. Family photography replaced formal portraiture and commemorative studio photography, while advances in photographic technology and the development of "snapshot photography" broke down gender barriers among family members. The field of art had previously been male-dominated, that saw images of mothers and children as a traditional subject matter. However, women had not always been passive users of technology, but rather used it for altering the status quo. This inspiring phenomenon could be the source for further reflection upon design.

As a commercial measure to articulate the supplier and market need, design usually aimed for clearly target market in advance, then met every requirement of users. Female was neither granted to be the users of cameras, nor considered to be the target market in the early days. In this case, however, we found that the users with great learning potential can apply this alien technology for self-expression, so as to construct their imagination of family history.

On one hand, designers are committed to reconciling the contradictions between production and consumption, and to raising the added value of a product, thus promoting economic development. On the other, designers are also cultural intermediaries [8], proposing new products while also constructing new lifestyles and values. Designers should attach importance to the experience of people using products in authentic social contexts, while also taking into account whether their designs have implications for discrimination based on gender or social stereotypes. Only through the proper interpretation of the technology in respect of cultural context can the design practice intervene in the real world and improve the mutual understanding of people.

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