

## **NOTE TO USERS**

**This reproduction is the best copy available.**

**UMI<sup>®</sup>**



**Retooling Gender? A Constructivist Analysis of Tomboy Tools**

**By**

**Rebecca Collins-Nelsen**

**Department of Sociology**

**Lakehead University**

**Thunder Bay**

**August 2010**



Library and Archives  
Canada

Published Heritage  
Branch

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

Bibliothèque et  
Archives Canada

Direction du  
Patrimoine de l'édition

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file* *Votre référence*  
ISBN: 978-0-494-71909-1  
*Our file* *Notre référence*  
ISBN: 978-0-494-71909-1

#### NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

---

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

#### AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

  
**Canada**

## Table of Contents

<b>Introduction</b>	1
<b>Chapter 2: Artefacts, Material Culture, and Technofeminism</b>	7
Rise of SCOT	8
Actor Network Theory	14
Technofeminism	19
Users Matter	23
<b>Chapter 3: Methodology</b>	27
Content Analysis	29
Participant Observation	31
Semi-Structured Interviews	34
Analysis	38
<b>Chapter 4: The Co-Construction of Gender and Material Culture: An Analysis of the Design Strategies in “Tomboy Tools”</b>	41
Challenges of Empirical Research on Gender	43
Gendering Design in Tomboy Tools	47
Making Tools Light	49
Size and Ergonomics of Tools	51
Adding “Female-Friendly” Features	52
Prescribing Gender, Prescribing Work	54
Gendered Aesthetics in Tomboy Tools	58
Impact of Gender Script	67
Conclusion	69
<b>Chapter 5: Marketing Tomboy Tools: Contradictions and Tensions in Gendered Images</b>	72
Marketing Tomboy Tools	74
The Home Sales Model	83
<b>Chapter 6: “Tools Party” as Modern Gendered Ritual</b>	88
Tool Party as Ritual Experience	89

Interaction Rituals	93
Idealization; Reifying Tools and Symbols	101
“Tool Part” as Context for Building Relationships	104
Conclusion	109
<b>Conclusion</b>	<b>111</b>
<b>References</b>	<b>116</b>

## Acknowledgments

First and foremost, I would like to thank my supervisor Dr. Antony Puddephatt for his constant guidance and support throughout this project. He was always available and willing to discuss various ideas and angles for the research that helped in turning a somewhat scattered idea into an interesting and theoretically worthy discussion. He was also very helpful throughout the editing processes, even if I was sometimes overwhelmed with his suggestions, they very much improved the thesis and made me a better writer. Secondly, I would like to thank my internal committee member, Dr. Sharon Dale Stone, for providing me with rich ideas and comments. I would also like to pay special thanks to my external examiner, Dr. Carrie Sanders, who provided me with thoughtful and detailed feedback and encouragement. I am also thankful for all those women who participated in the “tool parties” and the interviews with me. Your time, patience, and responses were very much appreciated.

I would also like to thank my friends for their support. Whether it was listening to my ideas, listening to my complaints, accompanying me on much needed coffee breaks, or providing laughter and good times away from academia, thank you, you kept me motivated and sane. I have the greatest friends in the world!

Lastly I would like to thank my extended family and my immediate family, sister Emilie, and especially my mom and dad, Carol Ann and Randy. Your unwavering support in my ideas, choices, and abilities truly means the world to me. Your collective intelligence has given me the ability to think critically, your sense of humour has given me the ability to stay positive and happy, and your morals, politics, and ideologies have guided me. You both make me want to follow through with my goals and be the best person I can be. I love you both very much.

### **Abstract**

In this study, I will examine the case of ‘Tomboy Tools’ as a form of gendered material culture. I will analyze the way this company has come to cross the traditional gender boundaries placed on women that has historically alienated them from the domain of tools and home repair. In attempting to bridge the historically opposing worlds of femininity and home repair, the company has used the strategy of making the tools conform to a traditionally feminine gender script (light, cute, pink, etc). Drawing on data from a content analysis, participant observation, and interviews I use a constructivist grounded theory approach (Charmaz 2006; Clarke 2005) to analyze how the identities, practices, and norms of potential female users are projected and reinforced in the design and marketing of the tools. I also consider how potential female buyers respond to these implicit assumptions, and interpret and give meanings to these new cultural artefacts and messages in often competing and contradictory ways.



## Introduction

Traditionally, tools and home repair have been dominated by males. Tokarz (2008:68) observes that boys predominantly gravitate toward activities such as “woodworking, blocks, and active outdoor play,” while girls tend toward “traditional female activities, such as housekeeping, puzzles, drawing, and books.” Dodge, Colker and Haroman (2002) made the point that even when young girls do take an interest in blocks or construction work, they are both discouraged by their male peers, and uninspired through the lack of female role-models in the trades. Many other studies support this, showing strong, reinforcing patterns of play and toy-based socialization along firm, gendered lines (Bradbard 1985; Fagot 1974; O’Brien, Houston, and Risley 1983). This tendency for boys to receive more experience with toys that “encourage exploration, manipulation, invention, construction, and that provide feedback” foster important elements of cognitive development that girls will lack (Miller 1987: 474). Indeed, Conner and Serbin (1977) found that masculine vs. feminine toy preferences in children (usually, as determined by their sex), had significant ramifications for their levels of different types of cognitive functioning.

Women also seem to be excluded from considerations of early tool-use in the philosophy of technology. *Homo Habilis*, the first tool-maker, was named after the Latin for *handy-man*. Even today, philosophers often talk about tool-use, and its importance, for “early man,” as though women were never central to these important evolutionary developments of the species. Consider the following quote from Fodor (1998: 159 [italics mine]): “Even if early *man* had modules for ‘natural intelligence,’ *he* couldn’t have become modern *man* just by adding what *he* knew about fires to what *he* knew about cows.” It is as though women were never involved in the development of tool use and its integration with traditional knowledge; women play, at best,

second fiddle to man's responsibility for evolutionary progress. Since our capacity for tool-use is connected deeply with our development as an intelligent species (Wilson 1978), and represents an important cognitive mediation between individual and world (Preston 1998), the male-centric conceptualization of tool-use raises questions about women's implied role in the march of human progress through evolution. One thinks of Charlotte Perkins Gilman's (1898) early arguments about men's exclusion of women from the progress of culture and the economy, which, she thought, had ramifications in their evolution and place in society.

At any rate, the clear demarcation of tools and handiwork with male culture has been apparent through society and its reflection in academic discourse on the subject. Recently however, there has been a movement towards designing tools and providing practical advice about home repair for women. The women's tool movement has brought contentious claims with different reactions from interest groups. Companies that are creating tools for women provide excellent examples for illustrating the extent of the movement as well as a platform for provoking discussion surrounding gender and technology. For these reasons, I am interested in studying the companies creating and marketing these tools for women. I use a company that operates locally, Tomboy Tools, as a case study to analyze the extent to which this company empowers women to enter the self-reliant domain of home repair, and the degree to which they challenge or actually reinforce traditional gender roles and boundaries.

The Canadian branch of Tomboy Tools was founded in 2003 by three women who had an interest in tools and do-it-yourself projects. Their mission statement is, "to build confidence and empower women through education, quality tools and an independent business opportunity" (Tomboy Tools 2008). This company provides an interesting case study because they are involved in creating traditionally male dominated artefacts but have designed them and marketed

them towards women. One of the marketing techniques the company has relied upon is hiring female representatives to sell products through “tool parties,” modeled after make-up and Tupperware parties. The company also makes its tools available in pink, the colour most widely-associated with femininity. Some techniques incorporated in the actual design of these artefacts include making the tools smaller and lighter, with smaller gripping areas. This is based on the assumption that women have less upper body strength, and smaller hands than men. This company has taken on the task of taking traditionally male artefacts and transforming them such that they can successfully cross over in to the female domain. This makes it an excellent case study to analyze the way that this intersection of gender and material culture operates, and what this entails both for the successful design and sale of the tools, and the implications this may have for the identities and gender roles of potential consumers.

Throughout this thesis, I argue that Tomboy Tools is embedded with a specific “gender script” (Akrich 1992), evidenced in the technical and aesthetic design of the tools, and through the marketing and promotional techniques used by the company. Their promotional material conveys strong messages of confidence and empowerment, which is a sales strategy that is historically female-centered (Clarke 1999). The imagery used by the company reinforces symbolic codes of hetero-normative femininity, which relates to a pre-determined and specific set of lifestyle norms biologically associated with the female sex and also implies heterosexuality as the natural sexual orientation. In some ways these reinforcements counter their attempt to shift gender boundaries in the ways they intend. The home sales model is central to the sales strategy of Tomboy Tools and also contributes to the gender script as it is a historically feminine and operates in a specifically gendered way. I will argue that the “tool party” represents a modern form of gendered ritual (Collins 2004), which both opens women’s minds to the core

messages of the company and the idea of using (and buying) tools by creating a comfortable transitional space with high levels of positive emotional energy. Drawing on the literature in constructionist studies of technology (Pinch and Bijker 1984; Latour 1991; Jasanoff 2004), I argue that this gender script manifests itself in the technical design of the tools such that gender and technology co-construct, reproduce, and reinforce each other.

In chapter 2, I outline the major theoretical background to my study, and draw on the sociology of science and technology (Pinch and Bijker 1984), actor-network theory (Latour 1991), techno-feminism (Wacjman 2004), and the role of users (Oudshoorn and Pinch 2003) and the cultural projections placed on them in the process of technological design (Akrich 1992). I begin by providing a background of the important features of the technology theories, and the ways that they will impact my study while placing the case of Tomboy Tools in the larger milieu of the women's tool movement and in the realm of changing gender dynamics. Since tools are a basic, and quintessential form of technology (Heidegger 1993), and these tools in particular are seen to reflect changing gender norms in their design and aesthetic appearance, this literature is highly relevant to contextualize my findings in all subsequent chapters.

In Chapter 3, I outline my methodological approach of constructivist grounded theory (Charmaz 2006; Clarke 2005) and the reasons why it is a suitable choice for this project. I discuss the strategies and techniques used to execute the content analysis of Tomboy Tool's web and print media, detail the process of participant observation at "tool parties," and outline the structure and approach to interviews with potential users as well as executives from the company. I argue that the three-tiered research method is well suited to explore this phenomenon from a range of perspectives, and to make up for the potential weaknesses in any one method.

In Chapter 4, I examine the design strategies used by Tomboy Tools and the ways that the technical and aesthetic design choices contribute to a fairly well defined and traditional female gender script (Akrich 1992). I start by analyzing the technical aspects such as the size, weight, and shape of the tools and include feedback on these issues from potential users. I also discuss the implications this has on the assumptions about women's skill level and physical ability, and on the kinds of jobs that can be performed, and are thus latently prescribed to the women. I then analyze the aesthetic choices, focusing on the colour of the tools. Responses from the executives explain how pink became popular, while responses from users show mixed reactions about the messages implicitly conveyed in this image.

In Chapter 5, I conduct a content analysis to explore the messages and imagery conveyed through the marketing and promotional material released by the company, and contextualize these messages by placing Tomboy Tools in the gendered history of which it is part: the home party sales model (Clarke 1999). I argue that the images presented by the company are hyper-feminine and serve to reinforce a hetero-normative stereotype. I also illuminate the reliance on empowerment discourses which is commonly used by companies that target women.

In Chapter 6, I deconstruct the "tool party" with the help of data from my attendance at the parties and interviews with other women who have attended. I argue that the "tool party" represents a modern gendered ritual in that it satisfies Collins' (2004) requirements for the modern ritual to generate the shared emotional energy necessary to reify new symbolic messages effectively. I will also argue that this leads to a successful "liminoid" experience (Turner 1979) at the tool parties, opening women's minds to the world of tools, and the lifestyle and positive beliefs that come with it. While this allows for women to more comfortably gravitate toward tool-use, I argue that this betwixt ritual experience also reinforces traditional feminine symbols,

beliefs, and practices. These gender-specific aspects of the ritual are seen to be critical to the sales strategy, for example, emphasizing relationships and social cohesion over instrumental purchasing decisions. Finally, I conclude the thesis by recapping the major findings of the study, considering limitations and discussing future research directions.

## **Chapter 2: Artefacts, Material Culture, and Technofeminism**

Although Tomboy Tools can be seen as a groundbreaking company that is challenging gender norms they are most basically a company that sells tools. That being said, materiality is an important measure of culture in our society and therefore an examination of the kinds of tools they are producing and the fact that they are targeting women is telling about cultural constructs of gender. Tools make for a particularly interesting case study as they are considered to be the basic foundation of technology (techné). Thus, to understand the essence of tools and their cultural construction and significance, it makes sense to consider relevant issues in the sociology of technology.

The evolution of the sociology of technology has provoked rich ideas and theories which become particularly interesting when intersected with other sociological factors such as gender. This chapter will provide a literature review for the case study of Tomboy Tools in order to show the connections between the evolution of gender norms and technological design, focusing on the way that designers are constructing not only tools as technological artefacts but also how they construct gender. I will begin by outlining the social constructionist theory of technology (Pinch and Bijker 1984), to demonstrate how the social “gets inside” of the process of technical innovation and design. I will then discuss the contributions of the more recent actor network theory approach (Latour 1991), which challenges the social reductionism of the constructionist approach, and considers how material forces intertwine with human forces in technological mediation. The rise of techno-feminism (Wajcman 2004) will be discussed as a critique and response to these male-centric and gender blind mainstream approaches, to consider women’s historical and contemporary relationship to technology in society. Finally, I will examine the roles that users and consumers have been seen to play in the design and shaping of technology

(Oudshoorn and Pinch 2003), by offering feedback to producers based on their market choices and cultural preferences, which are also often shaped by considerations of gender. I will attempt to highlight the gaps that are filled by each subsequent theory and also which parts of these theories will help inform my study. The final section will situate this project in the existing literature and show how my study might contribute to the existing field of knowledge.

### Rise of SCOT

Pinch and Bijker's (1984) social construction of technology model (SCOT) emerged largely in response to determinist models of technology that are more traditionally pursued by sociologists. The determinist model, as applied in sociology, considers the effects that new technologies have on society, assuming a one-way cause and effect relationship between technological change and the organization of society. Thus, sociologists might study the effects of technology on the third world, health and wellbeing, information and cyberspace, the natural environment, energy, and population growth and expansion (Hjorth, Eichler, and Morello 2003). Generally, the issue of technology is treated as a macro-phenomena, where machines and the new tools of modern society have ramifications for the human condition in broad terms.

Karl Marx was probably the most famous technological determinist for sociologists, arguing that the material forces of history far outweighed, and served to shape, cultural and social outcomes (Aronowitz 1988). Technology and science would form a key part of the "substructure" (material relations) of society, of which the "superstructure" (culture, politics, religion, and the organization of labour) would reflect. Thus, Marx (1848) argued that factory technologies (i.e. the means of production) change at a faster pace than the social organization of labour, and hence the former determine the shape and change of the latter. Further, the individual



genius or creativity of scientists or technologists are poor explanations of the emergence of new technological inventions or scientific discoveries, since these emerge naturally with the often invisible material forces of history, which unfold autonomously from the world of human ideas yet nevertheless impact them in direct ways. For these reasons, science and technology, much like the other relations of production operating at the material level through history, evolve according to the interests and requirements of the ruling class.

Jacques Ellul (1964) also considered modern technology to evolve independently, yet remain a dominating force over humanity, and a threat to human freedom and creativity. The onrush of new technologies into the structure of our education and everyday lives have a dramatic impact on the way we think and the direction and organization of our society. Thus, like Marx, Ellul imagined the independence of technical development from human culture, morals and values. Heidegger (1993) also saw the essence of technology as an “uncovering” or “revealing” of nature, such that each discovery made would lead to logically determined questions and behaviours, in turn generating further technological discoveries. Hence, technology leads according to its own logics, and human beings follow. Robert Grant (1995) similarly argued that technologies are best accounted for according to the most efficient means to achieving desired ends. Hence, technology is not accounted for socially or culturally, but is explained entirely with recourse to natural laws and logical necessity.

In contrast to these more deterministic models of technology, “The SCOT paradigm centrally emphasizes the mediation of technological change by social forces” (Puddephatt 2005:358). In this way, SCOT rejects the notion that the rise of technology is based upon purely objective or logical forces. This rejection parallels a similar trend in the new sociology of science that would argue for the social, institutional, and paradigm-relative aspects of theory

construction in science (see Kuhn 1962; Collins 1985; Latour and Woolgar 1979; Collins and Pinch 1993). SCOT therefore has benefitted not only from attempting to account for what the determinist model missed but also from the idea of applying approaches developed through the sociology of science to technology studies (see Pinch and Bijker 1984). The distinction between science and technology was thought to be over-idealized through philosophy but it is also difficult to determine in what ways one is dependent on the other, to the point that some use the hybrid term “techno-science”. Technology as a concept can be more effectively analyzed on its own but as Pinch and Bijker explain it can still very much benefit from some of the evolutions that have occurred in the way that sociology is used to study science.

It is clear then that the SCOT model can benefit from the changed approach to analyzing science since “science and technology are both socially constructed cultures and bring to bear whatever cultural resources are appropriate for the purposes at hand” (Pinch and Bijker 1984:404). The SCOT model also introduced two important ideas that were missing in the determinist approach. The first is the principle of symmetry and the second is interpretive flexibility. Both of these concepts, particularly interpretive flexibility, should be most helpful in the analysis of Tomboy Tools.

The symmetry principle is based upon ideas from the sociology of scientific knowledge, particularly from David Bloor’s (1973) Strong Programme. The symmetry principle states that the same sociological explanations would be used to account for both true and false beliefs, since sociologists are equipped to uncover the social and cultural aspects of knowledge construction, and cannot arbitrate truth from the perspective of science. This symmetry principle has been usefully applied to technology studies in what has been called the “social construction of technology” (SCOT) approach (Pinch and Bijker, 1984). Remaining faithful to the symmetry

principle of the strong programme, SCOT researchers are to remain even handed when assessing failed technologies as well those which succeed. Again, social and factors, and how they determine the development and use of technologies is key, not whether the technologies in question ultimately survive. Why technologies develop, and who they principally appeal to, must be situated appropriately in the correct historical and cultural context. As such, SCOT argues that social, cultural, political and economic factors are equally important considerations for both failed and successful technologies. This is important in my study as I am not interested in whether Tomboy Tools is ultimately successful or not in the long run, rather I am interested in examining the sociological elements behind the phenomenon, and the questions these material artefacts raise for the gendered culture they are supposed to appeal to.

Interpretive flexibility is the other concept introduced by SCOT and refers to the multiple meanings given to artefacts by various groups. These various meanings will have effects on the way that technology evolves. This idea is missing from the determinist model which views the innovation process of a technology as linear -- basic research, applied research, technological development, production development, production, and finally usage (Pinch and Bijker 1984:23). The linear model fails to account for the impact that groups of users can have on the innovation process. SCOT emphasizes the importance of considering users as integral parts of the process. Therefore, rather than benefitting from a linear diagram of the innovation process, the SCOT model uses a multi-directional model. Relevant social groups and the meanings they attach to the artefacts are represented as branching out from one another. Each new group or meaning can then be branched off again.

The way that the process of interpretive flexibility works is nicely illustrated in Pinch and Bijker's (1984) example of the evolution of the bicycle. They begin by highlighting the need to

identify relevant social groups and the values that those groups may have when considering the advent of a new technology. A relevant social group needs to consist of a “social group [who] share the same set of meanings, attached to a specific artefact” (Pinch and Bijker 1984:414). For example, in regards to the Penny Farthing bicycle women needed to be considered as their own social group since they were forced to consider different needs such as dress and safety. Because of the standard dress at the end of the 1800s it was difficult for women to ride these high bicycles without risking indecent exposure, which at the time had a standard that was especially conservative. Another problem for the social group of women as well as the elderly was the issue of safety which essentially contradicted the needs of young, well off males at that time who wanted the bicycle to represent speed and adventure.

It is often the case that the needs of social groups will be conflicting. For example, in the case of the bicycle the need for speed from one group conflicted with the need for safety from another. There can also be conflicting solutions while working within the same problem. This can lead to different types of features on the artefact itself. The “safety bicycle” for example went through a number of different prototypes in an effort to make it safer. Nineteen years after this process began (1898) a “stabilization” of the artefact was reached. That is to say that there were essential elements that made up what was considered a safe bicycle at this time which included air tyres, low wheels and a rear chain. The air tyres represent a particularly interesting component of the safety bicycle since they were originally created as an advantage for the social group that was interested in racing but ended up being “rhetorically translated” into advantages for other groups as well. Through years of development some of the needs of the relevant social groups were met and certain features of the bicycle became normalized. This wide, general consensus over elements of a particular artefact is also sometimes referred to as closure.

It is important to remember that this stabilization or closure does not mean that the needs of every relevant social group have been met but simply that there has been a wide consensus. It also may occur that two or more prototypes of the same artefact may exist simultaneously and each fulfills different needs of social groups. For example, contemporary bicycles may have a normative structure but different features of them can be tweaked in order to emphasize speed, for the social group that is using the technology as an adventurous hobby, or safety features can be emphasized, for those groups that want to ensure their safety on the mobile device. Jordan and Lynch (1992) argue that the diversity that is present in bicycles weakened Pinch and Bijker's argument about closure. They argue instead that there is a dispersion of innovation and "the social interactional conditions and consequences of such dispersion are substantive social phenomena rather than residual sources of noise in the system" (Jordan and Lynch 1992:78). This is likely true since there tends to be a certain amount of diversity within broad categories of artefacts. However, Pinch and Bijker allude to this possibility when they note that the stabilization or closure of artefacts is never static, depending on changes in the needs of relevant social groups, often based upon shifts in wider contexts, interpretive flexibility may reappear.

Pinch and Bijker also stress the fact that the SCOT method incorporates a wider socio-political milieu in its analysis. Since SCOT is dependent upon looking at relevant social groups and the meaning that they give to artefacts, it is clear that users' sociocultural, sociohistorical, and political situation will play a role in this. For example there is often a divide along gender lines in terms of relevant social groups, as well as a divide within the homogeneous categories of male and female that can be telling about gender constructs of the time.

Given that SCOT considers social factors as important in innovation processes it is an excellent model to use when considering the relationship between gender and technology. As

such, I will use a constructivist analysis as one approach in analyzing the women's tool movement and Tomboy Tools. The analysis will evaluate the way that the social construction of gender impacts the social construction of tools made for women. This comparison is particularly interesting given the vast and rapid changes that have occurred in women's societal roles over the last century. The analysis will also benefit from SCOT's focus on users in the innovation process since empirical data will be collected through interviews with Tomboy Tool users. The data will help illuminate the relevant social groups of women, and the meanings that these women users attach to the tools. While SCOT will be useful for my analysis for these reasons, the perspective is not without its faults, and hence, I will also be drawing on actor network theory (ANT) to handle these shortcomings. I will discuss these shortcomings, and outline how the ANT perspective helps address these, below.

### Actor Network Theory

Bruno Latour's Actor Network Theory, hereafter referred to as ANT, emerged from the idea that SCOT is built upon a sociological or idealist reduction. That is to say that since SCOT focuses on societal factors to answer questions of technology it risks being sociologically deterministic. It is easy for a SCOT analysis to over privilege the social and ignore the roles of material culture (non-humans) in technology processes. The second problem that emerges from the SCOT model is that when it does consider non-humans it relies on a dualism. This is reductionist since, "By separating the (actively framed) world of human actors from the (passively framed) material world, the importance of perceptual, worldly interactions are excessively downplayed" (Puddephatt 2005:60). ANT attempts to account for these shortcomings by rejecting dualism and considering all actants, that is all actors in systems, whether human or non-human, as they work

together equally in a network. All are given the same ontological status, since all act, and “perform” in equal measure in the context of practical lived experience.

The necessary advent of ANT can be well explained through Callon’s (1987) analysis of the attempted introduction of the electric car in France. Callon’s analysis shows that “sociological, technoscientific, and economic analyses are permanently interwoven in a seamless web” (Callon 1987:83). Proposing a new system (electric car) in an already very established system (traditional motorcar) is by no means an easy transition and has to take into account multiple variables. Callon notes that engineers, sociologists, politicians, economists and so on were all consulted in order to try to attain an overall picture for the system transition. The social web that was consulted shows that there was an understanding of SCOT concepts, in terms of the importance of including multiple social perspectives but Callon ultimately goes beyond SCOT in his final analysis of why the electric car failed. The reason the electric car did not get accepted into French society was because the developers were unable to create a battery that would last long enough to support the needs of the average driver. Therefore Callon’s point is that the level of success of the electric car did not benefit from a sociological analysis because the technology itself failed to become effective. This illuminates the idea that both humans and non-humans are important considerations in a technological analysis.

As mentioned above, this becomes an important critique of the SCOT model, since it generally fails to account for the agency of non-humans, making it guilty of sociological determinism. To counter the dualism that is present in SCOT, ANT states that, “we have to turn away from an exclusive concern with social relations and weave them into a fabric that includes non-human actants, actants that offer the opportunity of holding society together as a durable whole” (Latour 1991:103). ANT attempts to represent this network of actants, which include

hybrids of humans and non-humans, all working together. The addition of considering non-humans and the ways that the actor network reconstructs traditional sociological categories such as gender will be a consideration in the Tomboy Tool case study. While one may argue that SCOT and ANT are incompatible, I hope to work with the spirit of SCOT in locating the cultural sources of material constructions, while also considering the role of non-humans (i.e. tools and networks of association) in shaping culture, gender, and the social.

The idea that non-humans have agency is one of the more contested ideas surrounding the ANT approach to the sociology of technology. Latour (1988) outlines three reasons why artefacts have agency. Using the example of a door closer Latour writes, “first, it has been made by men, it is a construction; second it substitutes for the actions of people, and is a delegate that permanently occupies the position of a human; and third, it shapes human action by prescribing back what sort of people should pass through the door” (Johnson 1988:303). Material things are often necessary for instructions to be followed since, “the force with which a speaker makes a statement is never enough, in the beginning, to predict the path that the statement will follow” (Latour 1991:104). To illustrate this, Latour uses the example of a hotel manager wanting room keys to be left at the front desk when people leave the hotel. He began by writing this on the key holder itself but found that very few would return the key so he then attached a large weight to the room key. This makes the action of returning the key more predictable as people are unlikely to forget to return it due to the fact that the weight makes it inconvenient for customers to walk around with and therefore they remember to return it before leaving. Latour argues that by adding the weight to the key rather than expressing the message linguistically, translates the order from language to praxis, changing the original statement, the key, the customers, and even the hotel. Thus, material artefacts and tools often embody social scripts (in this case, the



customers' behaviour in returning keys). Despite the insightful argument that artefacts have agency and can act to shape and condition human conduct in determinate ways, many have argued that Latour's analysis remains largely a-political.

If artefacts have agency, one might go to the next step and ask do artefacts have politics? Langdon Winner's (1985) article "Do Artefacts have Politics?" answers the question in the affirmative and explores a number of examples to illustrate his point. Winner first shows how features and elements in the design of an artefact can end up establishing patterns of power and authority. He uses Robert Moses's overpasses to Long Island as an example of an artefact being created in order to achieve a specific social effect. He argues that Moses intentionally built the overpasses low so that buses would not be able to fit underneath them. This meant that low-income groups, including racial minorities, would be unable to utilize these overpasses, thereby limiting their access to Long Island.

This example shows how artefacts themselves can lead to political consequences. It is often thought that artefacts cannot be intrinsically political, but in the example above, it is clear that the overpass generates tangible political effects. Winner points out that the political consequences of an artefact does not always line up with the specific intentions of the designers. He points out how technological structures in society, for many years, neglected to account for people with disabilities. Consequently, this led to limited access for many people living with disabilities. It is likely, however, that the designers and developers of these establishments created limited access spaces more on account of ignorance and neglect than intentional purpose.

Winner's second argument is that certain technologies come with intractable elements that end up demanding certain institutionalized patterns of power and authority. This fits directly into Latour's (1991) observation that "technology is society made durable." For example, the

atomic bomb inherently involves lethal properties which means that it must be carefully controlled, generally implying a centralized authority with a rigid hierarchy to accept this. Winner concludes that “the things we call ‘technologies’ are ways of building order in our world” (Winner 1985:30). By being aware that artefacts often have hidden politics built inside them, designers can give more attention to the kinds of political consequences that their technologies may have which is especially important when considering their permanency. Although foreseeing all possibilities would be an unrealistic expectation as there are often unintended consequences (Merton 1936) being more aware of the kinds of impacts new technologies can have is important. This realization offers an opportunity for a more in-depth consideration of whether a particular technology should be implemented or not. While Winner’s analysis is clearly focusing on politics where Latour’s often has not, there is little discussion of gender in this analysis. How do material artefacts and technologies shape not only politics and culture, but more specifically, gender? In this vein, I will broaden the traditional scope of ANT, and arguments about the agential role of material artefacts in the style of Winner, to consider gender as a central concern, and ask what kinds of feminine scripts are implicitly embedded in Tomboy Tools, and how they are represented to, interpreted by, and affecting, potential users.

The Tomboy Tools case study can benefit from a debate about whether artefacts have politics but more specifically to this case the question becomes do artefacts have gender? Furthermore, what is the representation of that gender? This discussion can also benefit from Winner’s assertion that designers should be conscious of the political effects their innovations can cause. It could be argued that this consciousness is also very important when applied to gender so that designers are aware and responsible for the way that they are constructing gender. If technology is, as Latour argues, “society made durable” then what are the societal implications

of an overtly gendered technology? Winner's analysis invites the possibility that Tomboy Tools constructs not only artefacts, but also gender.

### Technofeminism

As eluded earlier, some scholars argue that debates in the constructivist study of technology and the actor network theory have lacked any kind of gender analysis (Wajcman, 2004). Perhaps this is because technology, like science, has been an area dominated by men. "According to feminist studies of technology, exclusion of women from technology (as inventors or as users) is not an accident and should not surprise anyone considering the process through which the meaning of technology itself has been actively developed to reflect the male gender" (Ngaruiya Njambi and Putman Spenkle 2004). This becomes particularly problematic since technology is incredibly important in our society. Therefore, monopolizing it creates power. Wajcman (2004) provides a valuable historic overview of women's relationships with technology, and outlines the ways that various feminist groups tend to conceptualize technology.

Wajcman (2004) contends that women have been at the forefront of innovations when it comes to domestic technologies, but this tends to be taken for granted, much in the same way as housework. Women's relationship to technology has received mixed reviews by feminists, as either promising new possibilities for emancipation, or further curtailing women's advancement. For example, the advent of reproductive technology can be seen as liberating women from the confines of reproduction, or as another example of men trying to take control of women's bodies. A similar debate now exists over the internet as to whether cyberspace will offer the opportunity for a genderless society or if it will simply reproduce women's subordinate relationship with technology. Wajcman contends that general statements of technology as either having entirely

negative or positive impacts on women are simplistic and dangerous. Rather, technology should be considered on a case by case basis, since different technologies may stand to benefit or harm different groups of women in myriad ways.

Liberal feminists think that women's exclusion from technology is a problem of equality and access to opportunity, so their proposed solution is for women to participate more (Wajcman 2004). In order to do this, they assume that women have to "degender" their identity since technological culture is deemed to be incompatible with femininity. Wajcman (2004) points out however, that there is no such process for men, and having women changing and manipulating their identities to fit into a male culture seems counter-productive. This approach implies that women are the problem in need of change, which fails to challenge the power structures that perpetuate the gendering of technology as masculine. Given that Tomboy Tools is attempting to create access and opportunity to a realm women were previously excluded from, it could be argued that the company itself is working to some degree from a liberal feminist standpoint. The company differs from this standpoint however, in that it is not attempting to entirely "degender" women's identity; rather, it is creating a space for tools and home repair for women with the traditional confines of femininity in mind. My analysis of Tomboy Tools will take a broader feminist approach, to consider the social context, gender norms and the material culture that ties it all together.

Radical feminists tend to view technology as inherently gendered, and embedded with patriarchal values. Technology is not neutral, but is based upon domination and exploitation over people (namely women) and nature (also often construed in a feminine light). Technology becomes based upon men's values, omitting women's values as insignificant. Socialist feminists also see technology as being inherently gendered but also consider class. They focus on the

negative relation of technology to women's health, and see it as taking away jobs that are traditionally held by women. Technology is also seen as a threat to women doing unpaid work in the home, as new and improved technology has done little to reduce the work load. Since there is a focus on social class, it is common for socialist feminists to incorporate Marxism into their analysis.

These varying feminist perspectives show that there is a lot of room for gender analysis in technology studies. An example comparable to Tomboy Tools of using feminist analysis for a technology case study is Ellen van Oost's (2003) article concerning the way that the design of women's shavers have the power to shape and reinforce ideas about gender. She argues that when a technology becomes domesticated it not only reshapes the technology, but also gender. She cites Akrich (1992), who coined the word "script" in relation to the way that designers envision the users of their products, and how these conceptualizations end up embedding their design with a particular "script." A "gender script" is the way that the designers think about gender as a variable in creating an artefact and in so doing reveal something about gender relations and identities. Gender is even apparent when the intention is to design an artefact for use by "everybody," since designers often use themselves as models and their environments as testing areas for the new technology. Since most engineers are males, the artefacts generated end up reflecting the wants and needs of young, white, well-educated males.

The differences among gendered technologies become clear in van Oost's example of the way that men's and women's shavers have evolved along gender lines. Philips had been rather successful in creating and marketing their shavers to men and in 1939, when they introduced the first electric shaver for women. By 1950, Philips producers had decided to split the shaver market and make a shaver designed specifically for women. Technologically, the shavers were

very similar but “the main design strategy in the 1950s and the 1960s to tailor a shaver for female users was to give it recognizable female-coded features, such as a pink housing or a round red storage case” (van Oost 2003:200). Eventually the different shavers marketed for men and women diverged to such an extent both aesthetically and technologically, that Philips was able to create a separate design and production environment for women’s shavers.

These women-specific shavers were called *Ladyshave* and were designed to be disassociated with anything technological, operating under the assumption that women dislike technology. Therefore, the design and marketing angle was towards the shaver as a cosmetic device. By the 1970s this idea was taken so far as to remove any visible screws from the apparatus, instead using a clicking mechanism to keep the parts together. Other tactics “included using perfume to mask the smell of oil, linking the shaver to lipstick, [and] transforming the shaver into a beauty set” (van Oost 2003:206). The *Ladyshave* reinforced gender roles by encouraging the cultural norm of women shaving their leg and armpit hair, as well as encouraging their dislike for technology. Put concisely, “Philips not only produces shavers but also gender” (van Oost 2003:207). Van Oost’s case study of women’s shavers focused on many of the same themes that will be the focus of the Tomboy Tools case study. Similar to this case, the gender scripts that are embedded in Tomboy Tools will be identified and analyzed.

Another reoccurring theme in studies of gendered technology is the implications of gendered divisions of labour. This idea was considered by Ronald Kline (1997) in an article he wrote entitled “Home Ideologies: Progress?”. In this article, Kline noted the political motivations in the early 20<sup>th</sup> Century that helped to construct a narrative about new domestic technology. He noted popular claims that new technologies would be helpful to the overworked United States farm wife; however the data collected about the working hours of farm wives

showed that this popular assumption was not supported. As it turned out, the introduction of new technologies brought forth greater expectations of cleanliness, that more chores would get done, more intricate processes and new norms for certain domestic duties. This example illustrates how social structures and political agendas shape the desire for new technologies, which sometimes have unintended consequences, namely with regard to the gendered division of labour. It also shows the ways in which technology and its uses is subject to change and influence by the users themselves. The next section will explore the importance of users on the consequences, impacts, and influences of technologies.

### Users Matter

How users interpret technologies has an impact on the way that they evolve, as well as how successful they become. This point is nicely illustrated through Ronald Kline's and Trevor Pinch's (1996) analysis of the automobile in the United States. The dominant perception is that the creation of automobiles was a prideful and enamoured time for people in the United States, and was the catalyst to fortifying American's unbreakable love affair with cars. This is not entirely true as the arrival of automobiles in the early part of the 20<sup>th</sup> century was met with much hostility by some social groups, namely farmers and rural residents. The new cars were seen as incredibly loud, and thus disturbed the peacefulness of rural life, bothering the livestock. These disturbances led to an antagonistic relationship between the urban, rich car drivers and the rural residents, giving rise to both legal and illegal tactics on the part of farmers. Many farmers pushed for legislative control measures, such that cars had to slow down or come to a complete stop if they were near horse-drawn vehicles. They also put spikes on the road, threw rocks, and

created large ruts for the cars to get stuck in. Interestingly, some of these tactics led to the design of improved models to better withstand the pranks.

As one would guess, the anti-car movement failed. This was due in large part to manufacturers producing more cars designed for country roads. This opened up the market to rural customers and eventually, gasoline cars were also supported by laws and major marketing campaigns. The adaptation of the car to rural life happened for some families as early as 1903 but was not always used strictly in its transportation capabilities. The motor was seen as a source of power that could be manipulated to help with various farm activities, including grinding, corn shelling and running other agricultural machines. It was also used for some domestic duties, such as running a washing machine. This demonstrates that transformations can happen to a technology as a result of a new social group taking hold of it. Designers even began to sell kits to facilitate using the motor for farm activities and chores.

Another testament to the importance of users is in the designer's efforts to anticipate the needs of users from the onset. Lindsay (2003) presents three different methodologies employed by producers to try and anticipate their target users in an effort to best cater to their needs in the design process. The first was identified by Thierry Bardini and August Hovath (1995) and is called the "reflexive user." This is when the developers consider their own image as representations of the future users. The second was coined by Steve Woolgar (1991), and is termed the "configured user." This is when the developers anticipate the identity of future users, and then functionally constrain their actions through the physicality of the artefact. This means that the artefact is designed to discourage certain kinds of behaviour and encourage others. A third method was considered by Madeleine Akrich (1992), which she terms the "projected user." This is different from the other methods as the designers are envisioning a specific profile for the



people who will be using the products. “The projected users are defined with specific tastes, competencies, motives, aspirations, and political prejudices” (Lindsay 2003:31). This information is then used to inscribe a script into the content of the artefact, reflecting the imagined needs of a very specific person. As such, the designers expect the projected user to share certain personal characteristics.

Lindsay rejects the first two methods on the grounds that they fail to account for how users might change when the technology hits the marketplace. Therefore, those methods neglect the role of the users in shaping their own roles, as well as the ability to negotiate the role of the technology in their day to day lives. Akrich’s framework is also guilty of creating a static user, but she does at least recognize that the actual user may not correspond to the imagined one. Instead, “I [Lindsay] propose that ‘user representations’ encompass many other imagined users, and that these user constructions are not built, and do not exist, in isolation” (Lindsay 2003:32). This diversity is likely present in Tomboy Tools as well so that the identities, needs, and interpretations of their users may be varied and may change over time.

By speaking to company executives, I can explore the ways in which they have anticipated their users and informed their identities, needs, and gender related roles. This will help to establish how executives envision women’s changing gender roles, and how this comes through in their tool-line and their marketing. Juxtaposing the executives’ understanding of the tools and lifestyles that are presupposed with that of the users will help highlight the tension and resistance that is embedded in attempting to re-gender a traditionally male dominated area of home repair. Since gender is seen to shape technology, and is simultaneously shaped by it, both gender studies and the sociology of technology would benefit from a gender focused analysis of concrete case study of gendered artefacts. Tomboy Tools should provide an informative case

study to examine these issues, as this company was founded and continues to grow by creating and servicing a women's market, but by transforming a traditionally male market of home repair.

I am interested in examining the co-production of artefacts and the social with particular attention paid to gender. More specifically I am going to examine the social forces involved in Tomboy Tools and the way that their marketing strategies and products are influenced and conceptualized by women in general. SCOT will be an effective framework for these purposes particularly given its emphasis on the importance of users in relation to technology and emerging artefacts. I also plan on analyzing the role of the tools themselves, as materiality that interrelates with users and also carries implicit messages about appropriate user behaviour, and by extension appropriate female behaviour. Since SCOT tends to ignore the causal role of materiality I will draw on concepts from ANT for the part of the discussion that relates to material artefacts. ANT, however, tends to ignore the influence and impact of gender and power dynamics which I consider an important focus for my research. Therefore, as an extension of Winner's (1985) argument that artefacts have politics, I will consider whether artefacts have gender and the kinds of impacts that material artefacts can have on gender and vice versa. I will also draw heavily from techno-feminist literature as it goes beyond generic considerations of technology and material artefacts to consider the important intersects of gender.

Using a social constructivist methodology I will draw on qualitative data from interviews, participant observation and discourse analysis to examine how gender both shapes and is maintained by this example of a feminized material culture. The following section considers my research methods in more detail.

### Chapter 3 – Methodology

My research uses the methodological approach of grounded theory (Glaser and Strauss 1967, Charmaz 2006, Clarke 2005) to examine the complexities and contradictions within gender, and the cultural artifacts that support various gender scripts using the case of Tomboy Tools. As such, grounded theory is well suited to the exploratory nature of this study, since companies that sell tools and repair techniques to women are relatively new (only appearing in Canada in 2003). Therefore women's experiences and perspectives in relation to these tools have been largely unexamined up until now. Rather than testing or forcing various theories prior to my research, I believe the grounded theory model allows for an openness and flexibility to allow ideas to emerge as the research goes on. This allowed me to account for the interplay of my early theoretical interests with emerging data, so that my concepts and empirical field work were mutually reshaped through the research process.

In the debate between traditional grounded theory (Glaser and Strauss 1967; Glaser 2007) and newer, more constructivist departures (Charmaz 2006; Clarke 2005) I side both in theory and practice with the latter. I do not propose to approach the research site with a blank slate mind, or pretend that my research, data collection, and interpretation proceeds without any prior theoretical knowledge or perspective. Indeed, I was highly influenced before entering the field by literature on the social construction of technology and cultural artifacts (Pinch and Bijker 1984; Kline and Pinch 1996; Mackenzie and Wajcman 1985) women's relationship to technology (Wajcman 2004; Faulkner 2001; Oldenziel 2003; Cockburn and Ormrod 1993), and broader feminist issues surrounding gender inequity. As such, my choice of the subject, the ways that I organized the research process, and the manner in which I collected my data were all guided by these conceptual orientations and interests. Acknowledging these preconceived

inclinations distances myself from the positivistic notions associated with traditional grounded theory and allows my theoretical ideas and standpoint to energize and guide my data collection. Along with recognizing this bias I also reject the notion of arriving at a single truth through research with human participants. As Charmaz states, “It is very hard to ignore the position of observer, as well as the issues around truth and accuracy. There are always tensions there because truth can be local, relative, historically based, situational, and contextual” (Puddephatt 2006:9). Nevertheless, and in line with traditional grounded theory practice, I maintained an openness to explore new themes as they were made present by my observations and interviews; through the processes of “exploration and inspection” new ideas and theoretical connections emerged continually through the research process (Blumer 1969). However, unlike traditional grounded theory assumptions, I believe in the need to be explicit and reflective about the conceptual choices made in the research process, and how these relate to practical research decisions, before, during and after the research has been completed (Puddephatt, Shaffir, and Kleinknecht, 2009).

In order to examine the ways that women were conceptualizing Tomboy Tools as a company, I conducted a content analysis of the company’s electronic and print media in order to better grasp the kinds of messages typically conveyed by the company. I also performed field work by attending three “tool parties” and one consultation, which allowed me to experience the procedure of the parties first hand and to examine the relationship dynamics amongst the women and between the women and representative. Finally, I engaged in eight semi-structured interviews with potential “users” who had been exposed to the products, as well as two salespeople and executives from the company. These were intended to provide insight into the ways in which potential users were conceptualizing the tools and the ways that executives were

negotiating design choices with user profiles. I will outline these research phases in more detail below.

### Content Analysis

Part of my prior knowledge about the women's tools movement came from my exposure to books and television show descriptions from other media that focused on home repair and targeted women. Although tools and home repair media for women is still a small field I was curious to examine the patterns and messages that were present so that I could juxtapose them with those found in promotional material for Tomboy Tools. I found numerous instances of hyper-feminine imagery, in the form of highly recognizable stereotypical female codes, as well as an emphasis on empowerment discourses. For example, there is a series of books produced by Mag Ruffman which target women and encourage home repair. The imagery in these books is explicitly feminine and Mag herself is often depicted in exaggerated feminine poses and attire. I was curious to see if this was going to be the case with Tomboy Tools as well.

I also reviewed posts from a web forum available on the United States version of the Tomboy Tool website in order to create an initial understanding of the company itself and the issues brought up by users. The forums are discussions generated by users of the products. The discussion topics are grouped by category which made it easier to access those that were pertinent to my project. For example I examined posts categorized under "pink tools" and "women in the trades." This helped my initial understanding of the issues and discussion that is generated by this company so that I could start to think about pertinent research and interview questions.

I began my systematic research method by analyzing the content of the promotional material put out by Tomboy Tools. This was helpful as introductory research into the company but also allowed me to examine the intended messages and discourse provided by the company in order to compare and contrast the ways users were interpreting and negotiating these messages. I examined flyers, websites, slogans, forums, and a book put out by the company. Content analysis allowed me to analyze the interests and agendas at work in the written text and imagery conveyed by the contributors (Spencer, Ritchie and O'Connor 2003). I looked for continually emerging messages and their contexts within these mediums. I also analyzed the imagery within the promotional material. Imagery can be particularly important to consider as the messages conveyed through pictures are subtle but telling about the kind of woman the company imagines in their consumer profile. While reviewing the various forms of promotional material available from the company, I was looking to see what kinds of messages were recurring. Based on marketing tactics used by other companies that target women I focused on looking for messages that emphasized positivity and encouragement which I identified on the basis of the language that was used. I was also looking for references to recognizable female-centric themes and images, such as the use of pink for text, background, pictures, and so on.

I was also interested in examining the kinds of jobs that are outlined in the flyers and on the websites to see if Tomboy Tools are encouraging certain kinds of jobs over others. I wanted to examine the tips that were provided for handy jobs to see if they were for simpler handy jobs which served to make aesthetic improvements or if they included tips for larger jobs such as building decks, fences, fixing plumbing and so on.

### Participant Observation

As my research involved human subjects, I applied for ethical approval from the Research Ethics Board at Lakehead University. I began my investigation by contacting a sales representative from Tomboy Tools to inquire about attending a “tool party.” My presence at the “tool party” would allow me to make field notes while engaging in participant observation and to make contact with a potential sample for interviews. I acquired the contact information for the representative from the Tomboy Tools website underneath “Find a Consultant” and then “Ontario, Thunder Bay”. I chose to call the first number on the list. I inquired about the “tool parties” and asked if I could attend one some time in the near future. Although she was presenting at one the next day she informed me that I could not attend, since the host is responsible for inviting their own friends and family. She informed me that she would be happy to present if I wanted to throw a party myself. I explained that I would like to do that at some point but was very interested in seeing some of the product line as soon as possible. She then invited me to her house the following day for a “mini” version of what she would present at the parties. This gave me a chance to see some of the tools and discuss the company and product line with her. I took field notes immediately after our meeting and later transcribed them. This was a useful introduction to the product line and main messages of the company, even though the presentation did not wholly represent the Tomboy Tools sales model in the home party format.

I proceeded by enlisting a friend of mine to host a Tomboy Tool party and to invite her family and friends. I repeated this procedure two more times, such that I attended one consultation and three “tool parties.” As a researcher engaging in participant observation I had to decide whether I would take on a covert or overt approach to the fieldwork, and the ethical issues related to each. Ideally perhaps, “participant observation is to live amongst the group in

their natural setting [...and] to upset that setting as little as possible, and in order to do this we hope that they will forget about us being there and act naturally” (O’Reily 2005:87). This portrayal involves being open and honest about research intentions, and spending the requisite time required for the participants to adjust, such that the setting returns to equilibrium, appearing again to be natural and undisturbed despite the presence of the researcher. However, given the short length of time of “tool parties,” I could not count on the party proceeding naturally if I declared my research intentions to the group. I decided to be open and honest with the host, as I was requesting their assistance in throwing the “tool party.” Also, some of the people knew of my research area based on an overlap of friends and acquaintances that attended. However, I did not declare my research intentions at any of the parties and participated in the same manner as if I were there solely for the “tool party” experience. Attending a selection of “tools parties” provided valuable insight into the group’s typical behaviors and gender-specific norms. The observations made during these parties led to a great deal of insight about the perspectives exhibited by the representatives and women about the tools, and the messages that were explicitly conveyed and “sold” during the proceedings. I found the home party marketing strategy to be an extremely important part of the company’s business.

Participant observation is particularly valuable for qualitative research, since it allows for observation in a natural setting and also permits researchers to provide insight into the phenomena based on their own experiences (Ritchie and Lewis 2003). It is also a form of accountability for responses from interviews. Sometimes people’s responses do not accurately reflect what is actually going on in the field. This can be on account of attempting to remain kind, polite, diplomatic, and so on. Ideally the interview dynamic would allow for complete openness but the reality is that numerous variables enter in so that the social game is still being



played. These miscommunications may be intentional or unintentional; nevertheless, critically observing the setting being discussed helps to check out what was said in the interviews. Further, attending numerous “tools parties” provided valuable insight about the setting in question, enabling me to ask more informed questions and guide the discussion towards topics that I had identified as important.

Each “tool party” took place in the home of the host and varied between 5-9 women. There was a different Tomboy Tool representative at each party, so I could identify patterns that were common to all parties I observed, and were not simply related to a particular consultant. Each party lasted between 3 and 4 hours and consequently I accumulated approximately 14 hours of field work. I typed field notes after the consultation and after each party. The field notes varied between 6 and 7 pages each. The nature of the party made it so I had a catalogue and pen in my hand. This allowed me to write down any key words that I felt were particularly important to remember for my field notes. Initially, I was predominantly concerned with remembering the ways that gender was discussed and performed. Therefore, I was especially attentive to the elements of the parties that I found to be particularly gendered, and was careful to describe these instances with more detail in my field notes. This is an instance of the “constructivist” aspect of my grounded theory approach as my acquired knowledge about gender and technology led me to focus my observations accordingly. Upon further research into the home sales model, after I had collected the data from the parties, I found this marketing strategy happens to have a history associated with marketing products to women. Reviewing my field notes with this new information revealed more themes in addition to the gendered one such as ritual elements, “liminoid” phases, idealized symbols and so on. This represents the openness of the grounded

theory approach that allowed my research to take me into new directions and account for emerging concepts and themes that I definitely did not foresee at the outset.

### Semi-Structured Interviews

Interviewing users of the products and executives from the company was very important to my study. Speaking with users is increasingly seen as important to understanding technology (Oudshoorn and Pinch 2003) and a number of sociology of technology case studies in the past that dealt with gender did not benefit from speaking with the users themselves. For example, Ellen van Oost's (2004) study on the gender script incorporated into women's shavers did not include any interview data. The same is true for Leslie Regan Shade's (2007) study of the gender scripts of mobile telephones. As such, the perspectives of female users were left silent, and up to the imagination of the researcher and the reader. The fact that I could conduct detailed interviews was a boon for my project, and allowed for an insider's perspective on the company and how the tools were interpreted. The interviews also allowed me to elaborate on my participant observation findings that may have required further explanation. The interviews were a perfect compliment to my participant observation notes as they allowed me to analyze the unobservable perspectives "of the tool parties," and flesh out the meanings of the company's messages to insiders/participants. I conducted interviews with users of the products (both those who support and who resist/reject the product line), as well as salespeople and executives from the company in order to compare and contrast responses from both customers and merchants.

I conducted two interviews with executives from Tomboy Tools in order to gain some insight into their perspectives on the design of the tool line and the marketing aspects of the company. I interviewed one from the Canadian branch of the company and one from the United

States branch. I contacted both initially by e-mail. I found the e-mail addresses either through the website, or by calling the company directly. Both interviews happened over the phone, since there were geographical barriers with both women involved. The interviews lasted between 45 minutes to an hour and were audio recorded with the verbal permission of both participants. Examples of questions for executives included: what do you see as the goal of the Tomboy Tools? What kind of feedback have you received about the products? In what ways do you see this technology being empowering for women?

In terms of the sampling for the potential users, I already had contact information from some of the people at the “tool parties” as I knew them from before and simply asked for contact information from those that I did not know. I also used snowball sampling, as some women referred me to friends who were also users. I selected women who had some experience with the company, but who were not necessarily active users of the tools. This is because I was also interested in interviewing those who resisted and/or rejected the concept of the company. I contacted and interviewed eight women, six of whom had attended a “tool party” and two who had attended a company presentation. I contacted each interviewee by phone and asked them to participate in the interview. After each agreed we decided on a time and location that was convenient for them.

The potential users ranged from 23 to 64 years of age. All of the interviewees were white and of a middle class background. All of them had some contact with the company and products, but their experiences with Tomboy Tools varied. Some women did not own any tools and were resistant to the idea of the company, while others owned plenty and were active users. Given the size of my sample it is fair to say that it is not representative of the general population as my sample was taken from a town in Northern Ontario and therefore is not representative of

potential customers from across Canada, nor around the world. There was no available demographic information on the Tomboy Tool users except that they are women. I asked executives to describe their target audience in hopes of getting a common user profile but their responses were vague because of the diversity of women who are users of their products. Further, I was interested in assessing not only profiles of users but also resisters and the ratio between the two. It was difficult to gauge how much of the general female population would be resistant to this company's products or ideas, particularly since they are a relatively new company and therefore there are many women who have never heard of them. That being said many of the people I interviewed had mixed reactions to various parts of the company's products and strategies but there was an approximate balance between users and resisters.

The total number of interviewees was somewhat limited. Although qualitative research tends to deal with smaller numbers of respondents, admittedly the generalizability of the study could have increased if the sample size were bigger to see if the patterns held true throughout a larger sample of participants, over a larger geographical area. However, I also felt that it was important to conduct in-depth interviews and therefore the sample size had to be somewhat limited in order to fit the scope of the study as I was working under time and financial constraints. I was very satisfied with the rapport and level of depth achieved with each interview and I am not it would have been possible to achieve this with a larger sample size.

I provided each interviewee with a copy of my research letter. I informed them that I would make an effort to uphold anonymity and confidentiality throughout my analysis before each of them signed the consent form. The interviews lasted an average of 45 minutes to an hour, and with the respondent's permission, were audio recorded. Interviews were face-to-face and consisted of semi-structured, largely open ended questions. An interview guide was created

prior to the interviews that outlined topics I was hoping to cover in relation to the opinions about the products and the company. Separate sections of the guidelines were used depending on if the participant tended to support or resist the company. Examples of questions for supporters consisted of: how did you become involved with these products? What about the tools do you like? And would you change anything about tools made for women or the techniques presented for women? Examples of questions for resisters included: what it is about the tools that you don't like? While they may not be for you, do you see a place for these tools for some people? What, if any changes would you make to the tools? Although the questions were informal and may have changed in wording most of the same topics were covered throughout each interview.

I was also careful to accommodate new conceptual directions throughout as necessary. This flexibility is helpful for exploratory research as it allows for new and unforeseen ideas to be introduced, which is an integral part of grounded theory (Strauss and Corbin 1990). I used both "content mapping" and "content mining" questions during the interviews (Legard, Keegan and Ward 2003). Content mapping consists of broad questions that are intended to allow the participant to identify dimensions and issues that they feel are pertinent to the topic at hand. For example, participants were asked general questions that included what their experience was like with Tomboy Tools? What they thought of the products offered by Tomboy Tools? What they thought of the marketing utilized by the company? What they thought about traditional gender norms and roles in comparison with the company's goal, products and marketing techniques? Content mining questions are much more detailed and are intended to break down the identified issues and dimensions to create in-depth understanding of what the participant is trying to express. I also provided follow-up questions based on responses in order to have participants think critically about their responses and to facilitate a more in-depth interview experience. This

is particularly helpful when dealing with concepts that have become “naturalized” such as gender. Issues surrounding gender have become so ingrained that it can be difficult to remember that gender is socially constructed. Therefore, further probing can aid in critically questioning seemingly “essential” gender traits. I took notes throughout the interviews so that I could keep track of comments that I could follow up on later.

All of the interviews followed in the tradition of feminist research practice (Smith 1989, Harding 2004). Giving women a voice for their experiences and an opportunity to discuss issues important to them has been a long standing goal of feminists. However, some feminist scholars (Olesen 2000; Phoenix 1994; Stacey 1998) have illuminated the dangers of researchers exploiting or distorting women’s voices through research. “Even though researchers and participants may both shape the flow of silences and comments in an interview situation, the researcher who writes up the account remains in the more powerful position” (Oleson 2000:231). As a researcher coming from a liberal feminist standpoint, I felt that it was important to be aware of this power dynamic. Although it is impossible to eliminate entirely, my awareness of these issues helped me to reflect on the ways in which my interests may have mediated the way in which the interview played out, as well as my written interpretation of the women’s views. Although there has been an increased sensitivity surrounding some of the ethical, political, and methodological issues associated with in-depth interviewing, it is agreed that it remains a central and productive method for feminist research by tapping into women’s experiences (Oakley 2000).

### Analysis

Once all of the interviews were transcribed from the audio recordings I read through all of them together. During the second read through I began to identify more specific themes. I would acknowledge each theme by assigning it a number and creating a legend containing all of the emergent themes. For example, “1” would correspond with “gendered aspect of tool party.” I identified ten main themes in all including “tool use as empowering,” “practice constraints,” “symbolic gender boundaries,” and so on. If there were subthemes for any of the categories I used letters to accompany the numbers. For instance “2” corresponded with “discourse of cute,” subthemes were represented as “2a – pink as cute,” “2b – company name as infantilizing,” and so on. There were twenty-five subthemes in all. When I was through coding the data, I cut and pasted the numbered passages into a new document so that all quotes relating to a particular theme would be grouped together. I then analyzed the quotes according to the key themes. Quotes that dealt with multiple themes were given multiple corresponding numbers and were either separated into parts according to the theme or else used in the section of the analysis that was most suitable. New themes emerged and pre-identified themes became reorganized throughout the writing process.

Combining the results from content analysis, participant observation, and interviews provided me with rich and varied data for my analysis. The interviews with users and executives were especially useful, particularly since interviewing users is a relatively new trend within case studies of material artifacts. The interviews also allowed me to combine my own inferences about the implied messages and projected practices of the tools with those of other women. Asking women how they viewed the design and technology of the tools, and what kinds of jobs and practices they engaged in with the tools, allowed me to better account for the material agency of the tool-line in my analysis. My constructivist grounded theory approach allowed me

to apply my initial research into gender and technology with the themes and concepts that emerged from the data. The small sample approach was helpful in attaining the kind of rapport with participants and the depth of interviews I was hoping to achieve.



#### **Chapter 4 – The Co-Construction of Gender and Material Culture: An Analysis of the Design Strategies in “Tomboy Tools”**

Feminists have long challenged the assumption that technology is gender neutral and have shown the ways in which women are systematically alienated from its design, production, and use (Wajcman 2004; Cockburn and Ormrod 1993; Faulkner 2001; Oldenziel 2003). This implicit masculinisation is propagated in how technology is designed, who uses it, and how it is implemented in everyday life. Feminist scholars have illuminated the dominance of male actors in all of these three areas, and have questioned the implications of this monopoly, in how technology structures our lives both at home and in the office.

On the other hand, others have argued that women are uniquely positioned to make use of new forms of technology, especially in the areas of communications, since these applications play to women's unique strengths over men (Wajcman, 2002). Further, the design of material culture and technology has often targeted and exploited the needs and dispositions of female users (McGraw 2003 ). Many technological artefacts have transformed their designs to be more appealing to women (van Oost 2003), opening the possibility that some aspects of material culture have served the needs of women along with men, and perhaps newly transformed versions of certain types of technology liberate women into spheres in which they have not traditionally had access. Tomboy Tools' feminized versions of tools thus may represent a panacea for women who have for years been denied independence in the traditionally male sphere of home repair. By designing the tools in a way that may be more appealing to women, the traditional alienation of women from home repair is overcome, and women are capable of entering a domain that has traditionally been closed to them. On the other hand, the feminine design of the tools can be seen to drastically limit women on all of these counts as well, by

placing boundaries of the kinds of work women can do with the tools, as well as their capabilities and perceived weaknesses that the tools are designed to overcome. Do Tomboy Tools construct a free, liberated woman tackling obstacles to bravely pursue home repair, or a cute, dainty housewife who is now able to fix a few odds and ends around the house without having to worry about trading in her femininity?

This chapter will examine the implicit and explicit gender codes inscribed in the design of Tomboy Tool's products. Throughout this analysis I argue Tomboy tools are embedded with female gender scripts that act to "co-construct" both gender and technology through a mutually supportive process (Wacjman 2002; Faulkner 2001; Jasanoff 2004). Specifically, I will discuss the technological design of the tools, with specific attention paid to weight, size and ergonomics, and the unique alterations made for easier use. However, I will consider how these design decisions also carry implicit messages in terms of the "projected user" (Akrich 1992), the assumed limitations of the typical women who are to use them. I then consider the aesthetic presentation of the tools and the impact of this on the overall message put forth by the company. I will draw extensively on interviews from both designers and users of the products in order to understand their interpretations of the tools, and what they believe the larger messages are in terms of women's potential changing role in home repair. Finally, I reflect on this examination to consider the women's tool movement generally, and its connection to broader feminist issues. Throughout my analysis, I try to balance the challenges of discussing gender without paradoxically reinforcing the very stereotypes and gender codes that are being deconstructed within the design of the tools or its aesthetics.

### Challenges of Empirical Research on Gender

There has been a long standing dialogue in feminist studies as to whether gender is a social practice or an institution, and thus whether it is a matter of doing or being, respectively (Butler 1990; West and Zimmerman 1987; Offenberger and Nentwich 2009). Judith Butler (1990) views gender as a performance, so that people are performing their gender when they choose to subscribe to pre-existing gender codes in their daily lives. Goffman (1977) references institutionalized gender when explaining his concept of institutional reflexivity. He uses the example of men and women having designated washrooms. This organization seems like a natural separation of the sexes but it is in fact helping to create and reinforce this constructed difference (Offenberg and Nenetwisch 2009:4). This is an example of institutionalized gender, and helps to show the way that “practicing gender by inscribing it into the materiality of public toilets, public spaces, private homes, technology, etc. supports the perception of gender as natural, unhistorical, stable and not for change” (Offenberg and Nenetwisch 2009:4). This dichotomy of institution and performance presents another example where the two sides are reinforcing each other. Institutional gender encourages people to perform in certain ways according to their gender and these performances in turn reinforce the “need” for institutional gender. Therefore, it is important to consider gender as both an institution and performance, all of which draw centrally on broad arrays of knowledge, varying sets of expertise, and different kinds of material artefacts.

It has been argued in feminist science and technology studies that technology is anything but gender neutral, since science, technology, and engineering has been historically designed and driven by the ideas of men, is seen to serve men’s interests, and largely represents the world from a specifically male point of view (Harding 1986; Haraway 1991; Akrich 1992; Wajcman

2004). These arguments can be extended from the realm of science and technology to other material artefacts such as tools, as we see gender codes inscribed into the products people typically use in their prescribed institutional contexts of gendered performances. The codes embedded in material artefacts, in turn, construct user contexts and contain both implicit and explicit messages about appropriate user behaviour. As a result, such products are designed with a “projected user” in mind (Akrich 1992). That is to say that inventors and designers must try to imagine the wants and needs of their target audience or demographic, and construct their products to conform to that image. Choosing certain characteristics to conform to gendered expectations not only “display[s] assumptions about the symbolic gender order and its ‘typical’ forms of work division, differences in characteristics, taste preferences, interests and competences, but are also enabling certain constructions of gender, thereby excluding others” (Offenberger and Nentwich 2009:2). For example, if kitchen appliances are continually designed as pink and petite with smooth edges, they tend to carry a female gender script that is meant to appeal to women’s tastes, implicitly reinforcing kitchen duties as “women’s work.” This example shows the way that material objects and inscribed gender codes can influence behaviour and reinforce the gendered division of labour.

Madelaine Akrich (1992) refers to the gender inscribed in an object and the actions that it persuades as a “gender script.” As Oudshoorn and Pinch (2003:10) explain, “Technologies are represented as objects of identity projects – objects that may stabilize or de-stabilize representations of gender.” Thus, while there may be an intended gender script of some kind infused into them, objects can become “de-scripted” as they are actively put to use and negotiated by people in novel contexts. Gender is considered an important variable when creating a user profile so that objects tend to reflect and enforce what are considered to be men’s

and women's respective colours, tasks, shapes, and so on. The inscription of gender can be found both in terms of the design of a technology but also in large part through aesthetics. Thus, analyzing design from both technical and aesthetic perspectives is important to the discussion of how gender is implicated in material artefacts.

Analyzing design from multiple perspectives relates to the importance of considering a multitude of variables and the ways in which they work together in a network. Latour's (1991) actor network theory illustrates this well, considering both humans and non-humans as actants that are working together in a network, such that each co-constructs and impacts the other. Sheila Jasanoff (2004) also deals with the theme of co-construction in relation to scientific knowledge, social institutions and discourse. Jasanoff states that "in broad areas of both present and past human activity, we gain exploratory power by thinking of natural and social orders as being produced together" (2004:2). I argue that this co-production theory can be applied to technology and gender and specifically in this case to Tomboy Tools. Although their purpose is to create tools for women the tools are in turn conveying messages about gender. The case of Tomboy Tools is particularly interesting given that the technology being designed is inherently considered a "male technology." Therefore inscribed female gender codes and scripts become particularly noticeable. These inscribed gender codes can be seen in the design of technology, but can also be seen to shape gendered expectations and behaviours through the images given off, and the ways that they are used in daily life; hence material artefacts and gender co-construct each other through the interactive process of design and use. As Faulkner (2001) explains "gender and technological artefacts are both source and consequence of the same process respectfully" (Offenbeger and Nentwich 2009:3). This co-construction is present right from the innovation stages of a technology through to the way it is put into use.

Stereotypes of what characteristics are essentially male and female is one of the reasons that studying symbolic gender codes is problematic. Gender codes tend to be split into simple gender binaries (e.g., blue is for boys, pink is for girls). These binaries are well ingrained and so their symbolic value “becomes real in its consequences,” a la W.I. Thomas, but even then, they fail to account for the complexity and fluidity of gender. The other issue with these binaries is that they are set up in a hierarchy whereby male associations are often placed at a higher value than the female. For example, women tend to be associated with passivity and weakness and men with aggression and strength. Of course, referencing these binaries and discussing the way they interact with technology is in and of itself a way of acknowledging them and to a degree reinforcing them. When gender is assumed as a binary construction, this can become reified by the research itself (Offenberger and Nentwich 2009). As Linstead and Brewis (2004:360) ask “how can we write about gender and acknowledge the importance of gender, without reproducing the problematic aspects of the gender binary?” (cited in Offenberger and Nentwich 2009). Focusing on binary assumptions about gender in the discussion of Tomboy Tools has the disadvantage of essentializing assumptions about gender while simultaneously trying to deconstruct and challenge these assumptions at the same time.

These are important issues to consider in order to properly contextualize this research. Although it is easy to reduce gender to simple binaries it is important to remember that these are constructed ideas and that gender is in fact much more fluid and complex. The close associations between gender and technology also illuminate the idea that “masculinities and femininities are constituted simultaneously with the production and consumption of technologies. The key argument here is that our relationship to technology is pivotal to the discourse of gender dualisms and gender difference” (Wajcman 2002:358 cited in Offenberger

and Nentwich 2009). The analysis below will reveal how gender scripts are inscribed into the design of Tomboy tools, and how these scripts are simultaneously constructed, reshaped, and reinforced by the technology and their interpretation and use by women.

### Gendering Design in Tomboy Tools

The stated goal of the Tomboy Tools company is to design tools that are better able to service women as effective tool users. For this reason the changes made to the technological design of the tools are explicit attempts to tailor them for use by women. Identifying and catering towards relevant social groups is a common step in the innovation process. The needs of these relevant social groups are based upon the same set of meanings that they ascribe to a particular artefact. Gender is often a variable since it is frequently assumed that the needs of men and women will be different. For example, in the evolution of the bicycle, (Pinch and Bijker 1984) women had to be considered as their own social group since they had specific needs relating to safety and their customary clothing style at the end of the 1800s. Safety was a need identified by other social groups as well, such as the elderly, and therefore the “safety bicycle” went through a number of prototypes before settling through processes of closure.

Based on the goal of Tomboy Tools, it was clear that women who have had little experience with tools would make up a relevant social group for their purposes. One executive described their target market as:

You know we're trying to hit the market of the women that for the most part have not had the opportunity to work with tools in the past but so much want to and are tired of waiting for someone else to do it for them or tired of paying a large expense for a simple fix or repair. (Respondent 9)

This description is specific since women as a category fails to account for the heterogeneity of the group. It does, however, provide a general place to start. Therefore the company has identified women as having traditionally less upper body strength and traditionally smaller hands in relation to the majority of men. They have used these assumptions to provide tools that account for these differences. The amendments revolved around three main areas. The first is to make the tools lighter. The second is to ergonomically manipulate the size and shape of the tools to comfortably fit women's smaller hands. The third is to make various creative amendments to the tools that make handy jobs easier, and ideally, less intimidating, for a population who is assumed to be less skilled in tool use. I will review each of these focuses below and show how these changes are interpreted by potential users. I will also discuss responses from potential users who were asked about benefits and drawbacks of these tools for various populations. Finally, I will analyze whether these changes to the tools affect or constrain the jobs that can be done with them.

Some of the tools made by Tomboy Tools are patented to their company while others are moulds that they have sourced from manufactures that have the specific features they are looking for. One executive was asked what they look for in designs and made reference to all of the main areas when she responded:

So the elements that are considered when we are designing, re-designing, or just sourcing [are] size, shape, weight, I'll say ergonomics and by that I mean some of the features for example on our pliers, I don't know if you've noticed at any of our parties, there's little wing tips that come out at the top so when you are holding them your hands can't slip up past the top. On most other pliers that doesn't happen. So things like that, when I say ergonomics just making it chunkier, smaller, softer, rubber gripped, those kind of elements are all part of our design. (Respondent 8)

Reactions to the tools as lighter, smaller, and ergonomic will be further explored below.



### Making Tools Light

Making the Tomboy tools lighter than traditional tools was identified as a priority for the company. Throughout the interviews weight was an issue that was brought up often. Many of the women agreed that a lighter tool was one of the most beneficial changes that could be made to traditional tools. One woman stated:

Well I know my strength I need to have a tool...Lighter is super important. I have used a Dewalt drill which is a regular guy's drill. They are HEAVY. Like my wrist is so sore and my fingers are really sore if I use something like that. So I wouldn't be able to finish a project necessarily if I started. (Respondent 2)

Another woman acknowledged her small stature as a reason why she would appreciate lighter tools. When asked if she felt that the weight of the tool was an important issue to consider she replied:

Yes. Well in my opinion because I am a small woman. And you know, you do see, you do see traditionally it is stronger women that are using tools. Right? So that seems to be because we don't have the option, well I don't know maybe it's just coincidental but it seems to me that people like myself should be able to do basic tasks with power tools and the size of the tools shouldn't be prohibitive. Now I mean if it's something like a chain saw and you need it big enough to have enough guts to do what you need it to do. It's impossible, you can't make a mini tool out of everything but with the right material and the right design I think you could really make that. (Respondent 1)

This woman also brought up an important distinction between basic tools and larger power tools. It is easier to manipulate hand tools in ways to mitigate the weight, but power tools present a bigger challenge. Power tools tend to be much heavier, so women could benefit most from lighter versions of them. The concern with making power tools light, which came up with several women, is that the functionality would be compromised since power tools require irreplaceable inner mechanics.

Some of the women suggested using titanium as a lighter material for the design of the more notoriously heavy power tools. When asked about this, one woman replied:

Sure, absolutely. I think it would be very beneficial to make tools more usable for women. And like I say, these titanium tools because they are made from titanium so they are that much lighter so you can pick them up and put them over your head without having to be six foot tall and 250 pounds. (Respondent 1)

On the other hand, some women felt as though there was not enough of a change to make that big of a difference. As mentioned above, the hand tools are not necessarily prohibitively heavy to begin with and therefore even after modifying them to be lighter there is only going to be a marginal difference. As one woman highlighted:

Yeah, with a hammer you know I liked the product, like this is lighter and it does have a good grip but put a male hammer or a generic hammer in my hand and close my eyes and do a hand held test. Like you know, I am going to get the job done with either, like what's ten ounces? (Respondent 4)

Many of the women who did mention that they thought weight was an important issue tended to reference bigger tools such as drills and power tools. One woman agreed that weight should be addressed for the bigger tools but felt that basic handy tools did not need to be changed. This was exemplified when she stated:

Like screwdrivers are no big deal. I use guy screwdrivers all the time, that's not an issue. (Respondent 2)

One woman felt strongly that the tools became devalued as they were made smaller and lighter.

She stated that:

They're [Tomboy tools] more like a hobby kind of tool. I don't think they're really made for anything major. I use an electric saw and I use a drill and those things [Tomboy tools] are almost like toyish. Cause I'm used to using heavy stuff. (...) Depending on the type of work you're doing most...I shouldn't generalize....some women, the little delicate tools is what they need to start. But it's more of a novelty than what they actually need. (Respondent 6)

This is interesting since throughout the interviews even the women who were not necessarily in favour of Tomboy tools agreed that the idea of manipulating size and shape to better suit women

was a good idea. This women's interpretation, however, diminishes the idea that the tools can be used effectively by more serious handy-women.

### Size and Ergonomics of the Tools

The size and ergonomics of the tools also received mixed reviews from those interviewed. One woman was in favour of the tools being smaller to fit women's hands. She states:

Like women have smaller hands. Even if I am at the gym and I am trying to test my grip strength compared to a guy. I don't have that kind of strength. I have smaller hands, smaller bones. Like a drill for example. I can't manage a drill that is designed for guys. They are impossible because of the torque on them. So one that is designed for a woman, I would actually be able to use it. (Respondent 2)

Another woman said she used her tools to renovate her newly purchased home, and was also in favour of the smaller size. When asked what she liked about the tools she responded:

Just that they're so light and they are easier to use. I find they are a bit shorter. Like the hammer is shorter than a big hammer so it's easier to use. (Respondent 5)

Another interesting response came from a woman who felt that the tools were too small for her hands. This represents a response from someone who does not fit into Tomboy Tool's presumed physique of a woman. When asked if the amendments made to the tools were more accommodating to her this particular woman replied:

Not for me, really. I mean they do have a couple of neat features, sort of. I have pretty normal size hands so the little gloves don't really do anything for me. A smaller hammer it's not really a big deal for me, I grew up using normal hammers, I mean the tape measurer had the extra ticks which was sort of handy but I mean all tape measurers should do that instead of just the ones marketed to women. But yeah, I don't really see the need, personally. But that's for me, I don't know about for other people. A smaller hammer may be easier for someone with smaller hands or someone who was petite and that might be easier for someone to use, or an older person. (Respondent 7)

This illuminates the risk of considering women as one homogenous category. It is clear that the group as represented by the term "women" encompasses infinite variations. This also shows the

limitations of considering women in general as a relevant social group during the innovation process as well as in relation to the “projected user.”

### Adding “Female-Friendly” Features

Tomboy Tools have added various mechanisms and features to the tools in an effort to try and make the work easier for women. Most everybody who was interviewed appreciated these features. The magnetic nail holder atop the hammer, in particular, received a lot of positive attention. As one woman excitedly stated:

I was really impressed with the hammer. I thought that was a great invention...not invention but modification of the old school hammer. And she actually had me bring up an old hammer that I had found in the basement just to make a comparison. And Tomboy hammer, I think it's the best thing in their product line...that magnet thing! (Respondent 4)

Other modified features included extra ticks on the tape measurer so that measuring would be exact. One of the women who purchased the tape measurer stated that:

Umm...most of the time we don't use the extra ticks...actually the ones on the inch side are kind of handy because I really suck at fractions and cutting them up but the other side, it doesn't really matter. So I guess they are sort of useful. (Respondent 7)

One of the Tomboy Tool's patented products is the modified paint roller. One of the executives explains the changes that were made to the paint roller and why it is helpful:

[W]hat we've done is a traditional paint roller has the handle and you hold it, what I will say vertically. Your hand wraps around it vertically and you go up and down with your wrist going up and down. What we've done is put a cross handle on the bottom that allows you to hold the roller overhand. So now what that allows someone, and it doesn't necessarily have to be a woman but all women fall into this category, with less upper body strength especially in the upper shoulders and arms to be able to use large muscles in their arms and all we had to do was switch the orientation. By holding yourself vertically you're using very small muscles in your arms and soon as you switch the hand the other way, now you are using the big, large muscles which means you can go longer with less fatigue. (Respondent 8)

Many of the special features to make jobs easier, as mentioned above, are not necessarily gender specific, which was an issue that came up frequently throughout the interviews. Many of the women interviewed mentioned that these sorts of changes, including size and weight alterations, could be helpful for broader populations of people. For example, the elderly, physically disabled, and people working long days with tools were all populations that were specifically mentioned who could benefit from these tool modifications. Also, some women mentioned that it could be helpful to everyone in general as it simply makes using tools easier and more convenient as long as the quality is not compromised. One woman was asked who could benefit from these types of changes to the tools. She responded:

I think that for example a construction worker who is swinging a hammer all day. I think there can always be improvements made to tools that are more ergonomic or take less power to operate. But whether or not you have to sacrifice performance would be the key issue. So if they can find a tool that can do everything the same way but with less effort than I think that it could satisfy everybody, or, more than just women. (Respondent 3)

There is also the issue of simply advertising the benefits of the tools without explicitly identifying a market. As one woman suggested:

I think that if you were to market the benefits of the tool rather than just saying it's made for women. Because I think there are certain benefits to it. I think women would recognize the fact and don't need to be told that it's for them but if they see something that says, "lighter and easier to handle for smaller jobs". I think that they would be willing to purchase that too. (Respondent 1)

In another example, one woman made reference to a book that held implicit messages of women as handy tool users, which she felt comfortable reading. She stated that:

we purchased a lot of books for home repair but none specific to women. Now I must say that the deck book that [we] bought at the beginning of the year did have a lot of pictures of women doing the work. It was very sort of bias neutral, or gender neutral. So it wasn't specifically sold to women or didn't mention that in any way but throughout the book you saw women doing stuff. I think that that makes it easier for me to look at and is more accessible to me. (Respondent 1)

Another woman acknowledged that it could be beneficial for men as well but was sceptical as to whether or not all men would be willing to purchase a smaller tool. She stated:

The tools are easier to grip and do accommodate a smaller hand. I think it's important but there are also men with small hands. I don't think it should be gender specific but would a guy really buy smaller tools because they have smaller hands. Because that would be embarrassing, no guy is going to say "I need the 8 inch pliers because my hands are small." (Respondent 10)

This is an interesting point because it reveals and reinforces some of the codes inscribed into material objects targeted towards men. Material inscribed with a male gender script is meant to be large. It also highlights the hierarchy of the gender binary since it would likely not be described as embarrassing for women to purchase a traditional, "normal-sized" tool, but one that is smaller implies unacceptable weakness that leads to embarrassment. Aside from the value judgement of smaller tools some may argue that the tools provided by Tomboy would not be durable enough to perform large projects and/or last throughout them.

#### Prescribing Gender, Prescribing Work

The design of tools impacts its utility and in so doing creates an implicit effect on the kinds of projects that can be done with the tools. Although there is the practical goal of making the tool smaller so that it is better fitted for a woman's hand, it is possible that too much of a decrease in size could compromise what the tools can do in practice. For example, a small hammer may be useful for micro level jobs like nailing a picture hanger to the wall but there is the possibility that it may not be large or durable enough for macro jobs such as hammering in the frame of a house. In that way, smaller tools may limit the bounds of what is possible in the realm of home repair. The possibility of the tools providing constraints on certain projects also means that there is implicit encouragement of other projects that can be preformed by the product line offered by

Tomboy Tools. This section considers the kinds of projects that are encouraged with Tomboy tools, which was brought up throughout the interviews. When asked what sort of jobs she felt that her customers predominantly take on, one Tomboy Tools executive replied:

[R]eally there are two camps. There are the ones that are looking for or in their homes and tackling projects that are more along the line of maintenance and repair. They just want to keep, you know, things under control. They want to make sure the base boards that have come off [are] reattached or they want to tighten or change a washer in a faucet or something like that, you know? And then we have a large group of customers that are using the tools and the products to what I'll say beautify their space. That's really what they're doing. They're watching *Home and Garden* television, they're watching *Fine Living*, they're getting the magazines and they go "huh...I really like that paint idea, I am going to do that in my bedroom and then I am going to put up a shelf and am gonna re-finish this table." So it becomes more of a creative outlet. (Respondent 8)

This hypothesis seemed to be consistent with how the women I interviewed were using their tools. Many of those interviewed mentioned wanting to have the tools and knowledge necessary in order to fix basic things around their houses. Some of those same women and others mentioned projects that would work towards improving the aesthetics of their spaces, such as painting or gardening. I would agree with the executive in saying that basic fix-ups around the house and beautifying projects were the two main areas that women hoped to conquer with their tools and knowledge. Few of the women mentioned taking on large projects. For example, this woman who comments about what projects she takes on says:

Umm...nothing too extreme. Maybe hanging pictures or shelves or fixing something quickly. But if there was anything that really needed some expertise I would call someone in who had it. (Respondent 2)

Most of them agreed that they would take on micro level jobs but many were hesitant when it came to larger projects. One woman stated:

umm... structural things kind of worry me. Like I don't have the credentials to do that and I know it's complicated with building permits and having the appropriate written plans. I also am really lucky to have family that are extremely skilled at it. I draw on

their expertise a little bit. I don't think I would ever touch electrical or plumbing or main structural things. (Respondent 2)

One woman was sceptical about whether or not the tools would be durable enough to last throughout large projects. When asked if she thought that the Tomboy hand tools were durable she responded:

It depends how much work you do with it. If you do very little Tomboy Tools are fine but if you do it very often Tomboy Tools won't cut it. (Respondent 6)

This brings up the idea of women who would be using tools a lot such as women in the trades. As one executive mentioned, women still make up less than 10% of trades people. That is obviously a small percentage and testament to the fact that tool use has traditionally been part of a male domain. It is clear that if Tomboy Tools could help mobilise more women to join the trades, this would represent a boon to their challenges to traditional gender norms. It would also reflect positively on their message to empower women. When one executive was asked about whether she sees many women in the trades who are interested in using Tomboy tools for their profession, she responded:

No, we don't and that is not our target market. I mean we do have a few that will get some of the tools. More so electricians seem to really like a few of our tools, like the eight hold impact drill and some of the smaller things. And not to say that they won't hold up, they're not top quality, they absolutely are. But our target market its all about the education and women normally who are in the trades they know how to do it. We have had a few women in the trades that become consultants and teach others. (Respondent 9)

The fact that this Tomboy executive does not think that they will have much of an impact on trades people illuminates the scale of change that they are attempting to achieve. Women using tools in general is important and its acceptability is a relatively new phenomenon but the data presented here show that many of these women are using their new found skills and tools for micro jobs around their homes. This is an important achievement; however, if confined to the



private sphere it simply adds to the domestic workload within the home where so much of women's work is done already and in that way does not necessarily challenge traditional gender roles in a large scale. Entering the realm of tools in general is encouraging but restricting this advancement to the private sphere serves to "keep women in their place."

I did come across some discussion of "women's tools" by women involved in the trades on the forum available through the United State's version of the Tomboy Tool website. The initial topic arose when one woman in the trades questioned whether or not it showed weakness to have tools specifically for women. In response one woman wrote:

I'm an apprentice electrician, I'm about as girly as they come I have long blonde hair extensions and I have pink acrylic nails. I wear pink steel cap boots, and I'm slowly building my collection of pink tools. I always, always wear a pink ribbon in my hair to work because for me it's about showing that you can be female AND a tradie! Whenever people ask me how I compare to the boys I say I work 100 times harder than they do for 80% of the respect they get, and I do it with NAILS!

A less enthusiastic woman wrote:

I've been a semi trailer mechanic for 20+ years, the only female mechanic there ever and seldom have I come across any tool that I had trouble handling because of its size unless we're talking about the 1" impact : D which weighs probably about 25/30 lbs itself. I don't think a baby crowbar or extra light hammer would do me much good. If some women want to use pink "women's" tools, I won't tell them they can't, but it's definitely not for me.

This mixed opinions from women in the trades is reflective of the feedback from my sample as well. The issue of gender performance is also brought up, particularly in the first quote. This issue will be further explored below in the section on aesthetics.

Tomboy Tools are explicitly modifying their tools by incorporating female gender scripts to do so. This is achieved primarily by making the tools lighter and ergonomically smaller in order to satisfy the assumptions that women have less upper body strength and smaller hands compared to men. They have also attempted to make creative amendments to the tools to make

them easier to use. I have shown through user feedback that these changes have been both approved and rejected by various female users. I have also shown that many of the women interviewed agreed that these changes could benefit many more populations than just women, including some men. The gender script embedded in these tools has been shown to have an impact on the projects women can envision doing, serving to place some limits on their participation in the practice of home repair.

### Gendered Aesthetics in Tomboy Tools

While products targeted to women often contain some obvious gender codes in their technological design, there are often major gender-based differences exhibited in their aesthetic design as well. This is exemplified in Ellen Van Oost's (2003) analysis of Philip's shavers. She points out that when Philips began to market their razors to women there were no accommodations made for women-specific needs. Thus, while both shavers for men and women were the same in terms of technological design, there were fairly large aesthetics changes made to women's razors in an attempt to appeal to the female market. These included making the shavers pink, marketing them with cosmetics cases, giving them a perfume odour, and removing screws from view, since it was assumed that women did not like products associated with "gadgets" or "technology."

Tomboy Tools was hoping to avoid making only a visual change at the onset of their company. As one co-founder explains:

When we started the company I remember seeing there was some company that was targeting women, I think "do-it-herself kit" it was called. And it was the cheapest tool kit probably you've ever seen. And it was insulting to us as someone who wanted to offer tools to women. And that was one of the things we put first and foremost, we wanted to be the first to offer women top quality tools and take women seriously. It was just known

as a cheap plastic pink and it was almost like toys. So we even had a slogan that said “no pink tools” with the circle around it and a pink wrench on there. But as we moved along we kept hearing this consistency back across the country and actually across the world, “we want pink tools.” And the main thing that we heard, “we want pink tools so our husband doesn’t touch them.” And that really was surprising and I cannot tell you how many times we heard this in every city across the country and what that told me was this is great because more and more women are picking up tools and wanting their own tools. (Respondent 9)

This example is testament to the importance of incorporating user feedback into technological designs. Pinch and Bijker’s (1984) social construction of technology theory and its concept of interpretive flexibility have highlighted the point that users have a dramatic impact on the evolution of a technology as well as whether or not it is successful. This is nicely illustrated in Pinch and Trocco’s (2002) account of the development of electronic musical instruments. They examine the adoption of analog synthesizers into mainstream use. There were two prototypes that had gained notoriety in the mid 1960s. One appeared in the summer of 1964 and was invented by Robert Moog, the Moog synthesizer. The other was invented in the fall of 1964 by Don Buchla and was called the Buchla Box. Moog travelled around asking for feedback about his synthesizer and found that users liked the incorporation of the standard keyboard as it brought a familiarity to the instrument. Despite this user feedback however, “Buchla was committed to this vision of doing something completely new. He felt that going the keyboard route was reverting to an older technology” (Pinch and Trocco 2002). Based in large part on Buchla’s refusal to accommodate the wants and needs of users it was Moog’s synthesizer that gained in popularity and became the mainstream electronic musical instrument. This shows the importance of considering user feedback and incorporating it into designs. Users matter to the extent that they can make or break emerging technological innovations.

In a similar way, Tomboy Tools took customer feedback very seriously in the development and design of their products. The introduction and the success of the pink tool line is an example of incorporating user feedback and interpretive flexibility. As one executive goes on to explain, the pink tools were consumer driven and gained in popularity at a rapid pace:

And so we started with the one pink hammer, we had always wanted to connect with ....we did always connect with fundraising like Habitat for Humanity and Girl Scouts but wanted to do more in the area with breast cancer. So we partnered with Susan G. Coleman which is a huge organization here. [...] So we went ahead with it and it was a combination, a test for us for the pink hammer, we did the pink hammer and committed 100 thousand dollars to Coleman for the first year. And that was so extremely popular and after that we continued to hear I want all my tools pink and right after that we introduced a limited tool line and that was extremely popular as well. And then it just kept progressing so we kept bringing in more pink tools and it was just amazing. Quite honestly now we probably sell, you know, easily probably 1% is blue now. (Respondent 9)

Canada had a similar evolution to their prominence of pink tools. They too started by bringing in a few pink items associated with the Canadian Breast Cancer Foundation and the line grew from there. As one executive explains, it became a lesson in business versus principle:

And as we went forward from 2007 every year it was more and more and more pink tools coming out. And now our pink eclipses our blue, I mean we carry much more in pink than we do in our original line. So that's a really good story for customer feedback that had it been left up to the company executives we probably would never have launched pink tools because we were committed to the misguided notion that it shouldn't be about colour. But then we started researching colour and realized that 68% of decisions are based on colours. And all you have to do is ask somebody when they buy a new car, what's the first question you ask them? You don't say well how many cylinders does it have? (Respondent 8)

When asked if there was initial resistance from executives at the company or if they were nervous that giving into the pink would be counter intuitive to their ultimate goal one executive replied:

It's about business. It's about getting down to business. And do you know what? Good intentions don't pay the phone bill. The sales on the pink hammer were so insane that we were kind of joking...saying "why the hell didn't we do this two years ago." So it's

true...I mean none of us have an ego here, I mean we all park it, so when that started happening we just responded. It was very clear and evident and we were hearing it on a regular basis from customers. More pink, more pink, more pink and so we responded and it's been fantastic. (Respondent 8)

The sale numbers are indicative of the demand for pink tools but having done interviews with users and people who attended tool parties I found that the resistance to pink came up more than once. The colour of the tools receives a lot of attention in terms of reactions since it is such an obvious feature. It likely stands out more since it combines traditional elements from male culture (tools) and female culture (the pink). One woman who was not impressed by the pink stated that:

I'd say [the pink tools] almost turns me off. I'd say that's a turn off actually. If I am going to be young and independent like we talked about and not having to rely on others, I don't need special coloured tools. I don't need pink because I am a girl. But I have never really liked pink anyway. I am not so much of a pinky girl. So I don't want my tools to be pink if I am going to be a strong, young independent woman. (Respondent 4)

A couple of women noted that the pink tools seemed to be counter to the idea of an independent tool user. When asked her thoughts on the pink one woman replied:

I don't like... I feel like I am being put into a box. Here's a pink tool for you just like a baby girl should be in pink pyjamas or have a pink room. I resist that just fundamentally so it's not something that would attract me. I mean really if you think about the marketing, an independent woman who would [be] likely to do home improvements on her own and do all these things I think a number of them would resist that. (Respondent 2)

Along those same lines another woman stated that:

If someone is independent enough to use tools and know how to use tools I really don't think that they are going to be that kind of girl who loves pink. Not everybody likes pink. I think pink is associated with a certain kind of person, like girl gurlies, ditzzy girls. I think pink associates a negative connotation it's just so typically feminine, it's so associated with women and if you are trying to... If you're serious with tools and you are a serious tool user, you would not want pink tools. I feel like the women who go to these parties and buy pink tools have them just sit there. (Respondent 10)

I asked the executives if they had encountered resistance from certain women after the introduction of pink, and one of them responded:

Oh sure, people now and then. At parties not so much. We don't hear a ton of feedback from consultants that people were anti-pink, shall we say. You know you get the one in the blue moon sort of thing. But when we do corporate events like public shows and things like that where we're more out in the public, you know, again for every 25 women who love the pink and go nuts for us, you get one who's got a chip on her shoulder and just can't understand why everyone doesn't want to pick up a 24 ounce roofing hammer to hang a picture. And really what we've learned [...] is that those women who resist us the most are the ones who are the most interested. They are the ones who...it's almost like when you see a really cute guy and you kind of get shy about it. You know what I mean? It's the feeling of wow are you ever somebody that I find interesting but boy I am just going to put my guard up. I am going to act like you're not there. That is kind of how I see it. That's generally what happens and if we can get them talking to us for a minute or so they come around in a hurry. (Respondent 8)

Another responded to the same questions stating:

Absolutely, and we still occasionally do get that and my response to that is it's pink for a purpose. That is our slogan "pink for a purpose" because we are now attached with Avon Walk for Breast Cancer and this is only in the US, we are a national sponsor of all the walks for breast cancer across the country. So that to me is first and foremost. Secondly, is the women that want their own tools and it really makes sense. And you know its funny, about the husbands; you know we just keep it fun. Even when we're doing the home shows, we always have women coming up with their husbands they're like "oh look I can have my own tools, now you won't touch them." And that's fine, if that's something that gets them more involved then fantastic but personally if you would have asked me, you know, 6 years ago if we would have had pink tools in our line I would have said absolutely not. (Respondent 9)

There is also a sense of a "re-claiming" of the colour pink. Since women have traditionally been associated with pink maybe it is matter of embracing that association and using it as a way to build independence from men. There is a possibility that the constructed female connection with pink and its accompanying male stigma have created an opportunity for women to use that against men in creating their own claim and space. In relation to this idea, I asked the executives if they felt as though women wanted these traditionally male dominated artefacts in a

traditionally female colour representing a re-claiming of the colour pink. One executive responded:

That's a really good way of putting it Rebecca. Pink has been reclaimed. Because back, like I said back in the early days you know part of the real MO to not go pink in the first place was because you would see the occasional sort of novelty gift quality level version of a quote unquote pink ladies' tool kit, that had 18 Allen keys and four pairs of scissors and it was really kind of a lame duck, you know? And we didn't want to be associated. Pink did have this kind of attachment to it that it was not good quality; it was just kind of for show. And that certainly has changed and not just with tools. Like you can get a pink Dyson vacuum, do you know what I mean? Like other companies of top quality stature are adopting pink and that's helping the colour and has helped us become a top quality provider in a colour that use to be associated with less quality but it doesn't have that feeling about it at all anymore. (Respondent 8)

Even though some of the executives were initially against the idea of pink tools, many saw it as tolerable as it was at least getting women involved. The question then becomes whether or not the fact that the tools are pink takes away from the effort made to challenge traditional gender roles. When asked her opinion on this issue, one woman replied:

Now I am not cognisant of a group of women, who I bet exist, that like their pink hammer and that works for them. This is one of the ways that they market it that they would like to have... Now this is important if women feel that their femininity is being deterred, is not being enhanced because they're walking around the house with an apron on with a bunch of power tools and they think hubby isn't going to find them so attractive or sexy then perhaps wearing a pink apron and wearing pink tools will allow them to feel more feminine. (Respondent 1)

I continued by asking this woman if she thought that getting the kind of woman who subscribes to many traditionally feminine roles involved is helpful. She replied:

Now that's a good question. Is it progress if these women feel that their lives are limited by the need to stay inside the boundaries of their husband's acceptability. So if staying within the boundaries of femininity is something that hampers their access to being creative or being useful or trying something new then that sucks. Now if this simply finds a back doorway into that whole social schmuck then it doesn't really try to change it does it? So I would say nice for the women that like their pink tools that they can use it but they should freaking well stand up to the fact that they need to have them pink. (Respondent 1)

When asked if she thought the pink tools were useful in getting women involved who wanted to remain feminine one woman stated:

[T]hey probably feel more comfortable with pink tools because they are labelled more feminine versus the blue ones or stainless steel and black and like they're smaller and they're made for women specifically so perhaps they feel like they are performing gender that way, and aren't stepping out of the box. They can still be traditional and still use these tools and feel like they are still feminine. I don't know if tools really take away from femininity but I guess in the view of some people they do. So maybe the fact that they're pink or the fact that they're made for women specifically will take away from some of the masculinisation. (Respondent 7)

Again, the idea of pink as a symbol for a re-claiming of what was traditionally a male domain came up. This is an interesting take as it could be argued that the pink creates a sacred object in that it symbolizes that this is only for women. The tools being pink adds a sacred, idealization to the tool that women can rally around on the same level and in the same space that is theirs alone.

Towards this point one woman stated:

Maybe women want to define their status as a woman using a tool and prefer the pink. That could be a possibility. Maybe they want to label them as pink and as women's tools so that maybe they don't want their husbands using them and things such as that. They could be doing that to define themselves in a feminine role or I guess in a little bit more of a masculine role but still as a female. That's possible. (Respondent 7)

Many of the women felt as though the pink tools helped to create the message that owning tools was "cute." This is contrary to what the company claims their message to be which is meant to be that of empowerment and education for women. When asked if she thought that Tomboy

Tools was delivering a respectful message to women, one woman replied:

No, by not having a sales person that knew what she was talking about, by marketing with this stupid pink thing and by not getting the right message, this whole idea of focusing on women having their own tools and that being really cute. That in itself is not a respectful message. (Respondent 1)

Some of the other responses included the fact that many of the women who purchase the pink tools likely do not use them and simply have them because they are cute. One woman stated:



Also I think it's like girlfriends look at my tools, I am cute. Like you know Heidi from Home Improvement. The little brunette with big breasts. It's almost like an image, or creating a boys look at me I am handy and have pink tools. Like almost a Playboy Bunny with a tool. (Respondent 4)

It may be worth noting that in Canada the pink tools are more expensive than the blue tools, even though the tools themselves are identical. This shows a particularly strong commitment to the pink since these women are willing to pay more for the colour alone. I asked the representatives at every party that I attended why there was a price discrepancy between the colours, and every time they responded jokingly that it was "insurance" so your husband will not touch them. When I asked the executive of the company she explained that the real reason is that the manufacturing costs are higher as the dying process for the pink is more extensive and therefore more expensive.

The idea of husbands, boyfriends, fathers and other male figures not touching one's tools if they were pink came up a number of times in the interviews. For example, when asked why she chose to purchase the pink tool set one woman plainly stated:

Well because I figured if I had pink tools my brothers and my dad wouldn't steal them but someone actually did steal them. (Respondent 5)

Again, this illuminates both the devaluing of pink and femininity. The implied idea is that men would be embarrassed to be associated with pink and therefore would not consider borrowing or using any kind of pink tool. Pink carries with it other associations of female binaries such as weakness that men would not want to be associated with. Another point that reinforces this is the fact that the opposite, women using blue tools, would not be considered as problematic. Thus the same logic of having blue tools so that wives, girlfriends, mothers and so on would not touch them would not have any reason to it. As one woman simply put it:

Cause a guy is not going to use a pink tool. A girl will use a blue but a guy is not going to use a pink. (Respondent 6)

This section has shown that although it was not the original intention for Tomboy Tools to have pink, consumer feedback and influence demanded a pink tool line. This is an example of the power of interpretive flexibility since despite the resistance from executives they had to respond to consumer demand. Since the tools are pink, this adds to the female gender script embedded within the tools; home repair can not only be useful and cost-effective, but can now also be, and perhaps should be, cute, sexy, fun, and feminine. This follows a pattern of using symbolically gendered aesthetics to market to particular audiences. Although the company's numbers imply that pink is highly popular among their customer base, many of the people I interviewed were resistant to pink, based on its stereotypically female association. It is possible that this is due to a skewed sample given that my sample size was small and the numbers from the company clearly show that the vast majority of their customers are purchasing tools in pink. It can also be noted however that there was at least one woman interviewed who was very outwardly against the pink who purchased a pink measuring tape "as a joke." Another woman who was against the pink also purchased some pink painting tools because that was the only colour they came in so the pink did not deter her completely. These examples represent a population who would have contributed to the increase in statistics of pink tools that were sold but who do not necessarily support the idea of pink tools. Nevertheless, some people interviewed felt that the pink reinforced a message of women using tools as being cute and in so doing does not take women as tool users seriously. The reoccurring idea that men would not use tools that are pink illuminates the inherent gender code hierarchy and reinforces the devaluing of femininity.

### Impact of the Gender Script

Tomboy Tools is a unique company in that they are trying to challenge gender norms by creating tools for women. The above analysis, however, shows that their tools are inscribed with a female gender script through both implicit and explicit means. This shows that although there was an attempt to begin a reversal of the traditional gender order through the objects being sold, the embedded gender script has the power to reproduce traditional gender patterns and stereotypes. Based on this tension, one might ask what kind of impact they can have on women's tool use and broader women's objectives in terms of gender equality?

Throughout the interviews many women mentioned that "it was time for a change like this." Some referenced the fact that women have become more and more independent so that learning skills around tools and repair is a logical step towards more independence. Others referenced the fact that single women are one of the highest demographics purchasing houses these days and therefore there is a need to acquire at least some basic tool skills to take care of their homes. As one woman put it:

I think it is a good time because women are more independent so it was probably a good time to bring these tools into the picture. And a lot more women I think once they get these tools and they are confident with them then it makes them more independent as well. They kind of go hand in hand. Like women are independent but if they don't feel comfortable using a big tool then they're probably not going to do it but if they have something that they are more comfortable with they're going to be more willing to try bigger projects on their own. (Respondent 5)

In another response one woman considered the timing in relation to feminist movements. She stated that:

Yes, I think women are more ready. Women are not... like I went to a gathering last weekend, and it was like a feminist reunion and people were talking about what they did. And it was a time when women were writing newspapers and trying to make social

change and in their own personal lives they were trying to work out the inequalities of their relationships and how to raise children and all that sort of thing. So women were more in an activism kind of way and now I think that women are making changes in their social lives, they're not out making social activism. Now women are manifesting their need for equality in their own personal lives. So I think it is a time when people are, you know women have waited around for men to do renovations in their homes and stuff like that, and everyone says the same thing so I think women are more ready to pick up the tools and take charge. (Respondent 1)

The fact that there are many women living alone and/or without men was also brought up. Social expectations have radically changed throughout the years and the consequences have created situations where women have to become more independent. For example, people are waiting longer to get married, more people are getting divorced as it has become more socially acceptable, and there is an increase in same sex couples so that some households are comprised of all women. As one woman stated:

Well the fact is there is a hell of a lot of single women out there that are making their houses work and they are doing it without men and sometimes they're doing it while men are lying on the couch and other times they are doing it completely without men. So I think the fact of the matter is women are often exclusively in charge of their homes. (Respondent 1)

One woman made an interesting point when she questioned whether or not some women want to break out of their traditional gender role and become tool users. She stated:

Yeah, but then maybe senior ladies who have had a husband who has done everything micro/macro for them their whole lives or these girly girls in heels who would hire someone or have someone else do it maybe they are just not into it or not wanting to do it. Maybe they would rather go shopping or prefer....like are we forcing women into these roles because we are trying to break stereotypes or...like it's still personal preference. (Respondent 4)

This discussion highlights the deeply embedded socialization process that occurs along gender lines in relation to material culture. However, even if we can recognize the pressures within society to conform to traditional gender roles and scripts, does that make women's likes and dislikes any less real? W.I. Thomas (1928) is famous for his statement that what is perceived as

real is real in its consequences. This is applicable in the sense that traditionally women have been socialized to disassociate themselves with technology and tools; therefore that has become their reality. It may also help to explain why sales of the pink tools dominates that of the blue.

I asked one of the women who was not very impressed with the company if they could change in ways that would make her more accepting of the tool line. She replied:

Yeah, I think that they would drop this whole Tomboy thing, they would drop this pink thing, they would change this whole cutesiness of it to competence. They would tell me that these tools were better designed for me because of my different physique and they would tell me that these tools were as good as anything I would get on the market place. And they would drop...just drop the cutesy the tomboy, the whatever the pejorative, value judgment. And very very importantly they would get a good salesperson, knowledgeable and respectful. Like more...I don't like the word Tomboy it seems disrespectful to me. It belittles, it infantilizes it because tomboy is a term from childhood, it's been nailed on to little girls who like to play boy's games I guess. (Respondent 1)

Tomboy Tools has attempted to challenge the gender order and accompanying scripts by marketing traditionally male technology to women. However, in practice they have reproduced a conventional pattern of traditional co-construction between gender and technology. These competing discourses create tensions and contradictions surrounding the company and their potential role in bringing about positive social change for women in this domain.

### Conclusion

This chapter has argued that the products made by Tomboy Tools are embedded with a female gender script (Akrich 1992) and that this leads both gender and technology to be “co-constructed” (Jasanoff 2002). The physical design of Tomboy tools was shown to be embedded with an explicit gender script. The tools were modified to accommodate women as the projected user. These changes show the ways in which gender, and the assumptions that it carries, is influencing and impacting the tools. These amendments to the tools were met with mixed

reactions from the tool users. Some women felt that these changes were positive and helpful while others did not see the benefit and some even felt as though the tools became devalued when made lighter and smaller. Some women also felt that the tools were not high enough quality to perform macro kinds of jobs. The idea that most women were doing micro jobs around the house was reinforced by the executives of the company and identified as their current goal as oppose to getting more women involved with the trades. The perceived constraints of the tools to only allow for certain projects is an example of the way that the technology is influencing gender. Although women may be becoming tool users, the extent of their tool use is constrained by the gender script embedded into the tools.

It was also shown that despite the best efforts from the founder and executives of the company the aesthetics of the tools become coded through the female symbol of pink. The customer demand shows the importance of interpretive flexibility and reinforces the fact that technology is socially constructed. It also demonstrates the influence of gender on the construction of technology. The interviews revealed that there was much resistance to the pink as some felt that it altered the discourse of the company from one of empowerment to one of cuteness. The idea that pink tools would mean that men would not touch them exposed some of the hierarchy in gender codes, and the “embarrassment” and “shame” attached to femininity.

Given Tomboy Tool’s goal of breaking gender boundaries and including women in a domain they have traditionally been alienated from and their reliance on gender boundaries to sell these tools, it is difficult to gauge the impact of this company on women. Although many of the women acknowledged that it is a time for change based on women’s increased independence some were sceptical as to whether it was going to come from Tomboy Tools. Is it possible for Tomboy Tools to increase women’s emancipation when they are heavily embedded with a

gender script? Gender scripts are not limited to being embedded into the design and aesthetics of technologies. They can also manifest themselves in the marketing techniques. The marketing strategies used by Tomboy Tools furthers their specific gender script. The next chapter will examine the imagery and messages conveyed in the marketing for Tomboy Tools and the ways they are interpreted by women. It will also consider the female-centric history of the Tomboy Tool's principal selling strategy, "tool parties."

## **Chapter 5 – Marketing Tomboy Tools: Contradictions and Tensions in Gendered Images**

We have seen how Tomboy Tools carries a number of highly gendered cultural scripts that are both embedded in the design and aesthetics of the tool line, but are also seen to reinforce a certain gender-specific behaviour among potential female users in the prescribed practices for which the tools are intended. Following Sheila Jasanoff's (2004) co-construction thesis, I have argued that material artefacts like Tomboy Tools may not only reflect wider gender norms, but actively reinforce them. The Tomboy Tools company not only constructs tools in gendered ways, but also constructs images of women by projecting traditional female stereotypes in potential users. Thus, women are constructed as strong, liberated, and independent, but at the same time weaker, less skilled, and concerned with maintaining a "cute" feminine image. While these gender-normative images and messages are implicit in the design and aesthetics of the tools themselves and the sorts of female-appropriate jobs they imply, these images become ever more explicit in the way that the tools are advertised, marketed, and sold. Indeed, the way in which a company markets itself is telling in terms of the kind of messages conveyed, as well as the potential buying market they anticipate but also work to construct. I will examine the ways that Tomboy Tools attempt to construct such markets by creating safe and gender-normative lifestyle images in their campaign to encourage potential female buyers.

By focusing on marketing and sales, this chapter aims to compliment the somewhat scarce sociological literature regarding sales tactics and social interactions in the marketplace. Robert Prus (1989) provides a detailed ethnographic study on the social practices of the marketplace, with particular focus on the role of vendors. Prus works from the interactionist perspective of Herbert Blumer to analyze the necessarily social and interactional nature of sales. He argues that economic exchanges are actively shaped by the interaction between buyer and



vendor so that the influence of vendors becomes an “interpersonal accomplishment.” Colin Clarke and Trevor Pinch (1995) also examine sales interaction by studying the actions and strategies of “market pitchers,” vendors who aggressively try to sell their products in public places. They found that the verbal and non-verbal skills or “sales talk” used by the pitchers is the most important variable in the success of the sale. They also discovered that this “sales talk” plays out in a very specific way; “the techniques used by pitchers are most often deployed within a framework of social and interactional ‘rules’ which both pitchers and the people who gather at their stalls share and which the latter rely upon in order to make their purchasing decisions” (Clarke and Pinch 1995:287). Both studies clearly indicate the importance of social interaction in relation to sales but neither discusses the way that gender mediates the relationship between sales and social interaction. Thus, my analysis of the sales of Tomboy Tools will examine the way that gender plays an important role in the sales and marketing of these products. I find that gendered norms are crucial to understand the content of their marketing messages, and the tactics used at home parties, which are integral to the success that representatives have in selling the tools effectively. The marketing and sales strategies of Tomboy Tools will be analyzed in two sections. First, I will examine the textual and symbolic content of their marketing campaign, as gleaned through an analysis of the company’s flyers, website, slogans, and “how-to” book. This will involve a content analysis of the various forms of marketing, whereby reoccurring themes will be identified and analyzed. Messages of empowerment and independence were common within the marketing material. I will also relate these themes to the various ways that messages can be interpreted using Stuart Hall’s (1980) Encoding/Decoding model.

Second, drawing on ten interviews with clients and salespeople, I will consider how this model works as a useful interactive set of marketing techniques that are specifically appropriate

to this consumer group and product line. This is because the “tool party” follows a long tradition of female-centered marketing techniques that adheres to a specific gendered logic to sell to women, but also allows for a safe space in which women can feel comfortable expanding and transforming their traditional realms of practice. Finally, considering these marketing and sales strategies as a whole, I will argue that despite the strong messages conveyed there are contradictions in the underlying narratives, imagery, and sales routine, which make for mixed reactions by consumers and women on the ground. On the one hand, the company is seen to encourage women’s independence from men through learning more about tool use and home repair. At the same time however, the same processes of socialization can be seen as limiting women and constricting them to traditional roles. The parties are defined in large part by traditional gender-scripted norms of femininity, and women’s entry into home repair is encouraged but also tightly bounded by prescribing home-repair jobs deemed most appropriate for potential female buyers. The fact that Tomboy Tools stands at the crossroads of a liberating movement to encourage women to enter the world of home repair, yet remains closely connected to still dominant traditional female norms in order to encourage this as well as make sales, sets up a number of interesting and at times contradictory tensions in the minds of the clients.

### Marketing Tomboy Tools

The way that marketing and advertisements portray gender has been a long standing interest of feminist scholars. In studying print and broadcast media, feminists have illuminated and analyzed some of the most common depictions of women. Frequent portrayals challenged by feminists include depictions of women as dependent and subordinate to men, weak, sex objects, and left to occupy traditional roles of wife and mother (Kilbourne 1999; Courtney and Whipple

1983). By studying magazine advertisements, Courtney and Lockeretz (1971) found that women were very rarely shown in occupational roles as compared to men. Ferguson, Krechel and Tinkham's (1990) analysis of advertisements in the feminist magazine, *Ms.*, found that there was an increasing portrayal of women as alluring sex objects. Rajagopal and Gales' (2002) argue that media images are largely responsible for shaping images of gender and that stereotyping in advertisements continues to objectify and diminish women by focusing exclusively on their physical attributes. Kilbourne (1999) argues that constant gender stereotyping through marketing can lead to people becoming "trapped in rigid roles and very crippling definitions of femininity and masculinity." As such, an analysis of the ways in which companies market their products is important, particularly as it relates to shaping gender norms through wider society.

It is also important to consider that the same messages produced by advertisements will be interpreted in different ways by audiences. Stuart Hall's (1980) Encoding/Decoding model nicely illustrates the way this process works. Hall argues that all media are encoded with particular narratives and that these narratives are based upon a number of variables, including the medium itself, the network, the producers and so on. He argues that audiences of these media will decode the narratives in different ways. One way is the "preferred reading" which is when the audience accepts the dominant narrative encoded into the media relatively uncritically. The second is the "negotiated reading" which is when the audience will take the dominant narrative but realize it from the standpoint of their own ideologies and social positions. The third is the "oppositional," reading whereby the audience decodes the messages in an opposite way from how they were intended. The oppositional decoding can be a conscious act whereby the audience member understands the encoded dominant narrative and chooses to reject it.

Although there is debate within the field of communications studies about how the media influence the public, there tends to be a consensus that they do have some sort of effect or influence. As Chomsky states when he is explaining the various techniques that are used by media creators to either shape or reinforce public opinion,

And they [media producers] do this in all sorts of ways: by selection of topics, by distribution of concerns, by emphasis and framing of issues, by filtering of information, by bounding debate within certain limits. They determine, they select, they shape, they control, they restrict – in order to serve the interests of dominant, elite groups in the society,” (Wintonick and Achbar 1994:55).

Although recent communication theory recognizes the fact that human agency extends to interpretations of media and marketing, it is clear that public opinions are influenced to some degree by a constant dissemination of messages.

Tomboy Tools is in an interesting position in terms of their marketing and contemporary gender politics as they are promoting a traditionally male product to women by relying primarily on traditionally female marketing techniques. The Tomboy Tools website states that “Our primary business is to provide the highest quality tools and techniques to women, empowering them to become confident and competent homeowners through our In-Home Workshops – Tool Parties!” These messages of confidence and empowerment, as seen above, are common throughout the promotional material put out by Tomboy Tools. The above quote is particularly exemplary of the tension that seems to exist within the strong messages conveyed by the company and the marketing techniques they rely on to disseminate these same messages. Although the quote encourages women to become “confident and competent homeowners” their suggested means to this end is through “tool parties,” which as will be explained further below, is strongly attached to a stereotypical feminine-script.

Other features of the website include tabs to a product catalogue, instructions for learning more about planning a tool party, how to become a representative, and so on. Forums for Tomboy Tools users are also made available through the website so that women can exchange information and opinions about the products and home repair in general. A forum option is available through the United States version of the website. Topics in the forum range from tips and questions about renovations, to excited comments about the pink colour of the tools, to some more weighty issues such as whether it shows weakness if women in the trades need their own tools.

This empowerment message is furthered through slogans that appear in their flyers and clothing. Examples include “Learn Today. Teach Tomorrow. Build Forever,” and “Women, Tools, Knowledge, Pass it On”. These mottos evoke images of confidence, support and solidarity among women. Perhaps one of the most obvious examples found in their promotional material is their preferred definition of Tomboy; “tom-boy (tom’boi’) n. a girl who determines her own destiny.” Being in charge of one’s own destiny is clearly an empowering idea. This also shows a marketing strategy of rebranding a word generally thought of as describing young girls who take on traditional male characteristics. There were, however, mixed reactions from the people interviewed regarding the name of the company. One woman stated that:

I don’t like the word Tomboy. It seems disrespectful to me. It belittles, it infantilizes, it’s because tomboy is a term from childhood, it’s been nailed on to little girls who like to play boy’s games I guess. (Respondent 1)

Other women were more positive when asked about the company’s name. One woman responded by saying:

That doesn’t bother me. I think the name Tomboy, and what that means has evolved over time and it is not a negative thing anymore. Like growing up for me I was always called a Tomboy so I associate it now that I am older with good things. Like being independent

mindful and doing things yourself and being able to do things that guys do so I don't see that as a bad thing. I think that's a great way to market their business. (Respondent 2)

These reactions demonstrate the diverse feedback from women and users. While some see the value of re-claiming the word "tomboy," others see it as a continued use of a pejorative word.

The flyers and catalogues are filled with products available for purchase. Some also feature sections such as "steps for a successful party" or messages and updates from the company's executive team. There are also sometimes "how-to" sections. For example, the 2008 product catalogue featured pages entitled "Tomboy Tools Project". The first project was the living room and explained how to properly install wall hang-ups. The second was for the patio and explained how to shape landscape. The featured projects in these flyers and catalogues demonstrate the sorts of jobs that Tomboy Tools is expecting their clientele to engage in. Neither of the featured jobs seem particularly challenging and both seem to be focused on beautifying spaces.

It is important to consider the imagery provided by the website and flyers as this can be telling in terms of the implicit messages embedded within the marketing. As with the tools, pink is a dominant colour throughout the promotional material. For example, the font on the website tabs is pink as is the background for the text blocks. There are even different shades of pink for overlapping borders. The women pictured on the website and in the flyers display traditional feminine symbols. This is depicted through their clothing, accessories and in some cases, visible make-up. These obviously identifiable feminine features ensure that the women in the images are seen as undoubtedly feminine and heterosexual. This is likely an intentional goal. Given the historical and traditional male association with tools there is a potential stigma that a woman using tools is unfeminine or "butch." The symbolism in the imagery of a Tomboy Tools user

and the pink tools themselves ensures that boundaries of femininity are not jeopardized. Even if women are holding traditionally male tools they are still clearly performing their traditional gender expectations in other ways. This perpetuation of the feminine, hetero-normative image compliments the message that you can use tools but continue to remain feminine and cute at the same time.

*The Tomboy Tools Guide to Home Improvement* is a book made available through Tomboy Tools and is another forum where their message is presented. The book includes drawings and detailed descriptions of how to fix things around the house. This part of the book is rather comprehensive and extensive in the jobs that it presents. The forward of the book is written by Janet Rickstrew, one of the founders of Tomboy Tools, and is applicable to this discussion. One of the beginning statements says “We have been so touched by the stories we have heard from women who told us about trying to maintain homes on their own, afraid of what they didn’t know, and the difficulties they faced.” This utilizes the common marketing technique of emphasizing a potential fear or insecurity in people. This statement is followed by inspirational testaments of users, such as “If the woman in the news program can be ‘empowered’ to do basic home repairs themselves, then so can I. Give me inspiration, guidance, and tools that are not intimidating to women.” Just like the other examples, this shows the reliance on optimistic, encouraging, and inspiring language and stories.

Whether Tomboy Tools is successful in generating empowerment and confidence in women is debatable. However, this type of message is far from unique to Tomboy Tools. It is widespread among companies that target women, and is especially common to those who rely on the predominantly female marketing tactic of home sales. The corporate culture created by these companies often rely on principles of positive thinking and include practices such as prayers,

retreats, pep talks, sentimental rituals, and pilgrimages (Clarke 1999, Butterfield 1985). This strategy appeals to both workers and consumers who feel excluded from traditional retail environments as it “fuses popular religiosity and positive-thinking rhetoric in the dissemination of the home party plan” (Clarke 1999:90). This doctrine of positive thinking was originally adopted by Tupperware and coupled with ideas about women’s empowerment.

Tomboy Tools shares many attributes with Tupperware. Besides using the “home party” as a marketing technique, they share a discourse of empowerment for women. Since the companies are 50 years apart, this message is constructed in different ways, yet the core theme is still clearly present. In the case of Tupperware, the focus for empowerment came from encouraging women to participate in a company that could give them financial independence (Clarke 1999). Tupperware was unique in that it was essentially a female-headed company, which encouraged women to participate in the post-war business world. This was while other companies were discouraging women from the workforce and largely directing them in terms of their domestic roles. In response to Betty Friedan’s arguments against the cult of domesticity, some feminists, such as Joanne Meyerowitz reference the popularity of positive thinking in her statement “historians need to explore further the influence of human potential psychology on the contemporary feminism” (Meyerowitz 1993:1455). A good example of this mantra is embodied in Brownie Wise, who was the dynamic and charismatic front woman for Tupperware’s “home parties”. She was known for preaching positive messages to her female workers and encouraging them to be confident about their careers as Tupperware representatives. She was even known for responding directly to letters from her employees who were going through hard times.



Even today, Tomboy Tools views women's independent business opportunities as empowering. As one executive mentioned in relation to the consultants:

That's the other thing is that we didn't truly realize the impact and power that we would have with women starting their own businesses because this is a real business. But this is a real business. This isn't some goofy internet, marketing, pyramid scheme. This is a real opportunity for women to help other women and make a decent living while they're doing it. (...) We have almost 500 now in Canada. The commitment, the dedication, the fun they're having, the way that they represent the company out there. It's just been...we've seen women come on board with us who are shy, maybe a little reserved but they love tools and they want to help other women learn about tools. And in six months Rebecca, they're speaking at a ladies groups and they're doing this and it's amazing how much we see that and how fulfilling it is. They're doing that and they're confidence has gone up with a different set of tools...you know? (Respondent 8)

Although this same theme is present in both companies, Tomboy Tools tends to focus their empowerment messages in terms of women entering into the realm of tools and home repair which they were historically excluded from. According to a high ranking executive from Tomboy Tools, helping women is their main objective. When asked about the company's marketing strategies, she responded by saying:

We are really not selling tools; we are selling empowerment and confidence and encouragement and we're breaking down barriers, we are a groundbreaking company. And so the tools, the products we carry, which are fabulous, they're really almost a by-product to the opportunity of telling a group of women in a living room "yes you can put a closet organizer in". (Respondent 8)

The marketing and promotional messages above clearly show how Tomboy Tools attempts to position itself as an empowering and liberating company for women. The users of the tools showed mixed reactions as to whether they accepted this message or not. When asked if women could attain confidence through using the tools, one woman responded by saying:

Yeah, I guess so. I guess that using tools does make you feel kind of good and there is some confidence especially because it's been traditionally not an inclusive field so yeah I think a woman does develop confidence using power tools. So in that way then, yes. (Respondent 1)

Other women acknowledged the opportunity for confidence in relation to tool use but were less optimistic about that confidence transferring to women's lives in general. As one woman stated:

I think that suddenly hammering a nail in for the first time in your life is not going to lead to an increase in confidence in everyday life. I think that it's a good idea if it gives people enough confidence to hammer a nail or use a screwdriver for a job that they could have gotten their husband to do but I don't think that just being able to put up a picture frame is going to change someone's self-confidence. (Respondent 3)

Although Tomboy Tools is strongly conveying the message that using tools will empower women, these messages do not seem to be uniformly accepted by their clientele. Even the women who agreed that learning to use tools would build confidence were not as enthusiastic about that prospect as the executives from Tomboy Tools.

Another reason for this scepticism may stem from the kinds of jobs that women are encouraged to take part in. Tomboy Tools does not encourage women to enter into, for example, heavy construction or the trades. The emphasis is instead on small jobs that can be done easily in the home. The most common jobs listed by the women interviewed were painting, hanging up shelves, and hanging up pictures. When one of the women was asked about the jobs that she sees herself doing with these tools she responded:

Umm...a lot of just minor things that happen around the house. I live on my own and I am single so it's important for me to be able to deal with whatever might pop up. Like right now I have a Christmas sign that is sitting on my stove, I have to put the little hook on the back so I can hang it on my wall. Or putting up pictures...or its even basic things...I had to put together a photo frame this week. It was a silly picture frame that came in 5 pieces with all these screws. I needed to have my own screwdriver set just to put together this frame. So those kinds of things. But I mean even as far as like I think it's important for me to know how to change my own tire. (Respondent 2)

This kind of response was common by the women who were interviewed. Most referenced wanting to be able to have the skills necessary to deal with basic things around the house. None

of the women expressed interest in entering a trade or handling larger, more labour intensive projects at their homes.

The above analysis demonstrates the complexities of Tomboy Tools in relation to contemporary gender norms and politics. There are tensions and contradictions between the messages conveyed by the company and their marketing approach. Their product line is a direct challenge to traditional gender roles yet they rely on stereotypical feminine imagery, reinforce aesthetic focused jobs, and utilize notoriously feminized sales tactics. Responses from users showed that rather than accepting the dominant narratives, women at the ground level mirrored the contrasts of the company by expressing mixed reactions. The next section will continue to examine Tomboy Tools marketing strategy by taking an in-depth look into their main sales tactic, the “tool party.”

### The Home Sales Model

Companies such as Tupperware have used the “home party” sales technique successfully since the 1950s. Here, I consider the generic form of the “home party,” as well a brief consideration of its history, in order to contextualize the case of Tomboy Tools. By gaining a better understanding of the core elements of this female-centered marketing tactic, the social processes and mechanisms that make these so effective can be better understood.

Alison J. Clarke (1999) provides a detailed account of the transition from the door-to-door salesman model employed by many companies at the turn of the 20<sup>th</sup> Century to the female-headed home party popularized in the 1940s and 50s. She explains that one of the pioneering door-to-door companies was the Fuller Brush Company who employed “Fuller Brush Man” salesmen. They were known for trying to debunk the stigma that door-to-door salesmen were all

swindlers. Clarke (1999) refers to the founder of the company, Alfred Fuller, who stated “most urban housewives had a firm rule never to open their doors to a salesman. To purchase from one was an invitation to be defrauded” (86). The “home party model” eliminated the problem of the cold door-to-door approach since the party is a planned event. The dynamic between the seller and consumer, based partly on their common gender, is also different in a party setting versus an unexpected drop-in, eliminating the “threat” of being deceived.

Clarke (1999) writes that *Wearever Aluminum Cooking Products* were the originators of the independent home sales model in the 1920s. Other companies adopted the model after them but in many cases used an exclusively male sales team. Companies such as *Stanley Home Products* began hiring women as representatives based on the idea that they did more household cleaning and therefore would be more knowledgeable about the products associated with it. Having a woman representative was also advantageous as it eliminated the salesman and in so doing also did away with the myths of the overbearing, threatening, and economically fraudulent salesmen. Women, in contrast, have traditionally been thought of as more passive and harmless, as one of the Tupperware managers once said “we train our girls to be genteel, not too aggressive” (Clarke 1999:92). It was clear that marketing products through a female led social event was an effective business model as it is a major factor in creating a comfortable space for women.

Today, the “home party sales model” varies slightly across companies but they are generally made up of many common elements (Frenzen and Davis 1990). A woman who wants to host a “home party” contacts a sales representative for the specific company and sets up a time. The hostess is then responsible for inviting “to her home an array of friends, neighbors and, relatives [usually exclusively female]” (Cialdini 2001:74). The representative arrives prior

to the guests to set up a small display and to tell the hostess anything that she may need to know about the proceedings. The guests are greeted by the host and the representative and are offered refreshments before sitting down to the presentation. The representative generally begins by passing out catalogues, pencils and order forms before moving on to some kind of ice breaker which could include party games or anecdotes.

The presentation proceeds with explanations of the sample products and references to other products that the company offers. Generally, participants are encouraged to ask questions and to interact with the product in some way to gain a sense of comfort and familiarity. When the presentation portion is over, guests are invited to purchase items from the catalogues. At this point, the representative generally highlights promotional products as well as incentives (Frenzen and Davis 1990). Incentives might include rewards for the host based on how much the group purchases, or a chance to be placed in a draw if a guest bought a certain amount of merchandise. As the party concludes, the representative will generally hand out literature with information about hosting a party and/or becoming a representative. After the formalities are through, the guests stay for a little longer to socialize. Depending on the dynamics of the group, the representative may stay as well.

Tupperware is the quintessential example of the “home party” and the company that made the sales technique famous. Earl Silas Tupper invented Tupperware in 1946. It was a revolutionary product at the time but despite having gotten it into some good department stores it did not sell very well thus rendering the brand ineffective (Kealing 2008). The product was so new that the uses, advantages, and convenience of the product were unknown. People could not tell by simply seeing it on a shelf that it had a clicking lid so that it could be turned upside down without any spilling or that it was essentially unbreakable and made with features that allowed

for easy stacking in the refrigerator or pantry. It eventually became clear that the product needed to be demonstrated and would therefore thrive from a home party, direct sales approach.

Tupperware became a multi-billion dollar company and since then the “home party” sales technique has been incorporated by many other companies who are selling female-targeted products. Some of the more common products sold today include candles (PartyLite), cosmetics (Mary Kay), kitchenware (Pampered Chef), and adult novelty (Passion Parties). This sales technique is particularly appealing for products being sold to women that are considered to be traditionally male. This is partially on account of the need for these products to be demonstrated to a population that has not necessarily been exposed to them before. Tomboy Tools also falls into this category as they are presenting a traditionally male product. Another example is the recent advent of “taser parties.” “Taser parties” involve the same elements as other parties but the discussion is around self defence and the product being marketed is tasers. Sheildher, the company that puts on the “taser parties,” also shares other elements of the gender script that is similar to Tomboy Tools such as the tasers being available in pink.

The marketing and promotional techniques employed by Tomboy Tools further the gender script that is embedded in the tools themselves. The strong messages of empowerment and confidence are ever present within their marketing but the imagery and the female-centered sales technique counter these discourses. This tension is reflected in the mixed opinions of women and users. The home party sales technique is an integral part of the company’s business model. The extensive female history and continued female dominance surrounding home parties makes it a strong contributor to the female gender script of the company. The “tool party” also represents a complex process that follows a very precise gendered logic. The specifications of

this process and why it is particularly effective for the sales purposes of Tomboy Tools will be deconstructed through an in-depth analysis in the next chapter.

## Chapter 6 – “Tool Party” as Modern Gendered Ritual

Thus far, we have seen the gender script that is embedded within the company, through the tools, as well as the marketing and promotional techniques. The history of the home party model illuminated its strong connection to female roots. The implicit and explicit associations with femininity and the fact that it is such a central part of the company merits an in-depth analysis of the “tool party.” My participant observation at the parties and my interviews conducted with people who had attended the parties revealed reoccurring elements and themes. I will explore these themes to deconstruct the “tool party,” arguing that its success as a marketing and sales strategy rests on the fact that it is a form of a modern ritual experience (Durkheim, 1912; Goffman, 1961; Collins, 2004). It is a ritual that allows women to comfortably transcend traditional gendered boundaries and become more comfortable with the traditionally male domain of tools and home-repair practices. Drawing on the work of Victor Turner (1974, 1979, 1992), I argue that these parties represent a unique form of a “liminoid stage,” where traditional gender boundaries and hierarchies are challenged. The result is new forms of practice that can be safely adopted as a result of the “in-between” status of the parties between traditional feminine contexts of socialization on the one hand, and the male world of tools, on the other. Drawing on field notes and interviews with people who attended the parties, I conduct a detailed analysis of these events as gendered ritual experiences that allow for an effective transitional space between the female world of home parties, and the male world of tools and home repair. I also look at the ways that this sales strategy works in specific ways to sell to women.



### Tool Party as Ritual Experience

A number of elements and themes from the “tool party” overlap with sociological and anthropological theories of ritual. Emile Durkheim (1912) made important contributions to the study of ritual through his examination of totemic religious practices among Australian aboriginals. He conducted an historical analysis to show that recent religions in their various forms share elements that are common to all. Ritual is one of these elements as it creates community, maintains group membership, and creates, structures and sustains moral beliefs. Although the specific rituals may differ, their presence is essential in all systems of belief and they need to be interpreted in relation to the social structures and communities that they maintain. That is to say that at the foundation of systems of belief there “ought necessarily to be a certain number of fundamental representations or conceptions and of ritual attitudes which, in spite of the diversity of forms which they have taken, have the same objective significance and fulfil the same functions everywhere” (Durkheim 1912:17).

Durkheim also argues that religion is in fact a reflection of both good and bad in society and in religion these become idealized. “Our definition of the sacred is that it is something added to and above the real: now the ideal answers to this same definition” (Durkheim 1912:317). Ritual is very important to this idealization process. The ritual experience is what reifies symbols and collective representations and infuses them with emotion. Durkheim argues that this process is just as important in modern institutions since society becomes patterned by symbols. Generating “collective effervescence” helps to reify common symbols and make them sacred. In the case of Tomboy Tools it is important to consider how the key symbols are effectively idealized and infused with emotional energy, so that the tools and messages become solidified in the minds of the women attending. According to Durkheim, rituals create a

“socially derived emotional energy [which...] is a feeling of confidence, courage to take action, [and] boldness to take initiative” (Collins 2004:39). This “emotional energy” makes the individual feel good, which becomes an incentive for repeating rituals. This incentive is obviously useful for Tomboy Tools for the sake of repeat business. The more positive energy generated in their “tool parties,” the better.

Erving Goffman (1961) also analyzed ritual, but he was more concerned with the micro-level interactions among people in modern day life. Goffman argues that these same principles of pre-modern ritual also happen across a variety of contexts in our modern industrial society. He examined rituals that can be found in everyday life, such as the greetings, small talk, and departures that occur in numerous settings. These “interaction rituals” play out differently based on the relationship between the people who are interacting. Therefore they can be indicative of the degree of friendship, intimacy, and respect among the people involved. These verbal rituals also help to focus the situation and attention. Given the importance of social interaction in conjunction with sales (Prus 1989, Clarke and Pinch 1995) interaction rituals are clearly important to Tomboy Tools’ sales strategy. Goffman argues that rituals differ based on “situational reality,” and people are encouraged to conform to these situations by maintaining normal forms of ritual interaction. Goffman was also interested in studying people who did not effectively conform to ritual interactions which provided evidence for his argument that the reality of everyday life, including “tool parties,” is highly constructed by specific interactional conditions.

Randall Collins (2004) uses the foundational work of Durkheim and Goffman to offer his own interpretation of modern rituals. Collins acknowledges the common criticism that ritual analysis can be over-generalized to the point that everything becomes a ritual. He argues

however, that this shows, “how much commitment to shared symbolism and to other features of human action, will occur in a wide variety of situations” (Collins 2004:15). That being said, Collins (2004:48) has identified four main components to the modern ritual process, which are as follows:

1. Two or more people are physically assembled in the same place, so that they affect each other by their bodily presence, whether it is in the foreground of their conscious attention or not.
2. There are boundaries to outsiders so that participants have a sense of who is taking part and who is excluded.
3. People focus their attention upon a common object or activity, and by communicating this focus to each other become mutually aware of each other’s focus of attention.
4. They share a common mood or emotional experience.

Collins goes on to identify four outcomes of the ritual process, which include; group solidarity, emotional energy (feelings of confidence, enthusiasm and so on), symbols that represent the group, and finally, feelings of morality. Collins has applied his theory of ritual to a number of everyday scenarios but has not adequately considered the impact of gender in his analyses. For example Collins examines the ways in which firefighters enact ritual elements before, during, and after an emergency. He does not, however, consider that firefighting remains a heavily male dominated occupation. Exploring the idea of a “gendered ritual” in relation to “tool parties” will be helpful in examining the way that gender impacts these ritual processes and helps to shape gender in the concrete settings of interactional space.

Victor Turner’s (1979) anthropological analysis of ritual is somewhat akin to Durkheim’s and has led him to develop a theory of liminality, which draws on van Gennep’s descriptions of “rites of passage.” These rites of passage are present in every culture and “are seen as both indicators and vehicles of transition from one sociocultural state and status to another – childhood to maturity, virginity to marriage, childlessness to parenthood [...]” (Turner

1979:466). Van Gennep identifies three stages to these rites of passage, which are separation, limen and re-aggregation. The first stage represents being separated from usual life, the second phase involves being in limbo between past and present ways of life and the final phase is returning to ordinary life in an altered state of being. Turner's interest lies in the limen (in between) stage of being. He has broadened this concept to include theories such as liminal time and liminal space. Further, he distinguishes liminoid states from the liminal stages identified by major life transitions:

‘liminal-like,’ rather than ‘liminal’; that is, they are historically connected with and often displace rituals which possess true liminal phases, and they also share important characteristics with liminal processes and states, such as ‘subjectivity,’ escape from the classifications of everyday life, symbolic reversals, deconstruction – at a deep level – of social distinctions, and the like; nevertheless, liminoid genres differ from liminal phases in ways which indicate major differences in the societies of which they respectively constitute major modes of reflexive stock (1979:491)

Turner also explains that liminoid phenomena are better suited to modern society, based on its complex structure whereby people are more likely now to voluntarily enter relationships versus inheriting them based on birth. Liminoid phenomena can be collective and often occur in “leisure spaces” (such as home parties). The ways in which the “tool party” represents a liminoid space will be apparent through my analysis of the key elements of these gender-specific ritual experiences. I argue that the success of the “tool party” ritual hinges on the following elements: (1) organizing the event so as to encourage a comfortable, non-threatening space exclusively for women (interaction rituals); (2) teaching women about the tools by adhering to traditional female gender norms (idealization of tools as symbols); and (3) emphasizing relationships and social cohesion over instrumental purchasing decisions (relationships born of ritual). I will consider each of these components in turn.

### Interaction Rituals

Collins is known for examining the structural set-up of a scene which is particularly reflected in his first two elements of modern ritual. “Tool parties” immediately satisfy Collins’ first element as they are made up of more than two people physically assembled together. The number of people at each party varies but there is generally 6 to 10 people present. It also satisfies the second element of modern ritual as the in-group is well defined. Attendance is through invite only and the parties are exclusively for women, which create clear boundaries to outsiders. This structural set-up of the “tool party” also aids in creating a quiet and comfortable space, minimizing distractions and maintaining a positive, anxiety-free social experience for the women. This was considered a boon to the sales strategy of Tomboy Tools.

Throughout the interviews, there was a general consensus that one of the advantages of the “home party model” was the all-women environment. This provided a comfortable, non-threatening space where women could express their questions and concerns without apprehension and the fear of “looking dumb.” This feature reinforces the importance of Collins’ second element to modern ritual in that it presents a boundary to outsiders and provides a welcomed exclusion of certain people, in this case, men. Since these events happen in the home, there is a less formal atmosphere, which carries the assumption that everyone at the party is there to learn. The home aspect is incredibly important as it is a private, domesticated space. If the location were a public place, even something seemingly appropriate like a coffee shop, the atmosphere would not be as conducive to creating the comfort level that accompanies the home, in part due to the lack of group boundaries.

The private space, coupled with the all-woman attendees, are key elements in creating the comfortable environment that allows presentations of traditionally male dominated merchandise

to thrive. In line with this point, some women expressed that they would not feel comfortable at a co-ed party or an event involving tools:

[...] allowing women a comfortable space to use the tools is really important. Like I would not be comfortable going to a guy's course about how to use tools. Like they all have more experience than me. [...] So I think that part of their marketing is good because it is word of mouth, It's a comfortable space, I think that is really smart. (Respondent 2)

This quote mentions the expectation that men would already have experience with tools. This idea came up with other women as well. The concern is that the different skill and knowledge levels of men and women at the same party would create an intimidating space, illuminating a masculine gender expectation. Although a traditionally male domain, it is likely that some men do not have much knowledge or experience with tools and home repair techniques. It is also the case that some groups of men could profit more than some groups of women from a learning experience about tools. Much in the same way that the dominant discourses about women are easily referenced and deeply ingrained, so too are those about men. Despite whether this assumption is validated or not, it was a recurring theme. Consider this woman's statement about "tool parties":

It's more social I think with all women, they would probably be pretty intimidated if men were there. Men might be kind of cocky or something. Not cocky but just making fun... like oh pink tools blah blah blah. So then women might be more intimidated to ask questions and try them out. So I think if it's all women everyone feels more comfortable and can ask whatever they want without feeling like an idiot. (Respondent 5)

At the parties I attended, women felt very comfortable asking questions about the various tools available and their uses. If the question seemed particularly elementary, there would sometimes be some chuckling and teasing but nothing that could be described as putting anyone down or making them feel uncomfortable. There was one conversation in particular where someone asked about the uses of the cocking gun:

**Woman1:** “What is a cocking gun used for?”

**Woman2:** “Seriously? You’ve never seen one used before!?”

\*light laughter from the group

**Representative:** “It is used to place sealant around the bathtub in order to prevent water from leaking”

**Woman3:** “How does this one load with the sealant because I have used one before and found it difficult to manoeuvre so that the sealant came out consistently and I plan on doing this to my bathtub in my new house soon”

\*Representative opens the cocking gun and demonstrates the process

**Representative:** “I actually recently did this in our bathroom at home and a really helpful tip that I used was to fill the bathtub with water first which will make it heavier and the sealing will set better as it’s drying.”

This example shows that although the woman asking the question was teased, her inquiry was taken seriously, leading to a productive conversation about home repair techniques.

One representative mentioned the comfort level that can be achieved through the commonality of not knowing something:

And when they realize that they can, when they realize that the women next to them at the party also doesn’t know what a Robertson head is they don’t feel so bad. They don’t feel so intimidated by wanting to express themselves in their homes. (Respondent 8)

The element of comfort is so important that one woman even viewed the lack of competence from one of the representatives to be advantageous in adding to the comfortable environment:

I think sometimes when you don’t know everything you put everyone else at ease. You’re not intimidating. Like she wasn’t intimidating to the other ladies and some of us knew and some of us didn’t know. (Respondent 6)

The idea of having a non-intimidating space as trumping the need for a tool-savvy and competent representative stresses the importance and emphasis placed upon a comfortable space.

Some of the women interviewed agreed that they would feel comfortable learning about tools in other environments besides the home party offered by Tomboy Tools. But even these women recognized the benefits of the comfortable environment and were able to empathize with the fact that some women may need the home space and the all-woman presence in order to feel at ease and maximize the experience. One of these women stated:

There probably are women who would end up at these house parties who would probably not go to a workshop full of people. And so for those women it's quite possible that they are getting introduced to the idea in an effective way. (Respondent 1)

This implies that there are some women who would need this modern ritual and the comfortable space that accompanies it in order to effectively challenge and possibly transcend gender boundaries. When asked if she thought Tomboy Tools would be a good introduction to tools for women who were more likely to conform to "traditional" gender roles one woman replied:

because of the way they are presented to people in the party style, it might be more of a break out of the traditional mould for women because they are presented the way that Tupperware is, and like candles and other feminine things because they are given in parties maybe it would give more access to women who are traditional and aren't used to doing things around the house. (Respondent 7)

The idea that the tool party offered a helpful transition and or introduction into the world of tools for women who were particularly traditional in their performance of gender was a reoccurring agreeable point among the interviewees.

There is also a large interaction component involved with the "tool parties." It is apparent that the goal of a "tool party" from the perspective of the company, as well as the Tomboy Tool representative, is to sell products. However, there is a reason that the word



“party” is in the title. Both company executives and the women hosting these home parties recognize the women’s interest in getting together and socializing. Having attended several of these “tool parties” myself I can attest to the fact that there is a lot of socializing throughout the events and that this seems to be high on the priority list.

The home party essentially utilizes “fun” to sell products, relying all the while heavily on female social norms. The representatives are very aware of this, and consequently make an effort not to interfere with the natural flow of the party. Throughout all of the parties I attended, the representative exercised discretion when delivering her pitch. For example, the representative was never the one to suggest that the presentation begin. Even when she had finished setting everything up, she would patiently wait while the guests mingled and did not begin or suggest beginning the presentation until the host or one of the other guests recommended that it start.

The value of the host and her friends enjoying the party is also recognized by the executives, particularly since the products sold are non-renewable. As this sales rep explains:

[...] you buy a hammer, you got one. How do you maintain repeat business, customer loyalty that sort of thing when you are selling something that once you bought it, you’ve got it? So it’s the educational piece, and the fun and the interactive and the dynamics of those parties that keep women coming back. (Respondent 8)

With respect to their product, the emphasis on providing entertaining parties is more important than for some other companies who utilize the home sales technique. For example, cosmetics will only last for so long and will need to be replaced. Therefore, companies such as Mary Kay need to emphasize a stronger sense of brand loyalty. As mentioned in the above quote, Tomboy Tools has to put more emphasis on the experience of the party in order to create repeat business. The emphasis placed on interaction at these parties fits nicely with Collins’s third and fourth

elements of modern ritual theory. The focus upon a common object and activity is continually communicated by those attending and this mutual focus in turn creates a common mood and in some cases emotional experience. The focus on reaching these common moods and emotional experiences is paramount for Tomboy Tools, because it will create an incentive to repeat the ritual, which in this case means more “tool parties.” They are selling both the experience of a “tool party” and the tool related products that go along with this. Along these same lines, one of the Tomboy Tools executives mentioned that one of their favourite sayings is “throw a tool party and get hammered.” Although clearly a fun play on words it is also essentially part of their business philosophy and approach.

The sociable aspects of parties were particularly important for the Tupperware company, during the post-war era, since it was a dissolute time for many people, and there was an inward need for social contact and community (Clarke 1999). It could be argued that today more and more people long for community involvement (Putnam 2000), and so the high levels of socializing among friends may provide much of the appeal for the “home party” model.

When asked about the home party as a promotional technique, one woman stated:

Girls like socializing....girls like to “chit-chat” and have social parties. If they’re going to be amongst friends and discussing how they are going to use [tools] then I could see how that would be beneficial to the sale of something that is not traditionally focused on females. (Respondent 4)

This idea of a feminine association with socialization adds a gendered aspect to this ritual that is important to understanding why it is particularly effective for this target group. The framing of socializing as “chit-chat” is interesting, since this terminology is often perceived to be degrading and trivializing. The negative imputations placed upon women’s conversational styles have been challenged within feminist scholarship. Jennifer Coates (1996) argues that women’s

conversations have important cultural significance and are effective forms of communication. Coates argues that all forms of dialogue between women allow for the discussion and evaluation of social norms, the creation and maintenance of personal identity, and a means of preserving trust and commonality with other women. Beyond the entertaining aspects of socializing, chatting at the tool parties also provides a forum for gaining information. This can help women learn about the tools, become more comfortable with them, and negotiate a new avenue of social practices from which they have traditionally been excluded. As one woman stated in regards to the party:

[...] they [women] are getting introduced to the idea in an effective way. Especially if there are all women at the party and this does develop a social network kind of thing. And people do meet each other and meet other women that are using the tools. (Respondent 1)

In another example, one of the women who was not particularly impressed by the tools or parties recognized the value of them in terms of social opportunities they provided:

‘Cause I don’t go to home parties, normally if I want something I just go down to the hardware store. But its cute, it gives a chance for the women to socialize at the same time and get to learn a few things. (Respondent 6)

Clearly not all of the conversation that occurs at these parties is focused on tools and home repair. However, since that is the reason for the party, the sales representatives anticipate that it will eventually become part of the conversation. The dialogues that emerged at the parties I attended ranged from anecdotal stories about renovation projects, to more in-depth conversations about women’s role in the design and use of tools over the years. A lot of conversations would include a mixture of dialogue about tools as well as general topics of interest. For example, a conversation at one of the parties went as follows:

**Woman 1:** “This hammer would be great for Julie.”

**Woman 2:** “Who is Julie?”

**Woman 3:** “She is my sister in-law. Really? You think she would use this?”

**Woman 1:** “Well I know that since the divorce she has been doing a lot more around the house. Last week she painted and redid her bedroom.”

**Woman 3:** “Probably a good idea to change the scenery -- that was a messy divorce! Don’t you think she already has a hammer then?”

**Woman 1:** “Well not one made for a woman and I think she would like the pink!”

**Representative:** “The hammer comes in one of the tool kit sets as well.”

In this example, the women at the party are mingling conversation about purchasing tools with updates about a woman who is not present. This is an exemplary of the way that important information regarding the tools and their uses can be disseminated even if it stems from a topic that seems superficial and non-related.

The social connections made at these parties are another advantage to the setting. Some relationships made through the party could carry over into more interaction with women who are interested in tools and home repair. When asked if she stayed in touch with anyone from the party to discuss tools, one woman replied:

A few of my friends, we do. Like my friend bought the same kit I had and she bought another one as well. [...] So we use hers and we talk about it. (Respondent 5)

This woman’s experience shows that there is potential for relationships that are made at “tool parties” to extend beyond the party to the likes of friendships and even communities. This is most likely a by-product of their business model, as a leisure world of social connections would aid in maintaining a demand for their products. The creation of social bonds and community is a common consequence of ritual practices.

I hope to have shown that although the sociability of the tool parties may seem trivial, it is in fact a very important element to the sales scheme. The interaction and fun that occurs at these parties exemplifies a positive emotional experience which helps to idealize the tools, and messages of the company. This is particularly the case for Tomboy Tools as they are essentially selling the atmosphere of the parties along with the sale of their tool line. The conversations that occur at these parties are important in creating and reshaping the social norms around women's use of tools, which is a relatively new realm. The interactions also offer the opportunity to create social connections and networks with women that can carry over to a lasting interest, and even create women-based tool communities.

#### Idealization: Reifying Tools as Symbols

The process of idealization is a significant component to ritual. It is important therefore, that the party works to generate emotional energy, such that the tools and messages of the company can be infused with symbolic meaning and emotional resonance. If representatives are successful in generating emotional energy so that powerful symbolic meaning becomes attached to the tools then these symbols and messages conveyed at the party will become solidified for the women. I argue that the all-women educational atmosphere and the opportunity to engage with the tools at the parties help to reinforce these components.

One of the goals of the "tools party" is to enlighten women about tools and the techniques of home repair. To accomplish this, they ensure that the groups consist exclusively of women. The idea of all-women or all-girl classrooms is a contentious issue within education literature. Some argue that educational institutions consciously and unconsciously act in sexist ways that divide students along gender lines, (Thorne 1993; Murphy and Gipps 1996; Arnot 2002) and that

a segregated classroom is the only way to combat this. Mary Daly (2006), for example, was a radical feminist who taught at Boston College and was known for her controversial move of not allowing males into her feminist thought courses. She argued that the presence of men repressed class discussion and that her refusal to allow them in the classroom was a reflection of the long silencing of women. This is obviously different from Tomboy Tools as they have economic goals of selling products but it is comparable in that the all-woman space contributes to a comfortable learning environment. There was a recurring concern that the presence of men at “tool parties” may impede women from expressing themselves and may be a point of intimidation. This theme was present when some of the women interviewed expressed why they would not want a co-ed party. One woman praised the all-woman atmosphere of another tool related event:

They also do, they do a couple of ladies nights. We were at one ladies night at Home Depot, it was about doing hardwood floors. So they had all this sanding equipment out like that and you felt really comfortable, everybody got a turn to try the equipment and you felt very comfortable doing that because everyone was women, except for the instructors but they were very, very respectful. So that I found really helpful. (Respondent 1)

Another interesting point brought up in this quote is the reference to getting to try the equipment.

These opportunities were brought up by other women interviewed as well. As one woman said:

I need to be able to feel, see, touch use, let me do it on my own. Like if I am going to spend like \$140 or whatever it is for a drill I want to have used it. (Respondent 2)

At each of the parties that I attended the representative would explain some of the features of a tool and then pass it around the semi-circle so that everyone had a chance to handle it. There were also opportunities at all of the parties for women to come up at certain points and demonstrate some of the tools, usually on a piece of scrap wood. I think that these opportunities to interact with the tools adds to the comfort of using them. Just visualizing the tools might

reinforce feelings of disassociation that some women may already have, and hence, embodiment and material practice goes beyond a merely symbolic familiarity, similar to Latour's previous observations about adding a weight to hotel keys in order to maximize the message and assure the compliance of the customers.

It also connects to a holistic educational philosophy. Rather than simply discussing the tools, the theory is put into practice, giving women the opportunity to use tools and gain familiarity with them. Many educational philosophies praise connecting theory and practice so that students can create an intimacy with what they are learning (Armstrong and Casement 2000). This intimacy through handling the tools can also transfer to the tools themselves which can help with the idealization process.

The educational component to the "tool parties" is also what focuses the attention of the ritual, which is the third element in Collins' theory. The common activity among those attending the party is learning about and practicing with the tools. This ritualized familiarity gives rise to the "liminoid" experience, and an effective transitional environment (Turner 1979; Pinch and Trocco 2002). The "tool party" acts as a liminoid stage as it is situated between two, often opposed, social worlds. The "tool party" provides the comfortable transition from the traditional gender role of women (tea parties, chit-chat, book clubs, etc.) to the male social world that involves tools and home repair. Turner (1979) mentions that the liminoid genre can expose alienations created by political structures. This is an example of exposing women's alienation from the realm of tools. The limitations that are generally guided by their gender are relaxed so that a transition to a new identity, as tool-user, becomes possible. The education about tools and home repair garnered through these parties helps in the transition of women as "second sex" tool users to "do-it-yourselfers" or "do-it-herselfers." Boundaries around traditional gender roles are

being transgressed and altered. The all-woman atmosphere and the opportunities for interaction create a comfort and familiarity around leaning about tools, which in turn creates access to the information needed to make the transition into a hand tool-user.

The learning opportunities that come through the “tool parties” are very important. The comfort level achieved at these parties, due in large part to the all-woman atmosphere, is crucial for an effective learning environment. The interaction with the tools proves to be a pertinent part of the learning process and accounts for a stronger connection to the tools and techniques being presented. The attention of the group is focused on learning about tools which accounts for an important part of the ritual, particularly since a positive emotional space reifies lifestyle, beliefs and symbols associated with the tools. Also, the education achieved at these parties adds to the “liminoid” experience since women can use that knowledge to transgress their traditional roles.

#### Tool Party as Context for Building Relationships

The intimate environment of the home party sales model allows for the opportunity to create new relationships and fortify old ones. Gender also plays a large part in this since all attendees are women; it is often argued that women have an inclination to create and preserve relationships. Carol Gilligan (1982) is well known for her research on women and morality. Although the home party scenario does not necessarily impose a situation on morality, the concept of women making an effort to create and preserve relationships crosses over into business, and women’s shopping behaviour. Gilligan critiqued Lawrence Kohlberg’s (1958) six developmental stages of moral reasoning, and his findings that girls tended to score lower within the six stages than boys suggesting that females were inferior in their personal or moral development. Gilligan (1982) refuted this claim in her study claiming that Kohlberg failed to consider gender



differences in his analysis. Gilligan (1982) conducted detailed interviews with women and found that rather than being less moral than men, they simply arrived at their moral decisions differently. While males focused on abstract principles of justice, females tended to focus on relationships with others and employed an “ethics of care” in their decision making. Gilligan’s research was done at a time when fewer women were participating in the public sphere so it is possible that women’s shifting gender roles have affected attitudes toward morality. However, I think her analysis remains applicable for the most part since characteristics of being caring and nurturing are still deeply rooted in the female socialization process. This theory is given support by this statement made by a Tomboy Tool exec:

[...] the party plan industry is a multi-billion dollar industry. So women shopped differently than men. So that marketing strategy really goes right to the core of what motivates a female buyer. You know, you could walk into a store tomorrow and find something you really, really love product wise and you need someone to help you get it, or buy it, or pay for it or whatever and if she’s not very nice to you or if he’s not very nice to you, you’ll walk out, you won’t buy it. Men don’t care about that as much, you know they still care but not as much, they don’t care about having a relationship with that person. (Respondent 8)

This perception suggests that women care about the relationship created through business transactions and that the outcome and development of this relationship can even trump the want or need for a particular product.

Some of the women interviewed felt as though the Tomboy Tools representative was incompetent, or that the tools were not as high quality as they had come to expect. Nonetheless, most of them still bought something. In terms of purchasing behaviour, some women revealed that guilt was at least in part a motivation for purchasing products. This type of motivation might be called a “sympathy purchase,” or show that they were interested in maintaining the harmony of a relationship with the representative. As one woman stated:

but I myself bought the adjustable wrench because I wanted to buy something to support the lady. I guess I needed it because at the cottage...I rarely use tools. (Respondent 4)

Although she goes on to mention that there is a possible use for the wrench for taking in and out the water system at camp, it is clear that her first inclination was to buy something in order to “support the lady”. She places a great deal of emphasis on sympathy for the representative, which implies that her purchase was more motivated by guilt than utility. Another woman stated this rather explicitly when she said:

Of course you have to buy something from those parties even if you don't really want anything. It's not like in a store where you can just walk out unnoticed. It is an intimate setting and you feel like the rep took time to explain stuff to you so her time should be rewarded. Not buying at those events is almost equivalent to not tipping at a restaurant. It just seems wrong. (Respondent 10)

Clarke (1999) points out that the “sympathy purchase” is not new and was recognized as a business advantage even in the earlier forms of home demonstration models. She notes that door-to-door salesmen had highly profitable results particularly during times of high unemployment since women wanted to support these working men. In 1938 a top manager from the *Wearever Aluminum Cookware* products wrote that “the great power of this program is in the fact that every lady present usually buys” (Clarke 1999:83). This remained the case in the present day “tool parties” that I attended. Some women even mentioned that they had not planned on purchasing anything but that they felt like they should, so they would look for something that was small or not very expensive. I personally purchased something at every party, since I would feel bad if the representative did not make enough sales. By the time I attended the final party I had already purchased most of the basics and therefore made my buying decisions based on price and what other people were buying at the party to ensure that it was worth the representative's time. The relationship with the hostess is also a factor. One study

about purchasing behaviour in embedded markets by Jonathan Frenzen and Harry Davis (1990) showed that the degree to which the guest felt close with the hostess weighed twice as much in their decision to buy something than did their regard for the product.

This approach of kindness is further demonstrated through one women's response when asked if she felt like the representative was knowledgeable and competent:

Well she had just started. I kind of give her the benefit because she's trying to make a living. I'm not sure they're giving her the big dollars to go and educate herself; she's got to learn on her own. And she's kind of...you can tell she's just been a little while doing it. She wasn't totally informed but maybe none of us were. (Respondent 6)

The competence of the tool representative is subtly challenged in the above quote, but it is clear that this interviewee is attempting to defend her. She is almost providing excuses or reasons to justify the representative's lack of knowledge in the area of tools. This is a clear example of caring trumping the logic of economic calculations, which relates back to Gilligan's theory about women's focus on preserving relationships and showing compassion.

A similar example occurred when one of the women was asked whether she felt the representative was competent:

NOOOO! Definitely not. She might have used them [tools] but whether she was using them correctly or not, I have no idea. The way that she came across was that she had no idea what she was talking about. Because a few of us who were at the party had background with tools or I don't know looked at the tools and could read that they were made in Taiwan or whatever when she told us that they were made in the States or in Canada or something like that. She exuded confidence but it wasn't competence necessarily. So I think maybe they should have a little more training. (Respondent 7)

It is obvious that this woman was not impressed with the representative. Nevertheless, she mentioned earlier in the interview that she purchased something from her. She also refrained from saying anything critical to the representative or even pointing out that she was wrong about where the tools were made. Also noteworthy were the comments made by guests as the tools

were being passed around. The representative would give their “spiel” about the tool and then it would be circulated. The representative might emphasize special features of the tools, such as the magnetic nail holder on the top of the hammer. Some would start their explanation about the next tool while the previous one went around the semi-circle. The silence created in these periods could often be awkward. These times of awkwardness could be seen as Collins’ (2004) discussion of failed rituals. This occurs when elements of the ritual break down (such as a loss of the common goal or attention), which negatively impacts the common mood, such that the generation of emotional energy is lost. There is low collective energy and emotional focus which causes the ritual to break down. This silence was occasionally filled by people saying something nice about the tool, such as “oh yeah, this does have good grip” or “wow, it is light.” These comments showed that the guests were attentive listeners, and were able to convey to the representative that they liked the tool. I found that these comments provided relief from the awkward silence, and served to validate the presenter. This relates back to Goffman’s (1959) theories surrounding interaction rituals as he discusses actors delicately covering for others in face-to-face communication since “the show must go on.”

The reactions of the women being interviewed shows that, like Gilligan noted in relation to morality, women are concerned with creating and preserving relationships. Guilt is often a motivating factor so that even those who were unimpressed with the presentation or product are still likely to buy. There are also efforts made to validate the representative either through the monetary contribution for the tool or the kind comments offered throughout the presentation. The forgiveness shown that is given to the representative, even if they were thought to be incompetent, demonstrates the power of this gender-specific business model. Women’s tendency to care about relationships, even throughout business transactions, is likely why

companies specifically employ the female dominated marketing strategy of home parties. Although past research on sales interactions (Prus 1989; Clark and Pinch 1995) has tended to ignore the role of gender, this example shows how gender-specific sales interactions are central to well performed “pitches,” or sales schemes. How representatives are able to sell Tomboy Tools so effectively within the gendered space of the home party, simply could not be understood effectively, without this sensitivity to the gender dynamics at play. More research into the gender-specific interactive routines of both male-centric and female-centric sales is essential to further our understanding of this interesting social-psychological terrain.

### Conclusion

The in-depth analysis of the “tool party” revealed that it adheres to a gendered logic and works as a modern ritual. The all-women environment and the private space created a comfort level that was highly appreciated by the women interviewed. The “tool party” satisfies Collins’s components of having more than two people physically present creating boundaries to outsiders, sharing a common activity and mood, and engaging in feedback of a smooth flow of interaction. The educational elements represent the common purpose element of modern ritual and helped to infuse the tools with symbolic meaning. The holistic learning approaches of the “parties” helped to create an intimacy with the tools and contributed to the possibility of a “liminoid” experience, bridging the social world of women’s home parties with the male domain of tools and home repair.

It is difficult to assess whether or not the final element of Collins’ ritual theory was achieved every time, which was a common mood or emotional experience among the guests. This would vary depending on if the ritual was successful and interaction and excitement for the

tools was at a maximum or else if the ritual was not maintained and there were awkward silences throughout. It was shown, however, that there were efforts made by the women to maintain the ritual based on compassionate goals of creating or maintaining relationships which also carried over into purchasing decisions. The women interviewed shared mixed opinions as to whether they found the experience helpful and enjoyable, or if they were sceptical about its effectiveness. The message of the company, would imply that at the end of the party all of the women should share the emotion of feeling empowered and therefore it would fit that they would consider the “tool party” as a modern ritual experience. This would also mean that the ritual outcomes would come to fruition, thus enhancing group solidarity, emotional energy, a shared sense of the symbols that represent the group, and feelings of morality and righteousness. In addition, it would imply a “liminoid” experience as these women would have utilized the “tool party” as the “in between” space to transition from traditional female roles to becoming tools users. This experience would extend not simply to using tools but as a lifestyle change so that the messages of empowerment and confidence were internalized. In reality, the conclusion from those interviewed is that only some women would have experienced the complete ritual and “liminoid” experience, along with the symbolic and emotional outcomes intended. This acts as further testament to the tension and complexity of the company in the eyes of the women.

## Conclusion

Analyzing the ways that gender intersects with everyday material artifacts and technologies is important for understanding the ways that gender norms and roles are sustained. The purpose of my exploratory research was to examine the ways in which women are negotiating their relationship with technology when it is made specifically for a female market. In the case of Tomboy Tools, gender was implicitly maintained through gender scripts embedded in the artefacts themselves, the marketing and promotional techniques, and the home party sales strategy. Through participant observation at “tool parties”, ten semi-structured interviews with potential users and executives, and a content analysis of web and print media, I developed a grounded theory of how gender and technology became relationally constructed within a matrix of Tomboy Tool’s products, advertising, and home based “tool parties.”

The products produced by Tomboy Tools were found to be embedded with a “gender script” (Akrich 1992). This gender script helps illuminate the “co-construction” of gender and technology (Latour 1991; Jassonoff 2004) which was evidenced through the ways that the tools were designed. They were lighter, smaller and ergonomically enhanced. The fact that the tools came in pink, the colour most widely associated with femininity, proved to further the female gender script. The aesthetics of the tools received mixed reactions from the women interviewed. Some saw them as a reclaiming or a way of staking femininity into the realm of tools, while others saw them as infantilizing, and counter to the idea of an independent, handy woman. The gender script was also reinforced in more implicit ways, for example through how “appropriate” home repair projects for women were inscribed. While the tools are supposed to compensate for women’s presumed weaker upper body and smaller hands some women felt as though this compromised their ability to handle larger repair or construction jobs which restricts women’s

access into this “male-domain.” This sentiment was echoed through company executives, who viewed their target market as performing predominantly small, home maintenance jobs around the house, and “beautifying” their homes.

On the other side of this, however, the marketing and promotion of Tomboy Tools conveyed strong messages of confidence and empowerment. These messages contribute to a specific gender script that has a long history of mobilizing women with messages of positive thinking and a “can-do” attitude, as demonstrated through Tupperware in the 1950s (Clarke 1999). However, Tomboy Tool’s empowerment discourse is undercut by the imagery and female-centered sales technique of home parties. The imagery involved in their promotional material revealed feminine hetero-normative images that did little to challenge traditional gender norms. These images imply that women can use these tools and engage in this historically masculine domain without trading in their femininity. Even if the activity is considered masculine, the pink tools, home parties, imagery and discourse ensure that a female gender script is followed and that femininity is performed. The historical analysis of the home party also exposed its gender specific evolution, generated specifically to target women.

An in-depth analysis of the “tool party” phenomenon revealed that it represents a unique form of a modern gendered ritual. The party easily satisfies Collins’s (2004) four elements of ritual as there is bodily co-presence, boundaries to outsiders, a coming together for a common purpose, and a shared mood; all of this can lead to the creation of emotional energy. Interviews and participant observation at the parties revealed key themes surrounding idealization and the build up of emotional energy (laughter, chit-chat) necessary for solidifying the messages of the company and in some cases creating a “liminoid” (Turner 1979) experience between the domain of female parties on the one hand, and the male domain of tools, on the other. The home setting



and all-women environment created a comfort level that was appreciated by most of the women interviewed, and created a space that allowed for a successful ritual to take hold. Interaction and fun are key components to the home party and also contribute to creating emotional attachments helping to idealize the imagery. The tool demonstrations emphasized a holistic approach to learning, allowing for “hands-on” interaction with the tools. This educational initiative follows traditional female norms, and contributes, again, to the process of idealizing femininity. Finally, I examined the relationships that emerged as a result of this ritual and the ways in which gender mediates these relationships. It was concluded that the women at the parties were empathetic in ensuring that the ritual played out properly by being polite and behaving as expected even if they were less than impressed in some instances. Attention to new relationships and social graces carried over into purchasing behaviour as well, as women felt “guilted” into purchasing something even if they did not necessarily want or need the product in question.

One limitation to the study is the size of my sample. The study could have been improved, and become more generalizable if I was able to collect data by attending more “tool parties” and through conducting additional interviews with women. The restricted time frame for this project, and the challenge of finding people who had been exposed to the company, and who were agreeable to participate in an interview, contributed to this problem. Further, my sample of users was taken exclusively from one Northern Ontario city, largely based on financial and time limitations. Therefore I was unable to access user populations in other parts of the world, or other regions of the country. It may well be that a smaller, Northern blue-collar town like the one where I conducted my study, would generate more “do-it-herselfers” based on having less access to outsourcing opportunities and being connected more to a “blue-collar culture” (Dunk 1991). A larger and diverse sample size would also make it possible to identify

other perspectives and consider how these might differ among age, race, class, ethnicity, ability, and so on, which may affect women's experiences with tools and their performance of gender.

Throughout my research a broad spectrum of issues and topics were covered. Since this is an introductory project the topic become increasingly multi-faceted as new themes and angles continually emerged. Creating a more specific focus on some of these issues would allow for a more in-depth examination. For example, the ritual theory (Durkheim 1912; Goffman 1961; Collins 2004; Turner 1974) emerged as useful after the data was collected and analyzed. Knowing this connection now, the field work and interview guidelines could refer more explicitly to these patterns and themes. Further a study examining ritualized aspects of home parties could benefit from other examples as well, such as Tupperware and Mary Kay. Questions could include: Do the same patterns of ritual from Tomboy Tools apply to other home party models? What variable or components of these home parties lead to successful rituals?

The existence and success of this company indicates that the boundaries of femininity are changing. However, the hyper-female gender script exposes the limitations of these changes. The scope of my research could not extend to consider all of the broader assumptions about what this means for the future of women in traditionally male domains of "a-vocational" practice. Further research questions might ask how women are negotiating traditional performances of gender as they become further implicated with new forms of material culture? How prevalent and overt are these gender scripts in other forms of technology? Are these gender scripts accommodating to changing gender roles or are they particularly constraining? Are there other examples of seemingly progressive companies and technologies that are in fact embedded with constraining gender scripts? Future research could also study women who are in the trades in order to examine the ways they are negotiating the social definition of femininity while

implicated in a masculine domain. The study could also include an examination of the kinds of tools that are available to women in the trades and what, if any, limitations they may impose on practice.

This case study contributes to the existing literature on the intersect of gender and technology within material culture (Akrich 1992; van Oost 2003; Kline and Pinch 1996; Lindsay 2003; McGaw 2003; Wajcman 2004). I have used a constructivist approach to dissect a particular gendered material artifact; that is, tools specifically created for women. The success of this company speaks to how it conceptualizes gender, using semi-traditional tropes that still resonate with many women, even if it turns off some. A further examination shows the importance of strategic marketing and promotional techniques for the emergence of new artifacts and technologies into culture. In relation to the sociology of gender my research extends the tradition of critically examining gender roles and performances in relation to specific social contexts. Women's behaviours and reactions to the products and marketing means of Tomboy Tools reveal their contextual interpretations of femininity. This is particularly relevant as it is being played out against the background of a traditionally male domain. Finally, my research contributes to the ongoing discussion of the overt and subtle ways that social constructs of gender become defined and negotiated in relation to emerging technologies and historically exclusive domains.

## References

- Akrich, Madeleine. 1992. "The De-Description of Technical Objects." Pp. 205-224 in *Shaping Technology, Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and J. Law. Cambridge, MA, MIT Press.
- Armstrong, Alison and Charles Casement. 2000. *The Child and the Machine: How Computers Out Our Children's Education at Risk*. Beltsville: Robins Lane Press.
- Arnot, Madeleine. 2002. *Reproducing Gender/ Essays on Educational Theory and Feminist Politics*. New York: Routledge.
- Aronowitz, Stanley. 1988. *Science as Power: Discourse and Ideology in Modern Society*. Minneapolis: University of Minnesota Press.
- Bardini, Thierry and August Hovarth. 1995. "The Social Construction of the Personal Computer User." *Journal of Communication* 45(3):40-66.
- Bloor, David. 1991. *Knowledge and Social Imagery, 2<sup>nd</sup> Edition*. Chicago, IL: University of Chicago Press.
- Blumer, Herbert. 1969. *Symbolic Interactionism; Perspective and Method*. New Jersey: Prentice-Hall.
- Bradbard, M.R. 1985. "Sex Differences in Adults' Gifts and Children's Toy Requests at Christmas." *Psychological Reports* 56:969-970.
- Butler, Judith. 1990. *Gender trouble: Feminism and the Subversion of Identity*. New York: Routledge.
- Butterfeild, Stephen. 1999. *Amway: The Cult of Free Enterprise*. South End Press.
- Callon, Michel. 1987. "Society in the Making: The study of Technology as a Tool for Sociological Analysis." Pp. 83-106 in *The Social Construction of Technical Systems: New Directions in the Sociology and History of Technology*, edited by Wiebe E. Bijker, Thomas P. Hughes and Trevor Pinch. Massachusetts Institute of Technology.
- Charmaz, Kathy. 2006. *Constructing Grounded Theory: A Pratical Guide Through Qualitative Analysis*. Thousand Oaks, CA: Sage.
- Cialdini, Robert B. 2001. "Harnessing the science of Persuasion" *Harvard Business Review* 79(9):72-79.
- Clark, Colin and Trevor Pinch. 1995. *The Hard Sell*. London: Harper Collins Publishers.

- Clarke, Adele E. 2005. *Situational Analysis: Grounded Theory after the Postmodern Turn*. Sage Publications.
- Clarke, Alison J., 1999. *Tupperware: The Promise of Plastic in 1950s America*. Smithsonian.
- Cohan, John Alan. 2001. "Towards a New Paradigm in the Ethics of Women's Advertising" *Journal of Business Ethics* 33:323-327.
- Coates, Jennifer. 1996. *Women Talk: Conversation Between Women and Friends*. Cambridge, MA: Blackwell Publishers Inc.
- Cockbrun, Cynthia and Susan Ormrod. 1993. *Gender and Technology in the Making*. Thousand Oaks, CA: Sage.
- Collins, Randall. 1985. *Three Sociological Traditions*. Oxford University Press.
- Collins, Randall. 2004. *Interaction Ritual Chains*. New Jersey: Princeton University Press.
- Collins, Harry M. and Trevor Pinch. 1993. *The Golem: What you should know about Science*. Cambridge: Cambridge University Press.
- Connor, Jane M. and Lisa A. Serbin. 1977. "Behavioural Based Masculine and Feminine Preference Scales for Preschoolers: Correlates with Other Classroom Behaviour and Cognitive Tests." *Child Development* 48:1411-1416.
- Courtney, Alice, E. and Sarah Wernick Lockeretz. 1971. "A Women's Place: An Analysis of the Roles Portrayed by Women in Magazine Advertisements" *Journal of Marketing Research* 8:92-95.
- Courtney, Alice, E. and Thomas W. Whipple. 1983. *Sex Stereotyping in Advertising*. Free Press.
- Daly, Mary. 2006. *Amazing Grace: re-Calling the Courage to Sin Big*. New York: Palgrave Macmillan.
- Dodge, D., L. J. Colker, and C. Haroman. 2002. *The Creative Curriculum for Preschool*. Washington, DC: Teaching Strategies.
- Dunk, Thomas W. 1991. *It's a Working Man's Town*. Canada: McGill-Queen's University Press.
- Durkheim, Emile. 1912. *The Elementary Forms of Religious Life*. USA: Oxford University Press.
- Ellul, Jacques. 1964. *The Technological society*. Toronto, Alfred A. Knopf, Inc.
- Fagot, Beverly I. 1974. "Sex Differences in Toddlers' Behaviour and Parental Reaction" *Developmental Psychology*. 10:554-558.

- Faulkner, Wendy. 2001. "The Technology Question in Feminism – A View from Feminist Technology Studies." *Women's Studies International Forum* 24(1):79-95.
- Fodor, Jerry 1998. Review of Steven Mithen's *The Prehistory of the Mind*." Pp. 153-160 in *Critical Condition: Polemical Essays on Cognitive Science and the Philosophy of the Mind*, edited by J. Fodor. Cambridge, MA: MIT Press.
- Frenzen, Jonathan K., Harry L. Davis. 1990. "Purchasing Behavior in Embedded Markets." *Journal of Consumer Research* 17:1-12.
- Ferguson, Jills Hicks, Peggy J. Kreshel, and Spencer F. Tinkham. 1990. "In the Pages of Ms.: Sex Role Portrayals of Women in Advertising" *Journal of Advertising* 19(1):40-51.
- Gilligan, Carol. 1982. *In a different Voice: Psychological Theory and Women's Development*. Cambridge, MA: Harvard University Press.
- Gilman, Charlotte Perkins. 1898. *Women and Economics: A Study of the Economic Relation Between Men and Women as a Factor in a Social Evolution*. Boston, MA: Small, Maynard & Co.
- Glaser, Barney G. and Anselm Strauss. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine Publishing.
- Glaser, Barney G. 2007. "Constructivist Grounded Theory?" *Historical Social Research* 19:93-105.
- Goffman, Erving. 1959. *The Presentation of Self in Everyday Life*. Toronto: Doubleday.
- Goffman, Erving. 1961. *Encounters: Two studies in the Sociology of Interaction*. Indianapolis: Bobbs-Merrill.
- Goffman, Erving. 1977. "The Arrangement Between the Sexes." *Theory and Society* 4:301-331.
- Grant, Robert. 1995. "Values, Means, and Ends." Pp. 177-188 in *Philosophy and Technology*, edited by Roger Fellows. Cambridge: Cambridge University Press.
- Hall, Stuart. 1980. "Encoding/Decoding." Pp. 166-176 in *Media and Cultural Studies*, edited by M.G. Durham and D.M. Kellner. Malden: Blackwell Publishing.
- Haraway, Donna J. 1991. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge.
- Harding, Sandra G. 1986. *The Science Question in Feminism*. Ithaca, NY: Cornell University Press.

- Harding, Sandra G. 2004. *The Feminist Standpoint Theory Reader: Intellectual and Political Controversies*. New York: Routledge.
- Heidegger, Martin. 1977. *The Questions Concerning Technology and Other Essays*. New York: Harper & Row.
- Hjorth, Linda S., Barbara A. Eichler, and John A. Morello. 2003. *Technology and Society: A Bridge to the 21<sup>st</sup> Century*. New Jersey: Prentice Hall.
- Jasonoff, Sheila. 2004. *States of Knowledge: The Co-Production of Science and the Social Order*. New York: Routledge.
- Joerges, Bernward. 1999. "Do Politics Have Artefacts?" *Social Studies of Science* 29(3): 411-431.
- Johnson, Jim. 1988. "Mixing Humans and Non-Humans Together: The Sociology of a Door-Closer." *Social Problems* 35(3): 298-310.
- Jordan, Kathleen and Michael Lynch. 1992. "The Sociology of a Genetic Engineering Technique: Ritual and Rationality in the Performance of the 'Plasmid Prep'." Pp. 77-114 in *The Right Tools for the Job: At work in Twentieth-Century Life Sciences*, edited by Adele E. Clarke and Joan H. Fujimura. New Jersey: Princeton University Press.
- Kealing, Bob. 2008. *Tupperware Unsealed: Brownie Wise, Earl Tupper and the Home Party Pioneers*. University Press of Florida.
- Kilbourne, Jean. 1999. *Deadly Persuasion: Why Women and Girls must fight the Addictive Power of Advertising*. Free Press.
- Kline, Ronald R. 1997. "Home Ideologies: Progress?" Pp. 392-124 in *Gender and Technology: A Reader*, edited by Nina Lerman, Ruth Oldenziel and Arwen P. Mohun. Baltimore: The Johns Hopkins University Press.
- Kline, Ronald R. and Trevor Pinch. 1996. "Users as Agents of Change: The Social Construction of the Automobile in the Rural United States." *Technology and Culture* 37(4): 763-795.
- Kohlberg, Lawrence. 1958. *The development of Modes of Moral Thinking and Choice in the Years 10 to 16*. University of Chicago.
- Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*. Chicago, The University of Chicago Press.
- Latour, Bruno. 1991. "Technology is Society Made Durable." Pp. 103-131 in *A Sociology of Monsters: Essays on Power, Technology and Domination*, edited by John Law. London: Routledge

- Latour, Bruno and Steve Woolgar. 1979. *Laboratory Life: The Social Construction of Scientific Facts*. Beverly Hills: Sage.
- Legard, Robin, Jill Keegan, and Kit Ward. 2003. "In-Depth Interviews" Pp. 138-170 in *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, edited by Jane Ritchie and Jane Lewis. London: Sage Publications Ltd.
- Lindsay, Christina. 2003. "From the Shadows: Users and Designers, Producers, Marketers, Distributors, and Technical Support." Pp. 29-50 in *How Users Matter: The Co-Construction of Users and Technology*, edited by Nelly Oudshoorn and Trevor Pinch. Massachusetts Institute of Technology.
- Linstead, Alison and Joanna Brewis. 2004. "Editorial: Beyond Boundaries: Towards Fluidity in Theorizing and Practice" *Gender, work and Organization* 11(4): 355-362.
- Mackenzie, Donald and Judy Wajcman. 1985. *The Social Shaping of Technology*. Buckingham: Open University Press
- Marx, Karl and Friedrich Engels. 1848. *The Communist Manifesto*. London: Penguin.
- McGaw, Judith A. 2003. "Why Feminine Technologies Matter" Pp. 13-36 in *Gender and Technology: A Reader*, edited by Nina Lerman, Ruth Oldenziel and Arwen P. Mohun. Baltimore: The Johns Hopkins University Press.
- Merton, Robert K. 1936. "The Unanticipated Consequences of Purposive Social Action" *American Sociological Review* 1(6): 894-904.
- Meyerowitz, Joanne. 1993. "Beyond the Feminine Mystique: A Reassessment of Postwar Mass Culture" *The Journal of American History* 79(4):1455-1482.
- Miller, Cynthia L. 1987. "Qualitative Differences Among Gender-Stereotyped Toys: Implications for Cognitive and Social Development in Girls and Boys" *Sex Roles* 16(9/10):473-487.
- Murphy, Patricia F. and Caroline V. Gipps. 1996. *Equity in the Classroom: Towards Effective Pedagogy for Girls and Boys*. United Kingdom: Falmer Press.
- Ngaruiya Njambi, Wairimu and Melissa Putman Spenkle. 2004. "Rethinking Masculinized Tools: Machetes, Women's Work, and Suburban Yard Maintenance." *NWSA Journal* 16(2):121-137
- O'Brien, Marion, Aletha C. Houston, and Tood R. Risley. 1983. "Sex-Typed Play of Toddlers in a Day Care Center" *Journal of Applied developmental Psychology* 4:1-9.



- O'Reily, Karen. 2005. *Ethnographic Methods*. New York: Routledge.
- Oakley, Ann. 2000. *Experiments in Knowing: Gender and Method in the Social Sciences*. Cambridge: Polity Press.
- Offenberger, Ursula and Julia Nentwich. 2009. "The Institutional Reflexivity of Gender and Technology: Theoretical Tensions and Empirical Challenges." *EGOS Colloquium*. July 2-4, 2009.
- Oldenziel, Ruth. 2003. "Why Masculine Technologies Matter." Pp.37-71 in *Gender and Technology: A Reader*, edited by Nina Lerman, Ruth Oldenziel and Arwen P. Mohun. Baltimore: The Johns Hopkins University Press.
- Olesen, Virginia L. 2000. "Feminisms and Qualitative Research at and into the Millennium." Pp.215-255 in *Handbook of Qualitative Research*, edited by Norman K. Denzin and Yvonna S. Lincoln. Thousand Oaks: Sage Publications
- Oudshoorn, Nelly and Trevor Pinch. 2003. *How Users Matter: The Co-construction of Users and Technology*. Cambridge, MA: MIT.
- Pinch, Trevor J. and Wiebe E. Bijker. 1984. "The Social Construction of Facts and Artefacts: or How the Sociology of Science and the Sociology of Technology might Benefit Each Other" *Social Studies of Science* 14: 399-441.
- Pinch, Trevor and Frank Trocco. 2002. *Analog Days: The Invention and Impact of the Moog Synthesizer*. Cambridge, MA: Harvard University Press.
- Pheonix, Ann 1994. "Practicing Feminist Research: The Intersection of Gender and 'Race' in the Research Process" Pp. 35-45 in *Researching Women's Lives from a Feminist Perspective*, edited by M. Maynard and J. Purvis. London: Taylor & Francis.
- Prus, Robert. 1989. *Making Sales: Influence as Interpersonal Accomplishment*. London, Sage Publications.
- Puddephatt, Antony J., William Shaffir and Steven W. Kleinknecht. 2009. *Ethnographies Revisited: Constructing Theory in the Field*. New York: Routledge.
- Puddephatt, Antony J. 2006. "An Interview with Kathy Charmaz: On Constructing Grounded Theory" *Qualitative Sociology Review* 2(3):5-20.
- Puddephatt, Antony J. 2005. "Mead Has Never Been Modern: Using Meadian Theory to Extend the Constructionist Study of Technology." *Social Epistemology* 19(4):357-379.
- Putnam, Robert D. 2000. *Bowling alone: The Collapse and Revival of American Community*. New York: Simon & Schuste.

- Preston, Beth. 1998. "Cognition and Tool Use." *Mind & Language* 13(4): 513-547.
- Prus, Robert. 1989. *Making Sales: Influence as Interpersonal Accomplishment*. London, Sage Publications.
- Rajagopal, Indhu and Jennifer Gales. 2002. "It's the Image that is Imperfect: Advertising and Its Impact on Women" *Economic and Political Weekly* 37(32):3333-3337.
- Ritchie, Jane and Jane Lewis. 2003 *Qualitative Research Practice: A Guide for social Science students and Researchers*. Thousand Oaks, CA: Sage.
- Shade, Leslie Regan. 2007. "Feminizing the Mobile: Gender Scripting of Mobiles in North America." *Journal of Media and Cultural Studies*. 21(2):179-189.
- Smith, Dorothy E. 1989. *Feminism and Sociological Theory*. London: Sage Publications.
- Spencer, Liz, Jane Ritchie, and William O'Connor. 2003."Analysis: Practices, Principles and Processes" Pp. 199-218 in *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, edited by Jane Ritchie and Jane Lewis. London: Sage Publications Ltd.
- Stacy, Judith. 1998. *Brave New Families: Stories of Domestic Upheaval in Late-Twentieth-Century America*. Berkley: University of California Press.
- Strauss, A. and Corbin J. 1998. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage.
- Thorne, Barrie. 1993. *Gender Play: Girls and Boys in School*. United States: Rutgers University Press.
- Tokarz, Barb. 2008. "Block Play: It's not Just for Boys Anymore" *Exchange* May/June:68-71.
- Tomboy Tools. 2008. "The History of Tomboy Tools." Tomboy Tools Inc., Retrieved November 20<sup>th</sup>, 2008.  
(<http://www.tomboytools.com/aboutus.asp>)
- Turner, Victor. 1974. *The Forest of Symbols: Aspects of Ndembu Ritual*. Ithaca: Cornell University Press.
- Turner, Victor. 1979. *Process, Performance, and Pilgrimage: A Study in Comparative Symbology*. New Delhi: Concept.
- Turner, Victor. 1992. *The Anthropology of Performance*. New York. PAJ Publicayions.

- van Oost, Ellen. 2003. "Materialized Gender: How Shavers Configure the Users' Femininity and Masculinity." Pp. 193-208 in *How Users Matter: The Co-Construction of Users and Technology*, edited by Nelly Oudshoorn and Trevor Pinch. Massachusetts Institute of Technology.
- Wajcman, Judith. 2002. "Addressing Technological Change: The Challenge to Social Theory" *Current Sociology* 50(3): 347-363.
- Wajcman, Judith. 2004. *TechnoFeminsim*. Cambridge: Polity Press.
- West, Candace and Don. H. Zimmerman. 1987. "Doing Gender." *Gender and Society* 1(2):125-151.
- Wilson, Edward. 1978. *On Human Nature*. Cambridge, MA: Harvard University Press.
- Winner, Langdon. 1985. "Do Artefacts Have Politics?" Pp. 28-41 in *The Social Shaping of Technology*, edited by Donald MacKenzie and Judy Wajcman. Open University Press.
- Wintonick, Peter and Mark Achbar. 1994. *Manufacturing Consent: Noam Chomsky and the Media*. Montreal: Black Rose Books.
- Woolgar, Steve. 1991. "Configuring the User: The Case of Usability in Trials." Pp. 57-102 in *A Sociology of Monsters*, edited by John Law. London: Routledge.