From Snow White to Frozen

An evaluation of popular gender representation indicators applied to Disney’s princess films

En utvärdering av populära könsrepresentations-indikatorer tillämpade på Disneys prinsessfilmer

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Abstract

Simple content analysis methods, such as the Bechdel test and measuring percentage of female talk time or characters, have seen a surge of attention from mainstream media and in social media the last couple of years. Underlying assumptions are generally shared with the gender role socialization model and consequently, an importance is stated, due to a high degree to which impressions from media shape in particular young children’s identification processes. For young girls, the Disney Princesses franchise (with Frozen included) stands out as the number one player commercially as well as in customer awareness. The vertical lineup of Disney princesses spans from the passive and domestic working Snow White in 1937 to independent and super-power wielding princess Elsa in 2013, which makes the line of films an optimal test subject in evaluating above-mentioned simple content analysis methods. As a control, a meta-study has been conducted on previous academic studies on the same range of films. The sampled research, within fields spanning from qualitative content analysis and semiotics to coded content analysis, all come to the same conclusions regarding the general changes over time in representations of female characters. The objective of this thesis is to answer whether or not there is a correlation between these changes and those indicated by the simple content analysis methods, i.e. whether or not the simple popular methods are in general coherence with the more intricate academic methods.
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1. Introduction

For a long time, elaborate academic research methods have been used to analyze media consumed by young children, where social cognitive theory claims a substantial importance of media exposure in children’s identity building and understanding of the outside world. In contemporary popular and social media, results from simplified methods of analysis are frequently spread with contextual implications of reflecting overall performance in post-feminist female gender role portrayals. Academic researchers have previously displayed little interest in widespread popular gender representation key measures, leaving room for important research contributions in producing knowledge on correlations between indications from popular measures and research findings deduced from more extensive academic methods of analysis.

This thesis will not go into detail on social cognitive perspectives and historical or production contexts, but will focus on the methods of content analysis themselves and how results stemming from these different methods correlate. The thesis will debouch in new knowledge on the possibilities, and perhaps impossibilities, of taking shortcuts in assessing female gender role representations in films.

1.1 Relevance and previous research

“Genes or environment?” is a question that has puzzled researchers on gender differences for generations, with a discourse resembling the classical chicken or the egg causality dilemma. Few, if any, children grow up without being exposed to pre-existing ideas and expressions of gender, along with encouragement and deterrent of behaviors and traits depending on the expectations and wishes of the adult environment. Due to the ethical and practical difficulties in finding unbiased test subjects (i.e. children), researchers have gone to great lengths trying to overcome these obstacles, psychologists even conducting (much criticized) gender experiments on non-human primates (Alexander & Hines, 2002).

Neurological research has identified general gender differences in the connections of the adult brain (Ingahalilkar, et al., 2014), but such findings should be interpreted keeping in mind that there is substantial evidence that the brain is plastic throughout life, meaning
that experiences will change structures in the brain (Fine, et al., 2013). These neuroscientific findings thus do not contradict the viewpoint of social constructivists and Simone de Beauvoir’s much influential notion that “One is not born, but rather becomes, a woman” (de Beauvoir, 1956, p. 273).

A famous natural experiment on the influence of media on children’s gender identity was conducted longitudinally on a Canadian town which, due to radio shadow, did not get access to broadcast television until 1973. Evidence suggested that the gender views among the town’s children were much more stereotyped after the introduction of television (Kimball, 1986).

The gender role socialization model stresses that the mass media “act as agents of socialization, teaching youngsters in particular how to behave” (Tuchman, 1978, p. 37). Later researchers also “lend support to a social cognitive model of gender development as involving a shift from socially guided control to self-regulatory control of gender-linked behavior with increasing age” (Bandura & Bussey, 1992, p. 1245), which points towards the importance of early childhood in shaping gender identity as this identity might be internalized and thus less malleable with increasing age. Cultivation theory (explicitly about TV, but applicable also to film) holds similar notions:

According to cultivation theory, massive exposure to television’s reconstructed realities can produce perceptions of reality that are very different from those held by people who watch less television. Cultivation does not imply any sort of simple, linear stimulus-response model of the relationships between media content and audiences. Rather, it implies long-term, cumulative consequences of exposure to an essentially repetitive and stable system of messages. (Cohen & Weimann, 2000, p. 111)

Cultivation theory thus suggests the viewing frequency of gender role connected messages is key in shaping viewer conceptions and identity. Not to be forgotten, the gender role socialization model and cultivation theory have been criticized on issues of global validity, as there is a predominantly American perspective, with a very high level of children’s TV consumption. There are also concerns regarding causality, as there are large general variations in TV consumption, depending on family social class and the educational level of the parents. In addition, the interplay between popular fiction and reality goes both ways and displays of values, roles and identities in fiction can be seen as a product of its historical, cultural and production context, which further complicates attempts to assign causality.
If we, however, choose to believe the overall outlines of these social cognitive theory perspectives, the importance of what films our young children consume is clear. A cornerstone in western children’s culture is Disney, ranking as the 11th most valuable brand in the world, with Lego (ranked 95th) being the only other leisure industry brand in the top 100 (Forbes, 2015). Out of all Disney’s franchises, Disney Princesses takes the top spot in sales and not even Star Wars has higher revenues from licensed entertainment products in North America (Goudreau, 2012). The Disney Princesses line products, aimed at the young girls focus group, are recently accompanied by the similarly aimed Frozen products, which currently constitutes its own franchise, with predicted billion dollar revenues (Demby, 2015). Furthermore, Frozen (Chris Buck and Jennifer Lee, 2013) has emerged as the highest grossing animated film ever, peaking at the number 5 position on the list of highest grossing films of all time (Shepherd, 2015), inflation adjustments undisclosed. Approximating children’s frequency of exposure with producer’s monetary turnover, the Disney Princesses franchise can be seen as a central influence in young girls’ building of identity and perceptions of reality.

1.2 Qualitative and quantitative methods of film gender role analysis

As implied in the previous section, if you are a child, chances are good that you consume animated Disney films and associated products on a regular basis. Thus, it should not come as much of a surprise that the Disney princess movies and Frozen are among the most studied ranges of films in gender role research, making research gaps scarce and there is a high degree of consensus in the conclusions drawn on contents, mostly from interpretative qualitative studies.

The aim of such studies is often proclaimed feminist, with the goal of raising awareness of skewed and stereotypical gender roles displayed, with an underlying assumption that these films may affect young girls in a sensitive stage of their identity building process (cf. the socialization model). Van Zoonen describes a feminist interpretative research strategy as “characterized by a radical politicization of the research process”, involving “moral and political responsibilities of the researcher” and a “desire to make research contribute in one way or the other to the feminist project” (van Zoonen, 1994, pp. 146-147). Some feminist researchers even go so far as to reject ideals of objectivity all together in favor of a “conscious partiality” (Mies, 1993, p. 68).
Although early feminists used quantitative methods for raising awareness, an aversion towards such methods emerged during the early 1980s, as it was seen as having close ties to male values of control and hierarchy as well as being exploitative towards research subjects, though feminist attitudes towards quantitative research have softened lately (Bryman, 2002, p. 38). Besides questionable reliability and transparency, qualitative methods have their own power relation issues, with varying levels of esotericism and some interpretative researchers have been accused of seeing themselves as “the secret elite of this world for it is only they who can grasp and use the magical methods of the qualitative tradition” (McCracken, 1988, p. 13).

Naturally, not all qualitative gender research is explicitly feminist and there are many examples of research conducted with positivistic ambitions. No matter the merits of such research, its understanding requires a certain level of immersion, constituting a possible threshold towards those not already convinced of gender imbalances in society and their resulting impact. Quickly grasped quantitative results on the other hand fit well into the contemporary fast flow of information and hold a scientific feel, increasing chances of convincing an occasional reader, which might help explain the revival of quantitative feminist methods. Not least simple content analysis methods have received an increasing amount of media coverage and it was worldwide news when Folkets Hus och Parker, with a small Swedish chain of cinemas, began rating which films on their repertoire were Bechdel test approved (Pettersson, 2014, p. 40). The Bechdel test, with non-academic origins, stemming from a comic strip by feminist artist Alison Bechdel (2005), in its most commonly used form has three binary criteria which must all be fulfilled for a film to be approved – There must be at least two named female characters, who talk to each other, about something other than a man. Talk time as well as character count, usually expressed in female percentage form, are two other simple metrics that have received attention, especially following the launch of the app GenderTimer, used to monitor these metrics and produced by a gender awareness consulting company (TT, 2014).

Naturally, these three simple content analysis metrics used separately and in isolation cannot be expected to show the level of detail and nuances of less square methods, whether qualitative or quantitative. The way the metrics are being treated, there seems to be a popular belief, or a hope, that they, despite their limitations, can at least serve as easily understood and applicable tools for giving an approximate rating on a film’s merits.
when it comes to female gender representations or equality. As I was unable to find any academic studies evaluating the performance of these metrics, perhaps due to the low status of popular science methodology amongst researchers, there is a clear knowledge gap. Through a case study of the Disney princess films and *Frozen*, I intend to shed light on whether or not the aforementioned simple content analysis ratings are in coherence with the conclusions of more complex quantitative and qualitative analyses of the same films.

### 1.3 Hypotheses and operationalized hypotheses and research questions

**H₀** Simple content analysis metrics are not coherent with intricate quantitative and qualitative research methods in indicating films level of equality in gender representations.

**H₁** Simple content analysis metrics are coherent with intricate quantitative and qualitative research methods in indicating films level of equality in gender representations.

As I here define “simple content analysis metrics” with the Bechdel test, character count and talk time, **H₁** can be divided into three separate hypotheses.

**Hₘₐₓₜₑₜₜ** The Bechdel test is coherent with intricate quantitative and qualitative research methods in indicating a films levels of equality in gender representations.

**Hₜₐ₍ₑₛ** Character count measures are coherent with intricate quantitative and qualitative research methods in indicating films levels of equality in gender representations.

**Hₜᵃˡₜ Ṯⁱᵐᵉ** Talk time measures are coherent with intricate quantitative and qualitative research methods in indicating films levels of equality in gender representations.

As a conversion of qualitative research and multi factor quantitative research conclusions into a single quantitative rating is arbitrary at best, it is an easier task to translate these results into rough developments over time regarding the level of equality in gender representations, looking only at relative scoring where such information can be extracted, without attempting to assign absolute scores. These identified changes can be regarded as benchmark in my operationalized hypotheses.
Simple content analysis metrics and intricate quantitative and qualitative research methods will indicate the same changes in level of equality in gender representations when applied to Disney’s animated princess films, with Frozen included.

With the three quantitative metrics separated into their own operationalized hypothesis, we get \( H_{Op \, Bechdel} \), \( H_{Op \, Character} \) and \( H_{Op \, Talk} \).

We also need to answer the operationalized research question “What changes in level of equality in gender representations are indicated by intricate quantitative and qualitative research methods applied to Disney’s animated princess films, with Frozen included?”.

1.4 Delimitations and definitions

This thesis only considers the original animated feature films behind the princesses in the Disney Princesses franchise and Frozen, which currently constitutes its own franchise. The included films are listed on page 10. Note that capital “P” in “Princesses” signals the franchise, while lower case “p” is used when referring to e.g. the characters. In the latter case, Frozen and its characters are also included. Sequels, prequels and spinoffs, usually made directly for the home video market, are not included in this study and neither are non-animated films. The films are considered in their currently available, English language DVD and Blu-ray format, which might differ in scenes and voices from the original theatrical release and previous home video releases. The word “princess” and “prince” are used analogous with the liberal use within the Disney Princesses franchise, thus including all female main protagonists and their potential love interest even when they are not technically royal.

As this thesis focuses on the Disney princess films, with primarily female protagonists displaying different characteristics and behavior, not least aimed at a young girls focus group, the focus of the study will primarily be on female gender representations. Although technically, a 50/50 male/female ratio in characters and talk time would be perfectly equal, as cultivation theory implies a cumulative effect and this study’s primary focus is on female gender representations, all increases in female frequency will be referred to as an “improvement”. Moreover, the notion of “equality in gender representations” (as mentioned in the hypotheses) will in this thesis be treated analogous to the films contributing to the
perception of females as able to possess the same positive characteristics as males, e.g. heroism, independence, integrity, ambitions and multidimensional personalities.

This thesis will not include detailed discussions or analysis of historical context, the production perspective or reception (audience) perspective. Cognitive perspectives such as the cultivation and socialization effects of films will only be touched upon briefly.

The purpose of this thesis is to produce knowledge on the implied correlation between elaborate academic methods of analyzing gender role portrayals and popular simplified methods. The primary study objects of this thesis are thus the methods of analysis, which in themselves contain a predominant contents perspective. Where necessary or fruitful for purposes of analysis or discussions, other perspectives are also represented to a limited extent.

2. Theory

Since the popular methodologies studied were mainly launched outside of academic frameworks, any attempt to expand the context into established theory will of course be a work of interpretation. As the production of these analyses is heterogenic, with often unschooled authors, I will in this section analyze the theoretical implications of the methods themselves and general traits of occurrences rather than of specific instances where they have been put to use.

The explicit focus is not on the site of production or audience but on the film itself, suggesting that this is where meanings are most importantly made. Based on the apparent desire to spread the readings of the analyses, there is an evident belief that a subpar outcome carries meaning and that a change in the measured metrics is desired and that such a change would have a profound effect on the lives of the audience. This in turn points towards theoretical assumptions along the lines of the socialization hypothesis (with its extreme in the hypodermic model), which “assumes a one-way flow between image and viewer, with the image acting on the viewer by prescribing roles and behaviors to a largely unspecified and undifferentiated receiver of the cultural message” (Walters, 1995, p. 41).
As would be expected from a methodology utilized predominantly by laymen, the strengths lie not in theoretical grounding but in public and policy maker accessibility and consciousness raising. Parallels can be drawn to the occasional theoretical simplicity of early quantitative feminist research, of which has been written that “while these studies suffer from an underdeveloped theoretical framework, they clearly stress the liberal idea of increasing women’s public visibility and criticize traditional stereotypes” (Steeves, 1987, pp. 101-102).

It should be noted that the objective of this thesis is not to evaluate the theoretical assumptions of the simple content analysis methodologies, as the intended research contribution is to determine the covariance between ratings based on these metrics and analytical results from more intricate and academically established methods. For practical purposes, a framework of statistical theory is what will predominantly be used, evaluating the hypotheses through regression analysis.

3. Method

Within this thesis, a full four studies need to be conducted. Firstly, a meta-study is made covering higher level academic assessments of changes in equality in gender representations in the Disney princess movies. The results of this study serves as a control with which all other test methods are compared, to determine covariations.

3.1 Meta-study

An answer is needed to the operationalized research question “What changes in level of equality in gender representations are indicated by intricate quantitative and qualitative research methods applied to Disney’s animated princess films, with Frozen included?”.

Through conducting a broad informal pilot study, reading a wide range of peer reviewed articles and theses as well as books, articles and blogs, general patterns have emerged. The pilot study has indicated a high degree of consensus, without much controversy, in conclusions regarding changes over time in levels of equality in gender representations in the Disney films with female heroines. Due to evident similarities in conclusions within the
field, a large sample would not significantly increase the quality of the meta-study, not least as the studied texts in themselves cover and build on broad ranges of previous research. Consequently, I have concluded a sample size of five papers is fully sufficient as well as an appropriate size to enable a comprehensive discussion including interrelations of the papers.

Although many gender studies have been made on the animated Disney feature films, a majority of these are student theses of master level and below as well as non-peer-reviewed or even non-academic articles and books, which makes it possible to substantially narrow down the sample size by only including Ph.D. theses and peer-reviewed articles. This selection of texts can be further filtered by removing those which do not have a broad scope covering whole ranges of Disney princess films, thus enabling a chronological comparison of level of equality in gender representations of the films of different eras. After said filtration, a mere four articles and one Ph.D. thesis remain from an original sample in the hundreds. These will constitute my sample.

As it is an objective of this thesis to find how the samples’ mostly qualitative data correlates to the predominantly quantitative data of the analyzed simple methods, the meta-studies data on evolution of gender representations has to be transformed into quantitative terms. Only then can this data be compared to the indicative ratings resulting from the simple tests which this thesis seeks to evaluate.

The pilot study indicates that attempts to distinguish changes in level of equality in gender representations on a film to film basis is not meaningful as academic gender themed research covering more than a few of the princess films in detail is scarce. In addition, more data points would require a gender representation classification scale with a multitude of grade steps, where each extra grade step makes translations from qualitative to quantitative data more difficult. Even if detailed studies can be found, more data points and grade steps will decrease chances of finding consensus between the texts studied. As detail level increases, inter-rater reliability decreases, which is why a trade-off has to be made and my assessment is that three is a fitting number of both grade steps and data points, as many of the texts studied in the pilot study distinguished similarly between distinct periods of Disney princess film production, the first being Walt Disney’s lifetime and subsequent periods defined and sometimes named after the CEO in charge of Disney.
Considering timespans with at least two films, these periods also happen to be separated by the two longest periods without a new non-sequel princess movie (1959-1989 and 1998-2009). Although this division is based on the production rather than contents perspective, it is hard to ignore the production apparatus as a key underlying factor when studying chronological changes in contents. Attempting to divide by contents would also risk being arbitrary, making the previously outlined division the better choice.

Following the period naming convention of Davis (2001), I have named the three periods as follows in the list below, where included films are also listed, with name(s) of the director(s) within parentheses.

**The Classic era**
- 1937, *Snow White and the Seven Dwarfs* (David Hand)
- 1950, *Cinderella* (Clyde Geronimi, Wilfred Jackson and Hamilton Luske)
- 1959, *Sleeping Beauty* (Clyde Geronimi)

**The Eisner era**
- 1989, *The Little Mermaid* (Ron Clements and John Musker)
- 1995, *Pocahontas* (Mike Gabriel and Eric Goldberg)

**The Iger era**
- 2009, *The Princess and the Frog* (Ron Clements and John Musker)
- 2010, *Tangled* (Nathan Greno and Byron Howard)
- 2012, *Brave* (Mark Andrews and Brenda Chapman)
- 2013, *Frozen* (Chris Buck and Jennifer Lee)

A possible downside of bundling groups of 3-5 films together is that a heterogeneous film could be partially neutralized through diversification effects, though the pilot study raises no concerns that this might be the case with the selected sample.

By analyzing the films on a periodically aggregated level, it will be possible to quantify internal relations between levels of equality with enough accuracy to facilitate a simplified
regression analysis. Applying three grade steps, each awarded once, on level of equality in gender representations (highest, middle or lowest), there are six possible permutations, which are visualized in figure 1. The same permutations constitute the, for all practical purposes, mutually exclusive and collectively exhaustive possible outcomes for the three simple content analysis methods which will be tested in this thesis. A simplified regression analysis can thus be applied, comparing the permutations of the simple content analyses’ outcomes with the control permutation of the meta-study.

Figure 1

Permutation 1:
Upward slope

<table>
<thead>
<tr>
<th>Highest</th>
<th>Middle</th>
<th>Lowest</th>
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<tbody>
<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
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</table>

Permutation 2:
Pyramid (Classic lowest)

<table>
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<th>Highest</th>
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<th>Lowest</th>
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<tbody>
<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
</tr>
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Permutation 3:
Reverse pyramid (Iger highest)

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<th>Highest</th>
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<tbody>
<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
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Permutation 4:
Pyramid (Iger lowest)

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<th>Highest</th>
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<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
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Permutation 5:
Reverse pyramid (Classic highest)

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<tr>
<td>Classic</td>
<td>Eisner</td>
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Permutation 6:
Downward slope

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It should be noted that although the notion of equality in gender representations is broad, the meta-study will focus on topics predominant in the sampled literature itself. The conducted pilot study has indicated that large parts of the attention is concerned with characteristics and actions of the female protagonist herself, which is why it can be expected that this will also be a main topic of the meta-study.
3.2 The Bechdel test

As the Bechdel test is non-academic in origin, first published in a comic strip by feminist artist Alison Bechdel (2005), there are no standardized specifications of the test and uses vary slightly. In order to approximate a most commonly used and most recognized version of the test, I have searched on Google (2015) for “bechdel test” and on the first 25 pages with search results, I have identified all homepages with domain names including the words “bechdel” and “test”, thus suggesting authority in the area. Already the first 10 pages of Google search results generate on average 99% of all traffic from Google (Chitika, 2013). Through the selection criteria stated above, the resulting four sites were bechdeltest.com (2015), bechdeltestfest.com (2015), passthebechdeltest.com (2015) and bechdeltestfilmclub.com (2015), which all presented the same variation of the Bechdel test, modifying the original comic strip test by requiring the female characters to be named. The three binary criteria, all of which must be fulfilled for the test to result in a pass, thus are the following:

There must be at least two named female characters…
who talk to each other…
about something other than a man.

In academic terms, the test can be seen as a simple coded content analysis where the three criteria stated above constitute dimensions in the coding schedule. However, missing on all four mentioned homepages is a coding manual, not least specifying how border cases are to be interpreted. Minute attention to the coding manual is required to ensure inter-rater reliability (consistency between raters) as well as intra-rater reliability (consistency over time in a single rater) and a weakness of the method is that it is practically impossible to formulate a coding manual which does not include a certain measure of interpretation on behalf of the coder (Bryman, 2002, p. 203).

Consequently, the Bechdel test coding in its popular use is arguably arbitrary and non-transparent, although the pilot study showed a high frequency of ad-hoc coding with disclosed discussions on specific encountered difficulties in rating and how these were handled. The popular, as opposed to academic, framework of the Bechdel test is part of
its power as its wide spread is a result of it being simple, easy to understand and can be performed by anyone.

Thus, I take a position where the Bechdel test is evaluated as it is commonly used, not as it is optimally performed within a higher level academic framework. In doing so, I purposefully include all flaws that might infiltrate the results as an academic treatment might result in lower inter-rater reliability when comparing results to practical real-life uses of the Bechdel test. This is motivated as the superior inter-rater reliability of using an academic framework is a purely hypothetical construct, as the day-to-day use of the test is not part of academia. Considering the simple nature of the test, the intra-rater reliability might not be significantly higher using an academic approach as the logic used in treating the limited number of princess film border cases is well within the limits of what can be easily kept and compared in mind by most people, without the lack of formal documentation affecting the outcome of the test.

Prioritizing inter-rater reliability of practical real-life uses of the Bechdel test, which might or might not be performed by researchers with an academic background, I have come to the conclusion that the most suitable method is to quantitatively compile the most publicly available Bechdel test results. These have been approximated by performing a Google (2015) search on “disney bechdel test” and evaluating all relevant homepages in the first 25 pages of search results, with a final selection criteria of homepages with original Bechdel test results presented on at least the first 10 Disney princess movies, thus covering a minimum of two movies of all three periods.

Seven sources of Bechdel test results filling the selection criteria were found and in order to compile and quantify the test results, the Bechdel test verdicts were tallied and $100/n$ points were awarded to a film for each Bechdel test pass received ($n$ being the number of sources giving a pass or fail verdict on the specified film). Thus, each film is awarded a total number of points ranging between 0 and 100. Average points are calculated for each of the three periods investigated and results are translated into one of the permutations previously shown in figure 1.
3.3 Character count

Unlike the Bechdel test, character count is in frequent use also within academic research, as a possible dimension in a content analysis coding schedule, which may of course encompass a number of additional variables.

Due to its intuitive nature, the test is self-explanatory in most matters and its practical use may or may not include an explicit coding manual, although adhering to a formalized and documented method is required in most instances of academic research. Major variations are commonly disclosed in the naming of the test, signaling what unit is being measured, e.g. protagonists, major characters or speaking characters.

The perhaps most quoted definition of content analysis is that it is “a research technique for the objective, systematic and quantitative description of the manifest content of communication” (Berelson, 1952, p. 18). In short, this means that in the content analysis, a certain characteristic of the material itself (the manifest content) is described in quantitative terms through a process with a consequent application of rules (systematic) carried out with minimal influence from the rater’s personal values (objective).

As a strategy to increase inter-rater reliability through minimizing the effects of subconscious personal bias in the coding process, multiple raters are often enlisted and discrepancies in ratings are treated according to a predefined ruleset. Rating is however a time-consuming task, as an attentive viewing of the full film is required and select scenes might need a second viewing in order to perceive all necessary details. For the whole series of Disney princess films, this translates to many days of concentrated work for each additional rater, which is why the use of multiple raters is not within the resource restraints of a master thesis. However, it must be remembered that through making final comparisons on an aggregated level, the marginal adjustments resulting from multiple raters has a very limited impact on end results.

The female character count metric faces similar coding difficulties as the Bechdel test and in order to increase the transparency and intra-rater reliability of the experiment at hand, a detailed coding manual must be written. A fine example of a coding manual, expounding on the character gender dimension, can be found in a study by Smith, Choueiti, Scofield
and Pieper (2013, p. 14) covering the ratio between female and male characters in 500 popular films released between 2007 and 2012. Smith et al. state that “The primary unit of analysis for all of our research is the independent speaking character. A character was coded as an independent unit if he/she/it spoke one or more words discernibly on screen or was referred to by name” (ibid., p. 10).

In my study, the definition of the unit of analysis (“character”) deviates slightly from that of Smith et al., as I have only counted characters uttering at least one audible word, thus excluding e.g. pets. I also include non-diegetic meta-presences such as a narrator, but do not count choirs and other non-diegetic voices of the musical soundtrack which only indirectly is a part of telling the story.

Both mentioned coding manuals are inclusive when it comes to anthropomorphic animals, humanoids and robots, animated objects, spirits, ghosts etc., which raises the question how to code when there is no evident biological sex present. Smith et al. write “For instance, a computer may be shown talking in an androgynous voice. Given the ambiguity of the vocal cues, biological sex would be coded as ‘can’t tell.’ ‘Not applicable’ was utilized when a character did not possess the particular variable being measured” (ibid., p. 11). However, this implies that it is a classificatory gender, independent from the biological gender, which is coded, which is the same approach as will be taken in my study.

A weakness in coding gender is that gender coding often relies on tacit knowledge, difficult (if not impossible) to convey on paper, which might introduce a personal bias from the coder. To increase reliability, I have therefore harmonized my findings with gathered data from IMDB (2015) on the gender of the English language voice actor and name of the character.

Results from the character gender content analysis has been structured in a table, with calculated percentage of female characters for each film. Average points are calculated for each of the three periods investigated and results are translated into one of the permutations shown in figure 1.
3.4 Talk time

Measuring talk time is surprisingly uncommon in academic research although the app GenderTimer, from Kichisaga Leadership AB consultancy firm, has successfully been used to produce film and TV-program analyses with the intention of raising public gender awareness (TT, 2014). In an academic context, female and male talk time are possible dimensions in a content analysis coding schedule. Using the GenderTimer app, the character count variable can be measured with the same registering tool, facilitating studies which take both dimensions into account.

As with character count, talk time has the power of an intuitive nature, where popular use, without a written coding manual, may have a reasonably high level of inter-rater reliability and intra-rater reliability. However, an academic approach can increase the acceptability of the results and makes it possible to compare readings between studies. Even more so than with character count, coding talk time is a time-consuming task, where multiple coders are reserved for larger or well financed research teams. As the analysis will be performed at an aggregated level, precision is fully sufficient as long as the readings of the analyzed periods are not tightly grouped, with only marginal differences.

As a control on intra-rater reliability, Snow White and the Seven Dwarfs was reviewed and coded twice. Female talk time readings between the two instances differed by less than one percent unit, indicating a high level of intra-rater reliability. Through utilizing a detailed coding manual, a systematic and objective rating process is ensured, thus adhering to the content analysis ideals of Berelson (1952, p. 18) and maximizing inter-rater reliability.

Writing a coding manual for talk time, gender classification issues are shared with character count, as detailed in section 3.3. Further, a talk time coding manual must encompass what should be coded as speech. Expressive body language, sign language or communicating through text, symbols, Morse code etc. will not be coded as speech (talk time) in this thesis. Audible words only will be coded as speech, whether originating from the vocal chords, a speech synthesis or any other biological or technological means of generating a voice which communicates a message initiated by the sender. Grunts, sighs, yawns, gasps etc. are considered bodily reactions, which will not be coded as speech. To be considered as a word, in the context of the film, the element of speech must function
as a bearer of meaning independent of musicality, thus excluding singing vocalizations such as “la-la-la” but including interjections such as “ouch” and “heigh-ho”. Silent pauses will be coded as part of the speech as long as they serve a rhetoric purpose or constitute a natural pause for thinking followed by continued speech from the same character. Mixed gender choirs, duets, simultaneous speaking etc. is not coded as it does not affect results. The female talk time percentage should thus be read as a percentage of a total consisting of male plus female talk time but excluding gender conjoint or non-gender classifiable speech.

Female and male talk time will be documented in a table, female talk time percentage for each film will be calculated and average percentage is calculated for each investigated period. The result is visualized as one of the permutations from figure 1.

### 3.5 Evaluating the simple metrics

The meta-study is constructed to answer the operationalized research question asking what changes in level of equality in gender representations are indicated by intricate quantitative and qualitative research methods applied to Disney’s animated princess films, with *Frozen* included. The answer is given in the form of inter-rankings between the three periods, which is visualized as one of the permutations in figure 1.

The experiments using the Bechdel test, character count and talk time are constructed to generate the same form of period inter-rankings based on identified changes in level of equality in gender representations, debouching in figure 1 permutations serving as visualizations of the result of each of the three experiments.

Through comparing results from the meta-study with experimental results from the Bechdel test, character count and talk time respectively, $H_{\text{Op Bechdel}}, H_{\text{Op Character}}$ and $H_{\text{Op Talk}}$ can be either rejected or accepted, as can the aggregated $H_{\text{Op 1}}$. Consequently, $H_{\text{Bechdel}}, H_{\text{Character}}$ and $H_{\text{Talk time}}$ can be rejected or accepted, finally giving evidence based on which either $H_0$ or $H_1$ is accepted.
4. Meta-study

The process of selecting the sample of the meta-study is detailed in the method chapter. One Ph.D. thesis was selected along with four peer reviewed papers, all of which will be concisely presented below before outlining levels of equality in gender representations according to the academic texts studied. As previously stated, the limited number of periods studied has been selected with one aim being to maximize academic consensus on interrelated levels of equality in gender representation between the periods. Nevertheless, an eventual observation of dissimilarities in conclusions must not be ignored. I will however not dwell on details from specific films as the primary objective of this meta-study is to assess equality of gender role representation inter-rankings between the three eras. Variations in the readings of single films are within the range of tolerance, thus not needing extended attention, as long as the sampled papers are in agreement on an era aggregated level.

4.1 Included papers

Disney’s Women: Changes in depictions of femininity in Walt Disney’s animated feature films, 1937-1999 (Amy M. Davis, 2001)

Amy M. Davis’ Ph.D. thesis is, along with the two published books based on the thesis, perhaps the most extensive academic work to date on the evolution of gender representations in the animated feature films of Disney. On the downside, it is the oldest text in my sample, thus not covering the Iger era. The study focuses largely on textual analysis while also giving attention to both historical context and the studio itself.

Gender role portrayal and the Disney princesses (Dawn Elizabeth England, Lara Descartes and Melissa A. Collier-Meek, 2011)

The article covers all films but Tangled, Brave and Frozen. Through coded content analysis, points are awarded to the princes and princesses of the films on a wide range of masculine and feminine displayed characteristics and actions, e.g. “performs rescue” and “collapses crying”. Results are analyzed both comparing princesses with princes and comparing newer films to the older.
Damsels in Distress: A textual analysis of gender roles in Disney princess films (Nandini Maity, 2014)

Counting only four pages, Nandini Maity’s article is by far the shortest in the selection and although published in October 2014, it does not include the last three princess movies. None the less, it offers a concise coverage of the gender role development of the Disney princess films through means of textual analysis while also making references to studies on the socialization effects of films on children.

Damsels and Heroines: The conundrum of the post-feminist Disney princess (Cassandra Stover, 2013)

In her article, Cassandra Stover performs a textual analysis on the evolution of female representations in Disney’s princess films while also putting these changes into the historical context of the surroundings, the animation studio and both the emergence and setbacks of feminism over the period. The article was published in 2013, but the last princess film covered is The Princess and the Frog from 2009.

Repackaging the Disney princess: A post-feminist reading of modern day fairy tales (Sarah Wilde, 2014)

Mainly applying semiotic analysis and Propp’s character theory, Sarah Wilde examines UK advertisements for Tangled, Brave and Frozen. This study also covers the three latest movies themselves, comparing them to the princess films of earlier periods, which is something not yet done in any other peer-reviewed article. The findings can be confirmed by an extrapolation of the analyses in previous articles.

4.2 The classic era (1937-1959)

Snow White and the Seven Dwarfs (1937), Cinderella (1950) and Sleeping Beauty (1959) were all sourced from Grimms’ collection of fairy-tales and a central point in Davis’ doctoral thesis is how the fame of these early “passive fairy tale princesses” has formed a widespread misconception “that Disney films are full of weak, passive women” (2001, p. 7).

The princesses featured in these first three movies are according to Stover “voiceless heroines who performed conventional gender behaviors like housekeeping and nurturing” (2013, p. 2). Davis even goes so far as to see these three early princesses as homogenous, where "any differences between them, however, are largely superficial,
stylistic, and artistic” and she does not see significant differences in views about young womanhood between the films (Davis, 2001, p. 114).

Maity concurs with Davis and Stover and in criticism aimed at Snow White and the Seven Dwarfs, she concludes that the plot “produces a naïve ideal that by being patient, obedient and subordinate a woman will be saved from this lifestyle [as a dutiful, happy homemaker] by the man of their dreams, concluding that no woman on their own accord can simply support herself” (2014, p. 30). Cinderella too is criticized for showing the princess as helpless without any power to affect her own fate and according to Maity, “The opening song, ‘The Dream is a wish your heart makes’, sums this up fully, suggesting to ‘have faith in your dream’ because some day they will come true” (ibid.).

Davis makes a similar interpretation of the morale of the stories, observing that “real happiness seems to be linked to one trait alone - passivity. If you are willing to wait patiently for your happiness, it will surely come to you. Try to make it happen for yourself; and you will only end up defeated and alone” (2001, p. 121). The wicked old women, “who are the strong, active, no-nonsense people who stop at nothing to get things done”, serve as a warning example (ibid.).

In England, Descartes and Collier-Meek’s coded content analysis, the classic era princess films by far displayed the highest ratio of feminine coded princess behavior, at 86% (2011, p. 563). The prince characters exhibited a slightly lower ratio of masculine coded behavior in the classic era films (51%) as compared to the Eisner era films (54%), but long drawn conclusions should not be made as the early princes had very limited screen time (ibid.). Cinderella showed the highest count of submissive behavior of all princess films (ibid., p. 565) and unlike in the Eisner era films, the classic era princesses frequently performed domestic work, which was interpreted “variously as an expression of servitude and a way to gain love” (ibid., p. 563). Continuing on the love theme, it was also observed that the princesses are very quick to fall in love with the prince, although “It was not clear how or why the princess fell in love with him; she seemed to be chosen by him and obligingly fell in love” (ibid.). Although the quote referred to the prince in Snow White, similar notions apply to all three classic era films.
It is clear that all sampled literature is in agreement that the classic era princess films perform the poorest in equal gender role representations, which is fully in line with preliminary observations from the pilot study.

### 4.3 The Eisner era (1989-1998)

After a three decade princess film hiatus, the classic era princesses were finally succeeded by *The Little Mermaid* (1989), followed by *Beauty and the Beast* (1991), *Aladdin* (1992), *Pocahontas* (1995) and *Mulan* (1998). The Eisner era contains the largest number of princess films as well as the most analyzed, adding to the extent of the meta-study for this period.

Stover claims that “The new Disney female is, at first glance, an overwhelming improvement from Snow White and Cinderella, and reflects the improvement in female status since the respective eras of those productions” (Stover, 2013, p. 3).

Stover further states:

> This new approach ushered in two decades of go-getting, proactive heroines, with progressive qualities and character traits that corresponded completely to the increasingly acceptable gender roles in a society where women hold the same jobs as men. If Snow White, Sleeping Beauty, and Cinderella exemplified the traditional Disney female as docile, beautiful objects waiting for their prince to come, then Belle, Jasmine, Pocahontas, Meg, Mulan, and Tiana are exactly the opposite: focused, ambitious, and in the case of Pocahontas and Mulan, literally heroic as they perform the traditional prince role and save the day. (Stover, 2013, p. 3).

Through their coded content analysis, England et al. see many remaining feminine traits in the princesses, “but also expanded to incorporate some traditionally masculine characteristics”, while male protagonists showed less changes in characteristics “and were more androgynous throughout” (England, et al., 2011, p. 566). They also concluded that the princesses were no longer shown doing domestic work (ibid., p. 563). Davis makes a comparison similar to Stover’s, contrasting the Eisner era films to the classic era in claiming that “if there is one thing the three main female characters are *not* doing, it is sitting around waiting to be saved by the guy” as “the heroine [in *The Little Mermaid*, *Aladdin* and *Pocahontas*] actively saves the hero in some way or another at least once. And their motivation to do what they do is never solely romantic love” (Davis, 2001, p. 6). However,
England et. al. note that “Whereas the later princesses performed more active roles in the final rescues of the [post classic era] movies, the princes still performed most of the climatic rescues. A princess has not yet performed the final rescue without the involvement of the prince” (2011, p. 565). Maity makes recognitions along the same line as Davis, writing:

But over the years the representation of women in Disney comics has evolved and changed with regards to existing social pressures and opinions. These heroines have evolved better reasoning […] and the crone figures have grown more independent and less subservient. As time progress each film takes more control over their destinies. The importance of marrying a Prince as the goal of the plot has also recently begun to be questioned. These modern Disney Princesses like Tiana, Pocahontas et al reflects more varied elements of being a princess; they demonstrate that it is possible to be both happily married and lead an ever-after life and also have her own personal career goals come true. These are the kinds of Disney Princesses that the girls should aspire to be like. (Maity, 2014, p. 31)

Gender representation setbacks are however plentiful, as all sampled papers bear witness to, starting already with The Little Mermaid, where Maity claims that “The lesson that is conveyed to the girls is that they need to sacrifice their voice - their power of communication, in order to achieve the bodily perfection which is the ultimate attribute for girls” and “she seems to have little ambition to beyond getting her Prince” (Maity, 2014, p. 30). Davis does however not agree regarding the incentives of The Little Mermaid, and argues:

Rather than sitting contentedly, waiting for their handsome princes to find them, the young women featured in the 1990s sought knowledge (Ariel [in The Little Mermaid], Belle [in Beauty and the Beast], Jasmine [in Aladdin] […] or justice (Pocahontas […] and Mulan) in some form, and when romance came, it was less a goal and more a pleasant surprise - the icing on the cake. (Davis, 2001, p. 242)

On a similar note, Stover points out:

Belle, Jasmine […], Tiana, and Pocahontas all reject, initially at least, suitors who would come into conflict with their goals. However, the ability to choose the right suitor at the end signifies post-feminist autonomy, and thus constitutes a happy ending. Post-feminism celebrates woman as the sexually autonomous individual, and thus Disney’s rhetoric shifted from any prince to the right prince. (Stover, 2013, p. 4)

Although Eisner era princesses display a newly won independence from the princes, Stover recognizes an emerging shift towards a “daddy’s girl” theme:

Other princesses Ariel, Jasmine, and Pocahontas show independence and determination in rebellion against their fathers, searching for forbidden love in forbidden lands, but each film’s happily-ever-after occurs when the father is pleased with the arrangement, such as when King Triton exchanges a knowing smile with Ariel’s soon-to-be-husband Eric. These finales clearly constitute the happy ending necessary for any children’s film, but their
importance lies in **patriarchal approval**, the final blessing from the father, as in *The Little Mermaid* or *Mulan*. (Stover, 2013, p. 5)

Maity underlines that Disney uses a “self-sacrificing” daughter role in both *Beauty and the Beast* and *Mulan*, where the latter princess (although technically not a princess) also gives up her hard earned warrior status and submits to marriage to a dominant male character after her mission is complete (Maity, 2014, p. 30). The patterns are recognized also by Davis, who writes:

Yet the heroines of 1990s Disney films, although more in keeping with feminist attitudes, are not by any stretch of the imagination heroines to feminists. They are often devote caretakers of those around them, require the protection - or at least the affirmation - of a male authority figure (usually in the form of a father, which, owing to the ages of many of the characters, is perhaps more acceptable to modern audiences), and live out adventures which are at least sanctioned, if not rewarded, by the patriarchies in which all of the characters live. (Davis, 2001, p. 243)

The surrounding patriarchies can, however, be seen as a narrative vehicle, “creating a world where heroines are trapped and breakout signifies a happily-ever-after” and “Belle, Ariel, Pocahontas, Tiana[…]and Mulan all express a desire to escape from their surroundings” (Stover, 2013, p. 4). Stover states that “The situations of these princesses are, in effect, a criticism of the very situations with which Disney began its princess empire” and “The post-feminist princess embodies ideals of feminism while representing the pressures and entrapment of pre-feminist culture” (ibid.).

Whereas all three classic era princess films featured wicked old women villains, *The Little Mermaid* is the only Eisner era princess film to do so, a development pointed out by Maity (2014, p. 31). Davis expands on the issue:

Women in Disney, if they have had other female characters to interact with in the first place, have been shown predominately as being in competition with one another or as outright enemies. Particularly in the films up to and including 1989's *The Little Mermaid*, Disney women did not get along well with one another. As the Women's Movement's emphasis on the idea of ‘Sisterhood’ emerged, however, Disney seems to have acknowledged this - at least implicitly – by steering clear of portraying women as enemies. The relationship between Pocahontas and Nakoma in *Pocahontas* (1995) was one of the few female friendships found anywhere in Disney, and the only relationship between two women to be found in a Disney film after *The Little Mermaid*. (Davis, 2001, p. 251)

In summary, the Eisner era featured heterogenic, complex princesses and although all papers see improvements in the levels of equal gender representations, contradictory messages and setbacks are plentiful. In a scene-by-scene or film-by-film perspective, the
sampled literature had a broader spectrum of assessments compared to the very similar readings of the classic era films. I have, however, not delved into these differences as the objective of this meta-study is to find patterns on a period aggregated plane, where all studied papers came to the same conclusions that there was indeed improvement since the earlier princess movies.

4.4 The Iger era (2009-2013)

Up to the time of writing this thesis, the Iger era consists of The Princess and the Frog (2009), Tangled (2010), Brave (2012) and Frozen (2013). Only Wilde (2014) covers all Iger era princess films while England et al. (2011), Maity (2014) and Stover (2013) only cover The Princess and the Frog. Based on their analyses of previous films, it is however possible to extrapolate through comparing characteristics and applicability of criticisms to see to what degree previous weaknesses are still present.

Starting with The Princess and the Frog, England et al. tally a large increase in domestic work (2011, p. 563), which constitutes a regression towards classic era princesses. Looking at a wider picture however, coded content analysis showed only a minor decrease in the numbers of feminine coded characteristics compared to the Eisner era princesses, but there was a massive increase in the percentage of masculine characteristics displayed (47%) compared to the classic era princesses (14%) (England et al, 2011, p. 562). Especially with Brave, Wilde describes this increase of male characteristics in the princesses as a “shift from ‘binary’ of what femininity should be, to the ‘diverse’ post-feminist princess where women can take the lead” and claims that “Merida is a positive role model for children; she represents different attributes that have never occurred in previous princess films” (Wilde, 2014, p. 143).

When it comes to the percentage of female characteristics displayed by the prince, The Princess and the Frog (68%) showed a substantial increase compared to both classic era and Eisner era films (England et al, 2011, p. 562). Wilde, from her semiotic perspective, has a similar notion about the theatrical poster of Tangled (although a similar scene occurs in the film), where “The fact the male is holding a domestic object [a frying pan] as a weapon juxtaposes the traditional domestic roles associated with women” (Wilde, 2014, p. 137). Similarly in Frozen, Kristoff “is illustrated as domesticated, when he begins cleaning
his sleigh after Anna has dirtied it. This again utilizes the shift from binary oppositions to a post-feminist ideal of equality, where both genders intertwine and can take the lead” (ibid., p. 146).

Following the example of the Eisner era princesses, the Iger era princesses are not passive damsels in distress, as in the classic era films, but rather belong to a line of “go-getting, proactive heroines”, as formulated by Stover, who gives Tiana in *The Princess and the Frog* as one example of the focused and ambitious princesses of later periods (Stover, 2013, p. 3). *The Princess and the Frog* is especially lauded for carrying a strong message of putting in the effort necessary to shape your own future, as exemplified by Tiana saying “You can’t rely on that star, you gotta have hard work of your own” (ibid., p. 4).

Arguably, Rapunzel (in *Tangled*), Merida (in *Brave*) Elsa and Anna (in *Frozen*) are at least as active, minus the domestic work – each taking their own initiative to embark on a quest. In *Brave*, the princess’ company is her mother (in the form of a bear) and in *Frozen*, the prince is left behind to do public care-taking while princess Anna leaves alone on her mission to save the kingdom Arendell from eternal winter (although she later gains male companions on her journey). England et al. observe that “A princess has not yet performed the final rescue without the involvement of the prince” (2011, p. 565), which holds true not only for *The Princess and the Frog* but also for *Tangled*, where Rapunzel rescues the prince through self-sacrifice, committing to serving the evil witch for eternity in order to save the life of Eugene. However, it is Eugene who finally subdues the witch through his own heroic act of self-sacrifice, apparently giving his life for Rapunzel’s freedom, while finally being healed and rescued by a magic tear from Rapunzel. Even though both commit acts of self-sacrifice, it can be argued that Rapunzel agreeing to submissiveness and healing through crying differs in gendered behavior from Eugene’s act of saving by putting his physical health and life at stake.

Final rescues performed by heroines, without involvement of male protagonists, as called for by England et al. (ibid.), are, however, at last seen in *Brave* and *Frozen*, thus constituting an improvement compared to Eisner era princess films. As Wilde observes, *Brave* also marks the first time a Disney princess film is narrated by herself, elevating Merida from object to subject (2014, p. 141).
Already in *Pocahontas*, where the heroine chooses to be a leader among her people over sailing off with the hero, Maity observes that “The importance of marrying a Prince as the goal of the plot has also recently begun to be questioned” (2014, p. 31) and Stover notices that “Belle, Jasmine, […] Tiana, and Pocahontas all reject, initially at least, suitors who would come into conflict with their goals” (2013, p. 4). With the Iger era films, this develops even further and the most recent princess films, *Brave* and *Frozen*, are unique in that they have princess characters without a romance sub-plot. Wilde argues that *Frozen* “propels the positive post-feminist message of empowerment […] illustrating the importance of finding oneself and not through a prince” although “the overall journey still ends in romance giving off strong mixed messages” and “the fairy tale still ends in true loves kiss” (Wilde, 2014, p. 147). England et al. observes:

The romance in the two most recent films, *Mulan* and *The Princess and the Frog*, however, developed over time as the characters interacted with each other, often overcoming obstacles together and fostering a friendship as well. This suggests that the more recent Disney Princess movies show a more balanced portrayal of relationship formation. (England et al, 2011, p. 565)

This trend has continued for the duration of the Iger era and *Frozen* even contains a sub-plot which appears to be a self-conscious meta-commentary on love at first sight, where the affection thirsting princess Anna is frequently lectured on, and finally learns the absurdity and hazard of thinking you can instantly judge the character of a stranger with a pretty face. Another noteworthy twist on the classic princess film plot devices in *Frozen* is when the act of true love necessary to save the day proves not to be a romantic true loves kiss but instead sisterly love and compassion.

Davis observes a sisterhood theme already in Eisner era film *Pocahontas* (2001, p. 251) and going into the Iger era, Tiana in *Princess and the Frog* has a female best friend and a close relationship to her mother while her father is deceased. *Tangled* can perhaps be regarded a step back as the Grimm fairy tale marks the return of the old, wicked woman villain. However, the central relationship in *Brave* is not that between Merida and her father but the relationship with her matriarch mother. Similarly, *Frozen* has a strong sisterhood theme between princess sisters Anna and Elsa.

Regarding themes of “daddy’s girl” and patriarchal approval, Stover notes in *The Princess and the Frog* that “the film constantly reminds the viewer that Tiana inherited this dream [of her own restaurant] from her father. The search for male parental approval not only
feminizes ambitious Tiana, but also reduces her to a little girl with love for her deceased father” (Stover, 2013, p. 5). In subsequent Iger era princess films however, the princesses rather long for matriarchal approval, where Rapunzel wrestles with the bad conscience of not living up to her apparent mother’s expectations, Merida longs to be accepted for who she is by her mother and Anna desperately seeks the companionship and closeness of her sister Elsa.

In conclusion, the Iger era showed an unprecedented degree of apparent self-awareness from Disney, with improvements in equality of gender representations in most areas and no evidence found of general deterioration on any topic. Wilde makes similar conclusions, stating that the 21st century princesses “are complex characters with a variety of traits, a departure from the historical princesses of the past” although “there are still similarities that are dominant in the narrative” (Wilde, 2014, p. 147). The criticism is first and foremost based on the UK cinematic trailers and examples given are that “Rapunzel’s story is told through a male narrator, who dominates the majority of the scenes, leaving her subordinate in the tale of her own journey. The Frozen trailer also focuses on a love triangle between Anna, Kristoff and Hans thus perpetuating the social script of love at first sight” (ibid.). These notions are of course much less dominant in the full versions of the films, where the love at first sight theme is treated with an apparent self-ironic twist.

Although not perfect, the reservations laid forward by Wilde, regarding gender representations in the Iger era films, are conspicuously subtle compared to the shortcomings recognized in analyses covering the Eisner era films. Evidence is thus conclusive that the Iger era princess films show improvements compared to the films of both previous periods.

4.5 Meta-study conclusions

There are innumerable aspects which could be covered regarding gender representations on a film-to-film basis and this meta-analysis does not in any way claim to contain even a representative selection of issues, as the objective is to investigate changes in equality of gender representations from a three period aggregated perspective. Nevertheless, certain film specific discussions have been covered for sake of illustration and as a source for discussions and analysis in later sections of this thesis.
On a film-to-film basis, England et al. notes that “Overall, trends toward less gender-based stereotyping over time in the movies fluctuated greatly and the progress was not necessarily sequential” (2011, p. 565). On an aggregated level however, the sampled literature, as well as an extended analysis, are all conclusive in indicating a distinct chronological improvement in gender role portrayals, with the classic era showing the lowest and the Iger era showing the highest level of equality in gender representations, which answers the operationalized research question “What changes in level of equality in gender representations are indicated by intricate quantitative and qualitative research methods applied to Disney’s animated princess films, with Frozen included?”.

Translated to the possible permutations in figure 1, this equates permutation 1, displaying an upward slope, which is thus what will be used as the control when evaluating the merits of the popular simple key measures covered in this thesis.

Permutation 1:
Upward slope

<table>
<thead>
<tr>
<th>Highest</th>
<th>Middle</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
</tr>
</tbody>
</table>

Figure 2

5. Empirical study

Results from using each of the three popular gender representation indicators are presented one indicator at a time. The detailed data is first displayed in table form, followed by a bar chart summary, facilitating visual interpretations of the results. As comparisons will be made to figure 2, the results are translated to one of the permutations of figure 1. Finally, observations are made and outlined on relevant aspects of the source material and presented data.
5.1 The Bechdel test

Table 1: Bechdel test scores for Disney films

<table>
<thead>
<tr>
<th>Film</th>
<th>Bechdeltest.com</th>
<th>Animatedmeta</th>
<th>Feminislandhesty</th>
<th>Ficofandalasia</th>
<th>Ladieofcomicalzi</th>
<th>Lipsredasroces</th>
<th>Storyofphoenix</th>
<th>Total points</th>
<th>Period average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow White and the Seven Dwarfs</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>86</td>
</tr>
<tr>
<td>Cinderella</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sleeping Beauty</td>
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<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>The Little Mermaid</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>43</td>
</tr>
<tr>
<td>Beauty and the Beast</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>57</td>
</tr>
<tr>
<td>Aladdin</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Mulan</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>The Princess and the Frog</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>71</td>
</tr>
<tr>
<td>Tangled</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Brave</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Frozen</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

100=Pass, 0=Fail

Total points for each film is calculated as an average. Cells with fail verdicts are filled with light grey in order to facilitate visual readings of the results. Bechdel test sources are listed in appendix 1.
Translated into a figure 1 permutation, the Bechdel test results equates to permutation 3.

**Permutation 3:**

*Reverse pyramid (Iger highest)*

<table>
<thead>
<tr>
<th>Highest</th>
<th>Middle</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic</td>
<td>Eisner</td>
<td>Iger</td>
</tr>
</tbody>
</table>

Figure 5

All raters but one had modified the original version of the test by adding the requirement that the two female characters needed for a pass have to be named. The rater not adding this criteria expressed that she kept from doing so only to be able to pass the Queen as the second female character (Ladiesofcomicazi, 2013), while the others seemingly all accepted “the Queen” as a name filling the requirements.

It should be noted that the Iger era had a perfect score of 100, but the classic era was only one rater failing behind, due to *Snow White and the seven dwarves*. Explanation given was “The Evil Queen is not canonically named, and she and Snow White do not directly interact” (Ficofandalasia, 2012). This will later serve as example in a brief discussion on inconsistencies. All raters agreed on a pass for *Cinderella* and *Sleeping Beauty*. The Eisner era saw major inconsistencies between raters and all were in agreement only on failing *Aladdin* and passing *Pocahontas*, two out of five princess films of the period. *The Little Mermaid* received 4/7 fails, *Beauty and the Beast* got 3/7 fails and *Mulan* was failed only by 2/7.

The Iger era princess films received a perfect score with passes from all raters, although two raters only had performed ratings up to and including *Tangled* while two more raters had performed ratings which also included *Brave* but not *Frozen*. However, as the interaction between two named female characters is central for the storyline in both films, chances are negligible that the missing rater scores would have changed the outcome had the raters covered the full set of films. Ficofandalasia (2012) was the only covered rater to add requirements beyond demanding female character names. The requirements added are that the female characters need to be human or humanoid and conversations cannot be about romantic relationships, even if no men are mentioned. No fails are motivated by these criteria.
5.2 Character count

Percentage female speaking characters

<table>
<thead>
<tr>
<th>Movie</th>
<th>Female characters (count)</th>
<th>Male characters (count)</th>
<th>Female characters (percent)</th>
<th>Period average (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow White and the Seven Dwarfs</td>
<td>2</td>
<td>10</td>
<td>16.7</td>
<td>41.9</td>
</tr>
<tr>
<td>Cinderella</td>
<td>7</td>
<td>4</td>
<td>63.6</td>
<td></td>
</tr>
<tr>
<td>Sleeping Beauty</td>
<td>5</td>
<td>6</td>
<td>45.5</td>
<td></td>
</tr>
<tr>
<td>The Little Mermaid</td>
<td>9</td>
<td>13</td>
<td>40.9</td>
<td>29.4</td>
</tr>
<tr>
<td>Beauty and the Beast</td>
<td>6</td>
<td>13</td>
<td>31.6</td>
<td></td>
</tr>
<tr>
<td>Aladdin</td>
<td>3</td>
<td>12</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Pocahontas</td>
<td>3</td>
<td>8</td>
<td>27.3</td>
<td></td>
</tr>
<tr>
<td>Mulan</td>
<td>6</td>
<td>16</td>
<td>27.3</td>
<td></td>
</tr>
<tr>
<td>The Princess and the Frog</td>
<td>6</td>
<td>16</td>
<td>27.3</td>
<td>27.5</td>
</tr>
<tr>
<td>Tangled</td>
<td>3</td>
<td>11</td>
<td>21.4</td>
<td></td>
</tr>
<tr>
<td>Brave</td>
<td>4</td>
<td>8</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>Frozen</td>
<td>5</td>
<td>13</td>
<td>27.8</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6

Figure 7

Percentage female speaking characters
Translated to a figure 1 permutation, the results align with the downward slope of permutation 6.

*Permutation 6: Downward slope*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 8*

In all the classic era films, women are predominant among the major characters and the four first princess films, starting with *Snow White and the Seven Dwarfs* and ending with *The Little Mermaid*, all had old wicked women as the villains. The classic era films also stood out among the whole line of princess films in that they were fairly enclosed in space, social settings and number of characters. Only *Pocahontas* and *Brave* had a similarly low number of speaking characters among the later films. *Snow White and the Seven Dwarfs* had the lowest percentage of female characters of all the classic era films, although it can be argued that the seven dwarfs in many ways all serve the function of a single character in the story. Noteworthy is also that the coding manual used in my analysis did not count Dopey as a character as he is mute.

Even though *Snow White and the Seven Dwarfs* displayed the lowest percentage of female characters of all the Disney princess movies, the classic era also included *Cinderella*, with the highest percentage of female characters. As a whole, the classic period by far surpassed the other periods in average percentage of female characters, while there was a smaller, but not insignificant, difference between the Eisner era and the Iger era, with the Iger era being 1.9 percent units behind the Eisner era. This might come as a surprise as the Eisner era included *Aladdin*, the only Disney princess film where the princess is not the main protagonist and the title of the film does not contain a name or adjective referring to the princess.

Although not measured, it was noted during coding that sidekicks were almost exclusively of male gender throughout all three periods of princess films, which lowers the percentage of female characters even when most major characters are women.
### 5.3 Talk time

**Percentage female talk time**

<table>
<thead>
<tr>
<th>Movie</th>
<th>Female talk time (minutes)</th>
<th>Male talk time (minutes)</th>
<th>Female talk time (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow White and the Seven Dwarfs</td>
<td>20.1</td>
<td>16.5</td>
<td>54.9</td>
</tr>
<tr>
<td>Cinderella</td>
<td>27.1</td>
<td>12.7</td>
<td>68.1</td>
</tr>
<tr>
<td>Sleeping Beauty</td>
<td>23.3</td>
<td>10.3</td>
<td>69.3</td>
</tr>
<tr>
<td>The Little Mermaid</td>
<td>19.2</td>
<td>26.6</td>
<td>41.8</td>
</tr>
<tr>
<td>Beauty and the Beast</td>
<td>17.4</td>
<td>36.3</td>
<td>32.4</td>
</tr>
<tr>
<td>Aladdin</td>
<td>5.97</td>
<td>53.4</td>
<td>10</td>
</tr>
<tr>
<td>Pocahontas</td>
<td>15.3</td>
<td>29</td>
<td>34.5</td>
</tr>
<tr>
<td>Mulan</td>
<td>11.9</td>
<td>29.6</td>
<td>28.7</td>
</tr>
<tr>
<td>The Princess and the Frog</td>
<td>25.4</td>
<td>37.7</td>
<td>40.2</td>
</tr>
<tr>
<td>Tangled</td>
<td>29.9</td>
<td>20.9</td>
<td>58.9</td>
</tr>
<tr>
<td>Brave</td>
<td>33.9</td>
<td>10.3</td>
<td>76.7</td>
</tr>
<tr>
<td>Frozen</td>
<td>28.4</td>
<td>26.7</td>
<td>51.6</td>
</tr>
</tbody>
</table>

**Figure 9**

**Figure 10**

![Percentage female talk time](chart.png)
Comparing to the permutations of figure 1, we see that this matches permutation 5.

**Permutation 5:**  
**Reverse pyramid (Classic highest)**

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Middle</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 11

Out of the Bechdel test, character count and talk time, the latter had the greatest spread in results between the three periods, while the two others tests each had two periods with a difference less than 5/100 units, with a larger difference only to the remaining period.

As with the character count, the classic era displays the highest average female scoring, where *Snow White and the seven dwarves* no longer earns a bottom ranking, as with character count, but instead rates at a 54.9% female talk time. Four out of the five films with the lowest percentage female talk time are part of the Eisner era, with *Aladdin* earning an exceptionally low 10%. The highest percentage of female talk time is found in *Brave*, with 76.7%, but the second and third highest percentages are found in classic era movies *Sleeping Beauty* and *Cinderella*. An interesting notion is that the classic era films contain significantly less speech than the films from later periods, even when taking into account the shorter running time of the earlier movies.

Comparing to character count, the Eisner era shows an almost identical average, meaning that each female character featured in the film on average has close to the same talk time as each male character in the film. The classic era and Iger era films are significantly higher in female talk time than in character count, which implies that the female characters in the films on average have considerably more talk time than the male characters.

Summarized, all classic and Iger era films, except for *The Princess and the Frog*, had more than 50% female talk time while none of the Eisner era films had more than 41.8%.
5.4 Summary of test results

Figure 12

Meta-study

*Permutation 1: Upward slope*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Permutation 6: Downward slope*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
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<td></td>
<td></td>
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<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Bechdel test

*Permutation 3: Reverse pyramid (Iger highest)*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Permutation 5: Reverse pyramid (Classic highest)*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Talk time*

<table>
<thead>
<tr>
<th></th>
<th>Classic</th>
<th>Eisner</th>
<th>Iger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td></td>
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<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
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</tr>
</tbody>
</table>
6. Analysis and discussion

In this chapter, the results from all three popular gender representation indicators will be analyzed and discussed, one indicator at a time. By comparing to changes in gender role representations indicated by the meta-study, the hypotheses connected to each popular gender representation indicator will be either accepted or rejected.

6.1 The Bechdel test

It should be noted that the Iger era had a perfect score of 100, but the classic era was only one rater failing behind, due to *Snow White and the Seven Dwarfs*. The explanation given was that “The Evil Queen is not canonically named, and she and Snow White do not directly interact” (Ficofandalasia, 2012), which highlights inter-rater reliability problems with not sharing a common coding manual. All other raters gave *Snow White and the Seven Dwarfs* a pass, thus making less strict judgements. This chronologically first rating inconsistency can be used as an example for purpose of analysis.

The Evil Queen’s birth name is left unknown, but it is a common practice to address royalty by their title rather than birth name and in the introduction of the film, she is referred to as Snow White’s “wicked Stepmother the Queen”. Also, Snow White never directly interacts with the Evil Queen in her regal attire, but interaction takes place with the queen disguised as an old woman, which arguably counts as the same character. A formal and shared coding manual could have detailed what should be regarded as a name and if a conversation with an unnamed alter ego of a named character should generate a pass.

Perhaps more difficult to cover in a coding manual is how to rate conversations which touch upon the topic of men but go back and forth to other topics. The conversation between Snow White and the Queen starts with the Queen asking “Making pies?”, with Snow White replying “Yes, gooseberry pies”. This constitutes a very short conversation, but without minimum duration requirements, it would render a partial pass on the Bechdel test. However, the conversation quickly takes a new route, with the Queen saying “It’s apple pies that make the menfolk’s mouths water”.

The margins by which the Iger era scored better than the Classic era on the Bechdel test were the smallest possible, due to a single rating by a single rater interpreting the implicit coding rules differently. The simple sub-tests are delusive in that they might give the impression that only one rating is possible, although a detailed and shared coding manual would be necessary to ensure a high inter-reliability.

Comparing to the change in gender role representations implied by the meta-study, the Bechdel test accordingly rated the Iger era the highest. However, ignoring the single deviant rating on *Snow White and the Seven Dwarfs*, the classic era would have also gotten a perfect score card on the Bechdel test. It should be noted that in most cases, the Bechdel test is performed and presented by a single rater, in which case the binary and possibly arbitrary scoring makes comparisons between films and even periods difficult if comparing to tests coded by different raters.

The Eisner era falls far behind in Bechdel test ratings even though the meta-study identified themes of female liberation, interests of their own and ability to act in all films from *The Little Mermaid* to *Mulan*. This illustrates a fundamental flaw with quantitative research methods, which in the Bechdel test is drawn to an extreme, namely that “how many” does not automatically answer the question “why”. As is touched upon by Stover (2013, p. 4), the Eisner era princesses are thrown in sharp relief against elements of patriarchy and oppression, thus highlighting their struggle, free minds and the absurdities of the environment although at the same time lowering chances to pass the Bechdel test. As the measure evidently does not measure what proponents claim it measures, the Bechdel test suffers from a low theoretical validity and consequently, \( H_{Op\ Bechdel} \) and \( H_{Bechdel} \) are rejected.

6.2 Character count

As a consequence of the rules formulated in the coding manual, mute characters, such as Dopey in *Snow White and the Seven Dwarfs*, were not included in the character count, which can be regarded as discriminative. In addition, many important sidekicks were not included in the character count, although they arguably communicate more with their vivid mimicry, sounds and body language than many extras with only one line in the entire film.
Notable sidekicks without human language include Rajah the tiger and Abu the monkey (Aladdin), Meeko the racoon (Pocahontas), Maximus the horse (Tangled) and Sven the reindeer (Frozen). Interesting to note is that all major animal sidekicks in the princess films are male and female animal sidekicks are included only as part of a larger group of animals. The only exception to the rule, depending on how “animal sidekick” is defined, is Merida’s mother Queen Elinor in Brave, who was magically transformed into a bear for a large part of the movie.

Although not an issue in the Disney princesses film series, dividing into two binary genders does not fully reflect the number of possible gender identities and it would in some instances be called upon to incorporate e.g. a third gender, no gender (androgynous), transgender and so on.

The number of characters is considerably smaller in the classic era films compared to the films of later periods, where only Pocahontas and Brave had a similarly low number of speaking characters. Common to all the classic era princess movies is that they are fairly enclosed in space, social settings and number of characters, which is possibly a reflection of an older animation technique, relying heavily on expensive and time consuming manual labor, although general pacing in movie storytelling might also have gone up between periods.

The overall trend observed between the periods through the character count analysis is a downward slope, with a lower percent female characters for every new period. The difference was more remarkable between the classic period and the latter two periods than in-between the Eisner era and the Iger era, which differed with 1.9 percent units. It should be noted that Aladdin is in many ways an outlier among the princess films, with the princess being only a supporting character as well as the only female character of importance, thus bearing similarities to a phenomenon popularly coined “the Smurfette principle” (Pollitt, 1991). Excluding Aladdin from the character count analysis would further cement the gap between the Eisner era and the Iger era.

Comparing to the meta-study, it is clear that a greater number of female characters does not always equate to improvements in female gender role representations. All classic era films together with The Little Mermaid and Tangled featured female villains and Cinderella
featured as many as three. These characters show antagonism and lack of cooperation and sisterhood between women and, as noticed by Davis (2001, p. 121), may serve to show that good things only happen to passive and submissive women while strong and active women are set for defeat.

Building on Davis’ notion, a male character can serve as a warning example of how not to behave as a man and what man should not be desired, as with Gaston in *Beauty and the Beast*. Gaston even has an entire musical number celebrating and describing what an incredible man’s man he is, although his lack of feminine characteristics, such as social perceptiveness, humbleness and empathy, inevitably leads to his doom. While still lowering the female character percentage and talk time scoring of the film.

In summary, the character count analysis indicates a gender representations trend in total reverse of the upward slope development indicated by the meta-study. As the academic framework is often present and fewer dimensions are coded, reliability is better than for the Bechdel test, but validity is possibly even worse. Thus, $H_{Op\ Character}$ and $H_{Character}$ are both rejected.

### 6.3 Talk time

Consistent with the character count analysis, talk time numbers were highest for the classic era films, which all feature wicked old women as villains. A certain correlation between character count and talk time measures is expected although the correlation is probably stronger to the number of major characters than to a measure which includes every single character speaking at least one word.

Differing from the character count readings, the Eisner era films earned the lowest talk time scorings, indicating that the average female character in the Iger era films had more lines of speech than their Eisner era counterparts. *Aladdin* scored even lower in talk time than in character count, with female characters having on average only half the talk time of the films’ male characters. Recalculating period scorings after excluding *Aladdin* does however not affect the period inter-ratings.

In the meta-study, the film *Brave* was only directly covered by Wilde, who concluded that
“Brave is the closest resemblance to a feminist fairy tale and the only contemporary princess to be truly communicated as a post-feminist princess” (Wilde, 2014, p. 148). It is thus interesting to see that Brave scored higher than any other princess film in female talk time, although one should not jump to conclusions as the second and third highest percentages are found in classic era movies Sleeping Beauty and Cinderella, which both received devastating critique on female gender representations from the researchers sampled in the meta-study.

Coding gender is a part of talk time rating, so it is not surprising that issues previously discussed for character count are also valid for talk time, although test results differ in numbers. The main criticism is that in quantitative coded content analysis, we measure quantities of observations while the coded observation can encompass a variety of different meanings; even more so in talk time than in character count. Talk time only measures the fact that women speak, not the contents and implications of what they say. Expressions of submissiveness, dependence and passivity are valued equally as testaments of dominance, independence and action. In the same manner, expressions of antagonism between women are coded the same way as cooperation, respect and sisterhood.

Performing talk time coding twice on Snow White and the Seven Dwarfs gave readings from the two iterations differing less than one percent unit, which points to a high level of intra-rater reliability while the detailed coding manual ensures a high inter-rater validity. However, talk time analysis failed to recognize the same top performer as found through the meta-study. Instead, the period declared as the winner through talk time analysis was in fact the meta-study’s bottom ranked period. Validity is thus low and $H_{Op \, Talk}$ as well as $H_{Talk \, time}$ are thus rejected.
7. Consolidated results and conclusions

Hypotheses \( H_{Bechdel} \), \( H_{Character} \) and \( H_{Talk\ time} \) were all rejected and consequently, \( H_1 \) is rejected and \( H_0 \) accepted based on the evidence from the studies conducted within this thesis.

The simple content analysis methods all overrated the classic era princess films, which received the highest scoring of all periods on both character count and talk time. On the Bechdel test, only one coder of seven failed one of the classic era films, due to a deviant interpretation of the coding rules inherent in the test.

Users of the intricate academic research methods in the meta-study, as well as users of the three simple tests, explicitly or implicitly express concerns about socialization or cultivation effects of media on young children in shaping gender conceptions and identities. As especially cultivation theory emphasize repetition as a key in these phenomena, measuring and stressing frequencies in research is a logical deduction.

While the methods used in the meta-study diligently attune to possibly gender socializing elements of the sample, the simple methods approximate the elements which might cause the cultivation effect with easily quantifiable and instantly comprehensible simple measures. There is however a central weakness with coded content analysis in its focus on the manifest, where a high frequency is assumed to equate to significance.

Through the studies conducted within the frames of this thesis, it has been made evident that the results of the covered simple content analysis methods lack in validity as they do not capture the complexities of the analyzed material and thus fail to produce assessments indicating the same presence of negative stereotype cultivation or socialization effects as is identified by more intricate academic methods of analysis.

Although the simple methods fail to provide a panacea catch-all-measure on gender role representations, they can act as a point of entry to the wider discourse, in parallel to earlier feminists, who often used quantitative methods for raising awareness. In a politicized feminist context, simple metrics can also be selectively used on a film-to-film-basis to generate wanted evidence, although I strongly discourage such use.
On a film-to-film basis, as well as on a period aggregated level including a limited selection of films, the studied simple measures are only a few building blocks of a whole myriad of variables with possible socialization impact. Bridging positivism with cognition theory might however not be totally inexecutable, as the meta-study saw in England et al. (2013) a positive example where a detailed coding schedule had been carefully designed with a qualitative factor awareness, with research results indicating similar changes in gender role portrayals as the qualitative studies reviewed in the meta-study.

Arguably, the simple measures might be useful primarily as an aggregated instrument on whole populations of films, as a repeated exposure to films with e.g. women being in minority might bear connotations of women being the secondary gender, which might according to cultivation and socialization theory affect viewer conceptions of identity and reality. On an aggregated plane, a gender balanced character count, talk time and Bechdel tests (including a reverse Bechdel test, with switched genders) might thus be seen as a long term hygiene factor in overall film production.
8. References


*Bechdel test sources, which are quoted in chapter 5.1, are listed in appendix 1.*
8.1 Filmography

(sorted chronologically)

Snow White and the Seven Dwarfs. 1937. Directed by David Hand. USA: Walt Disney Productions.

Cinderella. 1950. Directed by Clyde Geronimi, Wilfred Jackson & Hamilton Luske. USA: Walt Disney Productions.


Appendix 1: Bechdel test sources

The following webpages constituted the sampled Bechdel test reviewers in chapter 5.1. As all Bechdel tests were published on blogs, blogger alias is given as author name.


