

Fecha de recepción: 29 noviembre 2016
Fecha de aceptación: 17 marzo 2017
Fecha de publicación: 27 abril 2017
URL: <http://oceanide.netne.net/articulos/art9-2.pdf>
Oceánide número 9, ISSN 1989-6328

Women (and) scientists: Modern Sexism in *The Big Bang Theory*

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RESUMEN:

En el siglo pasado, la lucha por los derechos de la mujer ha seguido indudablemente un largo trecho. Sin embargo, el sexismo no ha desaparecido de los medios de comunicación y las sociedades occidentales, siendo más moderado en las últimas décadas. A finales del siglo XX, varios investigadores (Campbell et al., 1997, Swim y Becker, 2010) han observado una cierta tendencia hacia lo que han denominado neosexismo contemporáneo, es decir, discursos sexistas que derivan de la creencia en la plena igualdad o en micromachismos, sostenidos por personas que de otra manera no niegan la igualdad de género. Estos problemas son especialmente frecuentes en los campos de trabajo tradicionalmente masculinos, tales como la ciencia, la tecnología, la ingeniería o las matemáticas (STEM). Teniendo en cuenta el papel crucial de los medios de comunicación en la formación del discurso hegemónico en las últimas décadas, es importante analizar cómo estas creencias se legitiman en los medios de comunicación de masas, tales como series de televisión. Este artículo examina, por tanto, la representación y el tratamiento de los personajes femeninos, en particular las mujeres empleadas por el STEM, en una popular comedia estadounidense, *The Big Bang Theory*. Este caso de estudio en torno al tratamiento de personajes femeninos en un programa de televisión puede ofrecer importantes respuestas sobre cómo el discurso neosexista se perpetúa en la sociedad contemporánea a través de un medio tan popular.

Palabras clave: neosexismo, sexismo contemporáneo, género, cultura televisiva, *The Big Bang Theory*

ABSTRACT:

In the past century, the fight for women's rights has undeniably come a long way. However, sexism has not disappeared from the Western media and society: it has merely become more subdued in the recent decades. At the end of the 20th century, several groups of researchers (Campbell et al., 1997; Swim and Becker, 2010) have noticed the trend towards what they termed modern, contemporary, or neo-sexism, i.e. sexist ideas stemming from the belief that women have already attained full equality and are now asking for too much, or subtle sexist beliefs and practices upheld by people who otherwise do not deny ideas of gender equality. These problems are especially prevalent in traditionally masculine fields of work, such as science, technology, engineering or mathematics (STEM). Considering the crucial role of the media in the formation of public opinion in the past several decades, it is important to look at how these beliefs might be reinforced in the forms of media available to large audiences, such as popular television shows. This paper examines the portrayal and treatment of female characters, particularly STEM-employed women, in a popular US sitcom, *The Big Bang Theory*. This examination of the treatment of female characters on a popular television show can yield important answers about how modern and neosexist beliefs are perpetuated in contemporary society through popular media.

Keywords: neosexism, modern sexism, gender, popular television, *The Big Bang Theory*

1. INTRODUCTION

The shifting role of women's legal standing has changed how sexist beliefs are expressed and maintained in societies where voicing blatant misogynistic opinions is increasingly seen as undesirable, and thus people are potentially more careful about voicing their opinions (Campbell et al., 1997: 89-90). People with sexist attitudes nowadays might not be necessarily "opposed to equality and may even maintain non-traditional gender roles, but they deny the existence of discrimination against women" (Martínez et al., 2010: 3). Modern sexism encompasses all current expressions of gender-based prejudice, including traditional, overt forms of sexism, as well as subtler and less easily recognizable forms, such as neosexism (Swim and Becker, 2010: 577). Neosexist beliefs are defined as the refusal "to recognize that women are discriminated against and therefore that sexism actually exists" (Martínez et al., 2010: 3), and a "manifestation of a conflict between egalitarian values and residual negative feelings towards women" (Tougas et al., 1995: 843). According to Swim and Becker, the difference in methodology when talking about modern and neosexism is that "the Modern Sexism Scale primarily measures perceptions of discrimination, and the Neosexism Scale focuses mostly on the resentment of complaints about sexism and efforts to assist women" (Swim and Becker, 2010: 579).

In 1999, a study conducted on a sample of 335 secretaries employed in a Canadian federal agency showed that "the more women attempted to access nontraditional fields of work, the more they experienced discrimination" (Tougas et al., 1999: 1487). One of the fields of employment still considered non-traditional for a woman is the field of Science, Technology, Engineering and/or Math, commonly abbreviated as STEM. A 2011 report from the US Department of Commerce found that while women fill 48% of all work positions in the United States, they hold less than 25% of STEM positions, obtain a disproportionately lower share of STEM undergraduate degrees compared to men, particularly in the field of engineering, and even if they do obtain a STEM degree, women are less likely than men to work in a STEM work position, while being more likely to work in education or healthcare

(Beede et al., 2011: 1). Furthermore, while the percentage of female college-educated workers in any field increased from 46% in 2000 to 49% in 2009, the percentage of female workers in STEM fields remained unchanged, despite the fact that the wage gap between male and female workers is lower in STEM occupations than in other fields (3-4). The report itself provides speculations on the reasons for this gender-based division in the STEM workforce:

different choices men and women typically make in response to incentives in STEM education (...) STEM career paths may be less accommodating to people cycling in and out of the workforce to raise a family (...) relatively few female STEM role models (...) strong gender stereotypes discourage women from pursuing STEM education and STEM jobs. (Beede et al., 2011: 8)

According to Willis, this discrimination can also be explained through role congruity theory, i.e. "that prejudice occurs when individuals take on a role incongruent with expectations and/or attributes of their gender" (Willis, 2012: 10). In a 1929 essay, "Womanliness as a Masquerade", Joan Riviere described successful women who have attained 'complete feminine development' as women who "are excellent wives and mothers, capable housewives; they maintain social life and assist culture; they have no lack of feminine interests, e.g. in their personal appearance, and when called upon they can still find time to play the part of devoted and disinterested mother substitutes among a wide circle of relatives and friends" (Riviere, 1929: 304). This paper proposes that Riviere's expectations for the femininities of successful women can still be witnessed in the television fiction of the 21st century, creating some incongruity between the role of a successful professional or scientist, and the role of a woman. Female scientists on television are ultimately asked to step into the role of (house)wives, take interest in their physical appearance, and/or perform the role of a mother not only to their children, but also to their acquaintances and family members, adhering to Riviere's expectations as well as to Butler's statement that "the very injunction to be a given gender takes place through discursive routes: to be a good

mother, to be a heterosexually desirable object, to be a fit worker, in sum, to signify a multiplicity of guarantees in response to a variety of different demands all at once" (Butler, 2002: 185).

Additionally, Riviere examined the case of female activist who often spoke in public –however, afterwards, she would “seek some attention or complimentary notice from a man or men at the close of the proceedings in which she had taken part [in] an unconscious attempt to ward off the anxiety which would ensue on account of the reprisal she anticipated from the father-figures after her intellectual performance” (Riviere, 1929: 305). This performance of overt femininity as heterosexual and submissive is in accord with Willis’ theory of the incongruity between the expectations for the role of a successful intellectual and the role of a woman, and it is important to examine to what extent women might feel this incongruity in the modern society, or whether this incongruity is portrayed in the 21st-century television fiction. If gender is understood as performative, i.e. “constituting the identity it is purported to be” (Butler, 2002: 33), then it is necessary to study how the performance of femininity shapes the modern understanding of the gender itself. According to Barbara Berg, “girls are still unlikely to see themselves on television science shows except in subordinate positions like lab technicians” (Berg, 2009: 175), and if they do appear, they might be forced into the traditional roles of a mother and a housewife, or be “subjected to constant demands to be more beautiful, regardless of their accomplishments in other spheres of life” (Sartain, 2015: 99), suggesting that the incongruity between the two roles might still be present. Additionally, this demand for, or the performance of beauty becomes particularly troubling in relation to another stereotypical notion: that a woman’s attractiveness is a marker of her incompetence, or her lack of intellectual capabilities (Sartain, 2015: 100). Through this dilemma, successful female characters might become unavailable as role models for the creation of young women’s professional and feminine identities.

The Big Bang Theory (CBS, 2007-present) is one of the best examples of female STEM-employed characters, seeing as most of the female recurring characters work in these fields. While the first season received

mixed reviews and only ranked 68th in the 2007-08 television show ratings, its popularity steadily grew – seasons 6, 7 and 8 attracted an average of 19 million viewers and consistently rated in the top 5 programs, which makes this sitcom a potentially influential part of contemporary popular culture. Furthermore, the show has been produced and aired since 2007, fitting into the framework of President Barack Obama’s plans to increase the achievements of US students in science and math, as well as the 2013 strategy for increasing education in STEM fields, which “focused on encouraging women and minorities as one of the five key priority areas” (Hall, 2016: 1). Through the example of *The Big Bang Theory* it is possible to explore how these frameworks have – or have not – been utilized by popular television.

2. THE BIG BANG THEORY

The sitcom operates on a simple premise: an attractive wannabe-actress, Penny (Kaley Cuoco), moves across the hall from two socially inept scientists, Leonard Hofstadter (Johnny Galecki) and Sheldon Cooper (Jim Parsons), with the regular appearance of their two friends, Rajesh Koothrappali (Kunal Nayyar) and Howard Wolowitz (Simon Helberg). The four male protagonists are all employed in STEM fields, physics or engineering, and work together at the California Institute of Technology, a private research university commonly abbreviated as CalTech. In the first three seasons, the only recurring female protagonist employed in a STEM field is Leslie Winkle (Sara Gilbert), an experimental physicist at CalTech. In later seasons, Bernadette Rostenkowski (Melissa Rauch) joins the recurring cast as the graduate student of microbiology and Howard’s girlfriend, soon followed by Amy Farrah Fowler (Mayim Bialik), a neurobiologist and Sheldon’s girlfriend. Another female scientist mentioned in several episodes across the ten seasons is Leonard’s mother, Beverly Hofstadter (Christine Baranski). The underlying issues in the treatment of female characters on *The Big Bang Theory* become visible in the appearance of female scientists on the show only in the roles of love interests or mothers, i.e. in the representation of them as relevant solely in relation to male protagonists. Willis connects these representations to Kanter’s typology of

stereotypes about professional women: the seductress, the mother, the kid sister, or the virgin aunt (Willis, 2012: 8). In other words, the professional perception of women appears to be shaped by their relationship to men. In addition, Archer divides the representation of female scientists on the show into the categories of 'hyper-feminized' or 'ultra-rational', and argues that the female characters' sexuality and gender is overtly emphasized on the show, "marking them as women and thus minimalizing the 'threat' they pose to the male scientists" (Archer, 2015: 27).

2.1. Seductresses, mothers, and the workplace

The stereotype of a seductress is exemplified most clearly by the contrast between Leslie Winkle and Elizabeth Plimpton (Judy Greer). Dr. Plimpton, a cosmological physicist who comes to visit Sheldon as she is considering a position in Pasadena, becomes the epitome of the 'seductress' role. Initially, Leonard shows respect and even admiration for her based on her research and publications; however, in most of the episode, the focus remains on her attempts at seducing one or more of Sheldon's friends. Where Elizabeth Plimpton, dressed in erotic underwear and seemingly uncaring about who fulfils her sexual needs, embodies the 'seductress' stereotype from the perspective of hyper-femininity, Leslie Winkle's position as a 'seductress' fits into the ultra-rational category, when she is described as "highly intelligent, rational, and unemotional as well as a little socially awkward" (Archer, 2015: 27). However, her social awkwardness does not translate into an incapability of establishing sexual relationships, reaffirming Leslie's role of a 'seductress' – while her first appearance establishes her as a character with low libido who does not require sexual encounters more than once or twice a year, later she claims that she is ready to enter into a committed relationship with Leonard in the following manner: "I'm all done with casual sex (...) I guess there's just a time in every woman's life when she gets tired of waking up on a strange futon with a bunch of people she doesn't know" (Cendrowski, 2008b). Similarly to Amy Farrah-Fowler in later seasons, Leslie Winkle's initial low interest in sex is eventually reconfigured to better fit into the archetype of a 'seductress'.

Leslie's only appearance where she does not become an object of the men's sexual interest happens when she agrees to compete against Sheldon in a physics trivia competition solely because Sheldon previously told her "[she] should abandon [her] work with high energy particles for laundry and child bearing" (Cendrowski, 2008). Leslie's quote is one of the very few direct critiques of misogynistic behavior in the show, despite the fact that many characters, male as well as female, exhibit covert sexist and misogynist beliefs. In addition, Leslie is often portrayed as a loner: in the university cafeteria, she frequently sits alone, and she does not mention colleagues or friends. These factors contribute to the image of a female scientist alone in her field, a rarity instead of a typical occurrence. Hall explains this phenomenon regarding women networking in the workplace as some women disassociating themselves from other female colleagues in order not to appear inefficient or idle: "associating with other females in the office would not allow a woman to network in the most productive way, to be seen as a professional or to be deemed valuable to the organization" (Hall, 2016: 11). While other women are occasionally seen in the university cafeteria, Leslie does not associate with them.

Leslie Winkle is also depicted as a rather crude woman, discussing sexual and romantic relationships in scientific rather than emotional terms: her 'ultra-rationality' reaches the point of appearing cold, unfeeling or strange. In her relationship with Leonard, he is presented as the victim of her emotionless approach to the fulfilment of sexual needs. Her short relationship with Howard ends after he realizes that Leslie has been manipulating him and using him for sex or as "arm candy" (Cendrowski, 2009c) – Howard feels extremely hurt, despite the fact that he frequently treats women the same way. Through these situations, Leslie's behavior is consistently depicted as negative – shallow, manipulative, and emotionally distant. Whenever she exhibits preferences for sex without emotional attachment, or acts tough, self-assured, assertive or dominant, i.e. whenever she exhibits traits and behaviors stereotypically coded as masculine, it results in a male protagonist's emotional pain and thus in the negative perception of Leslie. Similarly, when Amy begins to show interest in entering a sexual

relationship with Sheldon, she is depicted as pushy, irrational, and occasionally manipulative and deceitful. While the sexual needs and conquests of the male characters are depicted as a victory and a positive way of reaffirming their masculine identities, “for Leslie, Leonard’s mother, and Amy, having a sexual drive, or worse, acting on it, gets depicted as a weakness or a character flaw” (Archer, 2015: 43). The archetype of a ‘seductress’ thus does not appear to account – or allow for female sexual agency.

According to Hall, similar gender stereotyping causes women in STEM positions to be perceived, on the one hand, as not sufficiently emotionally tough; on the other hand, emotional toughness is coded as masculine and thus might result in the negative perception of women who exhibit it: “these gender roles and stereotypes create a double bind. If [women] adopt male characteristics, they are not feminine enough but if they are too feminine, they might be liked but not respected” (Hall, 2016: 82). This dualism is clearly present on *The Big Bang Theory*: Leslie, who mostly refuses to perform femininity, is portrayed as an ultimately unlikeable person, whereas the women who display overt femininity, such as Elizabeth Plimpton or Bernadette, appear to be more likeable, but the merits of their work are rarely discussed as the key factor of their lives. Weitekamp suggests that “as a woman who managed her own sexual needs and remained independent, not wanting an emotional relationship (...), [Leslie] both breaks out of the usual stereotypes of women even as she conforms to some of the established stereotypes of scientists, being aloof and unpolished” (Weitekamp, 2015: 85). And just like the woman in Riviere’s 1929 article, after demonstrating significant intellectual capability in her argument with Sheldon about the benefits of loop quantum theory over string theory, Leslie turns to her boyfriend at the time, Leonard, for protection, demanding that he should not let Sheldon “talk to [her] like that” (Cendrowski, 2008b). In addition, Leslie breaks up with Leonard over his disagreement with her preference of the loop quantum theory, demonstrating irrationality stereotypically attributed to women. Interestingly, Leslie also adopts the role of a mother in the argument, claiming that she has been thinking about having children with Leonard and that she

is protecting these hypothetical children from what she perceives as incorrect or unstable upbringing.

The gender stereotype about the ultra-rational female scientists as emotionally distant and the difficulty in finding a balance between stereotypically masculine and feminine traits in the workplace is indicated in the characters of Beverly and Amy, and, to some extent, Bernadette. Beverly is a successful neuroscientist and psychiatrist, but her most prominent trait in the show is her lack of maternal feelings towards Leonard and her incapability to show positive emotions not only to her son, but also to her husband. Beverly is also put into sharp contrast with Sheldon’s mother, Mary Cooper (Laurie Metcalf), a religious rural woman who stayed at home with her children and with whom Sheldon has a mildly frustrating, but ultimately loving relationship. This contrast between the positive image of a stay-at-home mother and the female scientist’s failed relationship with her son exemplifies the reality of the discourse around motherhood and professional success. A study based on print news stories spanning from 1980 to 2006 suggested that women’s decision to leave work and stay home with children is often presented as a natural pull women feel towards family life, while women themselves, in 80% of the cases, cite workplace pushes such as inflexible jobs as the reason they left (Williams et al., 2006: 2). The underlying suggestion in this biased representation of the reasons why women leave their jobs appears to be that women can either choose to pursue their careers or to be mothers, but it is impossible to successfully and efficiently fill both the role of an employee and a mother. The contrast between Beverly Hofstadter and Mary Cooper in *The Big Bang Theory* fully supports this aspect of modern sexist depictions of women in the media and reinforces “an image of female scientists as highly rational and emotionally unavailable” (Archer, 2015: 39). Beverly is shown lacking not only in her role of a mother, but also in her role of a wife: Leonard’s comment about having built a hugging machine in his childhood, which his father used to borrow (Cendrowski, 2009b), can only be interpreted in terms of sexist stereotypes about professional women’s incapability to be good mothers or wives.

The importance of a woman's role as a wife and a mother permeates the show in various subtle ways. According to Berg, "the new mantra – 'what women really want is a husband and kids' – is being foisted upon us" (Berg, 2009: 189). Similar sentiments shape the character of Bernadette Rostenkowski. Despite gaining her doctoral degree in microbiology, her role on the show predominantly revolves around her marriage to Howard and later, around her pregnancy. The prevalent belief that women are naturally inclined towards motherhood (Butler, 2002: 118) is challenged when Bernadette states that she is not good with children and does not want to have her own (Cendrowski, 2012). However, this aspect of her personality is portrayed as a character flaw or a childhood neurosis caused by her mother having worked full-time, while Bernadette had to take care of her brothers and sisters (Cendrowski, 2012), perpetuating the stereotype about women employed full-time being unable to provide a healthy environment for her children, as is the case with Leonard's mother.

Furthermore, Bernadette eventually agrees to have children in the future: as Archer states, "for every spark of possibility [the show] offers for re-envisioning the role of women in science or motivating future trailblazers, it simultaneously erodes that message by contradicting it, often for the sake of making a joke" (Archer, 2015: 45). While Howard initially agrees to stay at home with the children after they are born, one of his first questions that he asks after Bernadette announces her pregnancy is if they are going to get a nanny for the child (Cendrowski, 2016), suggesting that he does not believe he is expected to honor his previous commitment. Bernadette's reluctance to have children is also transformed into concerns about Howard helping with the housework and child-rearing. When her father tells her that he simply does not want her to miss what was the most rewarding experience of his life, Bernadette confronts him about not helping her mother, emphasizing the problem that many women have regarding the balance between child-rearing and work. As Naomi Wolf explains, "though a woman does full-time paid work, she still does all or nearly all the unpaid work that she used to. In the United States, partners of employed women give them less help than do partners of housewives" (Wolfe,

2002: 23). Howard does not help around the house either, in fact, he has frequently made jokes about his refusal to participate in any chores. Rajesh concisely outlines the problem when he states that Howard not only reminds Bernadette of her absentee father, but also represents the child that she is afraid to have (Cendrowski, 2015c). Howard also worries about how he will financially provide for his family and talks about having to work more and earn more money, suggesting that the idea of a female breadwinner is still not too widely accepted, although Bernadette has been earning more than Howard for a long time and could arguably provide financial stability. In addition, Howard has proven to be unreliable with money, often buying overpriced merchandise or equipment on the premise that Bernadette is in a high-earning job and thus, he should be allowed to purchase what he wants because "that's how love works" (Cendrowski, 2013). Bernadette's reasons for not wanting to have a child are thus understandable and ranging from the concerns about the changes her body would undergo during pregnancy, the problems with her career path, or unreliability and childishness of her partner. Regardless of her reasons, she is eventually persuaded to reconsider her position and becomes a mother, hinting at a still-present stereotype of women primarily seen as potential mothers: according to Butler, "the clearly paternal law that sanctions and requires the female body to be characterized primarily in terms of its reproductive function is inscribed on that body as the law of its natural necessity" (Butler, 2002: 118).

Bernadette's concerns about her work become emphasized in the second episode of season ten, when Penny accidentally informs the people at the pharmaceutical company about the pregnancy. Bernadette worries that if her boss finds out she is expecting, he might give her work to someone else, because the previous year the same thing happened to a colleague after Bernadette told everyone that the colleague was pregnant (Cendrowski, 2016b). This not only demonstrates the problems pregnant women might face in their workplace, but also the competitive relationships among women previously mentioned with regard to Leslie Winkle. Associating with other women in the workplace might put the female worker into a position where she is regarded as

less efficient or productive, and thus, competitive behavior might develop instead:

'a woman's worst enemy is another woman' provides a poignant illustration of women adopting a patriarchal framework as a guide to action and collective understanding of that action. Rather than challenge the social stereotypes that set expectations for female action but devalue those modes of actions, participants appropriated these images to interpret themselves, accepting confining notions of what it means to do and to be 'female' and (implicitly) 'male'. (Ashcraft and Pacanowsky, 1996: 233)

This patriarchal framework, when adopted by women, results in behavior that undermines or devalues the work of other women, and Bernadette's behavior can be interpreted within these parameters. She willingly undermines her colleague's work by using the woman's pregnancy against her, and only realizes how difficult the position of a pregnant woman in the workplace is when she becomes pregnant herself.

Bernadette also expresses her frustration over always having been treated like a child based on her physical appearance and her voice – while she is complaining about other characters on the show, according to Willis, Bernadette fits into the stereotype of a kid sister and thus might be perceived as a child by the audience as well (Willis, 2012: 17). She transitions from being seen as a child to the role of a mother through her relationship with Howard, both metaphorically when she adopts maternal behavior towards him, and then through her pregnancy. However, it is only her pregnancy which induces worry that people will treat her differently (Cendrowski, 2016b). The concerns and challenges which pregnant women face in the workplace have rarely been acknowledged or studied in detail, predominantly because the stereotypical narrative of motherhood is one of the woman making the right choice to become a full-time caretaker for her family, particularly the children (Kuperberg and Stone, 2008: 10). An examination of articles about mothers who stay at home with their children reveals that these

women are predominantly described as having made the decision because of their families, not because of any problems associated with the inflexibility of their work (Kuperberg and Stone, 2008: 8). The character of Bernadette seemingly opens the discussion about these issues in *The Big Bang Theory*, but her concerns are never fully explored. What is more, when she talks to Penny again and is asked about the work that she was supposed to get, Bernadette hints that she threatened to sue her boss for discrimination if he did not allow her to participate on the project. This would suggest that the overall conclusion in the sitcom is in line with neosexist beliefs that equality for women has already been achieved and that discrimination does not pose a valid problem, because women currently possess legal means to achieve their goals through relying on anti-discrimination legislature.

Bernadette also exemplifies negative attitudes towards women in high-achieving positions. In traditionally male-dominated fields, men are likely to react negatively to women who "prove themselves to be competent in areas that traditionally are off limits to them" (Heilman, 2001: 672). These negative feelings are illustrated by Bernadette's boss, who admits during Penny's interview that he is afraid of Bernadette to the point where his work, and Bernadette's as well, are suffering: he confesses that he was supposed to tell her that funding was cut on one of the drugs she was developing and he could not do it so she is still working on that drug (Cendrowski, 2014). He and Penny quickly bond over fearing Bernadette, talking about how much of a bully she is: in view of the other instances of Bernadette talking about her work, she is clearly perceived negatively. Furthermore, Penny gets her job despite the fact that she does not have a college degree and she does not present her strengths at the interview: she stutters and is unable to answer basic questions about the work she would be asked to do in that position. Nonetheless, she eventually gets the job by talking negatively about Bernadette. Based on this behavior, Penny is symbolically adopting the patriarchal framework mentioned by Ashcraft and Pacanowsky (1996: 233), or at least representing it by acting submissive, laughing at her boss's jokes, and having very little ambition, since and does not possess any "unbridled ambition

is less acceptable in women than in men" (Berg, 2009: 194). These factors reinforce Penny's status as the non-threatening female worker who performs the traditional female role of making her male coworkers and bosses comfortable (Berg, 2009: 183). Bernadette is put into contrast with this side of Penny through using the societal expectations in her favor, such as threatening to cry or sue her boss in later episodes – however, in these instances, she is portrayed or described as cruel, aggressive or a bully. Similarly to Leslie's situation, Bernadette is also depicted negatively when she strives to fulfil her ambitions or achieve her work-oriented goals, whether she uses stereotypically feminine ways to do it, such as crying, or stereotypically masculine ones such as assertive or aggressive way of talking.

2.2 Women and intellectual achievement

Sartain notes that the portrayal of gender on the show "is a remarkably simplistic binary predicated on the terms of Cartesian dualism (...) the world of abstraction is reserved as an Edenic paradise for men" (Sartain, 2015: 98). The Cartesian opposition of mind and body can be exemplified on the character of Penny, who is often shown adhering to the societal expectations about femininity: her primary interests are cosmetics, shopping, and celebrity lifestyle or gossip, i.e. she maintains social life and has "no lack of feminine interests, e.g. in [her] personal appearance" (Riviere, 1929: 304). While she frequently displays remarkable insight into the emotional responses of her friends, her intelligence is routinely called into question in both overt and covert ways, reinforcing the stereotype that a woman's physical beauty is associated with her low intelligence (Sartain, 2015: 100). This stereotype is established from the very beginning of the show, particularly before Penny gains the job of a pharmaceutical sales representative: she is constantly confused or even irritated by scientific discussions of the male characters. When she decides to take a college-level history class, the condescension with which she has been treated until that moment is mirrored in the fact that she does not tell Leonard about it until he finds out by accident (Cendrowski 2012d). Leonard is outwardly supportive of her decision, but he apparently does not believe in her ability

to pass the class on her own: after reading her paper, he rewrites it during the night for her. Penny is angered by the discouraging mixed message – while Leonard supports her in going back to college, he also remains condescending and does not trust in her abilities and intelligence. Similar mixed messages "leave many women feeling concerned and confused about their own abilities. (...) Women may be generally encouraged but specific accomplishments are not rewarded and are sometimes even derailed" (Hall, 2016: 38). The situation itself would have been a valuable point of discussion on the treatment of women and undervaluing their abilities. However, the righteousness of Penny's anger is diminished through her inability to express herself clearly. As she is telling Leonard that she needs to take the class and write the paper on her own, and that his writing the paper for her will not be beneficial to her education, her argument quickly devolves into childishness, petty insults, and an inability to correctly remember or use a metaphor, which all subtly point the audience towards the belief that Leonard was right to mistrust her about the paper. This is reinforced later in the episode, when Penny is shown gloating about getting a B- on her paper, before revealing that Amy and Bernadette helped her write the paper so that she could win the argument with Leonard. Amy and Bernadette also express their opinion that Penny is not intelligent enough when they admit that they purposefully wrote the essay with errors that would guarantee Penny a lower grade: "we got you a B-minus on purpose to make it believable" (Cendrowski, 2012d). Any potential discussion on the devaluation of women's intelligence thus becomes lost in the conclusion of this plotline: Leonard was right not to believe in Penny's intelligence and academic abilities, and Penny wanted to win an argument more than prove her independence and truly test her skills. Penny is reduced to the embodiment of the supposed opposition between physical beauty and intellectual capability in women (Sartain, 2015: 100).

A similar situation regarding the devaluation of women's achievements occurs with the female scientists on the show as well. For instance, Leslie Winkle mentions her research in concrete terms; however, she is not afforded a scientific breakthrough or portrayed as contributing greatly to her field. Sheldon even calls

her an overrated physicist and claims that she could only contribute to science "if they resume sending chimps into space" (Cendrowski, 2008b). When Bernadette and Amy are introduced, "Sheldon regularly dismisses microbiology and neuroscience, their respective fields, as less significant" (Weitekamp, 2015: 84). Sartain anchors this denigration of their specialization in the Cartesian duality of mind and body. Biology is inevitably linked with the body and seen as "less worthy than the supposedly pure abstractions of intellect offered by Sheldon's field of theoretical physics" (Sartain, 2015: 101). When Amy informs Sheldon that her paper will be published as a cover story in a prestigious science journal, Sheldon fails to show any enthusiasm about her achievement and puts her work at the same level as his Twitter account having reached a hundred followers (Cendrowski, 2012). Penny then advises Sheldon to feign interest, instead of attempting to honestly appreciate Amy's achievements, and Leonard suggests that it is possible to overcome this disagreement with Amy "with an empty financial gesture" (Cendrowski, 2012), to which Sheldon readily agrees. While Amy attempts to explain to Sheldon why she is upset, opening the debate on selfishness and lack of acknowledgement for her scientific achievements, she easily forgets her anger when it is revealed that Sheldon bought her a tiara. This conclusion infantilizes her and disregards the root of the problem by insisting that women value jewelry or other expensive gifts related to the pursuit of physical attractiveness over having their success acknowledged by their partners: in other words, "women are subtly insulted or pigeon-holed into gender stereotypes, sometimes accompanied with a positive spin" (Benokraitis, 1997).

Bernadette's achievements might not be so overtly downplayed and devalued on the show, but, much like with Penny, the show appears to focus more on her feminine qualities than on her achievements. She does not discuss any scientific breakthroughs with other characters on the show: in fact, both Amy and Bernadette mostly mention their work through humorous, inconsequential remarks. When Amy talks about her work in neuroscience, it is often to mention animals on which she is experimenting, such as teaching a monkey how to smoke or watching rats perform tricks or die.

Riviere described similar behavior in her 1929 paper – a university lecturer who,

when lecturing, not to students but to colleagues (...) chooses particularly feminine clothes. Her behaviour on these occasions is also marked by an inappropriate feature: she becomes flippant and joking, so much so that it has caused comment and rebuke. She has to treat the situation of displaying her masculinity to men as a 'game', as something not real, as a 'joke'. (Riviere, 1929: 307)

This treatment of one's intellectual achievements as a joke or a game in order not to appear threatening to men and/or adopting masculine behavior resembles the devaluation of Bernadette and Amy's research as merely a source of humor in *The Big Bang Theory*. Bernadette in particular adopts a specific way of talking and performing non-threatening, 'kid sister' femininity, despite her character being revealed as much tougher and more ruthless in later seasons.

Bernadette's position as a scientist is devalued also through her depiction in the workplace, or rather, the lack of it. On several occasions, Amy is shown working in her laboratory, unlike Bernadette, who, despite the fact that she is first completing her doctoral dissertation and later developing pharmaceuticals for a large company, is never seen in a laboratory. Bernadette's work is explored through jokes based on negative side-effects of medication she is developing, and in both Amy and Bernadette's cases, these jokes are often perceived as nauseating, inappropriate or otherwise strange by their friends. Amy and Bernadette, despite both being employed in the field of biology, never discuss their research like their male counterparts do, and they are rarely asked for their scientific opinion on any matter. In fact, when Sheldon's colleague and rival wants to know Amy's view on his paper, Sheldon becomes extremely upset and sees it as betrayal, despite the fact that he never asked Amy for advice with his own research and was rude to her when she did offer help before (Cendrowski, 2015). In addition, Sheldon does not argue when a colleague assumes that his poor scientific results are to be blamed on the fact that he has a girlfriend: Amy is thus relegated not

only to a subordinate position in terms of intellectual achievements, but to the role of an active disruptor of Sheldon's scientific pursuit (Cendrowski, 2013).

Female achievements in science are undermined not only through the male characters' voices, but also indirectly through the actions of the female characters themselves. When Sheldon, Leonard, and Howard are asked to talk to schoolchildren to encourage them to pursue a career in science, they call Amy and Bernadette to say a few words to the class. While Amy and Bernadette deliver a positive message about girls being allowed to be what they want to be, and discuss how girls are asked from a young age to consider beauty more important than education or intelligence, their message becomes a joke as they are currently in Disneyland, dressed in princess costumes, and Amy is looking at herself in the mirror while she puts on red lipstick (Cendrowski, 2013b). Once again, the show fails to offer answers for its own questions about women in science, femininities, and equality: every potential situation in which women speak up against the unfair treatment is eventually turned into a source for humor (Archer, 2015: 45).

2.3 Beauty, competition, and female friendships

Female friendships outside of the workplace are frequently depicted in a questionable manner on *The Big Bang Theory*. The most prominent female friendship on the show features Penny, Bernadette and Amy, the male protagonists' girlfriends. Amy frequently expresses her disbelief over having female friends, and fixates particularly on Penny. For instance, Penny challenges Amy and Bernadette and asks if they think she is not smart, Amy comments that she feels like she is in high school again, to which Bernadette replies with "Yeah, doing the prom queen's homework so she'll like us" (Cendrowski, 2012d). Amy, however, does not show displeasure over the fact: instead, she reacts with excitement over the fact that this approach is "finally working" (Cendrowski, 2012d). This scene illustrates the mildly unhealthy relationship between the three women. While Penny herself treats both Amy and Bernadette as a friend and often provides helpful advice, her physical beauty creates imbalance in their friendship. As Naomi Wolf has written, "[beauty-based]

competition between women has been made part of the myth so that women will be divided from one another" (Wolf, 2002: 14), and this division is clearly visible in *The Big Bang Theory*. In fact, beauty plays an indispensable role in the narrative of the show's two most prominent female scientists, Amy and Bernadette, who fall into the respective stereotypes of "an asexual and frumpy or objectified and beautiful woman" (Sartain, 2015: 103). While Bernadette is certainly objectified, she also represents the element of competition when she frequently compares herself to Penny in terms of beauty and sexuality (Sartain, 2015: 102). Amy, on the other hand, becomes the one to objectify her friends. For instance, when talking about the traditional meaning of weddings and the price for a bride, Amy remarks that Bernadette is "adorable, intelligent and a good earner. I could conservatively see you going for at least two oxen and a goose" (Cendrowski, 2012b). Amy's commentary on Penny, however, does not include any positive assessment such as her intelligence or other valuable traits: she merely looks at Penny with apparent admiration and states that Penny "would fetch a unicorn" (Cendrowski, 2012b). Amy's assessment is insulting both to Bernadette, because her scientific achievements are discussed as inferior to Penny's physical beauty, and to Penny, who is devalued as having no worth other than her attractiveness. Just as Bernadette adopts a patriarchal framework in her workplace treatment of other women, Amy approaches her female friendships in a similar way: aside from her fixation on Penny's physical appearance, Amy is also shown looking at or commenting on Bernadette's breasts, objectifying her and making her uncomfortable. Amy thus visibly adopts behavior that could be coded as traditionally masculine, commenting on the bodies of her female friends in a sexual manner. However, her masculinity is portrayed as a fault of character, much like the masculine behavior of Leslie Winkle.

Beauty also becomes the basis for bonding among the three women, particularly regarding Amy, who is at first depicted as "asexual and frumpy" (Sartain, 2015: 103), commenting about not shaving her legs or wearing old-fashioned clothes. The other two undertake the task of transforming Amy into a conventionally beautiful woman through the use of make-up or appealing clothing, and Amy gradually starts wearing

high heels, lipstick, or erotic underwear. In addition, Amy begins to care more about her appearance and traditionally feminine pursuits, such as shopping, joining Penny and Bernadette in the role of professional women who are asked to perform their femininity overtly. As Wolf claims, "women took on all at once the roles of professional housewife, professional careerist, and professional beauty" (Wolf, 2002: 27). The women of *The Big Bang Theory* are similarly asked to step into all three professional roles in their lives.

Moreover, the portrayal of the friendship among the three women perpetuates harmful and sexist stereotypes regarding romantic and/or sexual relationships. It may not be surprising to hear Howard claim, early in the show, that "love is not a sprint, it's a marathon. A relentless pursuit that only ends when she falls into your arms. Or hits you with the pepper spray" (Cendrowski, 2007). In fact, the description of sexual harassment in a humorous way also appears in dialogue among the women, when Bernadette and Penny talk to Amy about dating. When Amy expresses discomfort about turning a man down and claims that it was not fun for her, Bernadette claims: "You get used to it. Some guys, you have to turn down over and over" (Cendrowski, 2015b). The statement in itself would not be particularly harmful, as Bernadette is merely stating a fact, however unpleasant or dangerous it might be for women when they must repeatedly defend themselves against unwanted advances. But Penny follows Bernadette's statement with a laugh and a joke: "And sometimes we marry them anyway" (Cendrowski, 2015b). Persistence in the pursuit of a woman is frequently mentioned in *The Big Bang Theory* as simply a way to get the woman to agree to a date: for this reason, it is difficult to believe that Penny would be the one to make claims – or jokes – such as this, considering her own experience with Howard's "relentless pursuit". In fact, she endures his overly graphic flirtations for several seasons, despite the fact that she has made it clear to him that she is not interested in pursuing a sexual or romantic relationship with him. Howard's comments towards her would undoubtedly constitute sexual harassment in a professional setting, however, when Penny gets angry about his words and tells him off, she is forced to apologize after he becomes depressed about her harsh

rejection (Cendrowski, 2009). Penny is powerless when facing sexual harassment not only from Howard, but also from Amy: whenever she dares to openly express her discomfort or anger at being objectified, she is forced to apologize to her harasser. Such a position resembles the problems women may have of addressing sexist remarks, when the person responsible claims that they were just joking, and the woman herself is accused of lacking a sense of humor (Benokraitis, 1997; Hall, 2016: 38). Sexual harassment thus becomes normalized among the characters of *The Big Bang Theory*, illustrating one of the prominent problems of modern sexism. Not only is a woman forced to apologize to a man who harassed her for expressing her anger, she later appears to internalize these sexist ideas and treats this approach to women and relationships with acceptance and amusement.

3. CONCLUSION

The sitcom certainly breaks some stereotypes by portraying most female characters as scientists. However, upon closer examination, these depictions of female scientists are not positive role models in the sense that women's achievements are frequently devalued or disregarded, as we have seen. Women on *The Big Bang Theory* are not allowed to step outside the stereotypical gender roles: they are predominantly 'seductresses' and 'mothers', further divided into the categories of 'overly feminine' or 'ultra-rational', where neither category appears to be depicted in a positive manner. The adoption of male traits, behaviors or habits is perceived as a negative occurrence or as a joke. Women's conversations still revolve around fashion or their relationships with men, and there are almost no instances of them talking about their research except in passing, often through humorous remarks. The relationships among the women are depicted as a hierarchy largely based on physical appearances and perpetuating patriarchal framework and gender-based stereotypes regarding female interests or thought patterns, as well as rivalry based on interest in men or their physical beauty. The male protagonists rarely actively support their girlfriends or wives in their scientific work, and scenes or dialogue can frequently be interpreted as supporting either subtle expressions of modern sexism, or neosexist beliefs that discrimination against women no longer exists in the

American society. Due to these factors, it is unlikely that *The Big Bang Theory* would play a great part in encouraging young women to seek education and career opportunities in STEM fields, considering that the show's conclusion appears to be that women, regardless of their level of education or their work position, are still expected to adhere to stereotypical binary gender roles.

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Title: Mujeres (y) científicas. Sexismo contemporáneo en *The Big Bang Theory*