MEDIA REVIEW ESSAY

**Stereotypes, Gender and Humour in Representations of coders in *Silicon Valley*.**

Review of TV series *Silicon Valley* (HBO 2014-2019) by Hannah Little

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Women in Science, Computer science, Representations, Comedy

**The Realities of Silicon Valley**

As I scroll through my Twitter feed, I notice a link to an article. “20 Ways HBO's Silicon Valley Is Just Like the Real Thing” (Waugh, 2020), it reads. I pause. Is this a fun, observational listicle? Or a thorough take-down of how real tech culture is based on the same toxic attitudes and problematic characters we see in the show? It turns out to be the former, but it got me thinking about why I was so alarmed at the idea that *Silicon Valley* might represent current reality.

 *Silicon Valley* (Altschuler et al. 2014-2019) follows a team of male coders in present-day Silicon Valley as they launch and develop a startup company called Pied Piper. Pied Piper is a company based on a single algorithm developed by Richard Hendricks, the show’s protagonist, that allows for astonishingly efficient file compression without losing any data quality. The show follows the Pied Piper team over six seasons as they rise, fall and reinvent themselves to tackle the challenges that the tech industry throws at them. The show represents tech culture as a toxic, capitalist, predominantly male-dominated world with some utterly reprehensible characters frequently expressing misogynistic attitudes that are outdated for the mid to late 2010s time-period it is set in. At times, the show successfully illustrates the issues and hostility women face within the tech industry through to the present day, though always with its tongue firmly in its cheek.

In the series 2 episode *The Lady*, for instance, some of the Pied Piper team recommend hiring a coder named Carla Walton: a brash, punky woman with a leather jacket, blue-highlighted hair and heavy eye-liner. Jared, Pied Piper’s COO, remarks ‘There’s a distinct over-representation of men in this company. Look around. I think it would behoove us to prioritize hiring a woman.’ - ‘I disagree’, says Gilfoyle, their systems engineer, ‘we should hire the best person for the job.’

They go on to have an extended argument about how they should hire Carla, not because she is a woman, but because she is the best, but it would still be better if she was a woman, even though the woman part is irrelevant. This discourse is played for laughs about the sometimes paradoxical nature of positive discrimination, and the anxieties it can cause women who are fearful of being hired for diversity reasons, rather than on their abilities, and the attitudes men can carry due to suspicions of a ‘diversity hire’.

In a later scene, we see the team interviewing Carla. ‘All of that,’ Jared says in wonderment at Carla’s impressive resume. ‘Plus, you’re a woman.’ Carla narrows her eyes at him. ‘I’m not a “woman engineer”’, she says using air-quotes. ‘I’m an engineer.’ The team trip over themselves to make it clear that they are hiring her because she’s the best person for the job, and not because of her gender. To further reassure her as he walks her out, Jared mentions how much he enjoyed *The Girl with The Dragon Tattoo*, which famously features a female hacker who is an asocial, skinny, tattooed punk. The writers of the show are letting us know that they know about the tropes associated with female coders, and they’re representing Carla to align with them on purpose. It’s a joke about how representations of women coders are so narrowly stereotyped in mainstream media. This comedic approach fits with the rest of the show: couching its humor in pointing to the stereotyped quirks and toxicity of the tech industry.

But how does humor that uses stereotypes affect public perceptions of the tech industry? *Silicon Valley* invites an analysis of how media representations potentially influence the aspirations of women who are underrepresented within computer science and the tech world. While much work in Science and Technology Studies (STS) has looked at representations of scientists and technology professionals in popular media (e.g. Chambers, 2022), we should consider how these representations are affected by and interpreted when they sit within comedic discourses and narratives.

# The Gender Gap in Computer Science

Among STEM (science, technology, engineering and math) fields, the gender gap in computer science is uniquely large, with women earning less than 20% of undergraduate degrees in the US (National Science Foundation, 2020) and having less than 20% of authorship on academic papers in computer science internationally (Holman et al. 2018). The tech industry is currently not keeping up with recruitment needs, so efforts need to rectify stigmas or environments that might deter women, a substantial part of the population. Closing this massive gender gap for computer science is not only important for increasing the workforce, but will also potentially help rectify gender-based biases in the design of technologies and ensure women have access to the high-status, flexible and well-paid jobs that the tech industry provides, to improve gender equality in standards of living.

Many researchers have looked at what has caused such a huge gender gap in computer science, pointing to women feeling unwelcome or out of place in spaces where they are in an extreme minority (Murphy et al., 2007), and women disregarding their own abilities due to stereotype threat, where women internalize stigmatizing, societal beliefs about their abilities (Ehrlinger and Dunning, 2003). Women in the tech workforce may also face overt sexism and misogyny from colleagues, or more implicit discrimination resulting in missed opportunities or promotions.

The above barriers are not unique to computer science, and have historically been true for other STEM subjects that have since managed to narrow their gender gaps (National Science Foundation, 2020). Cheryan et al. (2015) argue that this unique lag for computer science is due to stereotypes about the culture of computer science. Cheryan et al. (2013) conducted a study where people were asked to read a fictional newspaper article that emphasized computer scientists fitting with the current stereotypes, or an article where computer scientists did not fit established stereotypes. Afterwards, the women who read the article reinforcing stereotypes were less likely to express interest in pursuing a degree in computer science, whereas the men presented no difference in aspirations after reading the articles.

Perceptions of who STEM professionals are - or can be – has been found to be influenced more by the media than by any other source (Steinke et al., 2007), and a key factor in combating negative social attitudes towards women in male-dominated contexts is through diverse representations of both women and men in the media; normalising women in fields such as coding. Therefore, if it is true that representations of computer scientists and coders influence women’s aspirations in computational fields, then those who have the power to affect representations of coders within popular media may feel a responsibility to consider these effects. Socially responsible television producers face the dilemma of whether they should use their shows with coder characters to represent the male-dominated reality and the stigmas faced in these realistic environments salient, or represent women and men in ways that help rectify persisting stigma and therefore potentially the gender gap.

# Stereotypes and Representations within *Silicon Valley*

In an article in *The Guardian*, Alex Berg, one of the showrunners for *Silicon Valley* is quoted as saying: ‘People who actually work in this business say the show makes them nauseous because they feel like they’re watching their life, and it’s too traumatizing. The people who feel like it’s too real for them to enjoy, that’s actually a big compliment’ (Bowles, 2016). This assertion, that the show’s success is defined by people recognizing trauma from their own lives, indicates that the show’s aim is to derive its humor from problematic truths within the lives of tech workers.

In recent popular television, such as *Silicon Valley* and *Big Bang Theory* (Aronsohn et al, 2007-2019), depictions of modern STEM professionals, including coders, are mostly White or Asian males. Nerdy male characters are often coded neurodivergent with traits associated with autism, usually without labelling it as such, and portrayed as socially unskilled, often dressing informally and having an unkept appearance. In *Silicon Valley,* the five main characters are all male, dress informally and lack social graces. Male characters are often seen referring to women by their sexual organs (e.g. calling women ‘pussy’) and bullying each other with racism (e.g. using terms such as ‘Chinaman’) and otherwise calling each other obscene or fatphobic names.

The characters who work for Pied Piper are represented as being highly competent coders whose company grows from strength to strength. However, the audience also becomes familiar with the side character Nelson ‘Big Head’ Bighetti whose running joke is a propensity to ‘fail upwards’ by being promoted for several reasons that have nothing to do with his skills or even effort. Frequently portrayed as someone with no talent or motivation, through a series of promotions, Big Head ultimately ends up as the President of Stanford University. This character arch plays with the cultural meme that mediocre white men can get to high places without having much about them by knowing the right people.

Big Head’s success contrasts with the struggles of the talented women in the show. There are only two recurring female characters in *Silicon Valley*, who are both experts in business and finance. There are very few representations of women as coders and engineers, limited to one or two characters we see in single episodes. Female coders in recent television series are also mostly white or Asian, and are skinny, androgenous, asocial, and dress in alternative ways, often with dyed hair and piercings (Little & Olsen, 2021).

The tropes associated with women coders seem to be the product of fictional women within tech spaces needing to be masculine-coded in their dress in order to be accepted in a male-dominated world, but they are still required to fit some conventional ideas of attractiveness in their non-conformity. The writers of *Silicon Valley* are aware of these gendered tropes and use them for laughs, as we saw in the vignette with Carla Walton above. Within *Silicon Valley*, leaning in to stereotypes is done for comedy.

Using comedy in popular media about science and technology requires writers to make decisions about where the jokes situate the audience. Science and technology-themed comedy needs to either situate the audience as insiders, who know enough about STEM topics and cultures to understand inside jokes, or outsiders laughing at the scientist or tech insiders and their behaviour. Riesch (2015) argues that science comedy that aims to avoid feelings of exclusion among its audience should be careful to avoid jokes that might alienate an audience who need specific insider knowledge to understand them. Because of this risk, mainstream popular science-themed comedy usually opts to situate the audience as people laughing at insiders, from an outsider perspective. However, this strategy has its own drawbacks, potentially stigmatizing those working in STEM who end up the subject of the joke.

A comparative look at other popular STEM-themed comedies, such as *The Big Bang Theory,* can help identify how the humor in *Silicon Valley* is diverting from potentially stigmatizing tropes. In *The Big Bang Theory*, the humor derives from an outsider perspective, laughing at the neurodivergent-coded behavior of the main characters. The same is true for *Silicon Valley*, but where in *The Big Bang Theory* the humor comes from the characters behaving in ways that are out of the ordinary, in *Silicon Valley* the behavior that becomes the object of ridicule is often very socially reprehensible; for example, being overtly sexist, racist or offensive in some other way. In *The Big Bang Theory*, it often feels like an outsider audience is laughing at the characters for simply being neurodivergent but ultimately harmless. These stereotypical representations have been argued to be unhelpful for science communication (Riesch, 2015), and create humor that often feels like it is ‘punching down’. *Silicon Valley* avoids this trap by creating a narrative where the main characters shift from having no power, to wielding unimaginable financial and cultural capital. The characters quickly enter a world where laughing at them feels acceptable because it is ‘punching up’. This position is acknowledged in the first episode when Richard Hendricks says: ‘For thousands of years, guys like us have gotten the shit kicked out of us. But now, for the first time, we're living in an era where we can be in charge and build empires.’

**Conclusion**

Throughout its 5-season run, *Silicon Valley* uses comedy to represent and comment on the nature of the tech industry. The show uses its platform to perpetuate a stereotype that Silicon Valley is an exclusive, male-biased culture, and much commentary from within the tech industry has observed the accuracy of its representation (e.g. Waugh, 2020). The series shows the audience the stigmas faced by minority characters, including women, which may mirror those faced in real-world environments.

Much of the comedy in *Silicon Valley* comes from leaning in to stereotypes and laughing at outdated attitudes: making fun of industry attitudes belittling the capabilities of talented women, while exaggerating the capabilities of untalented men. The audience is positioned to be critical of both the implicit and explicit misogyny in the series, recognizing the tech world as a hostile and unpleasant environment to work in. By doing this, the show avoids an issue common in science comedy: using neurodivergent-coded behavior as a punchline, setting up the audience to laugh at the scientists for being nerdy stereotypes. Instead, we are encouraged to laugh at *Silicon Valley*’s characters for being rude, offensive and disrespectful to minorities – making the comedy feel more like “punching up” at successful tech leaders, rather than “punching down” at well-meaning nerds.

While framing the comedy in this way may encourage tech industry insiders to look at themselves in a critical light, it does little to improve aspirations of women within tech spaces. Research shows that women are less likely to want to participate in computer science when it is presented in a way that reinforces existing stereotypes (Cheryan et al., 2013). Therefore, by representing a toxic, stereotypical work environment in the tech world, the show may be putting women in the audience off participating in the industry.

While this review can’t speak to the wider effects the show has had on its audience or the tech industry, it does reveal that comedic discourses relating to science and technology in popular media can complicate how people respond to representations of STEM professionals and industries. Understanding that a stereotype is there as a joke, rather than as an oversimplified depiction of a person or industry, can inform a knowing audience that the writers know that reality diverges from their humorous representation. Instead of reinforcing a stereotype, jokes using a specific stereotype as a punchline (e.g. all female coders are asocial, alternative, skinny punks) are funny because we know they aren’t true in reality, despite the recurring tropes in popular media. These jokes could therefore create room for understanding why that stereotype is inaccurate and damaging.

However, the use of stereotypes in humor without a shared knowledge about what reality looks like and how it diverges from or converges with a stereotype, can lead to unknowing audiences concluding that ‘it’s funny because it’s true’. That is, rather than laughing at tropes associated with women coders because they aren’t true, unknowing audiences could be laughing assuming that the tropes are true, which in turn will reinforce them as stereotypes. Much of the humor using stereotypes in *Silicon Valley* could be interpreted either way. Future STS work on scientists within humorous texts should seek to contextualise representations to account for where the humor is coming from within texts; that is, to understand how representations may be understood and interpreted by audiences.

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