Building Diversity and Inclusion into the Media Production Pipeline

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Abstract

This research examines the problems relating to the lack of diversity in media production, particularly film and video games, and ways in which they can be addressed. Information was gathered from digital resources including online newspapers and magazines, the Internet Movie Database, televised interviews and YouTube videos, well-regarded business publications, blogs, and academic organisations specialising in gender and diversity studies. The relationship between staff composition and final product is discussed, as well as how this impacts financial returns and social perceptions of minorities. Game and film industry experts were interviewed to obtain information about their experiences with diversity in society and the work place. They were asked to propose solutions on how to address the underlying issues. Many participants believe greater awareness of diversity issues should be an intrinsic part of educational and work environments. Suggestions for positive change were collected and categorised for use in developing a mobile application. The application is intended to be utilised by professionals fulfilling a number of different roles within the entertainment industry. Conceptualisations for the application are laid out on http://suddenonset.eu, the accompanying digital artefact for this dissertation.

Contents

Declaration

I, Katrina Stovold, hereby declare that this thesis is my own work and has not been submitted for another degree, either at University College Cork or elsewhere.

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Katrina Stovold

Acknowledgements

I would like to thank my instructors at University College Cork for their assistance and support of my research. They introduced me to new ways of thinking about academic study, as well as many, many new tools and avenues of digital presentation. Their open-minded, progressive approach and desire to maximise usage of all the modern technology available is commendable and should be replicated on campuses across Ireland.

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Finally, thank you to the tough, smart women of my family who have led by example and earned Ph.D.'s in maths and science.

Introduction

"If she can't see it, she can't be it" is the rallying cry from the Geena Davis Institute on Gender in Media. It is a variation of the adage, "a picture is worth a thousand words." As the success of marriage equality campaigns in both Europe and the United States demonstrate, it becomes clear that visibility is an important component of awareness that contributes to advances is social justice. Popular media in its many forms, particularly entertainment and news, provide platforms for representation, disseminating imagery through traditional and emerging technology channels. Discovering the best way to build diversity into the media production pipeline is, therefore, an essential part of bringing visibility of marginalised groups to both the large and small screen.

"Media" is a broad term and covers many options for communication. In the case of this thesis, the emphasis will be on large scale digital media, specifically film and video games. Answering questions about what impact greater diversity and inclusion have on society, as well as profitability, are part of the equation, though not the focus. Components of diversity under consideration include: gender, sex, race, ethnicity, ability, age, cultural background, sexual orientation, and the frequent intersectional nature of these factors. Due to the necessarily limited scale of the project, gender, sexual orientation, and race will be the primary categories addressed at this time. The research can easily be expanded to include more categories for a Ph.D. at a later time.

Experienced professionals from the film and gaming industries were interviewed to gain their feedback on the best way to address related issues, as well as to gather personal anecdotes and insights. A mobile application in concept form will be proposed for development. All final materials will be presented on a website so as to be available in digital form.

Terminology

Introduction

When addressing issues of diversity, clarity is one of the most important aspects of the discussion. English, as a "living" language, is in a constant state of flux, ever evolving and changing. If anything, the language of diversity is changing even more rapidly in order to encompass growing awareness of nuance as related to the many facets of our society. For example, the initialism "LGBT" (lesbian, gay, bisexual, transgender) has, in several contexts, grown to "LGBTQIA" (lesbian, gay, bisexual, transgender, queer, intersex, asexual)[1] in order to include individuals who identify as falling somewhere on the queer or gender non-conforming[2] spectrum, but may not fall into one of the four initial categories. The term "gender non-conforming" is, in itself, a reflection of this expanded awareness.

Even with a list of current definitions of diversity-related language, one does not immediately gain an understanding of the often deep and complex issues underlying the terminology. More fleshed-out examples are not only helpful, but necessary. Understanding can likewise be facilitated by sharing the stories of those who have a stake in the conversation.

Metaphors are another helpful tool for understanding. However, when we use metaphors to help define a concept or marginalised group, often those metaphors can unintentionally oppress another such group. For example, stating that "white privilege makes one blind to the suffering of people of colour" uses the ableist[3] term "blind" in a pejorative fashion.

I will do my best to speak of people, individually and in groups, in respectful, humanising terms throughout this paper. As will be touched on later, it is important to acknowledge that the subject is a delicate one. Understanding – and the language that reflects such – is a malleable, evolving concept. None of us hold the moral high ground. The important things are awareness, respect, and a desire to learn.

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1   'What Does LGBTQIA Mean? | Tahoe SAFE Alliance' <http://tahoesafealliance.org/for-lgbqtia/what-does-lgbtqia-mean/> [accessed 9 August 2015].
2   'What Is Gender "Non-Conformity"? | Kinsey Confidential' <http://kinseyconfidential.org/gender-nonconformity/> [accessed 9 August 2015].
3   '10 Questions About Why Ableist Language Matters, Answered — Everyday Feminism' <http://everydayfeminism.com/2014/11/ableist-language-matters/> [accessed 24 May 2015].

Definitions

Here are some terms used in this paper, with my current understanding and intended usage defined in brief. Unfortunately, the current scope of this research does not leave enough room to address the many fine points that should be considered in terms of politics, medical language, social nuances, and other considerations. At the least, this list should provide a point of common understanding for the contents of this composition:

1. **privilege** – "an invisible package of unearned assets"[4] or "a set of unearned benefits given to people who fit into a specific social group"[5]

2. **race and ethnicity** – "race is associated with biology, whereas ethnicity is associated with culture"; further, "...races are genetically distinct populations within the same species; they typically have relatively minor morphological and genetic differences. Though all humans belong to the same species (Homo sapiens), and even to the same sub-species (Homo sapiens sapiens), there are small genetic variations across the globe that engender diverse physical appearance"[6]; although different, these terms are often used interchangably

3. **nationality** – "a: national status; specifically: a legal relationship involving allegiance on the part of an individual and usually protection on the part of the state; b: membership in a particular nation"[7]

4. **sex vs. gender** – "'sex' denotes human females and males depending on biological features (chromosomes, sex organs, hormones and other physical features); 'gender' denotes women and men depending on social factors (social role, position, behaviour or identity)"[8]

   4.1. **cisgender** – "denoting or relating to a person whose self-identity conforms with the gender that corresponds to their biological sex"[9]

   4.2. **transgender** – "umbrella term for people whose gender identity and/or

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4   Peggy McIntosh, 'White Privilege', *Creation Spirituality*, 1992, 33–35.
5   'Privilege 101: A Quick and Dirty Guide — Everyday Feminism'
    <http://everydayfeminism.com/2014/09/what-is-privilege/> [accessed 23 November 2014].
6   'Race and Ethnicity - What's the Difference | Race vs. Ethnicity' <http://www.livescience.com/33903-difference-race-ethnicity.html> [accessed 9 August 2015].
7   'Nationality | Definition of Nationality by Merriam-Webster' <http://www.merriam-webster.com/dictionary/nationality> [accessed 9 August 2015].
8   'Feminist Perspectives on Sex and Gender (Stanford Encyclopedia of Philosophy)'
    <http://plato.stanford.edu/entries/feminism-gender/#SexDis> [accessed 11 August 2015].
9   'Cisgender: Definition of Cisgender in Oxford Dictionary (American English) (US)'
    <http://www.oxforddictionaries.com/us/definition/american_english/cisgender> [accessed 11 August 2015].

gender expression differs from what is typically associated with the sex they were assigned at birth"[10]

    4.3. **gender fluid** – "[not] feeling like you're at one end of the spectrum or the other"[11]

5. **sexual orientation** – "a person's sexual identity in relation to the gender to which they are attracted; the fact of being heterosexual, homosexual, or bisexual"[12]

6. **ableism** – "discrimination against people with disabilities"[13]

7. **ageism** – "discrimination or unfair treatment based on a person's age"[14]

8. **prejudice** – "an unfair feeling of dislike for a person or group because of race, sex, religion, etc.; a feeling of like or dislike for someone or something especially when it is not reasonable or logical"[15]

9. **bias** – "a tendency to believe that some people, ideas, etc., are better than others that usually results in treating some people unfairly"[16]

10. **intersectionality** – "...intersections between forms or systems of oppression, domination or discrimination. An example is black feminism, which argues that the experience of being a black woman cannot be understood in terms of being black, and of being a woman, considered independently, but must include the interactions, which frequently reinforce each other."[17]

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10 'GLAAD Media Reference Guide - Transgender Issues | GLAAD' <http://www.glaad.org/reference/transgender> [accessed 11 August 2015].
11 'Ruby Rose Breaks Down What It Means To Be Gender Fluid' <http://www.huffingtonpost.com/2015/06/17/ruby-rose-gender-fluid-video-interview_n_7603186.html> [accessed 11 August 2015].
12 'Sexual Orientation: Definition of Sexual Orientation in Oxford Dictionary (American English) (US)' <http://www.oxforddictionaries.com/us/definition/american_english/sexual-orientation?q=sexual+orientation> [accessed 11 August 2015].
13 'What Is Ableism? Five Things About Ableism You Should Know' <http://disabledfeminists.com/2010/11/19/what-is-ableism-five-things-about-ableism-you-should-know/> [accessed 11 August 2015].
14 'What Is Ageism? | Discrimination & Rights | Work & Learning | Age UK' <http://www.ageuk.org.uk/work-and-learning/discrimination-and-rights/what-is-ageism/> [accessed 11 August 2015].
15 'Prejudice | Definition of Prejudice by Merriam-Webster' <http://www.merriam-webster.com/dictionary/prejudice> [accessed 11 August 2015].
16 'Bias | Definition of Bias by Merriam-Webster' <http://www.merriam-webster.com/dictionary/bias> [accessed 11 August 2015].
17 'Intersectionality - Wikipedia, the Free Encyclopedia' <https://en.wikipedia.org/wiki/Intersectionality> [accessed 12 August 2015].

Literature Review

Gender disparity in the entertainment industry is a long-standing tradition. In recent years, the continued enforcement of this divide has been called into question more and more often. Marginalising tendencies towards minorities of all sorts have likewise come to the fore. As the barriers between media types – film, gaming, print, etc. – begin to blur, calls for responsible portrayals across the entertainment spectrum begin to rise. Where, then, is the best place to insert the infrastructure that leads to progressive, appropriate portrayals of people in contemporary society?

It is difficult to find arguments against diversity. It is unclear whether this is due to insufficient data or due to the likely reaction of the public toward any person or organisation arguing against it. Economic arguments, xenophobia, and border control measures often play into this dynamic, opening the door to policies that are, in effect, racist, if not openly labelled as such. Political arguments directly against diversity, however, would likely – and most probably correctly – be perceived as racist, a fairly unpopular stance to support openly. That such positions are also frequently sexist, ageist, heteronormative, ableist, and bigoted in a number of other ways is not always so easy to point out, which is possibly why these issues continue to be so insidious.

The Concept of Privilege

Understanding privilege is something that can greatly enhance discussions about why diversity, equality, and inclusion matter. One definition of privilege is "...any unearned benefit or advantage one receives in society by nature of their identity."[18] It can be hard to notice from one's own perspective, as we are often so immersed in our environment that we fail to notice what defines it. "It's definitely easier to notice the oppression you personally experience than the privileges you experience since being mistreated is likely to leave a bigger impression on you than being treated fairly."[19] Privilege, like oppression, is intersectional, extending beyond rigid barriers of race or gender, with many people experiencing both sides of the issue. Experiencing oppression in one area does not make a person an expert in other areas. It may, however, serve to make them more aware of how the dynamics of privilege function, as well as engender empathy for oppressed peoples in differing circumstances.

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18 'How To Talk To Someone About Privilege Who Doesn't Know What That Is — Everyday Feminism' <http://everydayfeminism.com/2012/12/how-to-talk-to-someone-about-privilege/> [accessed 23 November 2014].

19 'Privilege 101: A Quick and Dirty Guide — Everyday Feminism.'

Privilege is relevant to this discussion in that in Western society the entertainment and technology fields have long been dominated by straight, white, cisgender males. This has had a profound effect on portrayals of the human experience in entertainment and other mainstream media. Not only are women represented less frequently both in staffing levels and on screen, but they are judged on different criteria – namely, their appearance.[20] An Australian newscaster demonstrated this by taking part in an unannounced experiment outing the imbalance of gender expectation. He wore the same blue suit for a year without one comment being made, while his female co-host, who changed outfits frequently, received regular letters and comments about her fashion choices.[21] Not only was his appearance given much less attention, it was, for all intents and purposes, ignored. A woman doing the exact same job, however, had to contend with the costs – personal and financial – of being constantly scrutinised and judged on her appearance rather than her skills, performance, and expertise.

Swedish Cinema and Video Games

Sweden has introduced a feminist movie rating. In *Swedish cinemas launch feminist movie rating*, Cohen states that most (presumably American) movie-goers expect a film's rating to be about sexual content, violence, or profanity. In Sweden, however, to "...get an 'A' rating, a movie must pass the so-called Bechdel test"[22]. While continually depicting half of the human race as subservient sexual objects is arguably a type of psychological violence, it is rare to see a government agency back the idea that equality is something worth noting.

The Bechdel Test[23] is a simple metric about women's participation in a film. There are only three rules to follow in order to pass: 1) there must be at least two women, 2) they must talk to each other, and 3) the subject of their discussion must be something other than a man. Even if a film does pass the test, it is not necessarily a balanced example of gender representation; it merely means it has risen a small distance above the usual disparity.

Many internationally popular films do not pass the Bechdel Test. Both Cohen and Cantrell both list several famous franchises that fail, including the *Lord of the Rings* trilogy,

20 Stacy L. Smith and Marc Choueiti, *Gender Disparity On Screen and Behind the Camera in Family Films; The Executive Report*, 2011 <http://50.63.223.162/downloads/full-study-gender-disparity-in-family-films-v2.pdf> [accessed 24 October 2014].
21 'Australian TV Host Wears Same Suit for a Year and Nobody Notices - BBC Newsbeat' <http://www.bbc.co.uk/newsbeat/30069564> [accessed 11 December 2014].
22 Sandy Cohen, 'Swedish Cinemas Launch Feminist Movie Rating', 2013 <http://www.usatoday.com/story/news/world/2013/11/06/sweden-cinema-feminist-rating/3451431/> [accessed 10 December 2014].
23 'Bechdel Test - Wikipedia, the Free Encyclopedia' <http://en.wikipedia.org/wiki/Bechdel_test> [accessed 11 December 2014].

all the *Star Wars* movies (thus far), *The Social Network,* and all but one of the *Harry Potter* films[24]. Cohen further states that at Bio Rio, one of the first four Swedish cinemas to launch the initiative, people generally reacted positively to the new system. Many also stated that "...it has been an eye-opener."

In another act of equality-minded thinking, the Swedish government has provided a grant of approximately $37,000 (close to €30,000) to Dataspelsbranschen, the Swedish Games Industry[25]. In a declaration signed by a number of game developers, the organisation stated, "Sexism, hate and threats have no place in our society..." and provide link to a petition to embrace diversity within the gaming industry[26][27]. Not only is their statement an acknowledgement that an imbalance exists, but that balance is a worthy goal.

The British Film and Video Game Industries

While Sweden is taking a two-pronged approach to the end results – namely, portrayal – of women in popular media, encouraging both filmmakers and game producers to be more inclusive, the United Kingdom is taking a more proactive stance, at least in terms of film and television. London is one of the most ethnically diverse cities in the world, yet this is not typically reflected on-screen.

In April of 2014, British actor Lenny Henry told the BBC "...the situation [is] appalling... the majority of our industry is based around London where the black and Asian population is 40%," compared to the 5.4% representation in the industry that the black and Asian population currently sees."[28] That the capital city in the heart of the country famous for its once vast empire and oppressive colonial policies should still harbour vestiges of its class-based bigotry is disappointing, though perhaps not surprising. Despite the fact that progress has been slow, the openness with which the topic is currently being discussed is encouraging.

The conversation has progressed to the point where the British Film Institute (BFI)

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24 Ashe Cantrell, '10 Famous Films That Surprisingly Fail The Bechdel Test', 2013 <http://filmschoolrejects.com/features/10-famous-films-that-surprisingly-fail-the-bechdel-test.php> [accessed 10 December 2014].
25 Kevin Hutton, 'Sweden Wants to Introduce a Gender Equality Label for Video Games | Nerdacy', 2014 <http://www.nerdacy.com/2014/11/14/sweden-wants-to-introduce-a-gender-equality-label-for-video-games/#sthash.UyfCIgX5.V8vrrT7T.dpbs> [accessed 10 December 2014].
26 'Swedish Games Industry - Swedish Games Industry Sign Declaration for Diversity', 2014 <http://www.swedishgamesindustry.com/news/2014/10/24/swedish-games-industry-sign-declaration-for-diversity.aspx> [accessed 10 December 2014].
27 'Embrace Diversity! Support #gamediversity –' <http://diversi.nu/petition/> [accessed 10 December 2014].
28 'British Actor Lenny Henry Tells BBC: "There Will Be A Cal | Shadow and Act' <http://blogs.indiewire.com/shadowandact/british-actor-lenny-henry-tells-bbc-there-will-be-a-call-to-arms-diversify-now> [accessed 11 December 2014].

recently instituted a change to their funding policies. A three point diversity checklist is now applicable to all recipients of government grants which "...should help raise the bar and ensure BFI lottery funded film productions reflect diversity both in front and behind the camera."[29] As the change is so recent – it only went into effect in September of 2014 – it is not yet possible to judge the long term effects, if any, of such a change. It will be interesting to revisit the situation in the years to come.

Sadly, the British video game industry cannot be said to be progressing at the same pace as the film business. Rockstar North, co-creators (along with New York-based Rockstar Games) of the wildly popular *Grand Theft Auto* series continues to bank on violence and misogyny. Two Australian retailers received such negative feedback from their customers that they have pulled the game from their shelves are are refusing to sell it[30]. One can hope that the British video game industry, like Dataspelsbranschen, will soon recognise and embrace the value of equality and respect in their products.

Film, Comic Books, and Video Gaming in the United States

With Hollywood eager to dramatise, and profit from, any form of entertainment, it should come as no surprise that major entertainment franchises frequently cross over from their initial medium to several others. Stories once exclusive to comic books and graphic novels have made their way to both the large (cinema) and small (television) screens. Marketing efforts frequently involve creation of tie-in video games, including mobile applications, as well as toys and fast food promotions. Video games are likewise making the leap across the divide to land on the big screen[31]. Behind the scenes, the technical skill sets required for video game and film production have likewise begun to overlap.

Comic books, once considered the exclusive arena of boys and young men, are now acknowledged to have a wider audience, one that includes females of all ages as well as people of all genders and ethnic backgrounds. The depiction of women in comic book franchises is still problematic, with female superheroes vastly under-represented. When they are featured, they are often portrayed in sexual, rather than heroic, action-based poses[32].

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29 'BFI Obligates and Supports Lottery Funding Recipients to Reflect Diversity in the UK | BFI' <http://www.bfi.org.uk/news-opinion/news-bfi/announcements/bfi-obligates-supports-lottery-funding-recipients-reflect-diversity-uk> [accessed 11 December 2014].

30 'Grand Theft Auto V Faces a Growing Backlash in Australia and New Zealand - Businessweek' <http://www.businessweek.com/articles/2014-12-05/grand-theft-auto-v-faces-a-growing-backlash-in-australia-and-new-zealand> [accessed 11 December 2014].

31 'List of Films Based on Video Games - Wikipedia, the Free Encyclopedia' <https://en.wikipedia.org/wiki/List_of_films_based_on_video_games> [accessed 11 December 2014].

32 Emma Gray, 'Spider-Woman's New Cover Sums Up The Problematic Way Female Superheroes Are

Marvel continues to push the inclusion envelope in some ways, but fail in others. They changed the gender of Thor from male to female in graphic novels, though whether this will translate to the screen or not remains only rumours[33]. The 2013 incarnation of the character Ms. Marvel is a female American teenager of Pakistani descent who also happens to be Muslim[34]. (*Ms. Marvel Volume 1: No Normal* won a Hugo Award in 2015 for Best Graphic Story[35].) Captain Marvel has been depicted as both male and female. Recently, UFC (Ultimate Fighting Championship) champion, Ronda Rousey, has put herself forward for consideration for the titular role in a film slated to be released in 2018[36].

Despite Marvel's advances in this and other areas, Emma Gray reports in the Huffington Post, "There's an extreme lack of Gamora in the merchandise for *Guardians of the Galaxy.* And somehow they always end up sexy posing with their butts out, while their male counterparts get to kick ass." Confusingly, after having been left out of several of the *Avengers: Age of Ultron* action figure sets, the character of Black Widow is even left out of a toy featuring her motorcycle – and only her motorcycle.[37] Furthermore, no major features – even spinoffs – based on female superheroes are due until 2017, while spinoffs featuring even seemingly minor male comic book characters continue to be slated and released.

Besides more blatantly sexist series, such as *Grand Theft Auto*, fantasy and science fiction games are still stuck in a pattern of inequality and objectification of women. Blizzard Entertainment has long programmed their playable female characters to have powers and capabilities equal to male characters. This is logical because, among other reasons, the cost would increase considerably to design and code a different set of criteria. Yet when they do undertake the necessary part of mapping armour sets and clothing to different body forms (based on race, class, and gender), somehow the coverage for female characters often becomes skimpy and insubstantial.

Chris Metzen, Senior Vice President of Story and Franchise Development at Blizzard,

Treated', 2014 <http://www.huffingtonpost.com/2014/08/22/spiderwoman-male-female-superheroes-sexism_n_5698337.html> [accessed 11 December 2014].

33 'Thor: Ragnarok Rumors - Marvel Movies Wiki - Wolverine, Iron Man 2, Thor' <http://marvel-movies.wikia.com/wiki/Thor:_Ragnarok_rumors> [accessed 24 August 2015].

34 'Two Years Ago Today: The Debut of Kamala Khan' <http://comicsalliance.com/tribute-kamala-khan-ms-marvel/> [accessed 24 August 2015].

35 '2015 Hugo Award Winners Announced | The Hugo Awards' <http://www.thehugoawards.org/2015/08/2014-hugo-award-winners-announced/> [accessed 24 August 2015].

36 'Should Ronda Rousey Play Captain Marvel in the Movie? | TIME' <http://time.com/4000291/ronda-rousey-captain-marvel/> [accessed 24 August 2015].

37 'Black Widow Absent From A Toy Based On One Of Her Coolest AoU Moments' <http://toybox.io9.com/black-widow-absent-from-a-toy-based-on-one-of-her-coole-1703705181> [accessed 13 August 2015].

recently discussed his changing perspective on the topic now that he has a daughter. "She saw a *World of Warcraft* cinematic of the Dragon Aspects, and my daughter was like, 'Why are they all in swimsuits?' And I was like, 'I don't know. I don't know anymore.'"[38] From statements like this, two things become obvious: 1) the US gaming industry is becoming aware of the imbalance issue, 2) they still have not thought through the implications of such, nor have the developed an appropriate, mature response. There is still a great lack of understanding about why it matters, let alone how to change the situation.

Despite the lack of full comprehension, there are signs that the entertainment industry is developing, albeit slowly, into a more egalitarian place. At the same time that Metzen displayed an inability to articulate the issue, he also indicated that progress is being made. With regards to *Overwatch*, an upcoming offering from Blizzard, Metzen said "...Blizzard is trying to represent a more diverse, less overly sexualised group of characters than they did in the past."[39] Additionally, Marvel's CEO stated that female superhero movies have been disastrous, yet months later it was announced that a female Captain Marvel movie was in the works[40][41].

Perhaps the best example of a financially successful film with a female protagonist and a female-centred storyline is George Miller's *Mad Max: Fury Road*[42]. The established character of Max became secondary to the newly introduced Imperator Furiosa. Not only is Furiosa female, the plot revolves around the rescue of several enslaved "wives" imprisoned by the film's antagonist. With a budget of $150 million, the worldwide gross as of August 2015 is $373,295,590 – hardly a "disaster"[43]. The ratings from three prominent websites, Rotten Tomatoes, IMDb, and Metacritic, reflect the popularity of the film, with scores of 98%, 8.3 stars (out of 10), and 89 (out of 100), respectively.[44][45][46] It may be worth noting that Miller's wife, Margaret Sixel, was the editor of the film[47].

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38 'With Overwatch, Blizzard Is Trying To Do Women Characters Better' <http://kotaku.com/blizzard-admits-to-over-sexualizing-women-trying-to-do-1656383872> [accessed 11 December 2014].

39 'With Overwatch, Blizzard Is Trying To Do Women Characters Better.'

40 'Marvel CEO Says in Leaked Email That Female Superhero Movies Have Been a "Disaster" | TIME' <http://time.com/3847432/marvel-ceo-leaked-email/> [accessed 24 August 2015].

41 'Should Ronda Rousey Play Captain Marvel in the Movie? | TIME.'

42 'Mad Max: Fury Road (2015) - IMDb' <http://www.imdb.com/title/tt1392190/> [accessed 24 August 2015].

43 'Mad Max: Fury Road (2015) - Box Office Mojo' <http://www.boxofficemojo.com/movies/?id=furyroad.htm> [accessed 24 August 2015].

44 'Mad Max: Fury Road (2015) - Rotten Tomatoes' <http://www.rottentomatoes.com/m/mad_max_fury_road/> [accessed 24 August 2015].

45 'Mad Max: Fury Road (2015) - IMDb.'

46 'Mad Max: Fury Road Reviews - Metacritic' <http://www.metacritic.com/movie/mad-max-fury-road> [accessed 24 August 2015].

47 'Mad Max: Fury Road (2015) - Full Cast & Crew - IMDb' <http://www.imdb.com/title/tt1392190/fullcredits?ref_=tt_cl_sm#cast> [accessed 24 August 2015].

In a report for the Geena Davis Institute on Gender in Media, Smith and Choueiti found that behind the scenes (b-t-s), it was discovered that females only make up 7% of all directors, 13% of writers, and 20% of producers.[48] There is a correlation between women on the production team to how many women make it into the final story on screen, as well. "In comparison to the percentage of females on screen in films with only male producers (26.3%), the percentage of females on screen when one or more women produce films is 29.9%."[49] Yet the correlation may not be as straightforward as it at first appears. "Overall, the results suggest that b-t-s females may be advocating for and/or casting more on screen girls/women than b-t-s males. It may also be the case that studios are more comfortable allocating "female-oriented" stories and scripts to female writers and directors."

Video Gaming and Television in Canada

While American game developers struggle with progress, at least one Canadian company has been making strides for years. BioWare, creators of the *Mass Effect* and *Dragon Age* franchises, have advanced the cause of gender equality and representation in video games considerably. Not only can players create a female lead as a Primary Character (PC), but many of the supporting characters are also female with fully developed character arcs.

Relationships are an option within many BioWare games, as well. A PC has the option to develop romantic and friendship relationships within the game. In a nod to equality, heterosexual, bisexual, and homosexual romantic relationships are accounted for and developed. In response to an angry post in the company's forums from a self-described "straight male gamer", David Gaider, the lead writer for the Dragon Age franchise rebutted the complainant's claim to having any sort of superior consideration in regards to game design. "The romances in the game are not for 'the straight male gamer'. They're for everyone. We have a lot of fans, many of whom are neither straight nor male, and they deserve no less attention."[50]

In BioWare's most recent addition to the Dragon Age universe, *Dragon Age: Inquisition*, they continued the tradition of equality and upped the stakes even higher. Cremisius "Krem" Aclassi is a transgender man. In a post on the company blog, Patrick Weekes explains with candour and transparency what went into the character creation process,

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48 Smith and Choueiti.
49 Smith and Choueiti.
50 '"Straight Male Gamer" Told to "Get over It" by BioWare | No More Lost' <http://www.nomorelost.org/2011/03/25/straight-male-gamer-told-to-get-over-it-by-bioware/> [accessed 11 December 2014].

including what happened after the initial writing and editing phase. "I then passed him to two friends in the [gender queer] community… at which point they showed me where I was absolutely messing things up and gave me constructive feedback on how to improve."[51]

An article about Krem on Kotaku.com, a gaming news website, states "That realization—that the best way for non-trans writers to keep from screwing up trans/genderqueer characters is to ask trans and genderqueer people for feedback—is so crucial."[52] It seems an obvious step to take when writing about a community or background with which the writer has no direct experience, yet it is often overlooked. For centuries writers have been researching their topics, through travel, interviews, and even immersion or infiltration, to get a better sense of what the truth behind the stories are. They choose to do this, rather than relying on anecdotal evidence or stereotypes, for the sake of accuracy and authenticity. It is a wonder that so many modern storytellers have lost the sense of how important this is.

Canadian video games are not the only form to get the equality treatment. A popular fantasy show, *Lost Girl*, features a bisexual woman as the titular character. While the visibility of such a character is good for representation purposes, the subsequent development of a strong LGBT fan base can sometimes lead to unintended backlash. An episode featuring a mythical figure know as a "Lidérc", a prison warden, garnered negative attention for its inept handling of such, as the character – revealed as a deceptive, illusion-creating antagonist who later became a subject of violence – could easily have been interpreted as transgender. "The Warden was only intended to represent this mythic being. We did not intend this character to be seen as a transgender person, we apologize if the character was seen as such."[53] The production further reiterated their commitment to gender equality and inclusiveness. "*Lost Girl* prides itself on being open and accepting to everyone, and are enthusiastic supporters of the GLBT community. We want to encourage a society in which everyone can feel comfortable to express and be who they are without judgement."[54] Still, the fact that not only is the main character of the show a strong, female action figure, as well as bisexual, and that

51 Patrick Weekes, 'Building a Character: Cremisius "Krem" Aclassi' <http://blog.bioware.com/2014/12/04/building-a-character-cremisius-krem-aclassi/> [accessed 11 December 2014].
52 Kirk Hamilton, 'BioWare Put A Lot Of Work Into Dragon Age's Trans Character', 2014 <http://kotaku.com/bioware-put-a-lot-of-work-into-dragon-ages-trans-charac-1666924495> [accessed 11 December 2014].
53 'Lost Girl Producers Release Statement Following Outrage Over Offensive Scene | GLAAD' <http://www.glaad.org/blog/lost-girl-producers-release-statement-following-outrage-over-offensive-scene> [accessed 11 December 2014].
54 'Lost Girl Producers Release Statement Following Outrage Over Offensive Scene | GLAAD.'

the production is willing to engage with the LGBT community and take their concerns on board, is a sign of how things are changing in Canadian media.

Diversity in the Global Market

In a report on the global scale of sexism in global media, the Geena Davis Institute on Gender In Media states, "A total of 5,799 speaking or named characters on screen were evaluated, with 30.9% female and 69.1% male." Under-representation is clearly not an issue solely for European and North American media. "Through its Millennium Development Goals, the United Nations has championed an increase in equality for women and girls across different sectors by 2015."[55] Around the globe, business leaders recognize diversity as a driving force for innovation and business growth, though many are, as yet, unsure what to do with that knowledge.

In a publication for Deloitte University Press, Paul, McElroy, and Leatherberry state, "Affinity drives loyalty drives business value."[56] The report addresses the shift in the ethnic make up of the US population, the increased buying power of women and minorities, and the tech-savvy, luxury buying character of the LGBT community. "As the retail consumer landscape evolves, diverse communities are representing a larger and more important part of total buying power."[57] Although the report is US-focused, it does reflect shifts occurring globally.

Australia, in addition to receiving global attention for the actions of some retailers who have refused to sell a sexist video game, has also embraced diversity within government ranks. Included in the Australian Public Service induction program, there now exists a diversity training segment based, in part, on findings by the Harvard Business School.[58] Outside of any perceived financial benefits, the department supports diversity as a method for being more effective in completing their mission. "A workforce that reflects the diversity of the community it serves understands the needs of its clients better, enabling more efficient and responsive policy and service delivery outcomes."[59] Moreover, they recognize that diversity of their own workforce is a multi-dimensional consideration. "Diversity includes differences in:

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55 'Gender Bias Without Borders - See Jane' <http://seejane.org/symposiums-on-gender-in-media/gender-bias-without-borders/> [accessed 11 December 2014].
56 Alison Paul, Thom McElroy and Tonie Leatherberry, 'Diversity as an Engine of Innovation - Deloitte University Press', 2011 <http://dupress.com/articles/diversity-as-an-engine-of-innovation/> [accessed 9 December 2014].
57 Paul, McElroy and Leatherberry.
58 'Australian Public Service Induction Program: The Benefits of Workforce Diversity' <http://www.apsc.gov.au/apsinduction/module-6/benefits> [accessed 18 November 2014].
59 'Australian Public Service Induction Program: The Benefits of Workforce Diversity.'

age, language, ethnicity, gender, cultural background, disability, religious beliefs, social and community responsibilities, caring and family responsibilities."[60]

Forbes magazine conducted a 2011 study into diversity as it pertains to multinational companies. Among other questions, they asked "...what is the business case for diversity and inclusion?" Their findings indicated that diversity is a key driver of innovation, it attracts top talent, that successful companies consider diversity and inclusion to be a given, and that measurability is a key component of prioritising diversity efforts. The report concludes with "...as companies compete on a global scale, diversity and inclusion frequently have to shift, as different markets and different cultures have varied definitions of what diversity means."[61]

Conclusion

In examining considerations of equality and diversity in the entertainment industry across several markets, it becomes clear that the issues are global, not merely national or even regional. The prescription, from a business standpoint, is to build a plan for diversity into the matrix of the relevant organisations. "A holistic approach to diversity means measuring performance at all levels and embedding diversity into the DNA of the organization."[62] Where the basis of this "DNA" lies is something that will differ from industry to industry, and embedding such into existing structures is an enormous challenge.

Designing for each situation will require particular, bespoke research, yet there are commonalities. As the lines blur between film and video game production, for example, it becomes easier to create a solution that applies to both industries. Both use similar production pipelines to go from page to screen; both have creative directors, producers, and artists; both regularly engage in pre-production planning which involves storyboarding and pre-visualisation techniques. Despite the often transient nature of film crews, many companies are, at some level, constrained by local hiring legislation and human resources law. These commonalities can be used to form a basis for initial construction of a diversity blueprint.

Drawing on traditional research in the fields of representation, equality, and diversity can be challenging, as the technology – and, therefore, the nature of the industries – is rapidly changing. Contemporary publishing practices – primarily online – allow for much more rapid dispersal of information, yet in many cases overlook peer review and academic backing.

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60 'Australian Public Service Induction Program: The Benefits of Workforce Diversity.'
61 'Forbes Insights: Fostering Innovation Through a Diverse Workforce'
   <http://www.forbes.com/forbesinsights/innovation_diversity/index.html> [accessed 18 November 2014].
62 Paul, McElroy and Leatherberry.

Making a financial case for diversity, however, should be relatively easy to achieve by using data accumulated by academic institutions with established business schools, as well as respected publications.

Methodology

Tools

The most basic of tools are simply requirements for a student of Digital Arts and Humanities: a computer with Internet access, a browser, email, and social media accounts.

Because the subject is so topical, all reference material was taken from online sources. Information on diversity, equality, human rights, representation, discrimination, film, television, marketing, video games, etc., can be found on a great number of public websites. News stories can be found through Google Alerts, hashtag searches (Twitter, Facebook, Google Plus), as well as curation and aggregate sites like Prismatic[63], StumbleUpon[64], Storify[65], and Scoop.it[66]. Statistics on film financial returns can be found on Boxofficemojo[67]. Video game sales information can be found on Statista.com[68] and esrb.org (Entertainment Software Rating Board)[69], among others. There are innumerable game and movie ratings sites, as well, each of which use different sets of criteria. There are caveats with a number of these sites, as very few of them offer peer reviewed material. Additionally, the rating sites may require extra digging into their methods, as some of them, while reputedly neutral, have ties to large corporations such as Warner Bros. Articles of interest will be saved into Zotero[70] and/or Evernote[71] for later reference and easy citation.

I interviewed a number of my former colleagues from the visual effects industry, many of whom have worked or are working in the video game industry, as well as connections provided through some of those contacts. Eight of the interviews will took place via Skype[72], one was through Google+ Hangouts[73], and one was by conventional telephone conversation. I did not record the conversations, instead opting to type comments into Evernote[74].

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63 'Prismatic' <http://getprismatic.com/home> [accessed 16 April 2015].
64 'Explore More. Web Pages, Photos, and Videos | StumbleUpon.com' <http://www.stumbleupon.com/> [accessed 16 April 2015].
65 'Storify · Make the Web Tell a Story' <https://storify.com/> [accessed 16 April 2015].
66 'You Are the Content You Publish. | Scoop.it' <http://www.scoop.it/> [accessed 16 April 2015].
67 'Box Office Mojo' <http://www.boxofficemojo.com/> [accessed 16 April 2015].
68 'Statista - The Statistics Portal for Market Data, Market Research and Market Studies' <http://www.statista.com/> [accessed 15 April 2015].
69 'ESRB Ratings' <http://www.esrb.org/index-js.jsp> [accessed 15 April 2015].
70 'Zotero | Home' <https://www.zotero.org/> [accessed 16 April 2015].
71 'The Workspace for Your Life's Work | Evernote' <https://evernote.com/> [accessed 16 April 2015].
72 'Skype | Free Calls to Friends and Family' <http://www.skype.com/en/#> [accessed 16 April 2015].
73 'Google+ Hangouts – Google Hangouts' <http://www.google.com/hangouts/> [accessed 16 April 2015].
74 'The Workspace for Your Life's Work | Evernote.'

Interviews

Ten people, mainly professionals from the film production and video game industries, were interviewed for the purpose of gathering insight and feedback on issues relating to diversity within the respective industries. They were asked to participate based on their unique perspectives on the subject, as well as their interest level and positions within their companies. One interviewee was a fellow university student who served as both a party interested in similar topics and as a consumer of (or audience for) the related media.

All participants were asked the same questions, though not everyone answered all three. On occasion this was due to time limitations, while other times it was due to a participant's feeling that they lacked expertise or insight into a certain subject. One participant stated outright that he felt he would be of more use by simply providing names of other potential contacts and interviewees. He did offer some general insight into his experiences with regard to the relevant issues, though not in great detail. It could be summed by saying that he was aware the issues existed, but had not been impacted directly, nor had he witnessed anything particularly noteworthy.

Although there were some expected patterns when it came to depth and volume of information provided – women speaking to the issues of sexism and people of colour speaking to issues of racism and cultural insensitivity, for example – people occupying privileged positions were often more cognizant of situational and social dynamics than expected. There was not a simple, linear measurement of perception that matched up with social hierarchy. The level of awareness and willingness to disrupt the prevailing paradigm did, however, seem to correspond with quality of information provided.

The most noticeably engaged groups were women of colour and white men. Women of colour were more likely to acknowledge the intersectional nature of issues negatively impacting diversity in the industry, while most of the white males were surprisingly aware of their position of privilege. White women appeared to be quite aware of issues of sexism, but not issues affecting people of colour – something frequently referred to as "white feminism"[75][76]. Likewise, men of colour seemed to be aware of the issues directly affecting themselves, but were either not quite as aware of, or were less willing to engage on, related

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75 'This Is What I Mean When I Say "White Feminism"' <http://groupthink.kinja.com/this-is-what-i-mean-when-i-say-white-feminism-1498799007> [accessed 24 August 2015].
76 '13-Year-Old Disney Star Pens Essay on "White Feminism" vs. "Black Feminism" - Breitbart' <http://www.breitbart.com/big-hollywood/2015/08/23/13-year-old-disney-star-pens-essay-on-white-feminism-vs-black-feminism/> [accessed 24 August 2015].

issues. It is important to note that all participants had some level of interest in the topic of diversity or they would not have agreed to be interviewed. Therefore, this is not a fully objective sampling.

The sample size is too small to draw any big conclusions, but it does bring up questions about social hierarchy. One way to look at it is that those in the position of greatest privilege – the white males – have the freedom to explore issues of social iniquity while not having to worry about their own survival and success, *à la* Maslow's hierarchy of needs[77]. Women of colour, frequently at the other end of the spectrum, were tremendously aware of the multiple ways in which issues affecting their own survival were echoed in the situations of others. Conversely, white women and men of colour seemed to occupy the middle space of Maslow's pyramid, finding that survival was not as desperate and visceral a subject as for those perceived as having a lower social status, but that their success was most definitely not as assured as that of white men. This led many to simply keep their heads down and do the job, rather than risk what nominal security they felt they had.

Outside of social groupings, there were similarities in proposals for change. Many suggested, or agreed with earlier suggestions for, a section of the mobile application to include personal stories and anecdotes, since connecting with people is easier than connecting with statistics alone. It was felt this would have a greater impact on potential users of the application. Another frequently suggested or agreed with idea was that awareness about diversity and opportunity should be introduced at the early levels of education. Furthermore, the discussion of such should be ongoing and carry through to work environments during adult life. These suggestions did not seem to be constrained to any one group.

Disclosure

Participants were asked if they preferred to remain anonymous or if they were comfortable with the use of their name in this study. Most were happy to have their names used, while a few requested anonymity. The latter group have had both their name and non-essential details changed in order to comply with their requests. When referenced for the first time in the paper, members of this group will have a note in brackets following their name to indicate that it is a pseudonym: [pseudonym].

It may be important to note that those requesting anonymity did so in order to preserve

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77 'Maslow's Hierarchy of Needs - Wikipedia, the Free Encyclopedia' <https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs> [accessed 24 August 2015].

their professional standing within current employment environments, rather than from any desire to maliciously spread misinformation. The delicacy of the subject(s), particularly as it pertains to bias and unfair treatment within the workplace, can mean open discussion about related concerns may lead to unfair targeting for harassment of individuals who bring attention to the matter. As there is a desire to protect those in potentially precarious situations from uncomfortable or hostile work environments, their wishes were respected.

Each interviewee was asked for self-descriptors as they pertained to diversity. Any terms relating to gender, race, age, etc., will, in many cases, be quotes from the participants themselves. In some cases – for example, those who did not provide a direct response to the question, though it may have come up during the conversation – generic descriptors may be used in order to give the reader context. In those cases, a note in brackets indicating that these are the author's words will be used: [author's description].

Participants

Neil Lim Sang is a "non-conventional, straight Asian male, mid 40's"[78] who worked for many years as an animator in the visual effects industry. His work also includes production of video, photographic, and marketing material for many high-profile musicians and bands. He holds both Canadian and US citizenship, and currently works as a supervising dynamic motion engineer for a graphics processing hardware producer.

Ed Kramer is a visual effects artist and educator who says, "On census forms I would be Caucasian of Eastern European Jewish ethnicity."[79] He rarely brings up his ethnicity "...because it's pretty irrelevant to who I am professionally." Ed has twenty-one feature film credits to his name and was instrumental in developing advances in many computer graphics techniques now considered part of the industry standard, such as the digital hair in *Jumanji*.[80]

Lisa Lubin is a three time Emmy Award winning news producer and self-described "white, American female."[81] She is a video and media consultant, broadcast journalist, writer, photographer, and travel blogger. She was the first female technical director at a local news affiliate in Columbia, South Carolina.

Adam Fletcher [pseudonym] has worked for many years in film and visual effects

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78   Neil Lim Sang, Interview, 2015.
79   Ed Kramer, Interview, 2015.
80   'CGW: Feature: Hair-Raising Effects (10.95)' <https://design.osu.edu/carlson/history/tree/related%20materials/10stry1.html> [accessed 11 August 2015].
81   Lisa Lubin, Interview, 2015.

production. He describes himself as a "queer male"[82] of mixed European and Latino heritage. He says he is "passively white", which is to say that most people perceive him as white and, therefore, he receives the automatic privilege inherent in that perception.[83] His queer identity is not something he keeps secret at work, though he does not always bring it up, depending on the environment.

John Andrew Berton, Jr., has worked as a visual effects supervisor on several blockbuster films. In addition to his technical and artistic duties at Industrial Light & Magic, he worked as a hiring manager. During that time, he made it a stated goal that he intended to actively hire more women in order to address the gender imbalance within the industry and company.[84] He is a white, American male [author's description]. He is currently working as an assistant professor at Drexler University.

Hina Pandya is a former model maker, policy advisor for the International Development and Independent Police Complaints Commission (UK), and current freelance journalist and writer. She describes herself, in order of importance as, "London[er], British, Asian (Indian)."[85] She identifies as a cisgender, straight, female. Her parents are from East Africa, rather than India, which is quite different from people living in India. "If you try to explain that... it's hard."[86]

Jason Murray [pseudonym] is an artist in the video game industry. He has worked at several visual effects and gaming studios across the United States. He is a white, American male [author's description]. He believes that the game production industry is widely perceived as having "bro culture".[87]

Kristina Thomas is a student at University College Cork in the Film Studies Department. Her current area of study is depiction of immigrants in Irish cinema. Of her own ethnicity, she says, "In the past I've listed every bit of ancestral heritage that runs through my veins (Black, Choctaw, Chickasaw, Apache, Irish, and Mississippi white folk). But I do realize the complications from such a list. Most people see me as a Black woman. So Black woman I am proud to be."[88]

Shi Kai Wang is an art director at a large game studio. "I'd consider myself male,

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82 Adam Fletcher, Interview, 2015.
83 Fletcher.
84 John Andrew Berton, Jr., Interview, 2015.
85 Hina Pandya, Interview, 2015.
86 Pandya.
87 Jason Murray, Interview, 2015.
88 Kristina Thomas, Interview, 2015.

straight, Asian, late 30s."[89] He has worked as an artist for video games for most of his professional career. He dislikes the tone of most diversity conversations in the (news) media, as they tend to be quite polarised.

Ingrid Carlson [pseudonym] is a software engineer who emigrated from Norway to the United States. She is a white female.[90] While she was growing up, she had many examples of successful, well-respected women working in the STEM (science, technology, engineering, mathematics) fields. She did not find working in the industry as a women to be challenging until she moved to the US, where she encountered numerous barriers to acceptance.[91]

Design of Digital Artefact

The thesis and digital artefact are designed to be a base level of research that will provide a jumping off point for later Ph.D. studies. As such, they are intended to be a means to an end, rather than a complete and final product. This is important to note, as it will have an impact on the long term sustainability and maintenance outlook for the artefact.

That being said, the artefact as currently envisioned will be a website – http://suddenonset.eu – with a basic wireframe layout of a diversity checklist for producers, creators, and hiring managers within the specified (film, television, video game production) fields. Portions of the website may be considered for use in a mobile application. Whether or not that occurs, the site itself is built using a responsive WordPress theme which allows it to be conveniently viewed and navigated from mobile devices.

The project is intended to be a basic outline for a functional website tool – rather than the complete tool itself – that will enable creators, at the early planning and pre-visualisation states, to both assemble a team and create a product that has considerations of diversity and parity integrated into the structure from the beginning. I aim for it to be flexible enough that checklist criteria can be expanded and modified to reflect trends and growing awareness of relevant social issues. Factors such as increased or decreased press coverage, changes in status of oppressed minorities, global funding initiatives and campaigns, user feedback, etc., may effect how pressing particular issues appear at any given time. There will be a section for live updates of trending topics – such as the #BlackLivesMatter hashtag, for example – as well as a section for personal stories and anecdotes.

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89 Shi Kai Wang, Interview, 2015.
90 Ingrid Carlson, Interview, 2015.
91 Carlson.

Another component of the puzzle is that the target audience of a particular project may be a narrow portion of the population or niche market. Inclusiveness and diversity, while largely positive goals overall, may be detrimental with regard to products designed for niche marketplaces. From this standpoint, including a checkbox or, later, an algorithm to calculate recommendations within those parameters would be useful.

Options Considered

Throughout the Digital Arts and Humanities (DAH) course we were introduced to a number of new technologies. In part due to the nature of the assignments, but also due to my own natural curiosity and interest in new technological toys, I considered how, if at all, any of them would fit into my project. Most of them I dismissed out of hand since they were designed for more the type of DAH work that is most often emphasised during class: archiving, historical work, and data visualisation of such. Yet some of the possibilities that some of them opened up for later usage were still enjoyable.

Categories of tools discussed included, but were not limited to:

- library and database options

- website / CDN platforms

- data visualisation

- mapping

- online code repositories

- timeline creation

- wireframe design

Due to time and budget limitations, many of my choices are based on what is free and open-source, as much as what will work with the resources to which I currently have access. That mainly consists of Windows-compatible software or web applications. Fortunately, a good portion of what I'll be doing will be interview-based, so simple writing and blogging platforms will suffice for transmission of the findings.

The data gathered is in relatively simple sets, with fairly small sample sizes. Therefore, a large cataloguing or library tool would have been overkill. The only database really required is the MySQL behind the supporting the WordPress CDN (content delivery

network).

Data visualisation will play a part in the project, but at the Master's level it will primarily be as basic placeholders in order to demonstrate they potential of the website, or an occasional piece of real data to fill out the wireframe layout. That being the case, sticking with simple and free is sufficient. Visualize Free[92] has some visually pleasing output options and, as the name suggests, is free. ManyEyes[93], also free, is nice and simple. Both of these sites were used for initial drafts of pages on the site, images that may later come into use, but for now, graphics from other sources are preferable.

At this time, maintaining a cache of code is not required, so websites like Github[94], while potentially useful for advanced web customisation or app development in the future, are not required. Any customised CSS code is currently being used in a WordPress plugin called "Simple Custom CSS"[95]. Mapping software is something for consideration further along in the process. Two aspects of diversity – cultural awareness and accuracy – will likely tie in with mapping options at a later date, but for now it is not needed.

Wireframe design options are many, but the field was quickly whittled down by the aforementioned budgetary and platform limitation. Tools that work without Internet access were preferable in order to guarantee consistent access. The Pencil Project, because it is free, it's a standalone application, and it works on Windows, became the application of choice.[96] It is also straightforward and has an intuitive user interface, which is important when pressed for time. Export file format options include .png, single web page, .pdf, print, multi-page SVG file, and .odt (OpenOffice.org document).

For design elements, graphics, and icons, free web sources with proper Creative Commons licensing were used.[97] Pixabay.com is one of the sources used most frequently, both for academic blog posts and for the new website that is the digital artefact.[98] Editing of images was done using GIMP (GNU Image Manipulation Program) and Irfanview, both freeware

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92 'Free Visualization Software | Free Analysis Software | Free Analytics' <http://visualizefree.com/> [accessed 15 April 2015].
93 'IBM Advanced Visualization' <http://www-01.ibm.com/software/analytics/many-eyes/> [accessed 15 April 2015].
94 'GitHub · Build Software Better, Together.' <https://github.com/> [accessed 15 April 2015].
95 'WordPress › Simple Custom CSS « WordPress Plugins' <https://wordpress.org/plugins/simple-custom-css/> [accessed 15 August 2015].
96 'Home - Pencil Project' <http://pencil.evolus.vn/> [accessed 15 August 2015].
97 'Creative Commons License - Wikipedia, the Free Encyclopedia' <https://en.wikipedia.org/wiki/Creative_Commons_license> [accessed 15 August 2015].
98 'Pixabay - Free Images' <https://pixabay.com/> [accessed 15 August 2015].

image editing software, with the former being open-source, as well.[99][100]

Website

The website currently has its own domain and is set up as a self-hosted WordPress site. My academic blog was set up on the free WordPress.com[101] platform, which was chosen in lieu acquiring another domain name. There are, of course, limitations as to what can be done in terms of customisation and coding on a free WordPress site. In order to allow use of more advanced tools, this site was created separately, along side existing sites currently being hosted by Reclaim Hosting.[102] WordPress was installed directly from cPanel. The theme was free, was selected from WordPress.org, and was installed from the administration screen.

Other platforms such as Joomla were considered, but self-hosted WordPress offers the most flexibility with the least amount of fuss. It is a robust platform, updated frequently, has an active support community, and numerous plugins are available. WordPress has a number of free, responsive themes that are plug-and-play ready. Addon types of particular note include options for creating wireframes directly on the site, image mapping, custom database tables, even data visualisation. Image mapping was briefly considered application mock-up portion of the site, but plugin options for WordPress were either difficult to use or costly. Wireframe images have been placed into a WordPress pages with hyperlinks added to take users to another image for demonstration purposes, though those links are now in the text description rather than the images themselves. Despite that, there are plugins that may be considered for future use, such as Responsive Image Maps and ImageMapper[103][104].

Embeddable database tables have be used to query statistics about such things as numbers of women and minorities portrayed in film, which recent popular films pass the Bechdel Test, percentages of women and minorities on production and design teams, and other useful information. It is not yet clear how that would translate to a mobile application, as using the existing embeddable formats would not be feasible. It's possible that licensing for the data can be obtained, at which point it can be imported into the application itself.

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99 'GIMP - The GNU Image Manipulation Program' <http://www.gimp.org/> [accessed 15 August 2015].
100 'IrfanView - Official Homepage - One of the Most Popular Viewers Worldwide'
    <http://www.irfanview.com/> [accessed 15 August 2015].
101 'WordPress.com: Create a Free Website or Blog' <https://wordpress.com/> [accessed 16 April 2015].
102 'Reclaim Hosting | Take Control of Your Digital Identity' <https://reclaimhosting.com/> [accessed 15 August 2015].
103 'WordPress › Responsive Image Maps « WordPress Plugins' <https://wordpress.org/plugins/responsive-image-maps/> [accessed 15 August 2015].
104 'WordPress › ImageMapper « WordPress Plugins' <https://wordpress.org/plugins/imagemapper/> [accessed 15 August 2015].

By choosing to go with graphical representations of wireframes, rather than an infrastructure of rough HTML, the possibilities for easy conversion into a mobile application are somewhat limited. However, the clarity of thought that the process will provide will make it easier to communicate the needs and goals to an experienced application developer at a later date. This is well worth the trade-off for the time being. Future incarnations of the website may include more directly exportable sections of code, including HTML5 or even XML, and scalable vector graphics (SVG). There are also ready-made Android application templates which may serve, so that the ideas and data can simply be input into existing design elements.

Despite being hosted on a WordPress framework, the site is less blog and more knowledge repository and design studio. The only sections that may resemble a traditional blog are the Storify page, where modifiable and embeddable data from Storify.com is presented, and the personal stories section. As more people were interested in being interviewed than the scope of the project allowed for, it is conceivable that more interviews will take place. Their stories, as well as material curated from other websites, will be presented here. Having a personal connection to stories about diversity and the impact of bias makes a big difference in how people relate to the data.

In terms of preserving the end product, as long as the server space is maintained with a web host, a copy of the website will be available for public viewing. If it becomes a well received and fully funded project, there is always the possibility that it will be moved to the servers of a private or academic institution.

In short, the key points of the process were:

- register domain name

- gather data, articles, and stories from the Internet; store it in Zotero[105]

- conduct interviews via Skype, telephone, and in personal; take notes using Evernote[106]

- write findings into thesis format

- create wireframe graphics

- upload graphics to website; write explanations and include links to related pages

As the scope of the subject is so vast, the process of writing the thesis and creating the website should provide further clarity on how to move forward with the research. The website

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105 'Zotero | Home' <https://www.zotero.org/> [accessed 15 August 2015].
106 'The Workspace for Your Life's Work | Evernote' <https://evernote.com/> [accessed 15 August 2015].

will be a proof-of-concept for myself, advisors, and potential adopters of the end product. The final vision for the end product is as a functional, rather than demonstrational, website and accompanying mobile application for multiple operating systems.

Building Diversity and Inclusion into

the Media Production Pipeline

Introduction

One of the greatest challenges in this field of study, when put into a modern, digital-age context, is knowing when to stop reading the news. The changes in global awareness on issues such as discrimination, imbalance, and income inequality, and how important a role they play in both ongoing poverty and opportunity, are dizzyingly fast paced. Communication networks which have only sprung up since the invention of the Internet and the World Wide Web are a major contributing factor to this change. Put another way, "The role of social media in the creation of what is called 'shared awareness' is immense."[107]

In the course of conducting interviews, for example, the hashtag #IlookLikeAnEngineer, a movement designed to shatter the stereotype of white, nerdy, male engineer, and bring attention to the number of women and minorities working in engineering fields, sprang up and accelerated the conversation. Indeed, it happened just after speaking with a female engineer who had stated that one of the problems within the STEM fields is, at least in the United States, that there is no history of positive, accepted, well respected – and perhaps most importantly – visible female role models. Similarly, the hashtag #BlackLivesMatter, a response to the shockingly pervasive violence against African American men and women by law enforcement, received a popularity boost when two activists in Seattle interrupted a rally by presidential candidate Bernie Sanders.[108] The widespread discussion about diversity and equality are so relevant to the times, choosing just a few topics to cover becomes a challenge in and of itself.

In order to get a sample of coverage on similar topics, it therefore became necessary to pare down the interview questions to three areas:

1. anecdotes and personal experiences related to diversity

2. recommendations for bringing about positive change within the word environment

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107 'SOCIAL MEDIA AND AWARENESS IN GLOBAL SOCIETY | GIAP Journals - Academia.edu' <https://www.academia.edu/4243682/SOCIAL_MEDIA_AND_AWARENESS_IN_GLOBAL_SOCIETY> [accessed 12 August 2015].

108 '"Black Lives Matter" Activists Disrupt Bernie Sanders Speech - NBC News' <http://www.nbcnews.com/politics/2016-election/black-lives-matter-activists-disrupt-bernie-sanders-speech-n406546> [accessed 12 August 2015].

(and, hence, the public, through output of the media produced)

3. suggestions for material to include in a diversity-related mobile application

In retrospect, beginning with the personal stories was a good decision, as it allowed both parties (interviewer and interviewee) to relax and establish rapport. Additionally, it provided a space in which the interviewee could safely and comfortably query as to the goal of the research, as well as the researcher's views on the subject(s). A couple of the interviewees were quite cautious at the beginning of the discussion until it was established to their satisfaction that there were no obviously contentious or polemic viewpoints held by the interviewer which would make the participants uncomfortable.

The question about personal stories was deliberately open-ended, with some guidance given that the stories could be positive, negative, or anywhere in between, and they could be about things which had happened to the speaker or simply observed situations. Some of the participants began with notable cynicism, as they had, thus far, been unimpressed with general media coverage on the subject, finding it quite polarising and utterly lacking in nuance.

As the interviews progressed and earlier contributions became interwoven with subsequent discussions, it became clear that, had time allowed, circling back around for a second round of talks would have been useful. In fact, more than one participant expressed gratitude at having the opportunity to discuss the topics, and requested to be kept updated on discoveries and progress. This development led me to realise that simply having the conversations in a safe and respectful atmosphere was an incredibly important component of advancing the collective dialogue.

Creating Space

Creating a space for respectful dialogue may, in fact, be one of the most important elements required to support the shift from homogeneity into diversity. Simply implementing a workplace policy that declares, "This is a safe space," however, is not enough. As TED's Social Media Manager, Nadia Goodman, explained, "When Monica [Lewinsky] spoke at TED2015, held in March in Vancouver, the audience in the room received her with warmth and generosity of spirit. Many who'd had reservations were swayed by her talk. We saw this kind, vulnerable, strong woman who wanted to be heard — a woman who knew what was at stake for the victims of public shaming and who deeply hoped to get her message right. For someone scarred by years of public abuse, we gave her a safe space. When we posted her talk

online a few days later, the safety we'd created in that room went out the window."[109] Creating and maintaining the tone of respect, as well as an atmosphere conducive to inquiry and personal growth, requires vigilance and willingness to take action.

In the case of the comments after Ms. Lewinky's talk, the TED staff were extremely active. "We had three people monitoring the comments, and we were deliberately aggressive with comment moderation. The point of her talk was the danger of online bullying; what would we be if we simply provided a high-profile forum for haters to bash her? We deleted any comments that attacked, disrespected or shamed her, and we responded to positive comments to pull them to the top of the Facebook thread." As is all too common in Internet fora, people seem to forget that they are talking about a living, breathing human being with feelings. The anonymity and distance of the online realm often seem to cause empathy and good manners to evaporate.

Fascinatingly, the diligent work of the TED team had an effect. "After hours spent boosting the positive comments and purging most of the brutish ones, the tide started to turn. People started to write things like, 'Brave woman. My first reaction was negative before I even clicked the link — then I realized that was the whole point and why she was the perfect person to give this talk.' Or, 'Politics aside, I respect the fact that Ms. Lewinsky is now demanding to write her own story. Too often we allow shame to silence our stories.' The flood of vitriolic comments dried up to a trickle."[110] The shift in tone is inspiring. The takeaway is that there are good, compassionate people who want to be a part of the conversation, given the opportunity. It is, therefore, the responsibility of employers and organisations who profess to back change to not only built the structures into their plans, but to actively maintain them.

Why Diversity

The purpose of the research and creation of a mobile application concept is not to convince any individual or group of the positive reasons for making diversity an integral part of business planning. Rather, the intended audience are those who already recognise this to be so, but are searching for the best methods by which to institute change. The importance of the question, however, cannot be overlooked.

Numerous other researchers have already addressed, and continue to address, the

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109 'This Is What Happened When We Posted Monica Lewinsky's TED Talk | Ideas.ted.com'
   <http://ideas.ted.com/want-to-help-prevent-online-bullying-comment-on-facebook/> [accessed 2 August 2015].
110 'This Is What Happened When We Posted Monica Lewinsky's TED Talk | Ideas.ted.com.'

compelling reasons for doing so. A simple online search for "why diversity is important" quickly brings up articles from authoritative sources such as universities and established business publications. A quick scan of the results reveals such titles as: "Importance of Workplace Diversity"[111], "Diversity as an engine of innovation"[112], "Reaping The Benefits Of Diversity For Modern Business Innovation"[113], "Diversity is good. Why doesn't everyone agree?"[114], and even "How Diversity Makes Us Smarter"[115]. The reasons favouring diversity are also plentiful. A short summary includes: access to a larger talent pool, varied viewpoints, reduced discrimination, ethnic shifts in population, increased buying power of minorities and women, opportunities in niche markets, and respecting the values of a company's customer base (which is reflected in customer loyalty).

Similarly, avoiding costly marketing mistakes is another good reason to make inclusion a priority, and is something that should get more attention than it does. The pen company, BIC, has made two such missteps in recent years. In 2012 they launched a produced line called "For Her," which was roundly mocked on television and social media.[116] Comedian and talk show host, Ellen Degeneres "...was so peeved that she took four minutes on her show this week to shame the company with a monologue and a fake commercial."[117] In 2015, apparently having not learned their lesson, BIC South Africa aired an advertisement on local television in celebration of National Women's Day. The offending advertisement advised women to "Look like a girl. Act like a lady. Think like a man. Work like a boss."[118] They ensuing social media backlash resulted in multiple apologies across their social media channels.[119]

"Global companies with at least one woman on the board have higher average returns

111 'Importance of Workplace Diversity | Chron.com' <http://smallbusiness.chron.com/importance-workplace-diversity-43235.html> [accessed 15 August 2015].

112 Paul, McElroy and Leatherberry.

113 Ekaterina Walter, 'Reaping The Benefits Of Diversity For Modern Business Innovation', *Reaping The Benefits Of Diversity For Modern Business Innovation* <http://www.forbes.com/sites/ekaterinawalter/2014/01/14/reaping-the-benefits-of-diversity-for-modern-business-innovation/> [accessed 18 November 2014].

114 'Diversity Is Good. Why Doesn't Everyone Agree? - The Washington Post' <http://www.washingtonpost.com/blogs/she-the-people/wp/2014/11/26/diversity-is-good-why-doesnt-everyone-agree/> [accessed 15 August 2015].

115 'How Diversity Makes Us Smarter - Scientific American' <http://www.scientificamerican.com/article/how-diversity-makes-us-smarter/> [accessed 15 August 2015].

116 'Branding Fail: Ellen Mocks Bic's "For Her" Line | PRNewser' <http://www.adweek.com/prnewser/ellen-degeneres-bic-for-her-pens/49615> [accessed 15 August 2015].

117 'Branding Fail: Ellen Mocks Bic's "For Her" Line | PRNewser'.

118 'Bic Offends with Women's Day Salute in South Africa - CNN.com' <http://edition.cnn.com/2015/08/12/africa/feat-bic-sexist-pens/> [accessed 15 August 2015].

119 'Bic Apologizes for Women's Day Ad That Mostly Just Made Women Furious | Adweek' <http://www.adweek.com/adfreak/bic-apologizes-womens-day-ad-mostly-just-made-women-furious-166358> [accessed 15 August 2015].

on equity, lower debt ratios and better average growth..."[120], diversity is thought-provoking and even makes us smarter.[121] So why, then, would the business world not be madly scrambling to make diversity a top priority? Despite the fact that "we work harder and prepare more thoroughly when we work with people who don't look like us" – something which contributes to all of the benefits listed above – we also "...anticipate receiving difficult questions or being challenged on our beliefs when we face someone with a different background."[122] Furthermore, "They have to work harder to make themselves understood. They have to consider alternatives. They might even have to change their mind."[123] In short, it's often a question of our comfort zones.

It may also be a case of lip service to appease constituents or regulations, while viewing the actual effort of initiating the requisite change as likely to provide a poor return on investment. When speaking with a senior BBC Radio executive, a white male, about one of the programs, Pandya says she pointed out that "...the content of the shows would not interest a black or Asian audience – there is nothing there for [that] demographic."[124] The executive was quite forthcoming about it, conceding, "I know. That's because there's nobody black or Asian on our team."[125] Although he acknowledged they were aware of the issue, he did not indicate whether or not steps were being taken to rectify the situation.[126] Pandya did indicate that, of the media executives present at the conference where they made contact, the man in question was the only one who agreed to a subsequent discussion on the topic and actually followed through.[127] It is hoped, therefore, that his interest in the matter translates to actual change.

Beyond lack of momentum and a sometimes very personal stake in maintaining the status quo, some organisations are genuinely at a loss about how to proceed. These people, as well as those well on the road to diversity, are the ones for whom this writing and mobile application are intended. By helping to increase awareness of related issues, as well as providing key suggestions from those who are negatively impacted by the atmosphere of homogeneity, these groups can take steps to move forward. They will better be able to create an environment that is welcoming and productive for all, including their customers.

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120 'Diversity Is Good. Why Doesn't Everyone Agree? - The Washington Post.'
121 'How Diversity Makes Us Smarter - Scientific American.'
122 'Diversity Is Good. Why Doesn't Everyone Agree? - The Washington Post.'
123 'Diversity Is Good. Why Doesn't Everyone Agree? - The Washington Post.'
124 Pandya.
125 Pandya.
126 Pandya.
127 Pandya.

Implicit Bias

Neil Lim Sang made the important point that discrimination is, in many ways, more difficult to detect in hiring contexts now than it was in the past. "How would you know you were being discriminated against?"[128] It seems that along with the rise of consciousness about discrimination, including implementation of laws designed to protect against it, employers who discriminate are much less likely to do so openly. As the recent lawsuit by former Reddit CEO Ellen Pao – which she lost – illustrates, proving bias can be very difficult indeed.[129]

Sometimes discrimination is deliberate, while other times it is subconscious on the part of hiring personnel. As a study from the National Bureau of Economic Research discovered, "White names receive 50 percent more callbacks for interviews."[130] It is doubtful that the majority of people who review applications and enact this bias think of themselves as racist.

According to the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University, "Implicit biases are pervasive. Everyone possesses them, even people with avowed commitments to impartiality such as judges."[131] Having come face to face with some of my own implicit bias through travel is, in fact, part of why this subject is of such great interest to me. Despite vigilance against such prejudice, I still found (and continue to find) that I have absorbed the negative parts of various socially prevalent dialogues with regard to certain parts of the world or the people who inhabit them.

This may be, in part, due to the complex biology of our brains. A study at Arizona State University indicates "...because human survival was based on group living, 'outsiders' were viewed as – and often were – very real threats."[132] Furthermore, "Unfortunately... because evolved psychological tendencies are imperfectly attuned to the existence of dangers, people may react negatively to groups and their members even when they actually pose no realistic threat."[133]

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128 Lim Sang.
129 'Ellen Pao Loses Silicon Valley Bias Case Against Kleiner Perkins - The New York Times' <http://www.nytimes.com/2015/03/28/technology/ellen-pao-kleiner-perkins-case-decision.html> [accessed 12 August 2015].
130 Marianne Bertrand and Sendhil Mullainathan, *Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination* (National Bureau of Economic Research, 2003) <http://www.nber.org/papers/w9873> [accessed 12 August 2015].
131 'Understanding Implicit Bias' <http://kirwaninstitute.osu.edu/research/understanding-implicit-bias/> [accessed 12 August 2015].
132 'Prejudice Is Hard-Wired Into The Human Brain, Says ASU Study -- ScienceDaily' <http://www.sciencedaily.com/releases/2005/05/050525105357.htm> [accessed 13 August 2015].
133 'Prejudice Is Hard-Wired Into The Human Brain, Says ASU Study -- ScienceDaily.'

Heuristics are one way in which this biology manifests. "In psychology, heuristics are simple, efficient rules which people often use to form [judgements] and make decisions. They are mental shortcuts that usually involve focusing on one aspect of a complex problem and ignoring others. These rules work well under most circumstances, but they can lead to systematic deviations from logic, probability or rational choice theory. The resulting errors are called 'cognitive biases' and many different types have been documented. These have been shown to affect people's choices in situations like valuing a house or deciding the outcome of a legal case."[134] Therefore, it seems the basis for many types of prejudice is simply heuristics gone wrong.

Although the concept of privilege has been defined earlier in this paper, it is something that cannot be emphasised enough. In addition to the behaviours we absorb from our social interactions, entertainment, the news, etc., we also see things through individual filters. Privilege – "a set of unearned benefits given to people who fit into a specific social group"[135] – is one of the biggest filters we have. With this in mind, it is perhaps unsurprising that some of the male interviewees tended to not believe the gender imbalance in STEM fields was as great as female interviewees did, or they saw it as holding much less significance. Essentially, it can be summed up as, "It has not affected me negatively, so it must not be a serious problem."

A demonstration of the dynamics of privilege can be seen in a study conducted at U.C. Berkeley, as shared by Paul Piff during a TED talk. Two players took place in a rigged game of Monopoly, wherein one was "rich" from the start, while the other was "poor". "...As the game went on, one of the really interesting and dramatic patterns that we observed begin to emerge was that the rich players actually started to become ruder toward the other person, less and less sensitive to the plight of those poor, poor players, and more and more demonstrative of their material success, more likely to showcase how well they're doing." Bear in mind, these players knew they were participating in a rigged game. This means they were, in essence, starting with a default level of mindfulness which most of us do not have. Piff went on to say, "...and when the rich players talked about why they had inevitably won in this rigged game of Monopoly, they talked about what they'd done to buy those different properties and earn their success in the game, and they became far less attuned to all those different features of the situation, including that flip of a coin that had randomly gotten them

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134 'Heuristics in Judgment and Decision-Making - Wikipedia, the Free Encyclopedia'
   <https://en.wikipedia.org/wiki/Heuristics_in_judgment_and_decision-making> [accessed 13 August 2015].
135 'Privilege 101: A Quick and Dirty Guide — Everyday Feminism.'

into that privileged position in the first place. And that's a really, really incredible insight into how the mind makes sense of advantage."[136] This is a clear example of why iniquity and privilege are such difficult subjects to unravel. Even when we enter into a situation knowing we have an advantage, we forget – and then take credit for our dominance as if it were all based on decisions and skill rather than starting position.

Addressing the Issues

Acknowledging the causal dynamics of the issue is a crucial part in understanding the wider problem. Even without a firm grasp of the complexities, however, there are steps that can be taken to address lack of representation. This may come in the form of legislation to protect the interests of underprivileged parties. In other cases, it may be a change in company policy. For example, Microsoft and Netflix recently updated their parental leave policies to give new parents additional paid time off to tend to their growing families.[137] (Notably, Netflix has excluded some departments from this change. As reported by National Public Radio, "...the policy only applies to 'salaried streaming employees,' and doesn't cover workers in the company's DVD distribution [centres], where the work is usually lower-paid and more physically demanding."[138] Two weeks after the announcement, at least three online petitions for Netflix to amend its policy have been created. So far, Netflix has responded with statements indicating that "...its DVD employees get bigger paychecks and better benefits than people in comparable jobs."[139][140]) Change can also come from campaigns by grassroots organisations who seek to raise awareness, pushing not only for specific goals, but to change the tone of the conversation around the issues they raise. The ongoing success of the global movement for marriage equality is a prime example of the latter.

John Andrew Berton, Jr., while working at George Lucas's Industrial Light & Magic

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136 'Paul Piff: Does Money Make You Mean? | TED Talk | TED.com'
      <http://www.ted.com/talks/paul_piff_does_money_make_you_mean?language=en> [accessed 13 August 2015].
137 'Microsoft Expanded Parental Leave, 401(K), Holidays - Business Insider'
      <http://uk.businessinsider.com/microsoft-expanded-parental-leave-401k-holidays-2015-8> [accessed 13 August 2015].
138 'Netflix Still Facing Questions Over Its New Parental Leave Policy : The Two-Way : NPR'
      <http://www.npr.org/sections/thetwo-way/2015/08/10/431273033/netflix-still-facing-questions-over-its-new-parental-leave-policy> [accessed 13 August 2015].
139 'Netflix Under Fire for Not Expanding Parental Leave Benefits to All Staff | Inc.com'
      <http://www.inc.com/associated-press/netflix-criticism-unpaid-leave-dvd-business.html> [accessed 25 August 2015].
140 'Netflix, Inc. Jeered For Excluding DVD Workers From Paid Parental Leave Policy'
      <http://www.bidnessetc.com/50801-netflix-inc-jeered-for-excluding-dvd-workers-from-paid-parental-leave-polic/> [accessed 25 August 2015].

(ILM), made it a stated goal to hire more women.[141] He had observed the gender imbalance among the technical and artistic staff, although historically, women have been represented in higher numbers – even majorities – in personnel and production positions. He believed that taking steps to "...redress existing inequity" where under-representation was prevalent was the right approach.[142] From a business perspective, he considered that "...excluding 50% of the brain power you need to solve the problem" impeded the company's ability to do its best work.[143]

Studies have consistently shown women and men are equally adept at maths and sciences, so the reasons for fewer women in STEM jobs cannot be attributed to a lack of ability. As Berton put it, "[there was] no reason apart from discrimination that women were not filling these [technical] roles."[144] Unfortunately, due to a rather vicious cycle of under-employment of women, lack of female mentorship, and fewer women seeing STEM fields as a viable career option, many female applicants for positions at ILM had less substantial work histories listed on their applications. This meant Berton often encountered resistance when attempting to hire less experienced female candidates. He also hired less experienced male candidates, if they, like their female counterparts, demonstrated a "spark" or a particularly clever method for approaching a problem.[145] "...You've got to take chances, give people an opportunity – you will find the diamonds in the rough."[146]

Yet getting hired as a woman or minority, while important, is only one point in the battle for parity. The roots of the issues extend back into the history of colonialism and beyond. Colonialism, as defined by Stam and Spence in *Colonialism, Racism and Representation*, is "...the process by which the European powers (including the United States) reached a position of economic, military, political and cultural domination in much of Asia, Africa and Latin America. This process, which can be traced at least as far back as the 'voyages of discovery' and which had its corollary the institution of slave trade, reached its apogee between 1900 and the end of World War I (at which point Europe had colonised roughly 85% of the earth)..."[147] Interestingly, he correlates the type of perspective codified by Renaissance humanism as part of a dynamic that allowed "...Europe [to construct] its self-

141 Berton, Jr.
142 Berton, Jr.
143 Berton, Jr.
144 Berton, Jr.
145 Berton, Jr.
146 Berton, Jr.
147 Robert Stam and Louise Spence, 'Colonialism, Racism and Representation | Robert Stam - Academia.edu' <https://www.academia.edu/12180023/Colonialism_Racism_and_Representation> [accessed 13 August 2015].

image on the backs of its equally constructed Other – the 'savage', the 'cannibal' – much as phallocentrism sees its self-flattering image in the mirror of woman defined as lack."[148] Iniquity was not only built into the process, it was a defining characteristic.

As George Bernard Shaw is reported to have said, "We are made wise not by the recollection of our past, but by the responsibility for our future."[149] While we cannot go back in time to change things, we can start earlier in the process of education to give people a more even chance at opportunities. The indoctrination of young people into the existing paradigm of unfairness begins early. Kristina Thomas noticed at a young age that when the local news in Memphis discussed a person of interest in a crime, they always included a photo of the suspect if the person was black, but not if they were white.[150] The message being that black suspects were guilty until proven innocent, while white suspects were innocent until proven guilty. She went on to state that she later began avoiding the news as a teen because, "I couldn't take it anymore."[151] This is, again, a piece of a vicious, self-perpetuating cycle. If young people lose interest in watching media because they feel demonised and devalued, what would motivate them to learn the skills and choose to follow a career path leading to employment in such a field?

A recurrent theme during the interviews was a belief that not only social representation, but early education and awareness of possibilities are key. A number of the artists who participated said they believed most young people were unaware that creating professional art for a living was a viable career path. Indeed, the field of qualified candidates for some specialisations is so narrow that artists are often aware of each others' online presence and portfolios for years before meeting or working together.[152] If more young people had realised it was an option, and had therefore stuck to a path of artistic development early in their education, the field today might be wider and more diverse.

Neil deGrasse Tyson pointed out in a panel discussion hosted by the Center for Inquiry "...there are many similar social issues related to access to equal opportunity that we find in the black community, as well as in the community of women, in a male-dominated – white male-dominated – society."[153] He went on to say, "The fact that I wanted to be a scientist and

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148 Stam and Spence.
149 'Quote by George Bernard Shaw: "We Are Made Wise Not by the Recollection of Our..."'
    <http://www.goodreads.com/quotes/28382-we-are-made-wise-not-by-the-recollection-of-our> [accessed 13 August 2015].
150 Thomas.
151 Thomas.
152 Murray.
153 'Panel Discussion: Dawkins, Tyson, Druyan, Stenger, Grothe - YouTube' <https://www.youtube.com/watch?

astrophysicist was, hands down, the path of most resistance through the forces of nature, the forces of society... I wanted to become something that was outside of the paradigms of expectation of the people in power."[154] He encountered people attempting to steer him onto a different path – such as sports – or actively obstructing his ambitions, at nearly every turn. Even now, as arguably one of the most well-recognised scientists in the world today, security guards still follow him through department stores expecting him to be a thief simply because he is black. "So, my life experience tells me, that when you don't find blacks in the sciences, you don't find women in the sciences, I know that these forces are real and I had to survive them in order to get where I am today."[155]

Educational Outreach and Mentorship

How can the educational process be positively affected to infuse young people with a sense of intellectual curiosity and confidence that there are places for them to participate in the shift away from homogeneity? The ways in which early educational outreach can manifest are many, though options may be different for large companies as opposed to smaller organisations. Some possibilites include support from private foundations, local business organisations, governmental initiatives, company sponsorship of educational programs and grants, and mentorship programs supported by these and other interested groups. The Bill & Melinda Gates Foundation lists five pages of grant opportunities under the search term "diversity".[156] The purpose of the Highline Public Schools grant, for example, is stated as being "...to support Highline School District's Human Resources Department redesign of its recruiting and selecting of educators to improve the strength and diversity of its workforce."[157]

In an arrangement that benefits both the community and the company, many businesses donate equipment to schools. This provides opportunities to the students they may otherwise not have had and, in the process, begins building brand loyalty among future consumers. Indeed, the companies often don't have to wait for students to achieve their majority. In the late 1970s and early 1980s, Apple Computers began to donate equipment and funding to teachers and schools. "It was a clever move; more educational software was available for the Apple II computers, more schools bought them than other brands, and many

v=KEeBPSvcNZQ> [accessed 14 August 2015].
154 'Panel Discussion: Dawkins, Tyson, Druyan, Stenger, Grothe - YouTube.'
155 'Panel Discussion: Dawkins, Tyson, Druyan, Stenger, Grothe - YouTube.'
156 'Awarded Grants - Bill & Melinda Gates Foundation' <http://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database#q/k=diversity> [accessed 14 August 2015].
157 'Highline Public Schools - Bill & Melinda Gates Foundation' <http://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database/Grants/2015/06/OPP1127982> [accessed 14 August 2015].

young people got their first introduction to computing on Apple. Then, because kids were familiar with the computers at school, they asked their parents to buy them."[158]

Non-profit programs, in concert with companies in the private sector (sometimes with government affiliations), already provide models for various types of outreach initiatives. US-based Northrop Grumman, for example, participates in CyberPatriot (the National Youth Cyber Education Program), a project conceived of by the Air Force Association. Despite its rather dystopian sounding title, it is not science fiction. Rather it is, "A fun, hands-on STEM initiative that's making an impact in building tomorrow's much needed cyber workforce."[159] It is designed "...to inspire high school students toward careers in cybersecurity or other science, technology, engineering, and mathematics (STEM) disciplines critical to our nation's future."[160] Again, it is a program which benefits both the community and the company.

Mentoring, both for adults and children, can be an incredibly valuable component of future success. Ingrid Carlson said that one of the best things that happened to her, as a recent immigrant and secondary school graduate, was having a successful female mentor assigned to her at one of her first positions.[161] Her mentor was the only woman working at the location besides Carlson. She was "...rough around the edges, but very well respected in her field."[162] Having a positive role model early on was tremendously helpful for establishing herself in what – in the United States, unlike her home country of Norway – was a tough field for women.

The lack of proper mentorship can lead to overlooked chances, both for the person in need of mentoring and for the company. Jason Murray provided an example of an intern who did not receive proper guidance during her time at a company where he worked. She was only the second intern they had hosted, which may have explained the lack of organisation which led her to "fall through the cracks" of the department.[163] He described her as an Asian female in an area largely dominated by white males, so her presence would have undoubtedly increased the overall diversity of the group, had she been hired. Because she did not receive an adequate amount of attention or support, she did not end up receiving an offer for

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158 'Steve Jobs The Man Who Thought Different - Karen Blumenthal - Google Books' <https://books.google.ie/> [accessed 14 August 2015].

159 'CyberPatriot' <http://www.northropgrumman.com/CorporateResponsibility/Pages/CyberPatriot.aspx> [accessed 14 August 2015].

160 'What Is CyberPatriot?' <http://www.uscyberpatriot.org/Pages/About/What-is-CyberPatriot.aspx> [accessed 14 August 2015].

161 Carlson.

162 Carlson.

163 Murray.

permanent employment. Murray felt they had "let her down" and that the whole situation was "a missed opportunity"[164]. It did, however, inform their decisions about how to better move forward with internships in the future.

As a professional, Ingrid Carlson, who has now worked in the field for many years, indicated that she wishes there were more mentors at the senior level. There are often women who fight for fair treatments of the newest female staff members, but once a certain level of seniority is reached, frequently the only people above them are male.[165] In perhaps a more obvious example of this deficiency, Kurt Barling pointed out that the BBC, despite "proclaiming initiatives and schemes", repeatedly fails to deliver lasting or meaningful results.[166] "Over the years I have seen many talented people, black and white, leave the BBC because they weren't nurtured, respected or valued... it's not just about faces on screen but experience and seniority. Where is the critical mass of BAME [black, Asian, and minority ethnic] journalists in senior decision making, strategic and leadership roles?"[167] It is incumbent on any organisation professing their support of diversity to commit fully and genuinely to the task, something which requires forethought, dedication, tracking of results, and modification of techniques, if necessary.

It is worth mentioning that in addition to mentors, there are also sponsors. Ann Hewlett is the author of *Forget a Mentor, Find a Sponsor.* "What you need is someone who has the power to help you get ahead. You need a sponsor."[168] What is the difference? Hewlett says, "Mentoring is a gift. A sponsor, on the other hand, is more transactional... A senior person is not going to go out of their way unless you have proven your worth."[169] Finding a sponsor may prove difficult for those already outside the established social group in power. There are steps you can take and points to remember that will help: network with influencers, build trust rather than showing off your skills, "turn mentors into sponsors", keep in mind that sponsors are not there to be your friend our counsellor – they are "gatekeepers", and remember that it's a transaction.[170] Perhaps what the BBC needs, then, is not more internships,

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164 Murray.
165 Carlson.
166 'BBC Failing Ethnic Minority Staff, Says Black Journalist | Media | The Guardian'
    <http://www.theguardian.com/media/2014/apr/20/black-journalist-accuses-bbc> [accessed 15 August 2015].
167 'BBC Failing Ethnic Minority Staff, Says Black Journalist | Media | The Guardian.'
168 'Yes, You Need A Mentor, But A Sponsor Will Really Boost Your Career | Fast Company | Business +
    Innovation' <http://www.fastcompany.com/3036037/hit-the-ground-running/yes-you-need-a-mentor-but-a-
    sponsor-will-really-boost-your-career> [accessed 15 August 2015].
169 'Yes, You Need A Mentor, But A Sponsor Will Really Boost Your Career | Fast Company | Business +
    Innovation.'
170 'Yes, You Need A Mentor, But A Sponsor Will Really Boost Your Career | Fast Company | Business +
    Innovation.'

nor even mentorships, but sponsors – senior professionals who will advocate on behalf of those who most need their support.

Atmosphere

Depending on the type of company, or even the department, the atmosphere of inclusion – or, conversely, exclusion – can be vastly different. A hardware company that Carlson worked for had her in a very senior position, managing a team, and generally being treated with the respect that her expertise warranted.[171] Likewise, Adam Fletcher reported that working in visual effects could be quite a welcoming environment, particularly at one company where a departmental director and a senior producer were both gay. They frequently organised luncheons for LGBT employees as a friendly space to socialise.[172] Both Carlson and Fletcher reported finding quite a different environment within the gaming industry.[173][174] "Games can be a really weird space for women, both in the design and the boys club atmosphere," remarked Carlson.[175] At one employer, she found the art department staff to be professional and respectful, while the climate of the engineering department was decidedly male-centric and hostile to women.[176] Again, Fletcher reported similar results about a gaming company where he worked, saying it had an environment which was very "dudebro".[177] While perhaps not openly hostile, it did mean that he was never open about his sexuality with his colleagues. Instead he preferred to, "Keep my head down" and deflect any conversation which might lead in that direction.[178]

Wang says he has not been on the receiving end of any noticeable, direct prejudice, but that colleagues who are not culturally aware have been known to make ignorant statements.[179] Once at an expo where his company was promoting a game with a Japanese, female protagonist, his colleagues were trying to come up with ideas for party favours. One of them suggested fortune cookies, completely unaware of how incorrect the suggestion that was for the culture.[180] "People don't care how they appropriate ethnic [symbols]... if it serves their needs, it's totally fine."[181] He does notice his physical characteristics – not as tall as nor

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171 Carlson.
172 Fletcher.
173 Carlson.
174 Fletcher.
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176 Carlson.
177 Fletcher.
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179 Wang.
180 Wang.
181 Wang.

possessing a "boomy voice" – are not representative of the average employee.[182] Generally, Wang does not object to representations of Asian people in video games – "It's a made up, fantasised world..." – and points out that even in Korean and Japanese games the characters do not look Asian.[183] "Even games that tried to do it right, like Mirror's Edge, still got scrutiny."[184]

Rather than leaving employees to fend for themselves, companies are in an immensely powerful position in terms of setting the tone of the work environment. Most organisations over a certain size have a human resources or personnel department, but they often seem to function as an option of last resort in cases of gross abuse, rather than behaving as a pro-active part of the structure. This can be extremely detrimental to employees in vulnerable situations, as responsibility is often first laid at the feet of those raising the complaint. Ingrid Carlson says, "[It's] hard to make this complex issue have the gravitas it needs [in a larger group]. People on the opposite side of the issue only hear complaining."[185]

Performance reviews are a clear indication of how implicit bias affects the careers of women in ways that it does not affect those of men. According to Fortune Magazine, "Women's reviews are more likely to include critical feedback."[186] They are also much more likely to include the word "abrasive", "aggressive", "angry", "shrill", and "overly ambitious."[187][188] Carlson said that she has seen difficult behaviour in men described as, "assertive, grumpy... sceptical and pragmatic," where the men are commended, while women acting in a nearly identical manner are called, "difficult, negative" and are reprimanded.[189] In one performance review, Carlson said she was told, "You're emotional."[190] However, she had recorded the meetings. Upon reviewing the recordings, she found was speaking as levelly and logically as the men in the room. The issue was not that she was speaking emotionally, too much, or interrupting, but that she was speaking at all.

This phenomenon is sometimes referred to as "speaking while female" (similar to the

182 Wang.
183 Wang.
184 Wang.
185 Carlson.
186 'Performance Review Gender Bias: High-Achieving Women Are "Abrasive" - Fortune'
    <http://fortune.com/2014/08/26/performance-review-gender-bias/> [accessed 15 August 2015].
187 'The One Word Men Never See In Their Performance Reviews | Fast Company | Business + Innovation'
    <http://www.fastcompany.com/3034895/strong-female-lead/the-one-word-men-never-see-in-their-performance-reviews> [accessed 15 August 2015].
188 'Sheryl Sandberg and Anna Maria Chávez on "Bossy," the Other B-Word - WSJ'
    <http://www.wsj.com/news/articles/SB10001424052702304360704579419150649284412> [accessed 15 August 2015].
189 Carlson.
190 Carlson.

racial profiling commonly referred to as "driving while black").[191] Another example of it can be found in a New York Times article of the same name: "Years ago, while producing the hit TV series *The Shield*, Glen Mazzara noticed that two young female writers were quiet during story meetings. He pulled them aside and encouraged them to speak up more. Watch what happens when we do, they replied. Almost every time they started to speak, they were interrupted or shot down before finishing their pitch. When one had a good idea, a male writer would jump in and run with it before she could complete her thought."[192]

Carlson experienced an even more dramatic example of this when her boss called her to attend a meeting about a topic in which she was not only extremely knowledgeable, but was, in fact, the resident expert. She was told very directly to "shut up and not say a word."[193] The other engineers in the room were male. As the meeting progressed, it became obvious that they didn't know how to handle the situation they'd been called in to address, so Carlson spoke up. After the meeting, her boss pulled her aside and said, "I told you to be quiet."[194] Why had she even been called in? Why would you not listen to the person with the most expertise on the subject? Sadly, this was one of many examples of the kind of disparate treatment she, and many other women in STEM, receive on a daily basis.

Beyond the basic issues of dignity, respect, and professionalism that all workers deserve, raising awareness of bias and unequal treatment allows for more honest feedback and, therefore, positive – rather than reluctant or resentful – improvements in performance. Carlson suggests, "Once you have the [diversity] conversation and biases are allowed for, [given] feedback is much more honest."[195] Additionally, recipients are "...able to accept genuine, constructive feedback – [it becomes] actionable."[196] Personal and professional growth can be experienced as ones true self, rather than with "...all sorts of bias lumped on top."[197]

Creating formal policies and informal spaces wherein equality issues may be addressed was called for repeatedly by several interviewees. Sometimes there is concern that

191 'Driving While Black: Racial Profiling On Our Nation's Highways | American Civil Liberties Union' <https://www.aclu.org/report/driving-while-black-racial-profiling-our-nations-highways> [accessed 25 August 2015].
192 'Sheryl Sandberg and Adam Grant on Why Women Stay Quiet at Work - NYTimes.com' <http://www.nytimes.com/2015/01/11/opinion/sunday/speaking-while-female.html?emc=eta1&_r=0> [accessed 13 January 2015].
193 Carlson.
194 Carlson.
195 Carlson.
196 Carlson.
197 Carlson.

people may feel diversity policies, in the vein of the oft maligned "sensitivity training", would leave people feeling like they were walking on eggshells. Yet "...corporations that have instituted those programs, even though it feels [contrived], [still left a positive impact] on the people."[198] Carlson further advises that companies "...have the conversation whether [they] think it's needed or not. It's important in companies that are functioning – large or small"[199]. Simply managing to function is not an indicator that all is well. Successfully shipping a product does not necessarily address the issues of staff composition, atmosphere, and representation in that final product. Inclusion is an ongoing process.

Language is an integral part of diversity. Not only does it allow us to express our feelings about our experiences, or about oppression and privilege, it helps define where we are on the journey of understanding. Whether and how often we choose to speak up about it also conveys a great deal. Jason Murray relayed a story from early in his career where a transgender colleague began to transition from male to female. Although Murray had no negative feelings on the subject or toward the person, he remained silent when another colleague, senior to both himself and the transitioning coworker, expressed consternation over knowing which bathroom facility she should be using.[200] Not only did the comment convey an ignorance of the situation, it was also incredibly disrespectful. Out of hearing of Murray's colleague, the manager in question said, "I have no idea what bathroom 'it' should be using."[201] Murray didn't know what to say at the time, although he knew this senior manager's handling of the situation was uninformed and unprofessional, so he remained silent. Were a similar situation to arise now, he said he would be much more likely to speak up.[202]

In answering the question of how to refer to someone, whether the question is about ethnicity, gender, orientation, ability, age, or other factors, the answer is nearly always found in how a person refers to themselves. If that cannot be determined, choosing the most respectful, professional choice is the best option. This has come to the fore in the case of transgender individuals in recent years, particularly with the increased visibility of celebrities like Janet Mock, Laverne Cox, and Caitlyn Jenner. It is quite shocking to see how many people wilfully refer to these women with the wrong gender pronoun. Often it is not merely an act of misunderstanding, but a deliberate refusal to acknowledge their true identities. Diversity is not about taking differences and making them fit an institutional norm – it is

198 Carlson.
199 Carlson.
200 Murray.
201 Murray.
202 Murray.

about acknowledging differences and celebrating their strengths.

Summary of Findings

Prioritising diversity has many benefits. These extend to individuals, businesses, and global society. The reasons for iniquity are historical and complex, as are the reasons for not actively pushing for widespread change. There are many people, companies, and government organisations who are moving forward with diversity, yet even people who are interested in supporting it often need help in understanding what the issues are and how to best implement lasting change.

Race and gender inequality between men and women are the most often discussed issues when the topic of diversity comes up, yet it is so much greater than that. As the definitions at the beginning of this paper demonstrate, diversity is a language of awareness. It manifests in how we perceive and treat others, how we plan our personal and professional futures, and how we value our fellow human beings. The words we speak, as well as the words we filter and hear, are crucial. The conversation surrounding diversity should be an open one – one that is carried out respectfully and with a desire to learn. Kristina Thomas advises, "Have an open mind – first step – [about] other races and cultures. Ask questions. Don't be afraid. Make friends outside your default circle. Start small conversations – 'Hi, how are you?' – This is a person, not a stereotype."[203] Small steps can lead to big change.

How organisations facilitate such exchanges can and should vary, depending on the details and relative social climate of the situation(s). Asking questions is a good place to start, but demanding that a person from a marginalised group do all the explaining is merely reinforcing the dynamic of privilege, and is not truly open minded. Such an action tends to fall within the camp of a person having to justify why they are worthy of respect and equal treatment. If you start from the base belief that everyone is, by default, worthy of such, and that there are just gaps in understanding to fill, things will have a go more easily for everyone involved.

There are many areas for improvement in international discourse about differences, justice, and parity. A mobile application will not be a solution in and of itself, but placed in the hands of those who have the job of shaping our views of self and society, it could have a tremendous impact. Designing it to be flexible and scalable, like our minds and our capability for empathy, will be key.

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203 Thomas.

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