Actual Versus Perceived Generational Differences within the Contemporary Workforce

A Dissertation Presented

by

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ABSTRACT

Actual Versus Perceived Generational Differences within the Contemporary Workforce

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The concept of grouping individuals into distinct generational cohorts such as Baby Boomers, Generation X, Generation Y, and now more recently, Generation Z, is not an uncommon one. It is often an attractive way to describe groups of individuals, similar to other forms of social categorisation via stereotypes and presumptions (Lyons *et al.*, 2015). Generational theory first originated in the early 20th century through the writings of Hungarian born sociologist, Karl Mannheim (McCourt, 2012; Remmling, 1961). Ever since, this theory has been revisited by various academic fields and has expanded into the discourse of contemporary culture with over 208,000,000 hits found on Google as of 2020 (Delaney, 2018; Demartini, 1985; Roskin, 1974). By natural extension there has been an increase in academic papers examining the differences between generational cohorts and its impact on work outcomes.

However, much of the literature surrounding generational cohort theory can be split into three camps, those who are proponents of Mannheim's original theory and its role in day to day interactions (Lyons *et al.*, 2015). Others, however, see no value in continued research, going so far to call for a moratorium on further research due to several study flaws and weak theoretical underpinnings which can be better substituted for other frameworks (Rudolph, Rauvola and Zacher, 2018; Costanza and Finkelstein, 2015). Finally, others appear to engage in academic research, ignorant of the broader academic discussion, overlooking the relationship of generations as a possible extension of established social theories (Schroth, 2019; Stewart et al., 2017; Ahn and Ettner, 2014; Sidanius *et al.*, 2004; Tajfel, 1974). Regardless of the veracity of generational cohort theory, such academic research has contributed to the creation and perpetuation of stereotypes and misconceptions found in popular press articles and business management advice (Espinoza and Ukleja, 2016; Fromm and Garton, 2013).

With more generations in the workplace than ever before, with the addition of the youngest cohort, Generation Z, this paper intends to build on the academic literature by replicating a 2012 study which sought to discern whether actual differences exist between generational cohorts in relation to work outcomes or if perceptual differences instead of actual differences were more common (Burton *et al.*, 2019; Lester *et al.*, 2012). To achieve this, using non-probability convenience sampling, a cohort of 249 individuals ranging from Generation Z to Baby Boomers were surveyed by asking how much they valued 15 unique work items and then asking how much they believed other generations valued the same work items. Using multivariate analysis and pairwise comparisons it was found that actual differences relating to some work items; autonomy, professionalism, technology, continuous learning, and fun at work, do appear to exist. However, compared to the five actual differences identified, forty perceived differences to work items were also found indicating that perceived differences outnumber actual differences.

The above results are also discussed in relation to the broader academic literature, taking into account the role of social identity theory and the Lifespan Developmental Perspective framework (Van Rossem, 2019; Rudolph *et* al., 2018; Weeks *et al.*, 2017). However, the main implications of the findings show that perceived differences between generational cohorts are prevalent and have the potential of leading to stereotypes between individuals at work, ultimately risking prejudicial and discriminatory behaviour often seen with other forms of social categorisation such as age, gender or race (Potter *et al.*, 2019; Cunningham, 2007). It is recommended that managers and professionals alike remember that individuals from different generations are more alike than different to encourage best practices, collaboration and interaction amongst employees. Finally, it is hoped this paper adds to the evidence that there is a danger in academic research continuing to make declarative statements without considering the role of perceptual differences or the broader research so as not to continue the propagation of stereotypes, especially for Generation Z who are just entering the workforce.

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Chapter 1. Introduction

1.0. Background to the study

Karl Mannheim's theory of generations has become pervasive in contemporary culture whether or not it satisfies academics as a substantiated framework (McCourt, 2012). Since 2012, the amount of results found on Google that mentioned, 'generation differences in the workplace,' has increased from 18,000,000 to over 208,000,000 as of 2020. Much of the discussion focuses on presumed gaps between one generation to another which has drawn the attention of various academic fields from political sociology, geopolitics, marketing and business management practices (Delaney, 2018; Stewart et al., 2017; Demartini, 1985; Roskin, 1974).

A problem exists in that beyond cursory evaluation of the academic literature, it is clear that many of the above studies, particularly those related to business management show clear methodological flaws, often presenting information with confirmation bias and without considering the larger role of social identity theories (Van Rossem, 2019; Stewart et al., 2017; Ahn and Ettner, 2014; Salahuddin, 2010; Tajfel, 1974). The result is that many of the above studies do not realise the types of stereotypes that their research might create in the broader cultural discourse (Fromm and Garton, 2013).

Such stereotypes have been found to be largely perceptual and not grounded in reality which feeds a narrative that has the potential to create prejudicial and discriminatory behaviours in a similar way age, gender and race have due to acting as social categorisations (Potter *et al.*, 2019; Perry, Golom and McCarthy, 2015; Lester *et al*., 2012; Cunningham, 2007). Now with more generations working together in the workforce than ever before academic research must refocus the debate to distinguish between actual versus perceived differences (Burton *et al.*, 2019; Lester *et al.*, 2012). More than that, Generation Z is the youngest cohort just entering the workforce, and already there are examples of academic research which promote misconceptions and may leave this group disadvantaged within the workplace (Silinevica and Meirule, 2019; Francis and Hoefel, 2018; Fratričová and Kirchmayer, 2018).

1.1. Gaps in the literature

The major gap present in the literature is the lack of agreement between different academics in relation to the veracity of generational cohort theory as a suitable framework for research. The biggest detractors have highlighted that Mannheim's original theory does not provide a complete framework which can be operationalised, with many unanswered questions which can affect study designs such as how generational cohorts from different geographical locations cannot share identical formative experiences, or that cross-temporal study designs are inadequate to remove the confounding influences of age and maturity (Costanza *et al.*, 2012; Costanza and Finkelstein, 2015). Instead, they have promoted alternative approaches such as the Lifespan Developmental Perspective framework which takes into account the maturation of individuals and their changing attitudes throughout their life cycle (Rudolph *et al.*, 2018). Proponents, however, hope to build on Mannheim's original theory and believe cross-temporal studies can add to a growing body of evidence over time in the absence of longitudinal study designs (Lyons *et al.*, 2015).

Further than that, while there are many studies which have not fully considered the above debate, they have also not treated generational cohorts as a form of social categorisation as per social identity theory. The ability of perceptual differences to influence cohorts, instead may be misconstrued as evidence of actual differences. Second, many often use small sample sizes to draw quantitative conclusions, preface their research with a level of confirmation bias, and use abstracted concepts to measure differences such as leadership qualities, going so far to use concepts coded from a Latin poem (Ahn and Ettner, 2014; Tajfel, 1974; Salahuddin, 2010; Rubin and Hewstone, 2004).

Finally, as of now, Generation Z has not been studied to the same extent as other generational cohorts despite the fact they are expected to make up to 22% of the workforce in the next ten years (Babushkina, 2019). Any available literature also suffers from the same problems as mentioned above such as inadequate sample distributions, being location-specific, and measures of abstract concepts such as, 'power, wealth, and courage,' (Silinevica and Meirule,

2019; Fratričová and Kirchmayer, 2018). Despite this, the academic literature often overreaches in its assessment resulting in claims such as Generation Z is overly pragmatic, and poor written communicators due to their overreliance on technology (Babushkina, 2019).

1.2. Academic justification

As mentioned, there are several gaps present in the current academic literature such as the on-going debate surrounding generational cohort theory, the popularity of studies which promote unsubstantiated claims on the differences which exist between generational cohorts in the context of work outcomes, and the lack of reliable research concerning Generation Z, who are just entering the workforce. This paper hopes to provide clarity to encourage future academic research to consider fully the breadth of factors which should be considered when examining generational cohorts to reduce the potential of stereotypes to propagate within the academic community and beyond in the broader cultural context.

To achieve this, this paper will build upon previous research which has come before, specifically a 2012 paper which examined whether actual differences exist between generational cohorts in regard to work outcomes and whether perceptual differences outnumber actual differences (Lester *et al.*, 2012). It is hoped that by contributing to the evidence base, that generational cohorts are more alike than different, whether or not actual differences can be explained via generational cohort theory, will help temper future academic research and create a more thoughtful approach used by academics in the future.

Second to this, this paper hopes to blend elements of social theory, specifically social identity theory into the discussion surrounding differences which may or may not exist between generational cohorts. Evidence suggests that generational cohorts can be treated as social categorisations similar to that of age, gender and race. As such, the role of perceptual misconceptions and

stereotypes can be discussed to guide academics and non-academics alike away from prejudicial and discriminatory conclusions.

Finally, it has been recognised that currently existing research is lacking in regard to Generation Z and, as they are only just entering the workforce, there is a risk that new stereotypes concerning them will be accepted without considering the impact this would have on young and vulnerable employees. This paper hopes to be an early contributor to the research base surrounding Generation Z to mitigate unfavourable behaviours in the workplace based on stock assumption and misconceptions.

1.3. Research aims

This study aims to provide clarity to current generational research. It will aim to replicate the results of a 2012 paper which examined whether or not actual differences exist between generational cohorts relating to work outcomes, and whether or not perceptual differences are more prevalent than actual differences. This paper will contribute to the literature base by applying the previous study to a contemporary work context by examining Generation Z who have only recently entered the workforce. Secondly, this paper hopes to blend the above into a wider discussion which considers elements often ignored in previous generational research, namely the role of generational cohorts as social categorisation as per social identity theory. The ultimate aim of this paper is to act as a guide to future academic research and business practices to temper future assertions that differences exist between generations without first considering the impact of perceptual differences and the resultant stereotypes and prejudicial outcomes that may result.

1.4. Research question

As this paper will look to replicate previous research, the research question largely persists from the original 2012 paper (Lester *et al.*, 2012). The only difference is that this paper will include Generation Z as part of the study. As such the research question is as follows; are perceived differences more

prevalent than actual differences which exist between generations in the contemporary workplace consisting of the Baby Boomer generation, Generation X, Y, and Z?

The above research question is broken into two main hypotheses, the first assumes; actual generational differences exist regarding the extent to which technology, face to face communication, e-mail communication, social media, formal authority, fun at work, continuous learning, and professionalism are valued. The second hypothesis assumes; there are more perceived value differences between generations than actual value differences.

1.5. Methods and scope

The research method employed in this study aims to replicate that of the original study by Lester *et al*. (2012). As such, it will use a mono rather than a mixed methods approach, focusing on quantitative analysis (Lester *et al.*, 2012). However, the limitations of the above approach are discussed, along with the value that a mixed methods approach utilising qualitative elements could add to the literature.

A sample of 249 individuals was collected using non-probability convenience sampling primarily due to an average 16-week time frame and lack of funding. Secondly, this paper was written during the COVID-19 pandemic, which restricted the ability to organise randomised samples from specific organisations. The sample does however include individuals from one organisation of about 80 employees.

The sample were asked to answer an online questionnaire based on the original 2012 paper; first respondents were asked to categorise themselves into a generational cohort based on when they were born. Secondly, respondents were asked to rate how much they valued 15 unique work items and then rate how much they believe members of other generational cohorts valued the same 15 work items. Demographic information such as gender and educational level attained were also asked which served as control variables.

Despite the fact this paper is limited in scope due to the fact it is replicating previous research, it will discuss the above results in the context of the wider academic literature surrounding social identity theory, as well as generational cohort theory. Several recommendations to expand the scope for future research initiatives are also made.

1.6. Dissertation structure

Chapter 1 – Introduction:

This chapter provides a summary of the chosen research area and a cursory overview of the gaps present in the literature and the overall justifications of researching this chosen area. It highlights several problem areas and how they relate to the broader context of business management and ultimately offers a research question and study design which can contribute to the literature base.

Chapter 2 – Literature review:

An in-depth review of currently existing literature is carried out to give background information to the chosen field of study. It critically explores previous literature as well as the on-going debate surrounding generational cohort theory. It then examines broader considerations such as the role of social identity theory, and the impact generational research can have on individuals in a work context including the potential of discriminatory outcomes especially in relation to Generation Z.

Chapter 3 – Research methodology and methods:

A clear case is made in relation to the chosen methodology which considers the overall aims and objectives of the research, examining the overarching research philosophy that is best applied, and resultant approaches and strategies that are chosen, primarily based on established frameworks. Secondly, it details the methods used to collect quantitative data, how this data is analysed and any limitations or ethical concerns which are present.

Chapter 4 – Results:

Results of the quantitative multivariate analysis are presented ultimately answering the hypotheses set out in the research question.

Chapter 5 – Discussion:

The results from the study are discussed in relation to the previous literature base with synthesis from generational cohort theory, social identity theory, and the role perceptions may have on individuals of different generational cohorts. Critical analysis of the results is also applied with an elaboration on the limitations of the scope of what this paper can answer and what is recommended for future study.

Chapter 6 – Conclusion and recommendations:

Salient points of the results and discussion are summarised and presented to inform future academic study as well as any practical implications for professionals.

Chapter 2. Literature review

2.0. Karl Mannheim and the origin of generational theory

The concept of generational cohorts, wherein individuals born within a particular period, are socially different to individuals from another generation which preceded or succeeded their own, is pervasive today in the 21st century. The main types of generational cohorts today are frequently defined as the Boomer generation (those born during the post-WWII baby boom), followed by generation X, Y and Z respectively (Harenberg, 2018). It is not uncommon to hear a generational gap described as older and younger generational cohorts are unable to bridge differences ranging from aesthetics to socio-political consciousness (Bengtson, 1970). The concept has even been used as a talking point for opinion pieces in respected media publications to discuss a growing divide in political opinion such as that around climate change and growing inequality within society (Lorenz, 2019).

The earliest and fullest examination of generations can be traced back to the Hungarian sociologist, Karl Mannheim (1892-1947) (McCourt, 2012; Remmling, 1961). Mannheim was principally concerned with the theory sociology of knowledge, in which he attempted to develop a relationship between society and knowledge (McCourt, 2012; Pilcher, 1994). As part of this broader theory, Mannheim wrote an essay in 1923 titled, 'The Problem of Generations,' which was later translated to English in 1952 (Meja *et al.*, 2018).

In this essay, Mannheim describes members of social generations as having similar worldviews due to a shared historical biographical past from experiences accumulated throughout their formative years. Individuals are born into a generational location, which not only considers the years in which an individual is born but also the presence of a shared historical or social dimension (Timonen and Conlon, 2015). This shared experience predisposes individuals to specific characteristics of thought. However, Mannheim goes further to describe that not every generation will have a defined zeitgeist. However, those that do are described as possessing generation actuality where concrete social bonds exist due to their participation in a common historical or social destiny, one which is often destabilizing, an example of which could be

World War II or the more recent 2008 financial crash (Timonen and Conlon, 2015; Demartini, 1985).

Mannheim describes this shared generational consciousness developing during the formative years of young adolescence, the argument is made that younger generations will view and respond to historical or social events differently to their parents or grandparents. Younger individuals will be found in one generational location, whereas their elders are found in another generational location (McCourt, 2012; Demartini, 1985). As such, this acts as a form of cultural or knowledge transmission, where culture will be continued to the next generation or discarded depending on its importance to the current generational cohort (Timonen and Conlon, 2015). Going further, Mannheim describes the role of generational units, individuals of a single generation who work towards challenging the status quo. For instance, this element of Manheim's work has been applied to discussions surrounding the civil rights movements in the 1960s (Demartini, 1985).

Before looking at the application of Mannheim's theory, it is essential first to understand the conditions surrounding its genesis. Mannheim first wrote, 'The Problem of Generations,' while based in the Frankfurt School of Social Theory during the years of the Weimar Republic, a period in which there was rapid social and political change. It has been argued that his idea of shared social experiences in formative years is a summation of his own experiences as part of the European intelligentsia after World War I. An example of this can be found in one lecture he published in 1918 in which he writes, 'These lectures are to help [these new Europeans] themselves and to gather strength from the consciousness of [constituting] a new generational community,' (McCourt, 2012).

Mannheim's theory of generations has since been used as a foundation of study among a broad spectrum of disciplines. As mentioned previously, the idea of Mannheim's generational units has been used to describe the growth of left-leaning student activism seen during the civil rights movements of the 1960s (Demartini, 1985). It has even been employed in literature surrounding international relations and foreign policy, where periods of American

interventionism and non-interventionism can be explained by the experiences of generational cohorts throughout history (Roskin, 1974).

Despite this, there has been several critiques of Mannheim's work, mainly that he does not provide a precise definition of what constitutes a generation, even in his essay Mannheim concludes, 'the generation factor – which at the biological level operates with the uniformity of a natural law – becomes the most elusive one at the social and cultural level, where its effects can be ascertained only with great difficulty and by indirect methods,' (McCourt, 2012). Second, to that, Mannheim does not adequately explore the sociological factors of class or geography, with one major criticism being that generational theory is viewed through a western perspective (Timonen and Conlon, 2015; Pilcher, 1994). Pilcher (1994) concludes that Mannheim fails to provide a theoretical framework for further empirical investigations, meaning that sociologists lacked direction as to the type of data to ascertain when trying to understand generational consciousness. Mannheim himself admits that his theory is a precursor to further research, 'Thus far I have come and no further, the rest I leave to my successors,' which should indicate to all that this is not a fully formed theoretical framework (Meja *et al.*, 2018). This might be why one paper states that, as the father of generational theory, Mannheim's work is often cited but frequently ignored (McCourt, 2012).

2.1. The growing popularity of intergenerational research and study limitations

Despite the fact generational theory has its origins in the social theory of the early 20th century, it has become quite pervasive throughout modern society. As indicated earlier, with a growing polarisation across the political spectrum in much of the western world, some commentators have taken to using generational gaps to describe the growing divide between right and left (Delaney, 2018; Economist, 2017). Research bodies such as the Pew Research Centre has also recognized a growing generational gap in American society which it attributes to a younger multi-cultural society cohabitating with an ageing population thanks to increased life expectancy. An economic clash between generations exist wherein younger generations often support big

government with improved health and educational services for all, whereas older generations seek small government and the benefits of reduced taxes (Frey, 2018). Such generational gaps however have to be dissected through the lens of other sociological aspects such as class, societal differences towards, and increased immigration in a globalized world, factors which would not have been considered in Mannheim's original theory.

Beyond political opinion pieces and research reports, the concept of generations and intergenerational differences is oft used in marketing research to help segment markets, often with internet articles parroting how millennials are turning their backs on goods and services in favour of the experience economy (Gherini, 2018). However, beyond marketing research and segmentation there has been a growing trend of monetizing so-called generational gaps in the form of books and consultancy advice (Fromm and Garton, 2013).

Intergenerational differences in the workplace have become a hot topic in recent years with many popular publications touting various management advice on how to handle a multigenerational workforce (Lipman, 2017; Espinoza and Ukleja, 2016) and even how to identify the wants and needs of employees from various generational cohorts. The growing popularity for this may be due to the fact that the modern workforce is seeing more generations working together than ever before (Burton *et al*., 2019). Another reason which has been suggested is that generations are simply an attractive heuristic way of grouping individuals via stereotypes (Lyons *et al*., 2015).

Interest in intergenerational differences within the workplace has also grown within the academic literature with various studies claiming empirical evidence of differences in relation to job satisfaction, career aspirations, work value attitudes and overall organisational success (Lyons and Schweitzer, 2016; Twenge, 2010).

One paper titled, 'Managing millennials: embracing generational differences,' claims that millennials unlike other generational cohorts, do not conceptually link organisational commitment with workplace culture. The paper goes on to give a series of managerial recommendations such as changing

performance evaluation metrics. A problem with this study is that it opens with confirmation bias, stating before the results, ‘Our students now seem to be driven by different priorities…a feeling echoed by many of our academic colleagues,' (Stewart *et al.*, 2017).

Secondly, the paper failed to present a full methodology and made the error of assuming correlation equates causation, ‘millennials surveyed could not be swayed by the workplace culture of the store. Unlike employees from the Baby Boomer or Gen X groups, the millennials results show no relationship between organisational commitment and workplace culture. Every other demographic in the study shows a positive relationship between organizational commitment and workplace culture. In other words, the store could be a great place to work, yet the millennial workers would not be any more committed than if it were a lousy place to work,’ (Stewart *et al.*, 2017; Barrowman, 2014).

One particular focus of intergenerational research has been on the differences and preferences of various leadership styles and values between generational cohorts (Seaman *et al.*, 2018; Ahn and Ettner, 2014; Salahuddin, 2010; Sessa *et al.*, 2007). The potential value of such research is to find quantifiable differences that have real implications between how managers and employees might work together cohesively or work in conflict.

However, many of these studies appear to have methodological flaws and lack any kind of focused empirical research. For instance, one study (Salahuddin, 2010) which used, 'The Checklist of Admired Leaders,' to find quantifiable differences between four generations; Veterans, Baby Boomers, Generation X and Nexters, only used a single individual from each cohort. Such a small sample size for a quantitative study cannot be representative of the broader population.

Second, to that, many study methodologies focus on grading individual attitudes to abstract concepts of leadership, such as, 'The Checklist of Admired Leaders,' (Salahuddin, 2010) wherein concepts such as integrity and honour are graded from most to least important. The problem is that such abstract notions may be pervasive across all generations. One study even based their leadership values off a Latin poem, ‘The Aeneid,’ (Ahn and Ettner, 2014). The limitation

here is that individuals, on the whole, can certainly imagine what makes a good leader, but that does not mean it is practised. It would be more appropriate to measure an individual's real-world application of leadership in the workplace, perhaps by questioning direct reports to discern what kind of leader an individual actually is, as actions in practice may differ from an individual's preconceived notion of what makes a good leader and in turn, what kind of leader they are.

More importantly, many of these studies fail to have a shared definition of what constitutes one generation from another. There are differences in the age of cohorts, as well as labels used to define them, as one study defined Generation X as being born between 1960-1980 (Salahuddin, 2010) whereas another used from 1965-1980 (Seaman *et al*., 2018). These artificially created categories pose a problem when trying to operationalise any methodology, and therefore research on generations cannot be built on one another to form a clear consensus (Rudolph *et al.*, 2018; Costanza and Finkelstein, 2015).

Moreover, many of these generational studies rely heavily on stereotypes and broad generalised descriptions for the values pertaining to different cohorts, such as Millennials being narcissistic and entitled (Costanza and Finkelstein, 2015; Ng, Schweitzer and Lyons, 2010). It does not appear that much care has been taken to separate pop stereotypes from the research (Arsenault, 2004). Aside from overlooking the role of individualistic determinism and differences within cohorts, there is a danger of confirmation bias wherein one study found Generation X placed less emphasis on authority compared to other cohorts ergo this must relate to their touted need for independence (Parry and Urwin, 2011). Instead, a better study method would be to treat all generational cohorts identical and let any statistically significant results speak for itself.

2.2. The academic debate for and against generational research

Criticism of generational studies is not uncommon within the academic literature (Costanza and Finkelstein, 2015), some going so far to say there

should be a moratorium placed on further generational studies until several of their methodological and theoretical flaws can be improved (Rudolph *et al*., 2018). The main push back appears to come from Costanza and Finkelstein who provide a meta-analysis review (Costanza and Finkelstein, 2015; Costanza *et al*. 2012) which demonstrates that there are no substantive differences between generational cohorts when it comes to work related outcomes and in instances where differences are identified, they can, in fact, be explained by other means (Costanza *et al*., 2012).

As mentioned above, they feel generational cohorts are poorly defined, leading to difficulty in identifying unique variation between age, historical period and the composition of the cohorts themselves. These cannot be easily untangled via cross-sectional methodologies which most generational research employs ergo it cannot accurately remove the effects of ageing and maturity on the selected outcome (Twenge, 2010). Another paper goes further (Rudolph *et al*., 2018) and suggests that the Lifespan Developmental Perspective framework should instead be applied to identify inter-individual differences during different stages in the life cycle. The Lifespan Developmental Perspective framework assumes that development is a plastic process, where no one age is superior to another. The added advantage of this framework is that it too takes into account historical and sociocultural influences, which should negate the need to view it in isolation as in the case of generational studies (Rudolph *et al.*, 2018; Lyons *et al*., 2015).

Similar to critique made of Mannheim's original theory, generational studies are also heavily westernised - the argument is made that if generational cohorts are a product of a shared consciousness around particular historical events, then these cohorts are compounded with demographic differences such as geography, as most generational cohorts are identified using American historical events such as the Civil Rights Movement and the Challenger incident (Arsenault, 2004). Second, to that, they note that a major failure in many of these studies is an inability to appreciate individual differences, using the fact that it is not just Millennials who are ever increasingly addicted to their mobile phones (Costanza and Finkelstein, 2015).

Advocates of generational research (Lyons *et al*., 2015) do however counter this by arguing that variance within cohorts does not disprove the existent of generations as it was noted by Mannheim (Meja et al., 2018) that each generation is composed of subunits that are supportive of, opposed to or ambivalent to the broader generational consciousness, or rather that each generation will, of course, have traditionalists and progressives.

As mentioned previously, some have called for a moratorium on all generational research out of the concern that methodological and conceptual issues are difficult to reconcile when the research has an inappropriate influence within high impact journals, giving the example of one study which recommended a theoretical extension of Leader-Member exchange theory so that organisations design team structures that will engage younger generations more effectively (Graen and Schiemann, 2013).

Advocates, however, argue that generational research is more nuanced and requires further research, citing that generational research is a natural extension of social identity theory and that any current operational limitations are not a reason to scupper research but rather the need for further investigation (Lyons *et al*., 2015). They do however recognise that different questions should be asked, and emphasis should move away from cross-sectional studies, perhaps instead focusing on qualitative exploration which may lead to more exact mixed methods. Their hope is that further research will shed light on collective memories as a common bond between members of generational cohorts and its role in diversity management.

Ultimately, advocates do admit a need to be careful so as not to further reductionist stereotypes (Lyons and Schweitzer, 2016; Lyons *et al*., 2015). It is, however, unfortunate that another paper by the same author describing Millennial career expectations was carried out without using a control group before drawing conclusions such as the cohort having greater expectations for their careers than compared to other generational cohorts (Ng *et al*., 2010).

As such, there has been push-back in the literature as in one case which looked to challenge the role generational research was having on practices adopted by education bodies of the health professions (Jauregui *et al*., 2019).

They argue that the overgeneralisations more times than not, problematise generational attributes (Jauregui *et al*., 2019). The pervasiveness of generational research is apparent with one paper on generational differences being cited over 1300 times on Google Scholar (Rudolph *et* al., 2018; Smola and Sutton, 2002), or over 18,000,000 hits found on Google when searching the same term, 'generational differences in the workplace,' and as of 2020 it returns over 208,000,000 hits (Costanza *et al*., 2012) (Appendix 1). The end result is this research being sold to organisations as a sound business strategy. Although there is merit in furthering generational research as a wider research topic, it should be tempered so as not to promote perceived differences (Lester *et al*., 2012) and the creation of stereotypes and unconscious bias within the workplace (Oberai and Anand, 2018).

2.3. Generations as a form of social categorisation and source of stereotyping

Age-based discrimination, or ageism, was first coined by Robert Butler in 1969 (Bratt *et al*., 2018; Butler, 1969). He defined it as a series of beliefs, stereotypes and prejudices against older individuals. Such discrimination can present itself in the workplace in a plethora of different ways, starting with basic stereotypes such as viewing older individuals as less competent –– especially in regards with technology –– and a general inability to learn new skills. Ultimately, this could lead to a series of discriminatory consequences such as disadvantaging older individuals of opportunities and exclusionary behaviours in the labour market (Raymer *et al.*, 2017). Beyond immediate consequences in the workplace, a meta-analysis review of 22 published and 10 unpublished papers have found such age-related stereotypes can have a direct impact on older individuals cognitive and physical health (Lamont, Swift and Abrams, 2015).

Modernisation theory has been cited as a cause behind ageism in that in a move from a rural to an industrial society, with an ageing population, the demand for older individuals is in decline in favour of younger workers, who offer new skills, creativity and the ability to learn quickly (Bratt, Abrams and Swift, 2020). As such, over the last half a century various laws and protections have been brought in to protect the rights of older workers such as the Age

Discrimination in Employment Act, in the US (Neumark, 2019), and the European Framework Directive 2000/78 (Lahey, 2010).

Despite this, there has been growing research indicating that younger workers face a substantial amount of reverse-ageism (Raymer *et al.*, 2017), such as a large European survey of 29 countries which identified that younger individuals faced more instances of age-based discrimination than that of older cohorts. Surprisingly this was most prevalent in northern European countries which are known for more fair and modern societal practices (Bratt *et al*., 2018). This could be explained by an extension of modernisation theory postulated by another large cross-cultural meta-analysis. It attributed increasing age discrimination against younger cohorts could be a result of a plateauing effect of modernisation wherein structural changes in society have allowed older individuals fiscal and societal support which is absent for younger individuals (North and Fiske, 2015). Unfortunately, laws and protections have not kept pace with recent research meaning that younger individuals are not offered the same kind of protection afforded to older individuals. In a 2005 retrospective, Butler concedes that such laws should be expanded to protect workers through all stages of their lifespan (Butler, 2005).

Second to a need to improve anti-discrimination laws for younger workers, it has been noted that workers can be stereotyped and generalised based on their generational cohort to which there are even fewer legal protections (Costanza and Finkelstein, 2015). Such a position assumes that there is a distinction between age-based discrimination and discrimination by generational cohort, however, evidence suggests there is (Van Rossem, 2019; Cox *et al.*, 2018; Perry *et al*., 2015). Two papers examined the effect of the generational label, 'Baby Boomer,' on work outcomes. The first examined the hiring outcomes between an older individual and a younger individual. The first cohort made hiring decisions with the applicants ages listed, 60 years and 29 years old respectively. The second cohort made the hiring decision with generational labels "Baby Boomer" and "Millennial" instead of ages and it was found that candidates defined as Baby Boomers were more likely to be hired

given the fact they were perceived to be more motivated and adaptable (Perry *et al*., 2015).

In contrast, the second study, 304 management students were asked to grade four workplace scenarios on a Linkert-scale (1 - strongly disagree, 7 – strongly agree), from hiring for a marketing position, to an IT position, retraining, and disciplining an employee for making an age-related joke (Cox *et al.*, 2018). The independent variable consisted of the scenarios describing a key employee as either an older employee or using the generational label, Baby Boomer. In each of the four scenarios, positive outcomes were found when the term "older employee" was used as compared to Baby Boomer. One limitation with this study, however, is that the cohort consisted of management students who were all undergraduates, which means the results may not be representative across real world work environments (Cox *et al.*, 2018). Regardless, what these two studies demonstrate is that generational labels appear to matter and can provide a distinct form of stereotyping outside of typical age-based discrimination. Second to this, positive and negative stereotypes can exist for the same generational label.

In the second paper, beyond identifying that individuals labelled as baby boomers faced more negative outcomes in the above scenarios, the authors tried to elucidate reasons behind this behaviour using Social Dominance theory (Cox *et* al., 2018; Sidanius *et al.*, 2004). Social dominance theory describes society as being composed of hierarchical groups which range from the political, cultural, ideological to the structural, which includes demographics such as race, gender and age. As such, it has been used to explore various forms of oppression and intergroup discrimination (Sidanius *et al.*, 2004). Social dominance orientation is used as a measure of how individuals view their own group in relation to other groups. If an individual is high in social dominance orientation, it describes them as believing in inequality within society where one group should be considered dominant over another. Conversely, low social dominance orientation describes individuals as believing that no single group should dominate one another (Sidanius *et al.*, 2004). In the context of the second paper, the authors believed that individuals with low social dominance

orientation would be less likely to discern differences between the labels, 'older employee,' and, 'baby boomer,' given their predisposition to view society more fairly. However, the results instead showed that while individuals with a high social dominance orientation viewed both older employees and Baby Boomers negatively in the above scenarios, individuals with low social dominance orientation also viewed Baby Boomers more negatively, albeit at a lower rate, indicating that generational discrimination is pervasive amongst all groups and further investigation is required (Cox *et al.*, 2018).

Others have also examined generational differences through the lens of social categories, namely, Social Identity Theory which preceded social dominance theory (Rubin and Hewstone, 2004; Tajfel, 1974). Social identity theory is the concept that group and social identities are important contributors to individual self-esteem and personal identity. As a result, individuals will self-categorize into an in-group, which they will often rate higher on various positive descriptors than compared to out-groups. This is often known as in-group favouritism and it has been linked to various instances of discriminatory behaviours within the workplace, and even argued to be the major contributor to societal discrimination (Greenwald and Pettigrew, 2014; Tajfel, 1974). Furthermore, stereotypes which an out-group may hold of an in-group can cause the in-group to become defensive. In a workplace context, this sort of defensiveness can lead to resistive interactions wherein groups fail to share information or collaborate together (Weeks *et al.*, 2017).

One paper in particular examined whether or not managers from three generational cohorts; Baby Boomers, Generation X, and Millennials, held perceptions of co-workers belonging to the same three generations, which precipitated social categorisation and in turn stereotypes (Van Rossem, 2019). Using the repertory grid technique (Curtis *et al.*, 2008) the paper revealed characteristics used by the managers to judge co-workers belonging to different generations by drawing cognitive maps and measuring differences with Euclidian distances (Van Rossem, 2019). They found that such Euclidian distances were small when managers assessed co-workers from their own generation while also viewing their own generation positively. Meanwhile, large

distances were observed between generations with the largest existing between Baby Boomers and Millennials (Van Rossem, 2019).

These results were found to be in line with social identity theory wherein generational identities were clearly defined as a form of social categorisation. As such, the results also pointed to examples of in-group and out-group behaviours, with an emphasis of in-group favouritism and the presence of generational stereotypes between groups. Many stereotypes noted in previous literature (Lyons *et al.*, 2015; Lester *et al.*, 2012) were confirmed such as Millennials being open communicators, goal orientated, technologically able, not loyal to the company and lacking social etiquette. What is most interesting is that in contrary to previous studies (Lester *et al.*, 2012), Millennials regarded their own self-identification in line with many popular stereotypes in that they viewed themselves as lacking experience, whereas other groups such as Generation X viewed themselves almost entirely positively (Van Rossem, 2019). It has been suggested by the authors that this is a form of meta-stereotype, in that enough time has passed for Millennials to begin to associate popular stereotypes with their own generation, however, no reason has been given as to why Generation X and Baby Boomers were also not affected in kind (Van Rossem, 2019).

This however could be explained by examining another paper which used social identity theory as the basis of its research into generational stereotypes (Weeks *et al.*, 2017). The paper discusses that in the presence of a strong stereotype, such as Baby Boomers lacking technological experience, traditional in-group favouritism would be overpowered or negated. As a result, Baby Boomers begin to believe the stereotype themselves. This could explain why Millennials in the previous study identified with the stereotype that they lacked experience.

The results showed the existence of strong stereotypes such as Millennials being unable to do what it takes to finish a job, and Baby boomers being poor multi-taskers and poor with technology. Secondly, in the presence of strong stereotypes, there was little evidence of strong in-group favouritism. An example being, Millennials did not score themselves lower on the item, '…wants

rewards without doing the work required to earn them,' than they rated other generations, even though both Generation X and Baby Boomers scored Millennials highly (Weeks *et al.*, 2017).

The above literature makes the case for specific generational based discrimination, different to age-based discrimination (Van Rossem, 2019; Cox *et al.*, 2018; Perry *et al*., 2015). Secondly, an argument is made to define generations as a form of social categorisation which in turn is predisposed to in-group favouritism, and out-group stereotyping (Van Rossem, 2019; Cox *et al.*, 2018), however this is further complicated by the presence of potential meta-stereotypes which negate traditional in-group favouritism, if the stereotype is found to be pervasive enough (Weeks *et al.*, 2017). Furthermore, what is most apparent in all cases whether it is out-group stereotyping or in-group meta-stereotypes, most are often based on perceptions with little to no evidence behind them. This is not to diminish the role of such stereotypes in anyway, as it has been found that perceptual differences have just as much an impact on the organisation as actual differences (Cunningham, 2007). Instead, what must be considered is the role of generational cohorts as a form of social categorization and their place in the larger study of intersectionality (Potter *et al.*, 2019).

2.4. Actual versus perceived differences between generations

Generational research has accurately been described as, 'fuzzy,' (Weeks *et al.*, 2017) and fractured at the best of times. As evidenced earlier, much research into generational differences related to work outcomes suffers from major methodological flaws and too often arrive at unsubstantiated claims that further propagate stereotypes which are already pervasive outside the academic literature. On the other hand, there is a growing body of research which treat generational research with caution, supporting Costanza and Finkelstein's argument that differences are often overstated, and generations are much more alike than they are different (Costanza and Finkelstein, 2015). Instead, the real value in generational research may be to it treat as a form of social categorisation and explore the perceived differences which exist between

generational cohorts, so as to challenge the growing misinformation seen in the popular press (Riggio and Saggi, 2015).

One paper from 2012 successfully examines actual versus perceived differences between generations, in a work-based setting in an attempt to ground the research and challenge any preconceived stereotypes which employees may have developed (Lester *et al.*, 2012). The authors used a simple quantitative study design, by asking 263 employees from a single company to rate how much they value 15 work items; 1) teamwork, (2) autonomy, (3) security, (4) professionalism, (5) flexibility, (6) formal authority, (7) technology, (8) face to face communication, (9) e-mail communication, (10) social media, (11) structure at work, (12) involvement, (13) continuous learning, (14) fun at work, and (15) recognition (Lester *et al.*, 2012). Second to that, they then asked the employees to rate the same work items based on how they believed other generations value them. The generations examined were, Traditionalists born before 1946, Baby Boomers born 1946 – 1964, Generation X born 1965 – 1981, and Generation Y born post 1982.

Their hypothesis was that they expected actual differences to exist for less than half of the work items outlined. Whereas they believed actual differences would however exist between generations for work items, technology, face to face communication, email communication, social media, formal authority, and fun at work (Lester *et al.*, 2012).

The sample cohort was designated a generational cohort based on age and their personal valuation of the listed work items was used as dependent variables as a multivariate analysis was carried out between generational cohorts. The results showed that there were statistically significant differences between generations for three of the hypothesised work outcomes as Generation Y valued email communication, social media and fun at work higher than Baby Boomers and Generation X. Differences were also found for work item, continuous learning which Generation Y valued more than Generation X. Professionalism was found to be valued higher for Baby Boomers over Generation X. Out of the 45 potential value differences between generations, 27

were found to be perceived value differences which strongly supported the second hypothesis (Lester *et al.*, 2012).

Interestingly, it was found that Baby Boomers recorded valuing technology more than Generation Y or X believed they did, which is similar to more recent research which explained this as an example of an in-group bolstering effect where in the presence of a strong stereotype, an in-group would react defensively and rate themselves higher to compensate for such a perception. This would be considered a form of meta-stereotyping, however further research would be required to discern whether or not Baby Boomers actually value technology to such an extent (Weeks *et al.*, 2017).

Secondly, due to the fact this research indicated Generation X and Baby Boomers incorrectly perceived Generation Y valuing less, all but one work item is cause for concern and suggestive that there are large divergences in how Generation Y is perceived by older co-workers. This would back up previous studies mentioned in this review which have suggested there is increased stereotypes found against Generation Y (Van Rossem, 2019) and that younger workers report more work place discrimination than older workers (Bratt *et al*., 2020; Bratt *et al*., 2018; Raymer *et al.*, 2017). This is concerning since Generation Z soon to contribute a large percentage to the modern workforce (Weeks *et al.*, 2017).

Finally, and most important, this research clearly indicates perceptual differences between generational cohorts are more prevalent than actual differences and in turn are a big contributor to unfounded stereotypes with the potential to create work related tensions and discriminatory behaviours.

2.5. Generation Z and the future of generational research

As the current literature on generational research suggests, further work is required in order to provide clearer methodological approaches (Costanza and Finkelstein, 2015; Lyons *et al.*, 2015) and to temper academic literature along with resultant popular press pieces that further sensationalise and propagate

generational stereotypes (Espinoza and Ukleja, 2016; Ahn and Ettner, 2014; Salahuddin, 2010).

However, as of today that need is ever more pressing to help mitigate negative implications from stereotypes being extended to what is now known as, 'Generation Z,' which is defined as individuals born between 1997-2013 (Schroth, 2019). Generation Z are the youngest addition to the labour market and are expected to make up 22% of the workforce in under 10 years (Babushkina, 2019). If previous studies indicating younger employees are predominantly being discriminated against or if meta-stereotypes can be learned over time, as it has been suggested for Millennials, then the onus is on academia to help provide balance and contribute to literature which can help protect Generation Z (Raymer *et al.*, 2017; Weeks *et al.*, 2017; North and Fiske, 2015).

Unfortunately, however, there are already examples of consultancy reports and popular press articles which emphasise stereotypes. A market report by LIMRA, with the loaded title, 'Approach with caution: lessons from Gen Z,' makes several declarative statements based on an online survey of 1500 individuals aged 18-22 (Babushkina, 2019). Having been children who came through the financial crash of 2008 and the following recession, Generation Z are described as favouring security and have a strong traditional outlook regarding employment. This pragmatic worldview would see members of Generation Z replacing their passions for a stable salary (Babushkina, 2019). Second to that, Generation Z are described as being even more adept with technology, being, 'true digital natives,' which means they are multi-taskers if they are working with a mobile interface (Francis and Hoefel, 2018). However, this contributes to them as being poor written communicators who instead prefer face to face communication (Babushkina, 2019).

Given how recently Generation Z has entered the workforce, there does not appear to be a wide selection of academic literature of the same quality and breadth as previous generational research, with many studies being location specific and using small sample sizes (Silinevica and Meirule, 2019; Fratričová and Kirchmayer, 2018). One study used a questionnaire distributed to a sample

of 200 students, 115 of which were from Generation Z, whereas the remaining 85 were split between a mixture of Generation Y, X and Baby Boomers. It asked participants their attitude to career development such as, 'willingness to defend one's opinion,' and, 'readiness to engage in politics,' which did not appear to be based off previously validated questionnaires (Silinevica and Meirule, 2019).

Second to that, they looked at how important Generation Z valued various concepts such as, 'power, wealth, courage,' however this element was not compared against the other generational cohorts. Despite the methodological flaws the paper drew far reaching assumptions, for example, with 39% responding strongly and 59% responding moderately and 9% responding low to having affinity to the state of Latvia, the authors state that Generation Z do not feel attached to their country, meaning there will be a continuing migration in the future (Silinevica and Meirule, 2019). A second study looking to assess Generation Z's attitudes towards work and motivation was methodologically sound, however, it's entire review did not consider fully the on-going debate within the literature around generations, and thus it's entire premise was based on generalisations about Generation Z (Fratričová and Kirchmayer, 2018).

Given the above review of more recent generational research, it would be more appropriate to encourage the study of actual versus perceived differences between generational cohorts, with the important inclusion of Generation Z. Such research should be based on empirical evidence and simple study design, similar to Lester *et al*. (2012), so as to challenge clearly the misuse and mischaracterisation of stereotypes which are prevalent when discussing previous generations. Second to that, it is important to build a robust collection of literature in which future research can confidently follow.

Chapter 3. Research methodology and methods

3.0. Introduction

Research in the academic sense is the search for knowledge through an objective and systematic method (Kothari, 2004). The systematic process of data collection and data interpretation is essential to ensure that research is based on a logical framework and not instead based on beliefs so that an identifiable truth can be ascertained (Ghauri, Grønhaug and Strange, 2020). This can best be defined by the scientific method, the process of observing a phenomenon, creating a hypothesis to explain the phenomenon and testing the hypothesis, often under controlled conditions (Bordens and Abbott, 2011). As such, the research framework employed by a physicist is often times no different than that used in the social sciences and business (Rousseau, 2006). The framework used to justify the research is defined as the research methodology whereas the process of collecting, analysing, and interpreting the data is referred to as the method (Kothari, 2004).

The purpose of this study is twofold, in that it hopes to replicate the study by Lester *et al*. (2012) by proving that perceived differences between generations are more prevalent than actual differences. Second, it hopes to add to the literature by testing the hypothesis in the contemporary work environment with the inclusion of Generation Z. The following chapter will outline the methodological approach and methods used such as overall research philosophy, research strategy, approach, sampling methods, and analytic techniques. Finally, present limitations of the study will be discussed, alongside ethical considerations.

3.1. Research aims and objectives

Effective research begins with a clear research question which helps focus the methodology (Saunders, Lewis and Thornhill, 2009). A good research question is one which is in line with the scientific method, in that it can be answered using observations under controlled conditions, and that it can be reproduced under the same conditions by others (Bordens and Abbott, 2011). It is important that the research question is not too broad so that it cannot be answered using a logical methodology. Neither should the research question be so narrow that it does not contribute to the knowledge base. Revision of the research question to meet the above criteria can be referred to as the goldilocks test (Clough and Nutbrown, 2002).

This study seeks to replicate the research by Lester *et al*. (2012), which already presents a clearly defined research question. That is not to say that the present study will not add to the knowledge base. As previously stated, the scientific method requires reproduction of previous research in order to validate it (Bordens and Abbott, 2011). Secondly, this study seeks to add to the literature with the inclusion of Generation Z. The original study was first carried out in 2012, since then Generation Z has entered the workforce and it is important to reaffirm that perceived differences between generations in the workplace are more prevalent than actual differences, to temper the promotion of stereotypes. As described in the literature, in the absence of longitudinal studies, successive cross-sectional research, although flawed, can provide a continued understanding of generations over time (Lyons *et al.*, 2015).

It is common practice to break the research question into research objectives, which will lead to increased specificity (Saunders *et al*., 2009). Second to that, this allows the research question to be operationalised, in that the variables which are to be measured are clearly defined. However, this can reduce the generality of results (Bordens and Abbott, 2011). The research objectives, or hypotheses that Lester *et al*. (2012) present circumvent this restrictiveness. Their first hypothesis, based on their understanding of generational cohort theory, states; 'Actual generational differences exist regarding the extent to which technology, face to face communication, e-mail

communication, social media, formal authority, and fun at work are valued.' Their second hypothesis is broader; 'There are more perceived value differences between generations than actual value differences,' (Lester *et al.*, 2012).

Given the fact that the results from the original study showed that actual differences existed for work values outside of the initial hypothesis, such as, 'continuous learning,' and, 'professionalism,' this study will modulate the first hypothesis to include them accordingly, so as not to ignore the literature which has come before. As such, the research question and research objectives for the present study are stated below;

Research question: Are perceived differences more prevalent than actual differences which exist between generations in the contemporary workplace consisting of the Baby Boomer generation, Generation X, Y, and Z.

Hypothesis 1: Actual generational differences exist regarding the extent to which technology, face to face communication, e-mail communication, social media, formal authority, fun at work, continuous learning, and professionalism are valued.

Hypothesis 2: There are more perceived value differences between generations than actual value differences.

3.2. Proposed research methodology

This study may be built on the back of research which has come before, nevertheless, the research methodology will be systematically described using the 'research onion,' paradigm (figure 1) put forth by Saunders *et al*. (2009). Saunders *et* al. (2009) argue that before considering the method of data collection and analysis, it is important to first peel away methodological layers which justify research decisions. As Saunders *et* al. (2009) quote, '…questions of methods are secondary to questions of paradigm, which we define as the basic belief system or world view that guides the investigation, not only in choices of the method but in ontological and epistemologically fundamental ways' (Saunders *et al*., 2009; Guba and Lincoln, 1994).

The research onion encourages one to think first of the broader philosophical underpinnings of the research before moving through various approaches and strategies to use. The inner layers of the research onion focus more on study design choices, time horizons and finally the techniques and methods used to collect and analyse data (Saunders *et al*., 2009).

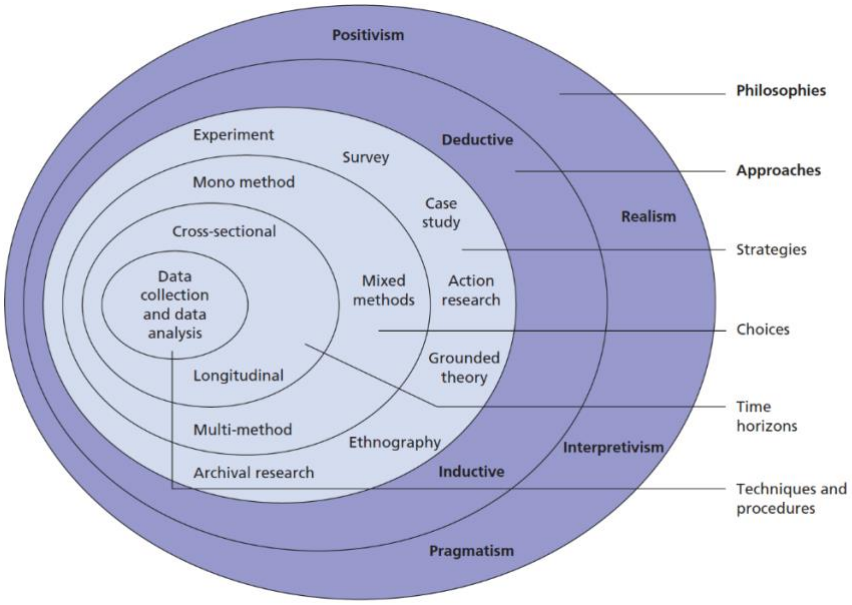

***Figure 1**: The Research 'Onion' (Saunders* et al*., 2009, p. 108).*

3.3. Research philosophy

As stated previously, research is the development of knowledge, as such, research philosophy questions the nature of that knowledge based primarily on how the researcher views the world and their own value systems which in turn direct decisions made on research strategies and methods. The value in considering such philosophies is that it allows the researcher to reflect on their choices and consider alternative study designs. Research philosophy is concerned with three main concepts; ontology, epistemology, and axiology (Saunders *et al*., 2009; Johnson and Clark, 2006).

Ontology relates to the researcher's view of the nature of reality which in large part determines the epistemological approaches considered (Quinlan, 2011). For instance, a researcher may hold an objectivist view of reality in that entities exist in reality, external to and separate from social influences. This may contribute to a researcher seeking a quantitative study design and viewing the entity as a variable, dependent on another, but largely unconcerned with other compounding factors. In opposition to that, a subjectivist approach would argue that social phenomena are created by the impact social influences have on perceptions and attitudes relating to entities. This may encourage one to perform qualitative research to explore the role of these social influences (Quinlan, 2011; Saunders *et al*., 2009).

Epistemology concerns the researcher's view of the nature of knowledge and how that knowledge is best acquired. One view is that of positivism which relates to the objectivist ontological position, where a researcher may prefer a research design more akin to that of a natural scientist. In this instance, there is a preference to acquire hard data to describe an observable social reality, one which the researcher is independent from and that fundamental laws of reality may be ascertained (Remenyi *et al.*, 2014). Alternatively, a researcher may prefer an interpretivist position which does not believe natural laws can account for the complexity of social reality. They instead may prefer to engage with the research first-hand to gather insights a positivist position may not yield. This of course has a basis in subjectivism and may lead the researcher to

employ a qualitative study which allows them to emphatically enter the social world in which they wish to study (Saunders *et al*., 2009).

Axiology relates to the researcher's judgements about value, in other words, the researcher's choices regarding the methodology and method are based on what they deem more valuable. An example of this would be a social sciences student may value an exploratory interview format over the measure of a single variable. This also contributes to a researcher's overall choice of philosophy (Saunders *et al*., 2009). However, research philosophies should be viewed as a continuum rather than a dichotomy. Many times, the research philosophy is chosen based on the type of research question posed and the practicalities which exist in creating a viable research design. Some have argued that it is important for a researcher not to be guided by strong principles but instead on the utility of the tools at their disposal, even if this means using a mixture of positivism and interpretivism as a mixed-methods approach would provide (Cotten, 1999). This is often referred to as pragmatism, that a researcher does not have to choose one philosophy, but instead choose aspects of many (Saunders *et al*., 2009).

Lester *et al*. (2012), have followed a positivist approach in that their study design employed quantitative analysis to prove their hypothesis that perceived differences are more prevalent than actual differences between generations. That is not to say that an interpretivist approach could not have been used to interview members of each generational cohort to discern not only how much they value the 15 work items but also to understand their reasoning for valuing one over another as influenced by the complexity of social influences.

With that, this study will continue with a positivist approach for several reasons. First, the study wishes to validate the results from Lester *et al*. (2012), and this requires replication of the original study design as per the scientific method (Ghauri *et al*., 2020). Second, based on the literature review there have been numerous examples of flawed study designs both qualitative and quantitative which have contributed to stereotypes of generational cohorts within the literature (Costanza and Finkelstein, 2015; Lyons *et al.*, 2015;

Salahuddin, 2010). The study from Lester *et al*. (2012) instead provided a sound methodological framework and rigorous method which is required to improve and clarify the discourse within the current academic literature regarding generational differences (Costanza and Finkelstein, 2015; Lester *et al.*, 2012). Finally, while it is agreed that a qualitative study would contribute to understanding differences perceived or actual between generations, the limited time available for this study and the on-going COVID-19 pandemic would make a mixed-methods study using both positivist and interpretivist approaches impracticable at this time.

3.4. Research approach

Building on the justifications behind the research philosophy, the research onion next encourages researchers to consider the research approach they will employ. There are usually two potential research approaches that can be used. The first is an inductive approach which relates to interpretivism and qualitative study designs often found within the social sciences. Interpretivism suggests that a cause and effect relationship is not sufficient to explain complex social phenomenon. Ergo the inductive approach consists of collecting data, usually the form of qualitative exploratory interviews and analysing the data to discover a pattern or theory to explain observations (Saunders *et al*., 2009).

In contrast, a positivist philosophy often leads to a deductive approach. The deductive approach begins with the development of a theory or hypothesis which is then tested empirically under rigorous methodology similar to that of natural sciences and the scientific method (Bordens and Abbott, 2011). The deductive approach has its origins in René Descartes philosophy of rationalism (Bordens and Abbott, 2011; Descartes, 2009). Descartes proposed that valid conclusions could be drawn from self-evident truths, truths which do not contradict logic. His example begins with the assumption, 'something that thinks must exist,' followed by, 'I am thinking,' ending in the conclusion, 'I exist,' famously paraphrased as, 'I think, therefore I am,' and has been called, the rational method (Descartes, 2009).

This was further improved to create the scientific method which uses empiricism to test assumptions (Braithwaite, 1953). The scientific method consists of formulating a theory or hypothesis, testing the hypothesis with quantitative data under controlled conditions which can be replicated, examining the outcomes to either prove or disprove the hypothesis and modifying future research accordingly (Robson, 2002).

The study by Lester *et al*. (2012) follows a deductive approach in that using generational theory, they created two hypotheses as described above. These hypotheses were operationalised and tested using quantitative measures and controls (Lester *et al.*, 2012). As such, in order to replicate their original research, this study will also employ a deductive approach. However, there are also several practical advantages which contributed to the decision to replicate the study by Lester *et al*. (2012) First, given the time constraints of this research it was decided that a deductive approach using quantitative data collection would be quicker than engaging in qualitative interviews. Second, inductive research carries a risk that no pattern or discernible theory might be found after data analysis. Finally, deductive research is often treated with more authority which is important as an aim of this study is to challenge the concept of accepted generational stereotypes within the academic and popular literature by proving that differences are largely perceived rather than actual (Easterby-Smith, Thorpe and Jackson, 2015). Despite this, that is not to say that there is no utility in considering an inductive approach in the future to further substantiate perceptual or actual differences which exist between generations. The advantage of an inductive follow-up study would be that it would require a smaller sample size compared to large samples required in quantitative research to ensure generality amongst the population which can be difficult to acquire (Saunders *et al*., 2009).

3.5. Research strategy

The inner layers of the research onion relate to the research strategy. Following the research onion framework, the strategy utilised will be based on the cumulative decisions made regarding the research question, overall focus, research philosophy, and approach considered. Similar to the aforementioned layers of the research onion, there is not a one strategy fits all solution. Instead, when choosing a research strategy, it is important to note that they are not mutually exclusive and that variations exist, which more times than not, are driven by the necessity of the research question and practicalities surrounding it (Saunders *et al*., 2009).

There are many strategies to choose from which include experimental design, surveys, case studies, action research, grounded theory, ethnography, and archival research although the list is not exhaustive (Saunders *et al*., 2009). Lester *et al*. (2012) used a survey design by asking members of various generational cohorts to participate in an online questionnaire. There is however an experimental element to their study design in that the questionnaire can be considered the dependent variable, while the different generational cohorts provide an independent variable. This allowed the use of descriptive multivariate quantitative analysis to test their hypotheses (Lester *et al.*, 2012). This provides a clear example of how research strategies are not mutually exclusive, as in contrast, a field survey strategy could also be utilised to distribute structured written interviews for qualitative analysis (Saunders *et al*., 2009).

This study will follow the original study design laid out by Lester *et al*. (2012), and a survey research strategy is a natural choice following a positivist philosophy and a deductive approach. This is because surveys are a useful tool to gather quantitative data, and quantitative data usually requires a large sample size in order to be representative of a population (Quinlan, 2011). A survey strategy also offers many useful advantages for the purpose of this study, in that they cheap to design, distribute, and can provide a quick return on data, providing more independence to the researcher (Quinlan, 2011; Trochim and Donnelly, 2006).

Despite the advantages, it is essential to consider several limitations of a survey research strategy. There should be a maximisation of the reliability of data, so it is vital to ensure the questionnaire used is well designed with clear and simple statements without much room for ambiguity. Secondly, in order to receive a suitable sample size, it is important not to make the survey too laborious so as not to reduce the overall response rate (Bordens and Abbott, 2011; Quinlan, 2011).

As laid out in the research onion, it is important to consider the choice of research method (Saunders *et al*., 2009). Due to previous justifications argued above, it is clear that this study will use a quantitative method, the same as Lester *et al*. (2012), rather than a qualitative study design. However, it is worth reiterating that there would be value in pursuing a qualitative or mixed research method in the future. A qualitative element could be applied to the current research question as it would allow an interpretivist and inductive approach which could substantiate and illuminate why there may be actual differences between generational cohorts, or the reasons why some differences are being perceived. Such mixed-method approaches are common in business research as they can provide both breadth and depth of the research topic and is not as restrictive as a mono-method approach (Curran and Blackburn, 2001; Cotten, 1999). However, given the limited time available for this study it was decided a qualitative element would not be practical.

Due to the research methodology chosen, and the limited time available, which is commonly found within research design, a cross-sectional study was utilised (Easterby-Smith *et al*., 2015). One of the major criticisms of current generational research is that cross-sectional studies are not a perfect way to study generations as it only provides data from a single point in time and it would be more appropriate to study a generation and any changes in behaviour over an extended period, as a longitudinal study would provide. This is so the compounding effect of age can be removed (Costanza and Finkelstein, 2015). Despite this, a cross-sectional study is more practical in the current context of a typical 16 week dissertation, and it is not entirely without merit, as multiple snapshots in time can add to what has been described as the fossil record,

building evidence over time (Lyons *et al.*, 2015). This study hopes to provide to the fossil record of information available on differences between generations by replicating the original study by Lester *et al*. (2012).

3.6. Quantitative primary data collection

As in line with the original study from Lester *et al*. (2012), quantitative data was collected using an online self-completed survey. The survey was created using the Qualtrics Experience Management platform (Qualtrics, 2020). The survey on average took 10 minutes to complete. The survey contained a short introduction explaining the nature of the research, contact details of the researcher and a consent form.

The survey consisted of seven close-ended questions. The first question related to 'I value,' statements. These consisted of ranking 15 statements relating to various work items based on how much the individual personally valued each. The 15 work items were as follows; 1) teamwork, 2) autonomy, 3) security, 4) professionalism, 5) flexibility, 6) formal authority, 7) technology, 8) face to face communication, 9) e-mail communication, 10) social media, 11) structure at work, 12) involvement, 13) continuous learning, 14) fun at work, and 15) recognition. These work items were chosen by Lester *et al*. (2012) based on previous literature (Anetzberger and Teaster, 2010; Bright, 2010; Simons, 2010; Giancola, 2008). However, as pointed out in the original study, this list is certainly not wholly descriptive of work contexts (Lester *et al.*, 2012). These 15 statements were answered using a Likert-type scale; '1 = No extent, 2 = To some extent, 3 = Below average extent, 4 = Above average extent, 5 = Great extent, and 6 = Very great extent.

The second question then asked individuals to categorise themselves into a generational cohort, based on when they were born. The generational cohorts consisted of; 1) Baby Boomers born between 1946 – 1964, 2) Generation X born between 1965 – 1981, 3) Generation Y born between 1982 – 1996 and, 4) Generation Z born from 1997 onwards. This component of the study deviates from the original research design carried out by Lester *et al*.

(2012), in that they asked participants to state their age. The decision to ask individuals to define themselves into generational cohorts was based on increasing the chances of the survey being accepted and distributed in organisations due to current guidelines surrounding GDPR (Intersoft Consulting, 2016).

Based on the generational cohort an individual self-identified as, the survey then presented three iterations of the original 15 work item Linkert-type scale each consisting of the remaining three generational cohorts. For example, if an individual self-identified as Generation Z, they then would be asked to value how much they think Generation Y, X, and Baby Boomers value the same 15 work items (Lester *et al.*, 2012).

The remaining two questions were demographic, the first asked individuals their gender; female, male or other. The second asked their level of education attained; completed secondary level education, attended some college/third level education, 2-year associate degree or diploma, bachelor's degree, graduate degree, or if the above were non-applicable. Some of the above wording was changed from the original study performed by Lester *et al*. (2012) to ensure it was relevant to individuals from an international perspective instead of a wholly American definition. Unlike the original study, the individual's race was not asked, again to ensure the study would be accepted and distributed more freely by organisations. Finally, the addition of, 'other,' was added to the question regarding gender to increase inclusivity (Lester *et al.*, 2012). Despite the above differences, it is felt that the above quantitative data collection method is similar enough to the original study by Lester *et al*. (2012) to allow for replication.

Aside from the above changes, including the addition of Generation Z and the removal of the Traditionalist generation cohort to better reflect the contemporary work environment, there was not much flexibility to consider alternative designs as this study hoped to replicate the original study (Lester *et al.*, 2012). However, the original study from 2012 acts somewhat as a pilot study meaning there is a degree of confidence in the reliability and validity of

the data and it's resultant suitability to answer the research question, which many questionnaires can struggle with (Quinlan, 2011; Albuam, 1993).

Using a questionnaire is beneficial for several reasons, in that it is a low-cost way to widely distribute to a large sample and usually internet questionnaires have a quick return rate (Quinlan, 2011; Saunders *et al*., 2009). Second to that, interviewer bias is low, meaning that respondents are more likely to respond truthfully (Dillman, 2007). The Likert-type scale is appropriate as they are commonly used to measure attitudes of respondents (Bordens and Abbott, 2011).

It is important to ensure questionnaires are easy to follow, and simple to use so as to increase the overall response rate (Saunders *et al*., 2009). As such, demographic questions are usually asked at the end of the survey (Millar and Dillman, 2011). However, this study deviated from the original study by Lester *et al*. (2012) by asking individuals to self-categorise themselves into a generational cohort for their second question instead of including it with the rest of the demographic questions. The reason for this was to improve the flow of the survey, so individuals identifying as Generation Z would not then be asked to answer how much they thought individuals from Generation Z valued the 15 work items, which would have been a duplication of the, 'I value,' question, causing confusion and potentially reducing the response rate. Also, there is evidence to the contrary that demographic questions placed near the beginning of a survey improve overall response rate (Teclaw, Price and Osatuke, 2012). Nevertheless, indicating generations as an important variable early in the survey may open the respondents up to bias and should be considered in the overall limitations.

3.7. Sample

In research, it is generally not possible to examine an entire population due to feasibility and cost, so instead, subpopulations are defined based on the requirements of the research question. From these subpopulations, a sample of individuals can be examined allowing the researcher to make generalisations about the entire population (Bordens and Abbott, 2011). Such generalisations are based on statistical probability, and to lower the likelihood of error, randomised samples are preferred (Saunders *et al*., 2009). However, as proven by large amounts of psychology and social science research, randomised probability samples are not always necessary, as this research does not usually generalise a population but instead acts indirectly through theories or models (Stanovich, 2013).

Despite the advantages of collecting data through randomised probability sampling, this study has used non-probability convenience sampling, where the probability of each selection from the overall population is not known meaning generalisations of the entire population cannot be made with the same degree of confidence (Saunders *et al*., 2009). Non-probability convenience sampling was used so that a sufficient sample size could be collected in a short period. Secondly, the COVID-19 pandemic coincided with the research causing obstacles when reaching out to prospective companies to participate.

The survey was distributed via an anonymous URL to friends and family of the researcher. Snowball sampling was recommended through secondary sharing of the link from one participant to another (Saunders *et al*., 2009). Bachelor's and master's class groups from the National College of Ireland were also asked to volunteer totalling 1225 students. To improve the overall ability of the sample to represent the contemporary workforce, the survey was distributed across LinkedIn where it was viewed by 388 individuals. More importantly, it was shared with 88 employees of the small Irish based company, 3D4Medical. The multi-national company, Elsevier, was also asked to distribute the survey to two departments, however, in the middle of data collection, Elsevier responded to say that this would not be possible. The survey generated

a total of 312 responses, of which, 249 individuals completed the survey in full. Due to the use of convenience and snowball sampling, an accurate response rate cannot be ascertained, however, it is below 18%.

Generational research is often criticised for being geographically weighted with a focus on America which is one limitation of the original study, which sampled 466 employees from a Midwestern organisation in the United States. Instead, the convenience sampling method employed by this study allowed for a broader sample of individuals geographically (America, Ireland, UK, and Europe), and across multiple industries.

3.8. Analysing quantitative data

Data collected from the survey using the Qualtrics XM platform was exported into an excel spreadsheet and coded to create a data matrix (Qualtrics, 2020). The resultant numerical values from coding the responses on the Linkert-type scale is a form of ordinal data analysis (Saunders *et al*., 2009). After coding, the data was imported into SPSS for statistical analysis. As the questionnaire was not previously validated, it was decided it would be good practice to perform exploratory factor analysis to examine if the 15-work items would be categorised similar to the results of the original study. (Lester *et al.*, 2012). The 15-items were tested using principal component analysis with a promax rotation, in order to achieve this, eigenvalues and scree plot analysis were utilised. Similar, to measure sampling adequacy, Bartlett test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were used (Ul Hadia, Abdullah and Sentosa, 2016). Demographic information, gender and educational level were used as control variables (Lester *et al.*, 2012).

The results were analysed using MANOVA multivariate analysis where the dependant variable consisted of the responses to the 15-work item survey, whereas demographics and generational cohorts were used as control variables. Multivariate analysis was used because there was more than one dependant variable present (Jackson, 2012). Following the original study, that variables measured were insensitive to which component was larger, absolute

difference scores were used to represent mean difference scores (Lester *et al.*, 2012; Johns, 1981). The original study by Lester *et al*. (2012), did not indicate the use of post-hoc control for Type 1 errors for their multiple comparisons. As such it was decided it would be good practice to apply Tukey post-hoc analysis to control for Type I error. This was based on the fact that Tukey has greater statistical power when testing a large number of means (Field, 2018).

3.9. Ethical issues

Research ethics relate to whether or not the behaviour of the researcher is one of non-maleficence, where no harm is caused to those involved in the research process or can be affected by it (Cooper and Schindler, 2014). As such, the research design was based on a deontological view, in that the ends do not justify the means, as such the code of ethics from the National College of Ireland were followed (National College of Ireland, 2019; Saunders *et al*., 2009).

The survey was created with an introductory page which explained to the subject, the purpose and content of the research and survey. Subjects were informed that their participation was voluntary. This was followed by a consent form, which used a force-answer question which meant that if the subject did not consent to the survey, the survey would end automatically. The survey itself was distributed using an anonymous URL generated from the Qualtrics XM platform which ensured that no identifying information about the subject would be collected, such as names, emails, or even IP addresses (Qualtrics, 2020).

Measures were taken in the research design not to offend, embarrass or harm the research population. When asking the subject's gender, the option of, 'other,' was included to ensure inclusivity. Second to that, the question relating to the subjects attained level of education included an option for, 'not applicable.'

Beyond the individual respondents to the survey, ethical considerations needed to be considered when working with potential organisations. In January 2020, pre survey contact was made with Elsevier and 3D4Medical to request formal consent to distribute the survey to employees (Robson, 2002; Jankowicz,

1991). As per the company's request, questions regarding subjects ages and race were altered or removed respectively from the survey. When the survey was ready to distribute to 3D4Medical, the survey was shown to HR and legal before approval was given. Approval was not guaranteed which partly contributed to the decision to carry out convenience sampling.

3.10. Limitations to research

The described research methodology and method suffered from several limitations which must be taken into consideration when viewing the results of this study. Similar to the original study by Lester *et al*. (2012), the 15-work items used to judge the attitudes of generational cohorts is not an exhaustive list. It is recommended that future research considers expanding the list to describe a more comprehensive work environment (Lester *et al.*, 2012).

Generational cohort theory has been criticised for being heavily westernised, and this can be seen in the original study, which sampled employees from one organisation in one region (Lester *et al.*, 2012). This study, however, used convenience sampling which gathered data on individuals across industries and geographical regions. However, such demographic information was not collected. Similar to that, demographic data on race was not collected to ensure approval of the study by organisations. As such, it is not possible to infer if the sample was wholly representative of a contemporary workforce.

The most significant limitation regarding non-probability convenience sampling is that the results cannot be taken as a representation of the larger population as valid inferences cannot be concluded (Saunders *et al*., 2009). It is debatable as to what constitutes a large enough sample, however as this study resulted in 249 responses, a case could be made that it is not large enough as a likelihood of error is compounded with the use of non-probability convenience sampling (Saunders *et al*., 2009). There also exist large differences in the cell size between generational cohorts, with only 22 respondents identifying as Baby Boomers whereas 137 identified as Generation Y. Such a difference between cohorts has the potential to skew results. Such a large number of

respondents from Generation Y and so few respondents from the Baby Boomer generation could be indicative of the primary researchers network and contacts, or it could be indicative of the fact Millennials now make up the majority of the contemporary workforce (Rab-Kettler, 2019). Again, due to convenience sampling, it is possible that some of the respondents, especially those sampled from the National College of Ireland, may not have had a full time job and as such there is a potential for uninformed responses affecting the reliability of this study (Dillman, 2007).

It has been argued that demographic data being presented at the beginning of the study, instead of the end of the study has the potential to cause bias (Saunders *et al*., 2009). However, because evidence to the contrary also exists, it was decided to position the question regarding generational cohort demographics early in the questionnaire so as the flow of the survey would exclude duplicate questions and improve the overall response rate (Teclaw *et al*., 2012).

Finally, this study is limited in that it is cross-temporal, which has been pointed out in the literature as not being sufficient enough in removing the effects of age or period when examining outcomes of interest regarding generational research (Costanza and Finkelstein, 2015). It is hoped however that this study can be considered, similar to the original study by Lester *et al*. (2012), as part of building an evidence base regarding differences between generations (Lyons *et al.*, 2015; Lester *et al.*, 2012).

It is recommended that future research endeavours to use randomised probability sampling from multiple organisations situated in different geographical regions to improve validity and reliability. It is also recommended that future research considers expanding on the original 15-work item values to collect a more comprehensive view of differences between generations in the contemporary workplace.

Chapter 4. Results

The following section will detail the results of the analyses carried out on the 249 completed survey responses. The survey demographics will be presented, followed by the presentation of the exploratory factor analysis, a MANOVA analysis with Tukey post-hoc procedure of the, 'I value,' statement. Finally presented are the results of repeated MANOVA analyses with Tukey post-hoc procedure applied for the 'generations value,' statements consisting of the Baby Boomer generation, Generation X, Y and Z. The results of the MANOVA analyses will be presented in tables showing the pairwise comparisons of absolute values similar to the original study by Lester *et al*. (2012).

4.0. Demographics

Of the 249 respondents who completed the survey, 55% were from Generation Y, 24.1% from Generation X, 12% from Generation Z, and 8.8% from the Baby Boomer generation (figure 2). As mentioned previously, the difference in cohort size between generations poses a potential limitation. 57.4% of the respondents were female with 41.8% male and 0.8% identifying as other (figure 3).

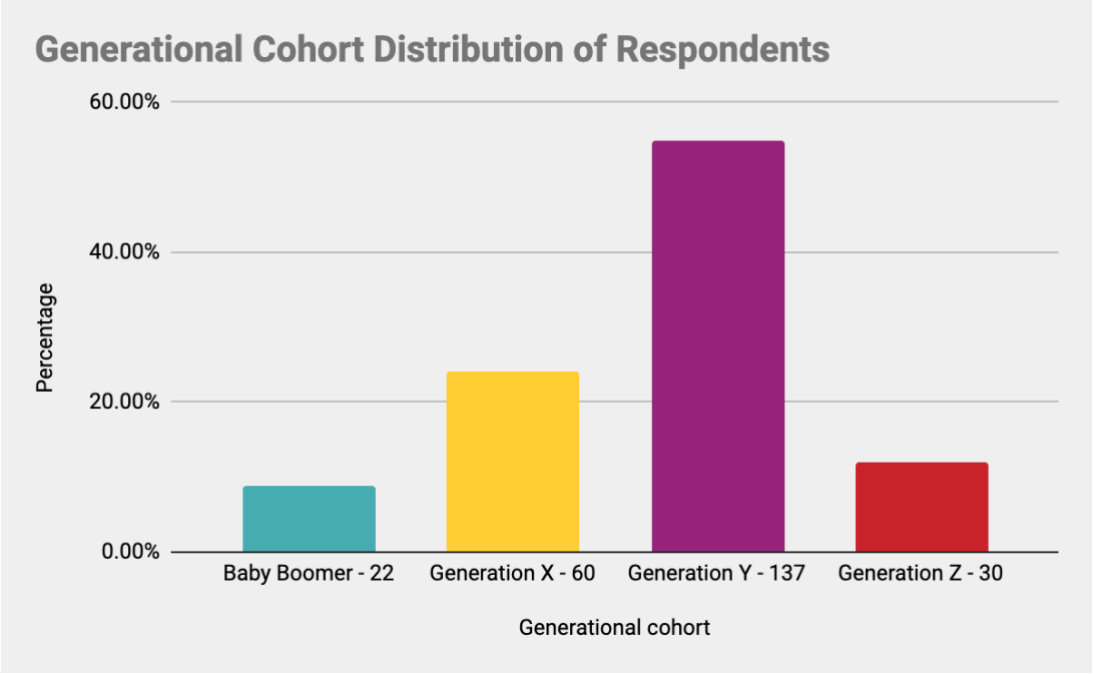

Figure 2: *Generational Cohort Distribution of Respondents.*

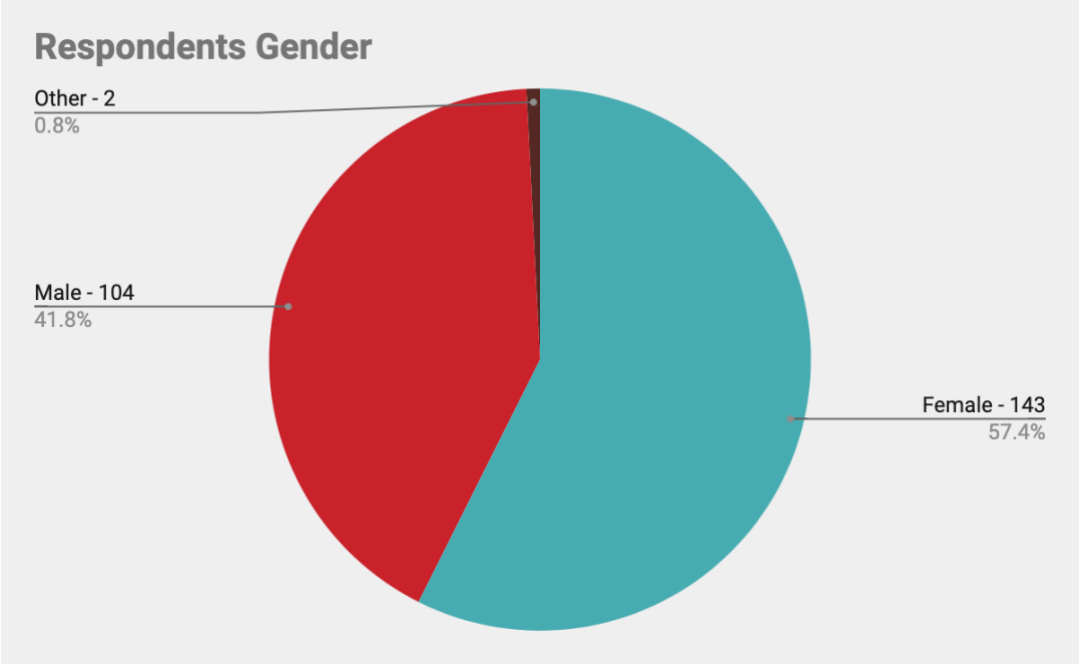

Figure 3*: Respondents Gender.*

In relation to educational level attained, 41.8% had attained a graduate degree, 32.1% attained a bachelor's degree, 15.3% attended some college/third level education, 6.8% completed secondary level education, 3.2% received a two-year associate's degree or a diploma, and finally 0.8% found the above options non-applicable (figure 4).

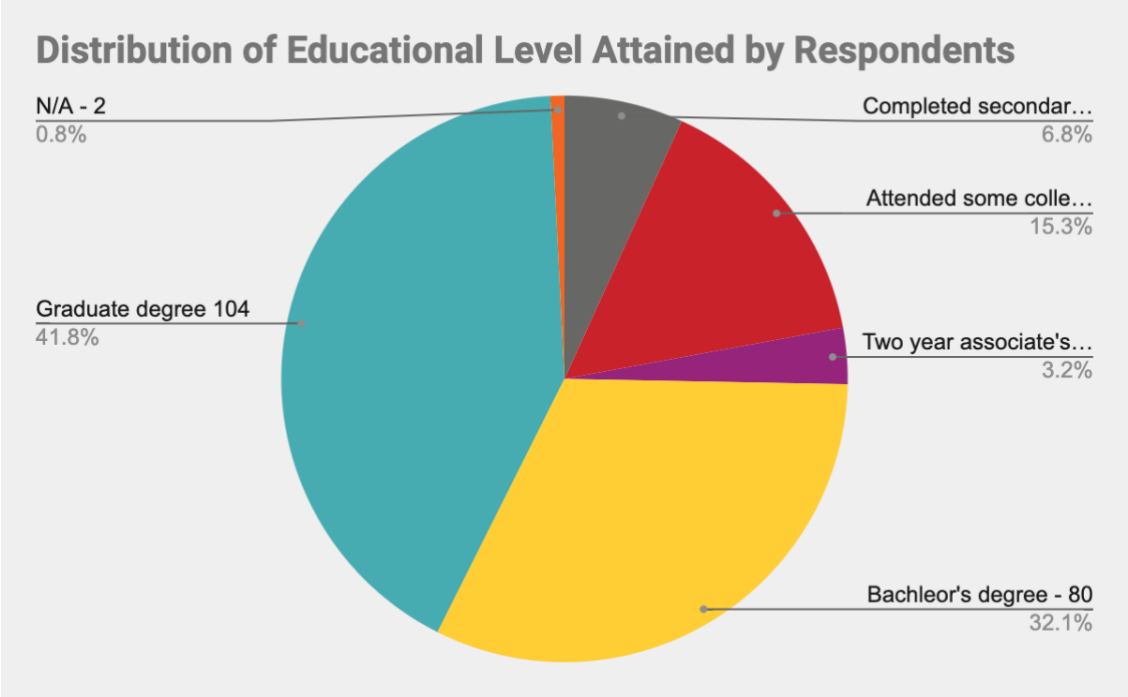

***Figure 4**: Distribution of Educational Level Attained by Respondents.*

4.1. Exploratory factor analysis

The Bartlett test of sphericity revealed a p value of < 0.000 indicating that the assumptions of sphericity have been met, and the Kaiser-Meyer-Olkin measure of sampling adequacy was .816 which is categorised as good and that factor analysis will reveal reliable and distinct factors (Field, 2018). Eigenvalues and the screeplot generated from the principal factor analysis showed four factors accounting for 52.362% of accumulated variance. These factors are shown in Table 1.

Table 1: *'I Value' Measure Groupings from Exploratory Factor Analysis.*

Typical Job Structure	Growth & Relatedness	Freedom	Communication
Formal Authority	Fun at Work	Autonomy	Social Media
Face to Face Communication	Continuous Learning	Technology	E-mail Communication
Structure at Work	Recognition	Flexibility	
Teamwork	Involvement		
Security			
Professionalism			

4.2. Multivariate analysis of 'I Value' statements

Hypothesis 1 - Actual generational differences exist regarding the extent to which technology, face to face communication, e-mail communication, social media, formal authority, fun at work, continuous learning, and professionalism are valued.

The first hypothesis was tested using MANOVA to assess whether or not actual differences existed between generations in relation to, 'I value,' statements. Control variables gender and level of education attained were utilised for this analysis. No relationship was found between the 15, 'I value,' statements and the level of education attained by respondents. However, gender was significantly related to both security and e-mail communication. In both cases, females valued these work items more than their male counterparts, as seen in Table 2.

Table 2: *Differences between Genders of 'I Value' Statements.*

Value	Male	Female	Mean Difference	P Value	Interpretation
Security	4.72	5.17	0.45	.001	Females report valuing item more than males report valuing it
E-mail Communication	4.00	4.38	0.38	.023	Females report valuing item more than males report valuing it

Analysing pairwise comparisons revealed 4 of the 8 work items stated in the first hypothesis had significant differences between generations, as per Table 3. Baby Boomers were found to value professionalism more than Generation Z. Generation Z was found to value fun at work over Generation X. Generation Y valued continuous learning over the Baby Boomers. Secondly, Generation Y valued technology more than compared to Generation Z. Outside of the initially listed work items in the first hypothesis, Generation X valued autonomy more than Generation Z.

Significant differences were not found for work items, face to face communication, e-mail communication, social media, and formal authority. As such, the first hypothesis is rejected as only half of the work items listed were found to have actual differences between the generational cohorts.

***Table 3**: Hypothesis 1: Actual Differences Between Generations on "I Value" Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Autonomy	4.37		5.03		0.67	.019	Generation X report valuing item more than Generation Z report valuing it
Professionalism	4.77			5.50	0.73	.030	Baby Boomers report valuing item more than Generation Z report valuing it
Technology	4.63	5.15			0.51	.032	Generation Y report valuing item more than Generation Z report valuing it
Continuous Learning		5.36		4.82	0.55	.040	Generation Y report valuing item more than Baby Boomers report valuing it
Fun at work	5.23		4.62		0.62	.028	Generation Z report valuing item more than Generation X report valuing it

4.3. Multivariate analysis of 'Generations Value' statements

Hypothesis 2 - There are more perceived value differences between generations than actual value differences.

The second hypothesis tested whether or not perceived differences existed between the generational cohorts, again using MANOVA and control variables. The first test examined whether perceived differences existed in relation to the Baby Boomer generation, the next examined Generation X, followed by a third examining Generation Y, and finally perceived differences in relation to Generation Z were examined.

The first pairwise comparison, as seen in Tables 4, concerning Baby Boomers revealed that significant perceived differences existed for 9 of the 15 work items listed, these included; teamwork, flexibility, formal authority, technology, e-mail communication, social media, involvement, continuous learning, and fun at work.

It was found that Baby Boomers valued flexibility, technology, involvement, continuous learning, and fun at work more than Generation X, Y or Z believed they did. Second to that, Baby Boomers valued teamwork, e-mail communication, and social media more than either Generation Z or Y believed they did.

There were also significant differences found in cases where generations differed in their perception of how Baby Boomers valued the above items. Both Generation Z and Y believed Baby Boomers valued technology, social media, and fun at work less than Generation X believed Baby Boomers valued them. In the case of e-mail communication, Generation Z, compared to Generation X, believed Baby Boomers valued it less.

All three generations believed Baby Boomers valued formal authority more than Baby Boomers actually valued it, with Generation Y believing Baby Boomers valued it more than Generation X believed they did.

***Table 4. 1**: Pairwise Comparison Between Generation and ' What Baby Boomers Value' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Teamwork	3.67			**5.09**	1.42	.001	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		3.93		**5.09**	1.16	.001	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
Flexibility	3.17			**5.05**	1.88	.000	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		3.33		**5.05**	1.72	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
			3.75	**5.05**	1.30	.001	Generation X do not think Baby Boomers value item as much as Baby Boomers think they value it.
Formal Authority	5.20			**3.77**	1.43	.000	Generation Z think Baby Boomers value item more than Baby Boomers think they value it.
		5.31		**3.77**	1.54	.000	Generation Y think Baby Boomers value item more than Baby Boomers think they value it.
			4.85	**3.77**	1.08	.000	Generation X think Baby Boomers value item more than Baby Boomers think they value it.
		5.31	4.85		0.46	.027	Generation Y think Baby Boomers value item more than Generation X think Baby Boomers value it.

***Table 4. 2:** Pairwise Comparison Between Generation and ' What Baby Boomers Value' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Technology	2.30			**4.64**	2.34	.000	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		2.61		**4.64**	2.03	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
			3.37	**4.64**	1.27	.000	Generation X do not think Baby Boomers value item as much as Baby Boomers think they value it.
	2.30		3.37		1.07	.000	Generation Z think Baby Boomers value item less than Generation X think Baby Boomers value it.
		2.61	3.37		0.76	.000	Generation Y think Baby Boomers value item less than Generation X think Baby Boomers value it.
Email - Communication	2.83			**4.09**	1.26	.002	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		3.26		**4.09**	0.84	.016	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
	2.83		3.58		0.75	.031	Generation Z think Baby Boomers value item less than Generation X think Baby Boomers value it.
Social Media	1.80			**3.00**	1.20	.001	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		1.90		**3.00**	1.10	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
	1.80		2.68		0.88	.003	Generation Z think Baby Boomers value item less than Generation X think Baby Boomers value it.
		1.90	2.68		0.79	.000	Generation Y think Baby Boomers value item less than Generation X think Baby Boomers value it.

***Table 4. 3**: Pairwise Comparison Between Generation and ' What Baby Boomers Value' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Involvement	4.37			**5.36**	1.00	.005	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		4.36		**5.36**	1.00	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
			4.62	**5.36**	0.75	.026	Generation X do not think Baby Boomers value item as much as Baby Boomers think they value it.
Continuous Learning	2.80			**4.82**	2.02	.000	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		3.31		**4.82**	1.51	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
			3.45	**4.82**	1.37	.000	Generation X do not think Baby Boomers value item as much as Baby Boomers think they value it.
Fun at Work	2.77			**4.64**	1.87	.000	Generation Z do not think Baby Boomers value item as much as Baby Boomers think they value it.
		3.01		**4.64**	1.62	.000	Generation Y do not think Baby Boomers value item as much as Baby Boomers think they value it.
			3.52	**4.64**	1.12	.001	Generation X do not think Baby Boomers value item as much as Baby Boomers think they value it.
	2.77		3.52		0.75	.022	Generation Z think Baby Boomers value item less than Generation X think Baby Boomers value it.
		3.01	3.52		0.50	.029	Generation Y think Baby Boomers value item less than Generation X think Baby Boomers value it.

In the second pairwise comparison, 12 work items out of the original 15 were found to be perceived significantly different between Generation Z, Y and Baby Boomers in relation to how Generation X actually valued them which can be seen in Table 5.

Generation X valued teamwork, flexibility, technology, social media, involvement, continuous learning, and fun at work more than either Generation Z or Y believed they did. They also valued autonomy and e-mail communications more than Generation Y or Z believed they did respectively.

In three instances, both Generation Z and Y believed Generation X valued fun at work, social media, and flexibility less than Baby Boomers believed they did. This was also found again in the case of technology; however, a significant difference was also found where Generation Z believed Generation X valued it even less than Generation Y believed they did. Generation Z and Y also differed on how they believed Generation X valued e-mail communication, with Generation Z believing Generation X valued it less. Beyond that, a difference was found between only Generation Z and Baby Boomers with respect to how each believed Generation X valued teamwork and continuous learning, with Generation Z believing Generation X placed less value in it than Baby Boomers believed.

Generation X actually valued formal authority less than the three other generations believed they did. Generation X valued structure at work less than either Generation Z or Y believed, meanwhile they valued security less than either Generation Y or Baby Boomers believed.

***Table 5. 1**: Pairwise Comparisons Between Generation and 'What Generation X Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Teamwork	3.63		**5.25**		1.62	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		4.32	**5.25**		0.93	.000	Generation Y do not think Generation X value item as much as Generation X think they value it.
	3.63			4.68	1.05	.006	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
Autonomy		4.60	**5.03**		0.77	.011	Generation Y do not think Generation X value item as much as Generation X think they value it.
Security		5.48	**4.90**		0.58	.000	Generation Y think Generation X value item more than Generation X think they value it.
			4.90	5.50	0.60	.042	Baby Boomers think Generation X value item more than Generation X think they value it.
Flexibility	3.73		**5.10**		1.37	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		3.78	**5.10**		1.32	.001	Generation Y do not think Generation X value item as much as Generation X think they value it.
	3.73			4.82	1.08	.005	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
		3.78		4.82	1.04	.001	Generation Y think Generation X value item less than Baby Boomers think Generation X value it.

***Table 5. 2:** Pairwise Comparisons Between Generation and 'What Generation X Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Formal Authority	5.10		**3.78**		1.32	.000	Generation Z think Generation X value item more than Generation X think they value it.
		5.18	**3.78**		1.39	.000	Generation Y think Generation X value item more than Generation X think they value it.
			3.78	4.82	1.03	.000	Baby Boomers think Generation X value item more than Generation X think they value it.
Technology	2.87		**4.90**		2.03	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		3.61	**4.90**		1.29	.000	Generation Y do not think Generation X value item as much as Generation X think they value it.
	2.87	3.61			0.75	.001	Generation Z think Generation X value item less than Generation Y think Generation X value it.
	2.87			4.64	1.77	.000	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
		3.61		4.64	1.02	.000	Generation Y think Generation X value item less than Baby Boomers think Generation X value it.
Email - Communication	3.47		**4.20**		0.73	.020	Generation Z do not think Generation X value item as much as Generation X think they value it.
	3.47	4.45			0.99	.000	Generation Z think Generation X value item less than Generation Y think Generation X value it.
	3.47			4.64	1.17	.001	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.

***Table 5. 3**: Pairwise Comparisons Between Generation and 'What Generation X Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Social Media	2.30		**3.65**		1.35	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		2.61	**3.65**		1.04	.000	Generation Y do not think Generation X value item as much as Generation X think they value it.
	2.30			3.55	1.25	.000	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
		2.61		3.55	0.94	.002	Generation Y think Generation X value item less than Baby Boomers think Generation X value it.
Structure at Work	5.00		**4.42**		0.58	.014	Generation Z think Generation X value item more than Generation X think they value it.
		5.20	**4.42**		0.78	.000	Generation Y think Generation X value item more than Generation X think they value it.
Involvement	4.53		**5.08**		0.55	.035	Generation Z do not think Generation X value item as much as Generation X think they value it.
		4.66	**5.08**		0.42	.016	Generation Y do not think Generation X value item as much as Generation X think they value it.

***Table 5. 4**: Pairwise Comparisons Between Generation and 'What Generation X Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Continuous Learning	3.37		**5.05**		1.68	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		3.90	**5.05**		1.15	.000	Generation Y do not think Generation X value item as much as Generation X think they value it.
	3.37			4.36	1.00	.008	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
Fun at Work	3.17		**4.62**		1.45	.000	Generation Z do not think Generation X value item as much as Generation X think they value it.
		3.42	**4.62**		1.19	.000	Generation Y do not think Generation X value item as much as Generation X think they value it.
	3.17			4.36	1.06	.004	Generation Z think Generation X value item less than Baby Boomers think Generation X value it.
		3.42		4.36	0.80	.009	Generation Y think Generation X value item less than Baby Boomers think Generation X value it.

10 work items were found to hold significant differences in relation to how Generation Z, X, and Baby Boomers perceived Generation Y, Table 6. Generation Y were found to value teamwork, flexibility, and continuous learning more than all three other generations perceived they did. They also valued fun at work more than Generations Z and X believed they did. Generation Y valued technology and involvement more than Generation Z and X perceived, respectively. They also valued autonomy and e-mail communication more than Baby Boomers believed they did. In relation to technology, Generation Z believed Generation Y valued it less, than Baby Boomers believed Generation Y valued it.

On the other hand, Generation Y valued formal authority less than Generation Z or X believed they did, with Generation Z believing Generation Y valued it more than either Generation X or Baby Boomers believed. Generation Y also valued social media less than Generation X and Baby Boomers believed they did with Baby Boomers believing Generation Y valued it more than either Generation Z or X believed they did.

***Table 6. 1**: Pairwise Comparisons Between Generation and 'What Generation Y Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Teamwork	4.47	**5.13**			0.66	.001	Generation Z do not think Generation Y value item as much as Generation Y think they value it.
		5.13	4.70		0.43	.006	Generation X do not think Generation Y value item as much as Generation Y think they value it.
		5.13		4.32	0.81	.000	Baby Boomers do not think Generation Y value item as much as Generation Y think they value it.
Autonomy		**4.84**		4.09	0.75	.006	Baby Boomers do not think Generation Y value item as much as Generation Y think they value it.
Flexibility	4.63	**5.15**			0.51	.034	Generation Z do not think Generation Y value item as much as Generation Y think they value it.
		5.15	4.67		0.48	.006	Generation X do not think Generation Y value item as much as Generation Y think they value it.
		5.15		4.59	0.56	.049	Baby Boomers do not think Generation Y value item as much as Generation Y think they value it.

***Table 6. 2**: Pairwise Comparisons Between Generation and 'What Generation Y Values' Perception Items*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Formal Authority	5.10	**3.66**			1.44	.000	Generation Z think Generation Y value item more than Generation Y think they value it.
		3.66	4.18		0.53	.012	Generation X think Generation Y value item more than Generation Y think they value it.
	5.10		4.18		0.92	.001	Generation Z think Generation Y value item more than Generation X think Generation Y value it.
	5.10			3.82	1.28	.000	Generation Z think Generation Y value item more than Baby Boomers think Generation Y value it.
Technology	4.37	**5.15**			0.78	.001	Generation Z do not think Generation Y value item as much as Generation Y think they value it.
	4.37			5.41	1.04	.001	Generation Z think Generation Y value item less than Baby Boomers think Generation Y value it.
Email - Communication		**4.51**		4.27	1.05	.000	Baby Boomers do not think Generation Y value item as much as Generation Y think they value it.

***Table 6. 3**: Pairwise Comparisons Between Generation and 'What Generation Y Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Social media		**3.38**	4.48		1.10	.000	Generation X think Generation Y value item more than Generation Y think they value it.
		3.38		5.36	1.98	.000	Baby Boomers think Generation Y value item more than Generation Y think they value it.
	3.83			5.36	1.53	.000	Generation Z think Generation Y value item less than Baby Boomers think Generation Y value it.
			4.48	5.36	0.88	.031	Generation X think Generation Y value item less than Baby Boomers think Generation Y value it.
Involvement		**4.96**	4.60		0.38	.500	Generation X do not think Generation Y value item as much as Generation Y think they value it.
Continuous Learning	4.40	**5.36**			0.96	.000	Generation Z do not think Generation Y value item as much as Generation Y think they value it.
		5.36	4.43		0.93	.000	Generation X do not think Generation Y value item as much as Generation Y think they value it.
		5.36		4.45	0.91	.000	Baby Boomers do not think Generation Y value item as much as Generation Y think they value it.
Fun at Work	4.33	**4.94**			0.61	.016	Generation Z do not think Generation Y value item as much as Generation Y think they value it.
		4.94	4.53		0.41	.460	Generation X do not think Generation Y value item as much as Generation Y think they value it.

In the final pairwise comparison, perceptions on how Generation Z valued the listed work items were examined as shown in Table 7. Out of the 15 work items, significant differences were found to exist for 9. Generation Z was found to value security, professionalism, formal authority, face to face communication, structure at work, and involvement more than the three other generations, Y, X, and Baby Boomers perceived they did. Generation Z valued teamwork more than Generation X and Baby Boomers perceived they did. Generation Y perceived Generation Z to value teamwork and security more than Baby Boomers believed Generation Z valued them.

Generation Z valued both technology and social media less than what the remaining Generations, Y, X, and Baby Boomers believed they did. In a unique case, a significant difference was found between how Generation Y perceived Generation Z to value flexibility and recognition than compared to Baby Boomers, despite no significant differences existing in relation to Generation Z themselves. As such, both of these were discounted as they did not contain a significant difference with Generation Z's, 'I value,' ratings.

***Table 7. 1**: Pairwise Comparisons Between Generation and 'What Generation Z Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Teamwork	**5.00**		4.30		0.70	.025	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	5.00			3.77	1.23	.001	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.
		4.45		3.77	0.68	.039	Generation Y think Generation Z value item more than Baby Boomers think Generation Z value it.
Security	**5.07**	3.96			1.10	.000	Generation Y do not think Generation Z value item as much as Generation Z think they value it.
	5.07		3.45		1.62	.000	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	5.07			3.45	1.61	.000	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.
		3.96	3.45		0.51	.040	Generation Y think Generation Z value item more than Generation Y think Generation Z value it.
Professionalism	**4.77**	3.61			1.16	.000	Generation Y do not think Generation Z value item as much as Generation Z think they value it.
	4.77		3.53		1.23	.000	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	4.77			3.36	1.40	.000	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.

***Table 7. 2**: Pairwise Comparisons Between Generation and 'What Generation Z Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Flexibility		5.12		4.45	0.66	.048	Generation Y think Generation Z value item more than Baby Boomers think Generation Z value it.
Formal Authority	**3.97**	3.11			0.86	.003	Generation Y do not think Generation Z value item as much as Generation Z think they value it.
	3.97		2.90		1.07	.001	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	3.97			2.82	1.15	.005	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.
Technology	**4.63**	5.58			0.95	.000	Generation Y think Generation Z value item more than Generation Z think they value it.
	4.63		5.62		0.98	.000	Generation X think Generation Z value item more than Generation Z think they value it.
	4.63			5.55	0.91	.000	Baby Boomers think Generation Z value item more than Generation Z think they value it.
Face to Face Communication	**5.07**	3.68			1.39	.000	Generation Y do not think Generation Z value item as much as Generation Z think they value it.
	5.07		3.55		1.52	.000	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	5.07			3.55	1.52	.000	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.

***Table 7. 3**: Pairwise Comparisons Between Generation and 'What Generation Z Values' Perception Items.*

Value	Generation Z	Generation Y	Generation X	Baby Boomers	Mean Difference	P Value	Interpretation
Social Media	**3.87**	5.53			1.66	.000	Generation Y think Generation Z value item more than Generation Z think they value it.
	3.87		5.50		1.63	.000	Generation X think Generation Z value item more than Generation Z think they value it.
	3.87			5.55	1.68	.000	Baby Boomers think Generation Z value item more than Generation Z think they value it.
Structure at Work	**4.70**	3.72			0.98	.000	Generation Y do not think Generation Z value item as much as Generation Z think they value it.
	4.70		3.40		1.30	.000	Generation X do not think Generation Z value item as much as Generation Z think they value it.
	4.70			3.73	0.97	.011	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.
Involvement	**5.13**			3.95	1.18	.000	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.
		4.68		3.95	0.72	.014	Generation Y think Generation Z value item more than Baby Boomers think Generation Z value it.
			4.65	3.95	0.70	.039	Generation X think Generation Z value item more than Baby Boomers think Generation Z value it.
Recognition		5.34		4.41	0.57	.047	Baby Boomers do not think Generation Z value item as much as Generation Z think they value it.

In total, 60 value statements relating to work items were analysed. Of which 5 actual value differences existed, whereas in relation to perceived differences, 40 perceived differences were identified. The only work item which was not found to hold a significant difference in how each of the generational cohorts perceived one another was recognition. Given the above results, the second hypothesis is strongly accepted.

Chapter 5. Discussion

5.0. Exploratory factor analysis

This study replicated the original study by Lester *et al*. (2012), to show that actual differences exist between how generational cohorts' value certain work items; technology, face to face communication, e-mail communication, social media, formal authority, fun at work, continuous learning, and professionalism – as per the first hypothesis (Lester *et al.*, 2012). Secondly, it hoped to prove that perceived differences outnumber actual differences found between generational cohorts and that this is also true when Generation Z are considered in the analysis. Before the above results can be discussed, it is important first to consider the category groupings revealed from the exploratory factor analysis as this will provide structure to the discussion.

In the original study by Lester *et al*. (2012), exploratory factor analysis revealed four distinct factor categories, engagement, nature of job, technology, and structure (figure 5). Replication of exploratory factor analysis in this study also revealed four distinct categories, however, they varied in contents as compared to the original study. In order to make sense of the found factors, different descriptors were used. Typical job structure was used to describe the grouping of; formal authority, face to face communication, structure at work, teamwork, security, and professionalism. Face to face communication may be considered distinct to other forms of communication as person-to-person interaction is part of many job structures. The second factor included fun at work, continuous learning, recognition, and involvement which could be arguably related to an individual's higher level needs such as self-actualisation, self-esteem, and social belonging as purported by Maslow's Hierarchy of Needs (Maslow, 1943). For this study, these are defined as, 'Growth & Relatedness,' as per Alderfer's ERG theory of motivation (Alderfer, 1969).

Autonomy, technology and flexibility were defined under the descriptor, 'freedom,' as each relates to an individual's freedom in a work context. Technology can be considered under this category based on the fact that technology infrastructure plays a significant role in giving individuals the freedom to work from home or pursue broader career opportunities, as made

apparent during the COVID-19 pandemic (Kitchen, 2020). Finally, e-mail communication and social media can be considered part of modern-day communication within the workplace (Klapalová and Symonová, 2015).

Engagement	Nature of Job	Technology	Structure
Teamwork	Autonomy	Technology	Formal authority
Face-to-face communication	Security	E-mail communication	Structure
Participation	Professional	Social media	
Continuous learning	Flexible		
Fun at work			
Recognition			

***Figure 5**: 'I Value' Measure Groupings from Original Study (Lester et al., 2012).*

5.1. Hypothesis one: Actual differences

The first hypothesis, although rejected, assumed that actual differences would be found between work items; technology, face to face communication, e-mail communication, social media, formal authority, fun-at-work, continuous learning and professionalism. Only half of the above listed work items were found to be have actual differences between generational cohorts. The work items were technology, continuous learning, fun at work and, professionalism. Actual differences were also found for the work item autonomy which was not included in the initial hypothesis.

The original study by Lester *et al*. (2012) found that actual differences also existed between generations in relation to social media and e-mail communication, however such differences were not reported in this study. As mentioned previously, digital forms of communication have become ubiquitous in the modern workplace and due to the eight years between both studies, such forms of communication could have become normalised amongst all generations (Klapalová and Symonová, 2015).

The previous study showed that Baby Boomers valued professionalism more than Generation X, however, the above results show that Baby Boomers now value professionalism over Generation Z. Similar to that, instead of Generation Y valuing fun at work more than Generation X, the results show that

it is now Generation Z, not Generation Y, who value it more than Generation X. Perhaps this result is better explained using the Lifespan Developmental Perspective framework wherein attitudes and behaviours change over time rather than generational cohort theory (Rudolph *et al*., 2018). Perhaps both Generation X and Y have matured over the last eight years enough to value professionalism and fun at work, respectively, similar to older generations. Instead, the youngest generation entering the workforce differ in how much they value each work item based on their age and level of maturity.

Contrary to this, one result between the original study by Lester *et al*. (2012) and this study persisted in that Generation Y value continuous learning more than Baby Boomers. This was initially described as ironic, in that Generation Y may have been brought up to believe in the value of education by their parents, yet continuous learning and development is not viewed as important by the older generation (Lester *et al.*, 2012). However, the Lifespan Developmental Perspective framework fails to explain why no difference is found between Generation Z and older generations. Using generational cohort theory, many of Generation Y had their formative years during and after the 2008 financial crash. The resultant labour market made it difficult to acquire jobs and evidence suggests that the value of educational qualifications diminished with many seeking postgraduate education to improve labour competitiveness (Vuolo, Mortimer and Staff, 2016). Perhaps as a result, Generation Z does not place the same level of importance on continuous learning as Generation Y do as they are entering an improved labour market. It would be interesting to examine this in the future if the current COVID-19 pandemic results in a downturn forcing Generation Z to pursue further education to improve their position within the labour market ergo changing how much they value continuous development.

Lester *et al*. (2012) were surprised not to find a significant difference between generational cohorts in relation to technology due to the level of stereotypes which exist that indicate that younger generations value technology more than older generations (Weeks *et al.*, 2017; Lester *et al*., 2012). This study also failed to find significant differences in relation to technology between

Generation X, Y, and Baby Boomers. However, surprisingly, a difference existed between Generation Z and Y, where Generation Y valued technology more. This is surprising given the fact that one of the main stereotypes associated with Generation Z is their penchant for technology (Babushkina, 2019; Francis and Hoefel, 2018). This might be best explained considering the normalisation of technology within society wherein it is used without individuals being consciously aware of it. In the case of Generation Z, they are the first generation to grow up entirely with technological advancements such as the internet through their formative years whereas Generation Y is old enough to remember pre-internet society. This may have the effect of Generation Z not consciously realising how much importance they place on technology unlike Generation Y who despite being technologically adept, distinctly remember life before such advancements and therefore might place greater importance on it than any other generation.

The final actual difference found, which was not found by Lester *et al*. (2012), was that of autonomy, as Generation X valued autonomy more than that of Generation Z. Two reasons could exist for this result which are not mutually exclusive. A common stereotype which has been reported in previous literature is that Generation X value independence more than other generations. Secondly, Generation Z is just entering the workforce and in their tentative careers, may value guidance and direction more than other generations (Lyons *et* al., 2015; Parry and Urwin, 2011). Together these factors may contribute to why a difference exists between Generation X and Z.

It is noteworthy that in the original study by Lester *et al*. (2012), most actual differences were between Generation Y and other cohorts whereas in this study, most actual differences instead exist between Generation Z and other cohorts. This would suggest that actual differences between established generations in the workforce have decreased over time, whereas they exist most between established generations and the younger generation just entering the workforce. It cannot be ascertained from the above results if the Lifespan Developmental Perspective framework, with Generation Y and X maturing, could explain this change. It is also worth considering the role of the contact

hypothesis which suggests increased positive contact and interaction between different out-groups could have the effect of reducing prejudices between said groups (Hewstone and Swart, 2011). It could be the case that increased time in the workforce together since 2012 has reduced actual differences between established generational cohorts but not with Generation Z who are just entering the workforce.

The role contact hypothesis may play in reducing actual differences over time is beyond the scope of this study and may be worth exploring in future research, however, applying contact hypothesis to perceptual differences does not yield the same effect. Excluding Generation Z entirely, perceptual differences the three established generations in the workforce held for one another appear to have increased compared to the original study (Lester *et al.*, 2012). The original 2012 study recorded Generation Y holding a total of 6 perceptual differences, Generation X had 11, and Baby Boomers had a total of 13. Compare this to the respective 20, 13, and 8 perceptual differences Generation Y, X, and Baby Boomers now hold for each other according to the results of this study. These results would indicate perceptual differences between these three established generations in the workforce has increased over time since 2012, barring Baby Boomers who appear to hold fewer perceptual differences. The starkest increase comes from Generation Y with 20 perceptual differences concerning Generation X and Baby Boomers.

Contact hypothesis is, however, quite complex and takes into account multiple dimensions when assessing attitudes. One study examined the role contact hypothesis might have in reducing prejudicial attitudes between Arabs and Israelis in a work context. They did find that contact hypothesis contributed to a willingness for both groups to meet in and out of the workplace and improve attitudes about each other on an individual level. However, they did not find that it improved more general perceptions the groups held about one another and that other factors outside of work also had an impact (Klein *et al.*, 2019). Again, it is outside the scope of this study but a decrease in actual differences between established working generations could be related to the

fact these groups have spent more time working together whereas the increase in perceptual differences could be impacted by other variables.

5.2. Hypothesis two: Perceived differences

The second hypothesis assumed that perceptual differences outnumbered actual differences found between generational cohorts and with 40 perceived differences of work items being identified between cohorts, this was strongly supported and correlates with the results found in the original study (Lester *et al.*, 2012). As mentioned earlier, many implications can result from the presence of perceived differences in that they have been found to contribute to discriminatory and exclusionary behaviours in the workplace in the context of age and also generational identity (Bratt *et al*., 2018; Raymer *et al.*, 2017; Butler, 1969).

It is the role of future academics to recognise that most differences between generational cohorts are overstated and in fact they are much more alike than different when designing future studies (Costanza and Finkelstein, 2015). To ignore this would lead to more flawed studies which fall victim to confirmation bias which further propagate misconceptions and stereotypes about generations that can influence a wide array of business literature and popular culture (Stewart *et al.*, 2017: Fromm and Garton, 2013). Although it is concerning that perceived differences appear to have increased over time between Generation X, Y, and Baby Boomers it is important to note that this is not a perfect replication of the original study by Lester *et al*. (2012). Elements of the study design could have contributed to an increase of perceived differences, primarily the fact that the Generation Y cohort surveyed was larger than all other cohorts combined. A perfect study design would employ a longitudinal design by examining the perceptions of the same individuals in an organisation multiple times throughout their career and ensuring that cohort cell sizes were more equally matched.

Despite the above caveat, the results regarding perceived differences deserve to be discussed in relation to the wider academic literature. Although

this paper did not examine statistically significant differences in terms of the amount of differences one generation held for another, the younger generations of Generation Z and Y held a total of 30 perceived differences about members of older generations. In contrast, the older generations, Generation X and Baby Boomers held 40 perceived differences about members of the younger generation. This result supports previous research which examined the role of reverse ageism in the workplace (Van Rossem, 2019; Bratt *et al*., 2018; Raymer *et al.*, 2017). If such perceptual differences exist not just in relation to the age of individuals but also their generational identity, then there is a potential gap in current legal protections which must be re-examined (Costanza and Finkelstein, 2015; Butler, 2005). One paper described earlier found that when older individuals were described as, 'Baby Boomers,' they had an increased chance of being successfully hired than compared to individuals described as, 'Millennials.' Currently both Baby Boomers and Generation X hold senior decision making positions within organisations, the fact that both groups hold the least amount of perceived differences in relation to one another than compared to their perceptions of Generation Y or Z could contribute to exclusionary hiring practices (Perry *et al*., 2015).

Viewing the results through the lens of social theory, it is clear that perceptual differences are pervasive amongst all generational cohorts supporting the idea that generational cohorts are clear social categorisations as per social dominance theory would suggest (Cox *et al.*, 2018; Sidanius *et al.*, 2004). There is also evidence of social identity theory in-group favouritism and out-group stereotyping (Rubin and Hewstone, 2004; Tajfel, 1974). Examples of the in-group bolstering effect were found throughout where a generational cohort rated itself favourably, contrary to a stereotype (Weeks *et al.*, 2017). For example, Baby Boomers are generally viewed as rigid in their approach with all other generations perceiving them to value flexibility lower than other items. Despite this, Baby Boomers had a high self perception of flexibility with a mean of 5.05. Secondly, out-group stereotyping is then seen as Baby Boomers perceived both Generation Z and Y to value flexibility significantly lower, 4.45 and 4.59, respectively (Rubin and Hewstone, 2004; Tajfel, 1974). As mentioned previously, such in-group and out-group behaviours have been attributed to

major reasons for discriminatory behaviours, mainly since such behaviours can cause out-groups to become defensive and resistive to future interaction and collaboration (Weeks *et al.*, 2017; Greenwald and Pettigrew, 2014).

Unfortunately, statistical examination of the internal bolstering effect and broader in-group/out-group behaviours are not fully considered in this study due to the fact it is a replication of the original paper by Lester *et al*. (2012), however, future researchers need to consider the role it may play in explaining the perceptual differences one generation may have for another. To illustrate this, earlier papers asked generational cohorts to value abstract items in relation to leadership attributes, or concepts coded from a poem, which ultimately examines what individuals believe they think and not how they act or behave (Ahn and Ettner, 2014; Salahuddin, 2010). Despite the fact this study was based on a sound methodological approach, using statistically significant differences to speak for themselves, it still suffers from the same flaw, for example, Generation Z do not believe they value social media highly, grading themselves with a mean of 3.87, yet does this equate to their behaviour in practice? All other generations perceived Generation Z to value social media highly with a mean above 5 on all counts. Distinguishing between belief and behaviour should be investigated in future research, as well as considering the role social identity theory may play in regards to a particular cohorts beliefs about themselves and others (Weeks *et al.*, 2017).

Again to further highlight the complexity of analysing perceptual differences between generational groups, an interesting result emerged which appears to support the presence of meta-stereotypes (Van Rossem, 2019). It was found that traditional in-group favouritism via the internal bolstering effect would be negated in instances of strong stereotypes, wherein a particular in-group would come to believe the stereotype about themselves to be true (Van Rossem, 2019; Cox *et al.*, 2018). While Baby Boomers showed in-group favouritism in relation to flexibility, they did not show the same for the work item social media. This is quite a strong stereotype perpetuated across popular culture that Baby Boomers are not as fluent with social media as their younger peers with recent research reporting a strong age effect in relation to discerning

disinformation on social media (Guess, Nagler and Tucker, 2019). In the case of this study, Baby Boomers graded themselves as valuing this work item low to moderate with a mean of 3.00.

This could further explain why Millennials appear to value technology highly with a mean of 5.15, yet a significant difference was found for Generation Z who did not value it as highly with a mean of 4.63, on par with Baby Boomers who valued it at a mean of 4.64. This could suggest, due to the persistent and strong stereotype that Millennials are technologically adept, over time Millennials have come to believe this about themselves as a meta-stereotype, whereas Generation Z who are just entering the workforce have not yet experienced this stereotype to the same extent in order to believe it about themselves. According to some, meta-stereotypes are largely based on perceptual differences with little evidence based in reality, meaning their impact on generational cohorts and ultimately, the organisation, are quite high (Cunningham, 2007).

Another element that would be interesting to study in further detail based on the above results is that a previous paper described how Euclidian distances measured from cognitive maps increased when managers of a particular generational cohort assessed co-workers from other generational cohorts (Van Rossem, 2019). There are various instances in the results of this study where the further apart generations are from one another the absolute difference increased in size for several work items. Where the other generational cohorts assessed how much they believed Baby Boomers valued continuous learning, fun at work, technology, and flexibility, the absolute difference increased in size from Generation X to Generation Z. The opposite effect can be seen in relation to how Baby Boomers, Generation X and Generation Y believed Generation Z valued security, professionalism, formal authority and face to face communication. It is difficult to comment on whether the extreme to which perceptual distances exist increase based on the gap between one generation to another but it is worth exploring in future research as the presence of such would provide academics and professionals with a

clearer focus on where to target anti-discriminatory programmes (Van Rossem, 2019).

Ultimately, this study wanted to replicate the research carried out by Lester *et al*. (2012) with the addition of bringing it into the modern workplace with the addition of Generation Z. It is clear that actual differences exist between generational cohorts, most of which appear to involve Generation Z. Similarly, perceptual differences are also pervasive among generational cohorts in relation to Generation Z. Similarly, Generation Z appears to hold many perceptions about the other three generations. It will be important for professionals when trying to tackle stereotypes within the workplace that they do not conflate actual differences with perceived differences. Likewise, it will also be important that future academic research concerning Generation Z take a balanced approach when discussing Generation Z, unlike much of the research previously mentioned which are beginning to create new stereotypes about this young generational cohort (Babushkina, 2019; Silinevica and Meirule, 2019; Fratričová and Kirchmayer, 2018).

Chapter 6. Conclusion and recommendations

6.0. Conclusion

The idea of generations as a social categorisation has been described as an attractive heuristic way to group individuals together using stereotypes, with such stereotypes being used not just in popular publications but also in business training and academic literature (Stewart et al., 2017; Espinoza and Ukleja, 2016; Lyons *et al.*, 2015; Fromm and Garton, 2013). The concept of generational cohort theory, first originated by Hungarian sociologist Karl Mannheim, shows no evidence of going away despite that, since its introduction, it has divided the academic community with those who dismiss outright and those who believe it has an important role to play in understanding those individuals who make up facets of the world around us, including the workforce (Costanza and Finkelstein, 2015; Lyons *et al.*, 2015; McCourt, 2012; Remmling, 1961).

After examination of the current literature, there are certainly examples of flawed studies which overstate the significance of their results, and also other studies which do not consider generational cohort theory as part of the larger question around social identity (Van Rossem, 2019; Ahn and Ettner, 2014; Salahuddin, 2010; Weeks *et al.*, 2017). This paper hoped to provide clarity to the discussion by replicating a 2012 study which examined the prevalence of actual and perceived differences between generations (Lester *et al.*, 2012). Whether differences exist between generational cohorts or not, the presence of perceived differences has several implications for members of the workforce in that they can promote stereotypes which lead to discriminatory behaviour similar to that of other social categorisations such as age, gender or race (Potter *et* al., 2019; Van Rossem, 2019; Raymer *et al.*, 2017; Butler, 2005). The need for such research was apparent in that Generation Z, the youngest generation just entering the workforce have already been subjected to multiple stereotypes purported by limited academic research and ergo are at risk of increased discrimination (Babushkina, 2019; Schroth, 2019; Francis and Hoefel, 2018).

This paper has successfully added to the described fossil record of cross-sectional studies in relation to generational research by replicating the results

of previous literature (Lyons *et al.*, 2015; Lester *et al.*, 2012). The first hypothesis questioned whether actual differences existed between generational cohorts in relation to eight work items; technology, face to face communication, e-mail communication, social media, formal authority, fun at work, continuous learning, and professionalism.

The first hypothesis was rejected as only half of the above listed items were found to contain actual differences between generational cohorts. Instead, it was found that actual differences do exist for autonomy, professionalism technology, continuous learning, and fun at work. Compared to the original study, it could be suggested that actual differences between generations change over time which may lead credence to the role of the Lifetime Developmental Perspective framework (Rudolph *et al*., 2018; Costanza and Finkelstein, 2015). In contrast, identical results with the original paper by Lester *et al*. (2012), such as the case of continuous learning between Generation Y and Baby Boomers, might be best explained with generational cohort theory. Given the limitations of this study design, in that it was not a longitudinal extension of the original 2012 paper, the above discussion can only be treated with speculation.

All but one of the actual differences found appear to indicate that most exist between established generational cohorts in the workforce and Generation Z, the youngest addition, whereas in 2012 it was found that most differences then involved Generation Y, which also was the youngest. It was speculated that contact hypothesis might attribute for the reduction in actual difference between older generations and Generation Y, which might explain why actual differences appear to predominantly relate to the most recent addition to the workforce at any one time. This is only speculative and again it is suggested that future research considers this in further generational studies.

The second hypothesis assumed that perceived differences outnumber the amount of actual differences found between generations in the work context. This hypothesis was strongly accepted given the fact that 40 individual work item differences were discovered between all generational cohorts. The main inference that can be made from this is that perceptual differences are widespread and also involve Generation Z. Therefore, professionals and

academics need to consider this in their approach to business practices and research, respectively.

Unlike actual differences, perceived differences appear to have increased since the original 2012 study, meaning that contact hypothesis does not provide a complete framework in how generational perceptions of one another change over time. Most important, the study design implemented in this paper should be scrutinised as surveyed respondents from Generation Y largely outnumbered that of all other cohorts combined and may have skewed the results. It has been suggested that future research attempts to move from cross-sectional study design to longitudinal study design while maintaining consistency between the cell sizes of each cohort.

Unfortunately, the scope of this study does not venture into making assertions regarding elements outside that of the original hypotheses but results share interesting similarities with previous research in the realm of reverse ageism and social identity theory (Van Rossem, 2019; Raymer *et al.*, 2017; Weeks *et al.*, 2017). For instance, the older generations, X and Baby Boomers held more perceptions of the younger generation than vice versa.

In relation to social identity theory and various in-group and out-group behaviours, there are instances of both in-group favouritism, internal bolstering and most importantly, the potential influence of meta-stereotypes which if a stereotype is strong enough may convince a generational cohort that it is true. This is best seen by how Baby Boomers view their own use of social media and Generation Y who score themselves highly in regard to technology. The main takeaway regarding the role of social identity theory is that it may be intertwined with that of generational cohort theory, with previous research strongly suggesting that such cohorts are indeed social categorisations open to the same types of perceptual misconceptions other in-group and out-groups experience (Weeks *et al.*, 2017; Cunningham, 2007). This, of course, adds a layer of complexity to the study of generations and should be considered more thoughtfully by researchers in the field lest they fall foul of flawed study designs that do not consider this as a potential for confounding factors.

Finally, following the work of Van Rossem (2019) who used repertory grid technique to create cognitive maps and measure the Euclidian distances between how one member of a generational cohort viewed members of other generational cohorts, the results of this study demonstrated instances of where the absolute difference between recorded means appear to increase the further away one generational cohort was from another. Ultimately, this study hopes to have brought research surrounding generational cohort theory into the new decade by first including Generation Z and secondly building on a comprehensive literature base with systematic quantitative study design.

6.1. Recommendations

6.1.1. Recommendations for future research

The above paper briefly touched upon several recommendations which are worth reiterating. The overall study design provided by Lester *et al*. (2012) provides a quantitative method to discern between actual versus perceived differences amongst generational cohorts, however, as stated by proponents against generational research, it is flawed in that it employs a cross-sectional study design which only captures a snapshot in time (Costanza and Finkelstein, 2015). An ideal study design would replicate the above method with the same cohort of individuals throughout various stages of their career to see if particular generational differences persist over time. Second to that, the study would benefit from a mixed method study design, adding a qualitative element to elucidate further from respondents why certain differences exist, perceived or actual, following the identification of such from quantitative analysis.

In order to account for the possibility of a geographical dimension affecting generational cohorts, this study should be replicated utilising multiple organisations on a global scale so that comparisons and differences could be elucidated (Timonen and Conlon, 2015; Pilcher, 1994). Given the lack of resources and time available, this paper was unable to carry out a randomised probability sampling instead opting for non-probability convenience sampling, neither was it able to collect more comprehensive demographic data. Future

research should attempt to correct this in order to gain a more representative slice of the contemporary workforce. Finally, as also mentioned by Lester *et al*. (2012), the list of 15 work items are not exhaustive and there is room to expand upon them.

Beyond elements of the study design, future researchers should not make the same mistake as previous academics who have not fully considered the role social identity theory and meta-stereotypes might play in influencing perceptual differences between generational cohorts (Van Rossem, 2019; Weeks *et al.*, 2017; Cunningham, 2007). Future studies should thoughtfully consider how they might include these various dimensions as they may contribute to explaining whether or not actual and perceived differences change over time, the role of internal bolstering or whether perceptions become more disparate the further generational cohorts are from one another. In kind, there is also ample opportunity to explore whether or not reverse ageism can be attributed to differences between generational cohorts. In the absence of such, researchers should attempt to study not just beliefs and perceptions in relation to abstract concepts but also behaviours of individuals so as to identify whether differences occur beyond generational cohort's cognizance.

6.1.2. Recommendations for professionals

Despite the various recommendations which can be made for future research in the field of generational cohort theory, it is in itself indicative that current research cannot yet provide professionals and managers alike with concrete recommendations. There are still many avenues to be explored in the role generational cohort theory may play in the workplace. The primary function of this paper was to provide clarity on whether or not perceptual differences outnumber actual differences between generations. As such this paper can conclusively state that perceived differences exist in far greater quantity than that of actual differences between generations and that generational cohorts are more similar than they are different.

In order to operationalise this, professionals should temper any assumptions they may make about individuals from various generations and like academics, question the validity of various academic texts which state confidently that differences do exist between one generation to another. Doubly so, professionals should be cautious of following management consultancy or popular press articles that state the same. Instead, as pointed out in the original 2012 study, professionals, managers, and employees should promote an environment of tolerance and open communication on the understanding that individuals from other generations are more alike than different so as to reduce prejudicial or discriminatory behaviour.

The important addition of this paper was to include Generation Z since they are now the youngest employees to be joining the workforce and will continue to be for many years. It is recommended that any actual differences that may exist are not conflated with perceived differences and consider that actual differences whether they exist on a generational level or not might have the potential to change over time. Ultimately it is hoped that this paper has contributed to removing stereotypes and demystifying misconceptions so that individuals regardless of their generational identity are provided with fair and equal opportunities.

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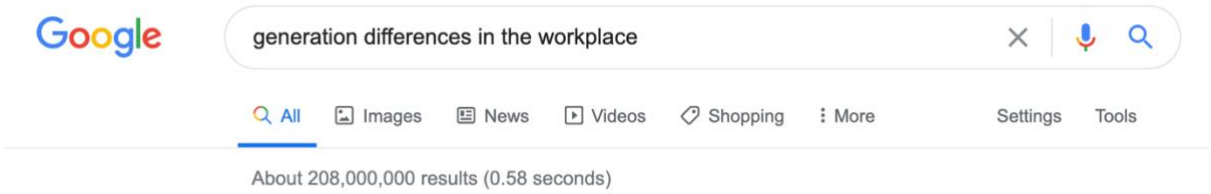
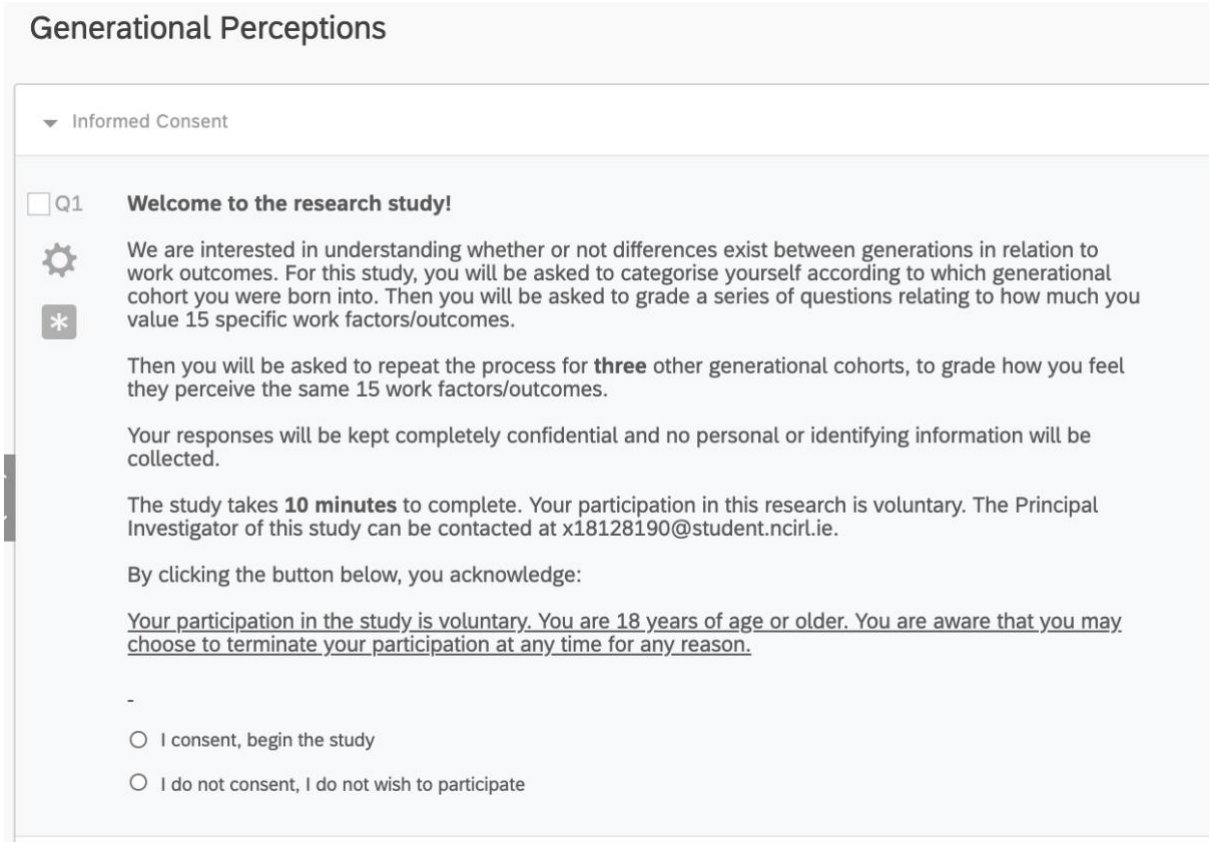
Appendices

Appendix 1. Results from Google for search term, 'Generation differences in the workplace,' reporting 208,00,000 hits as of 4th/August/2020.

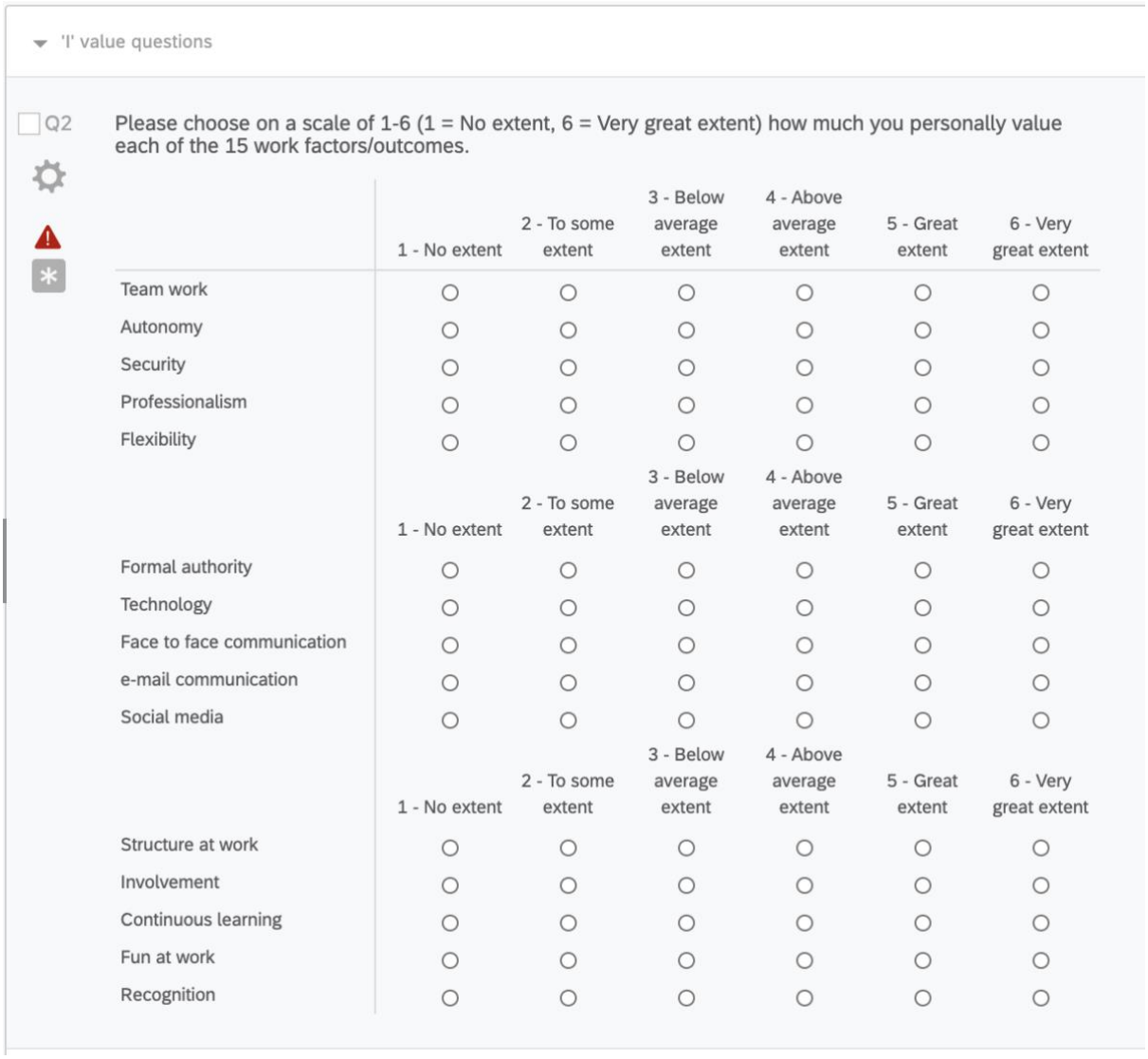


Appendix 2. Survey components.

a) Survey introduction and consent form.



b) ‘I Value’ 15 work item questions.



'I' value questions

Q2

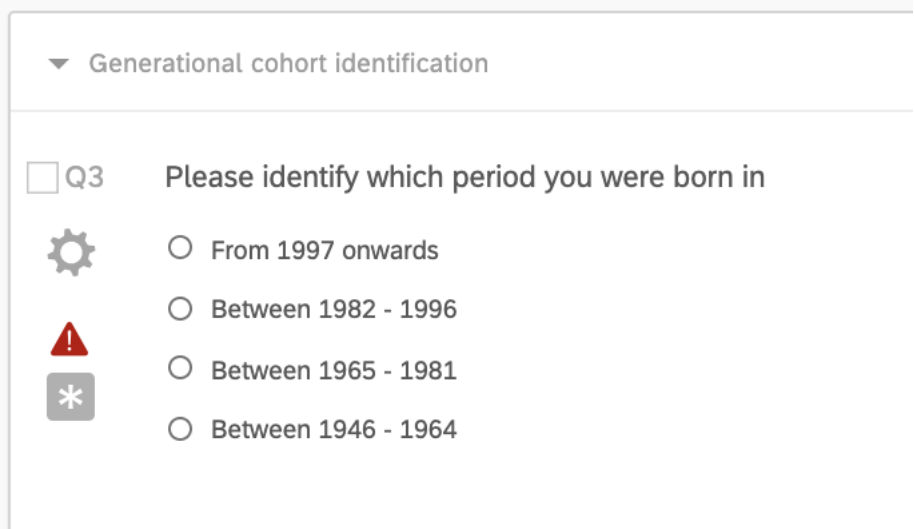
Please choose on a scale of 1-6 (1 = No extent, 6 = Very great extent) how much you personally value each of the 15 work factors/outcomes.

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Team work	○	○	○	○	○	○
Autonomy	○	○	○	○	○	○
Security	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○
Flexibility	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Formal authority	○	○	○	○	○	○
Technology	○	○	○	○	○	○
Face to face communication	○	○	○	○	○	○
e-mail communication	○	○	○	○	○	○
Social media	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Structure at work	○	○	○	○	○	○
Involvement	○	○	○	○	○	○
Continuous learning	○	○	○	○	○	○
Fun at work	○	○	○	○	○	○
Recognition	○	○	○	○	○	○

c) Generational cohort identification.

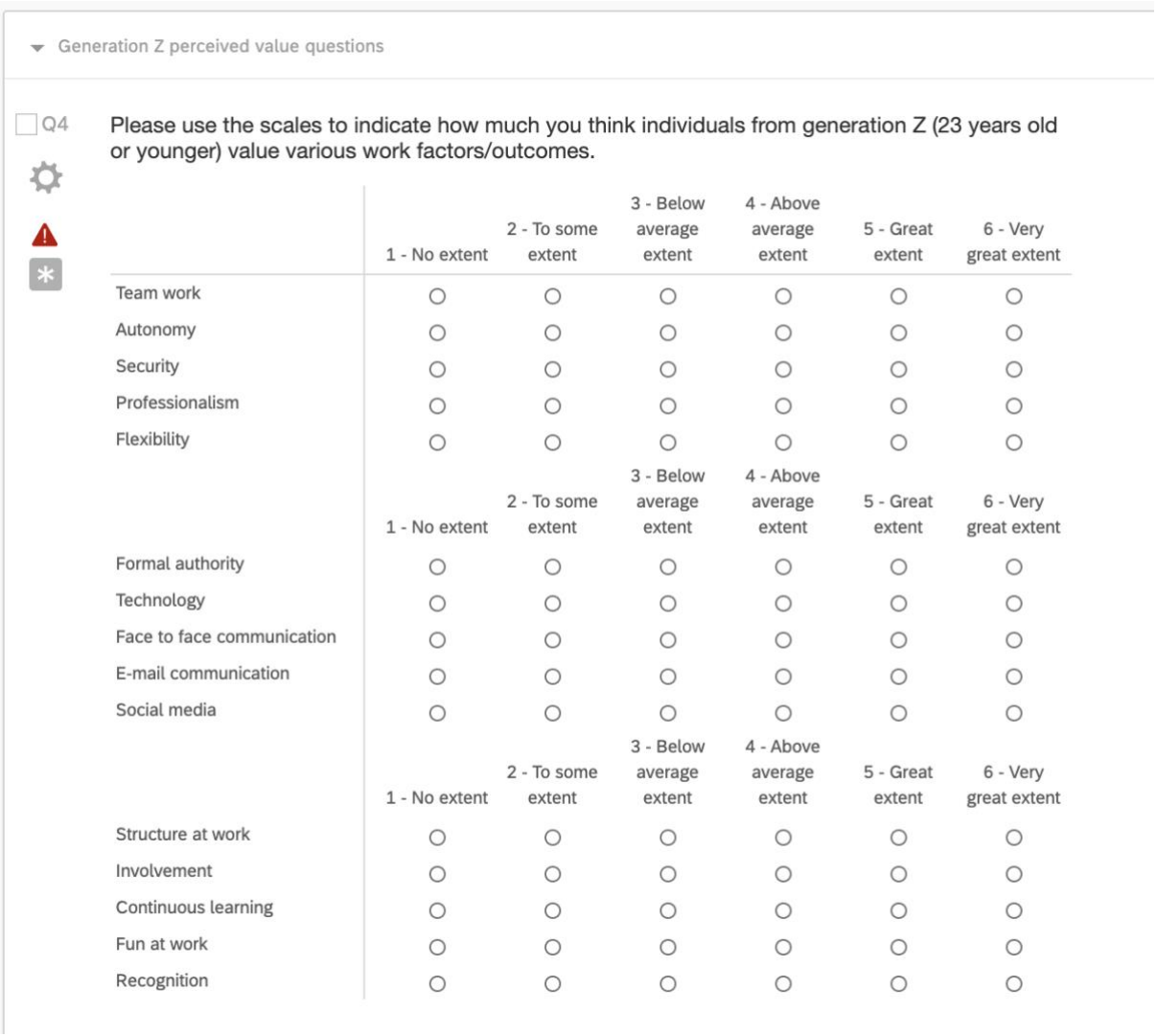


Generational cohort identification

Q3 Please identify which period you were born in

- ○ From 1997 onwards
- ○ Between 1982 - 1996
- ○ Between 1965 - 1981
- ○ Between 1946 - 1964

d) Generation Z perceived value questions.



Generation Z perceived value questions

Q4

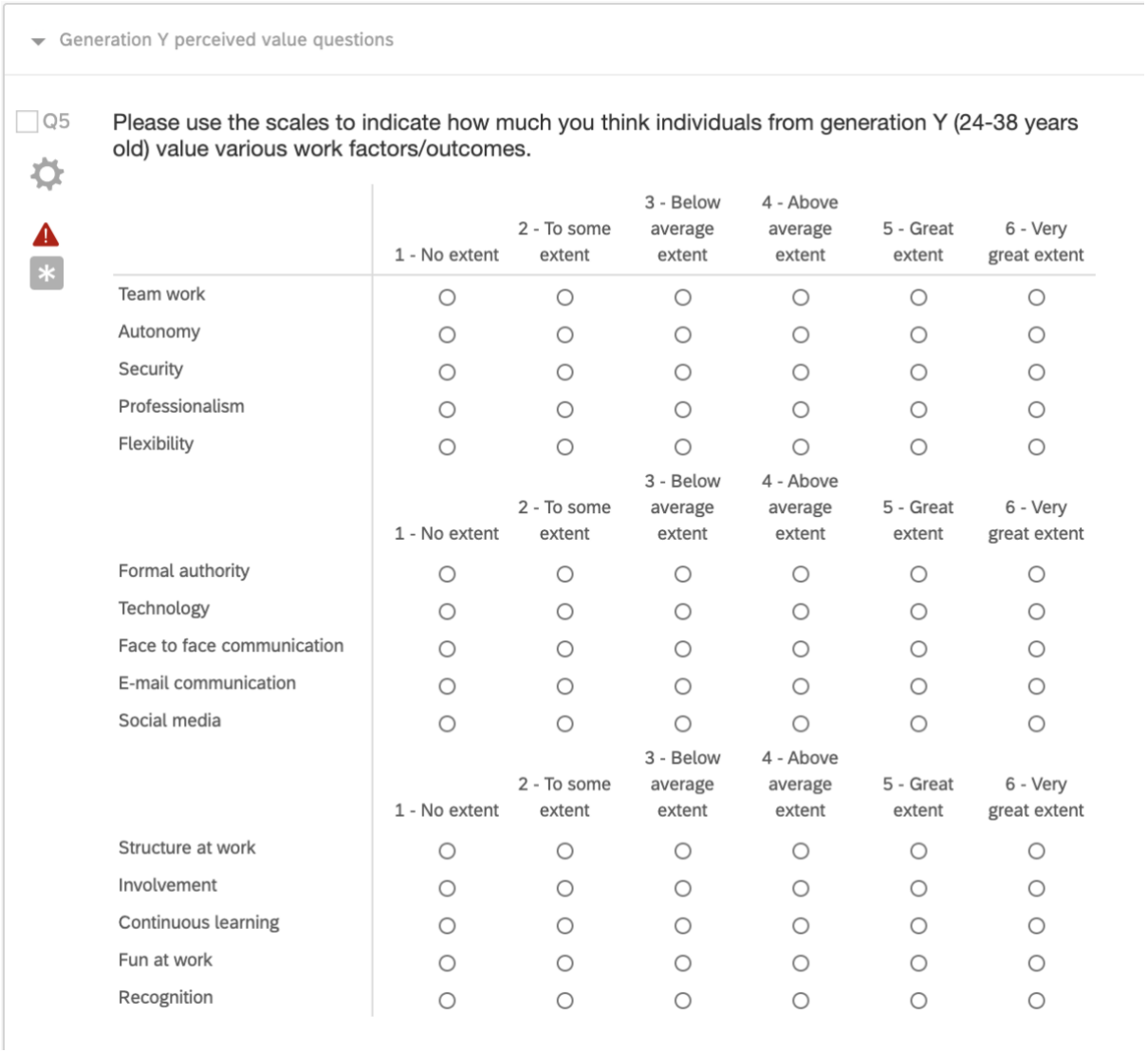
Please use the scales to indicate how much you think individuals from generation Z (23 years old or younger) value various work factors/outcomes.

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Team work	○	○	○	○	○	○
Autonomy	○	○	○	○	○	○
Security	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○
Flexibility	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Formal authority	○	○	○	○	○	○
Technology	○	○	○	○	○	○
Face to face communication	○	○	○	○	○	○
E-mail communication	○	○	○	○	○	○
Social media	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Structure at work	○	○	○	○	○	○
Involvement	○	○	○	○	○	○
Continuous learning	○	○	○	○	○	○
Fun at work	○	○	○	○	○	○
Recognition	○	○	○	○	○	○

e) Generation Y perceived value questions.



Generation Y perceived value questions

Q5

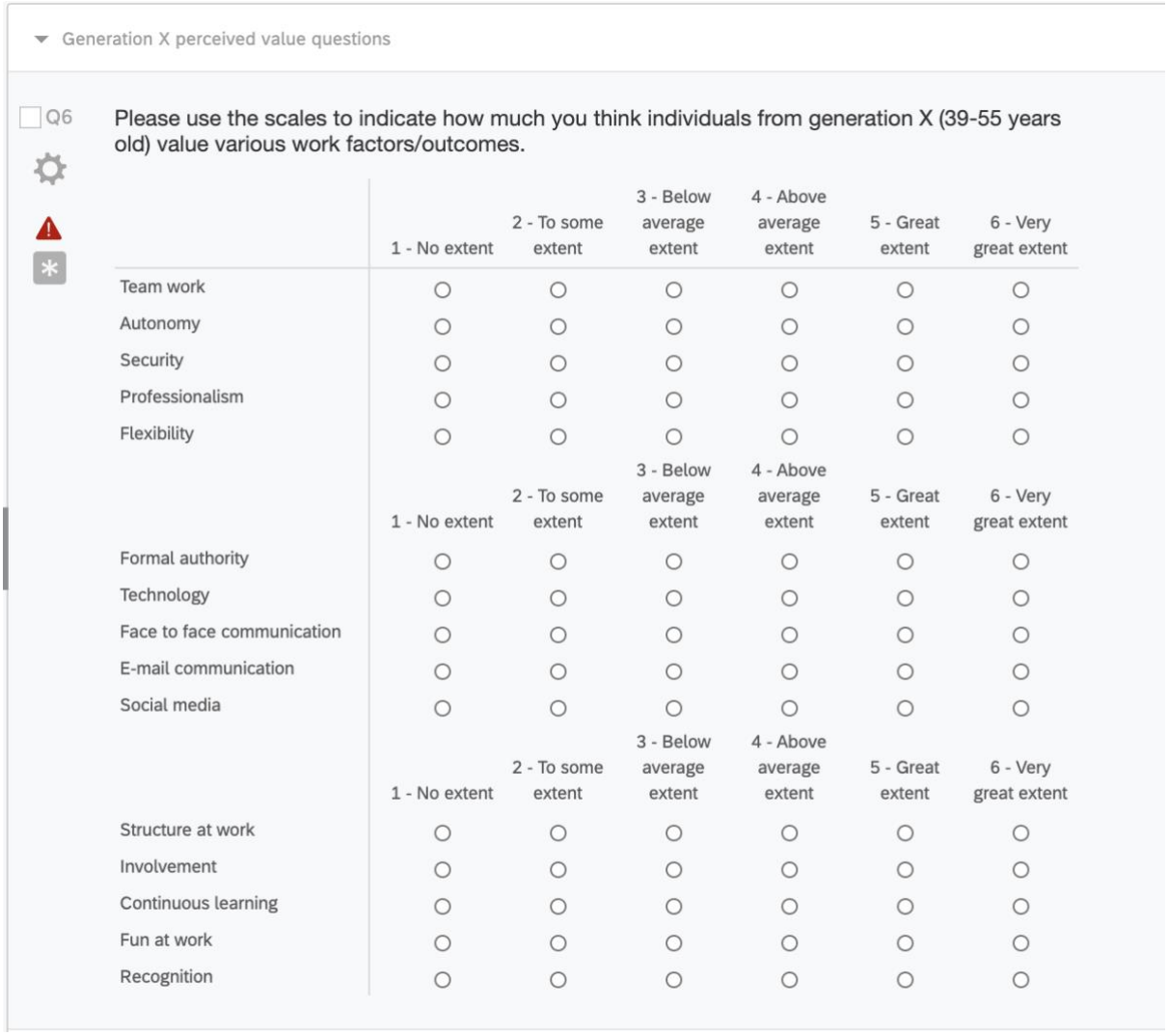
Please use the scales to indicate how much you think individuals from generation Y (24-38 years old) value various work factors/outcomes.

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Team work	○	○	○	○	○	○
Autonomy	○	○	○	○	○	○
Security	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○
Flexibility	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Formal authority	○	○	○	○	○	○
Technology	○	○	○	○	○	○
Face to face communication	○	○	○	○	○	○
E-mail communication	○	○	○	○	○	○
Social media	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Structure at work	○	○	○	○	○	○
Involvement	○	○	○	○	○	○
Continuous learning	○	○	○	○	○	○
Fun at work	○	○	○	○	○	○
Recognition	○	○	○	○	○	○

f) Generation X perceived value questions.



Generation X perceived value questions

Q6

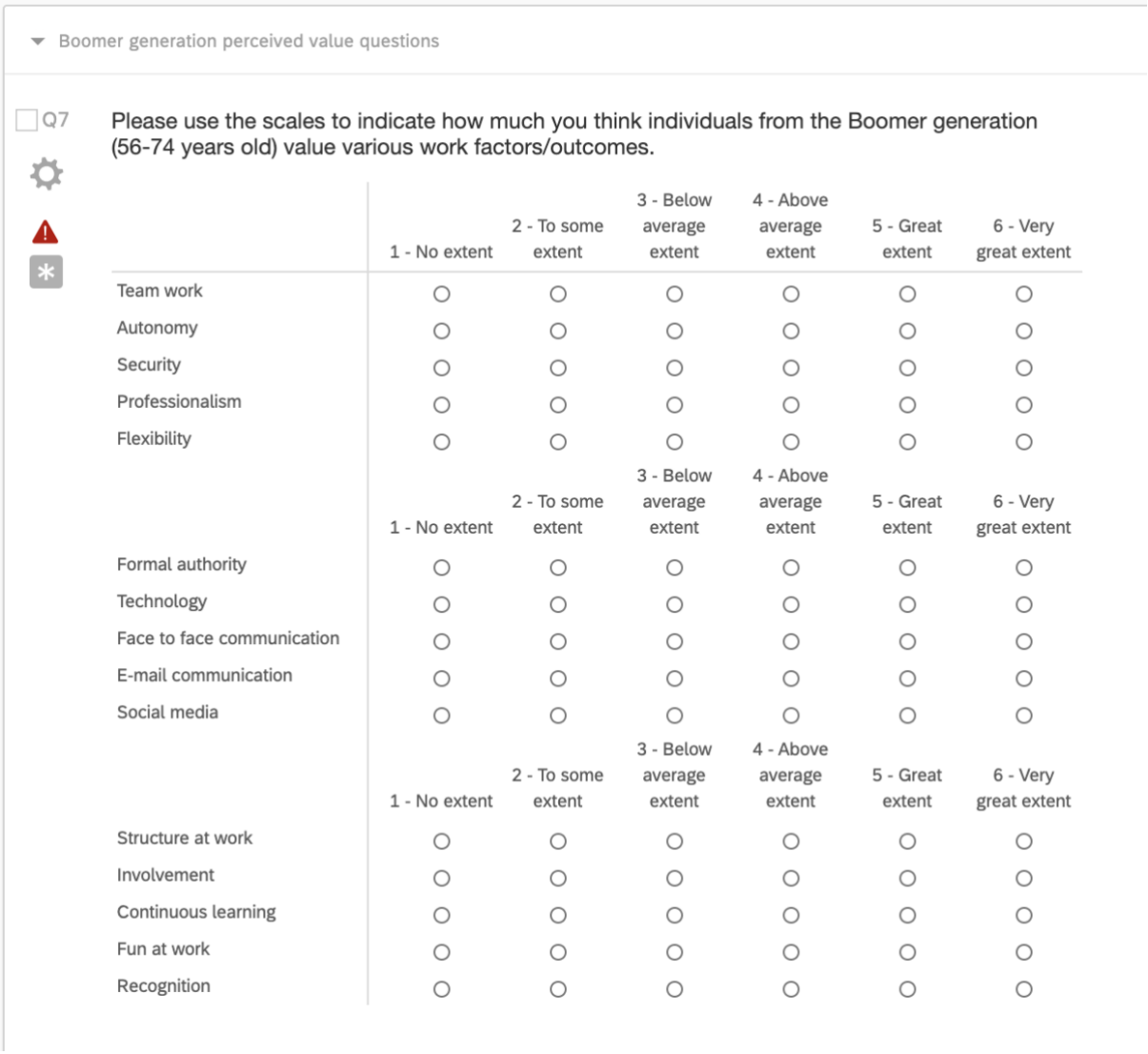
Please use the scales to indicate how much you think individuals from generation X (39-55 years old) value various work factors/outcomes.

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Team work	○	○	○	○	○	○
Autonomy	○	○	○	○	○	○
Security	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○
Flexibility	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Formal authority	○	○	○	○	○	○
Technology	○	○	○	○	○	○
Face to face communication	○	○	○	○	○	○
E-mail communication	○	○	○	○	○	○
Social media	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Structure at work	○	○	○	○	○	○
Involvement	○	○	○	○	○	○
Continuous learning	○	○	○	○	○	○
Fun at work	○	○	○	○	○	○
Recognition	○	○	○	○	○	○

g) Baby Boomer perceived value questions.



Boomer generation perceived value questions

Q7

Please use the scales to indicate how much you think individuals from the Boomer generation (56-74 years old) value various work factors/outcomes.

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Team work	○	○	○	○	○	○
Autonomy	○	○	○	○	○	○
Security	○	○	○	○	○	○
Professionalism	○	○	○	○	○	○
Flexibility	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Formal authority	○	○	○	○	○	○
Technology	○	○	○	○	○	○
Face to face communication	○	○	○	○	○	○
E-mail communication	○	○	○	○	○	○
Social media	○	○	○	○	○	○

	1 - No extent	2 - To some extent	3 - Below average extent	4 - Above average extent	5 - Great extent	6 - Very great extent
Structure at work	○	○	○	○	○	○
Involvement	○	○	○	○	○	○
Continuous learning	○	○	○	○	○	○
Fun at work	○	○	○	○	○	○
Recognition	○	○	○	○	○	○

h) Demographic questions.