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The evidence-base for generational differences: where do we go from here?

### Abstract

Interest in generational diversity has exploded since the turn of the 21<sup>st</sup> century. While many researchers are supportive of the concept of generations, a growing number have questioned the validity of the idea that people are different according to when they were born. In this paper we review recent work in the area and build on our own previous studies; which have been highly critical of extant empirical work. Many studies utilize cross-sectional data that do not allow investigation of generational difference; and even when appropriate data are used, the a-priori assumption of four or five generational categories invalidates research findings. We present selected results from analyses we have undertaken to overcome these issues, and identify a more robust direction for the research. Essentially, the theoretical foundation for generational research has some validity, but the existence of generational differences has not been validly tested. We suggest that researchers must investigate whether any cohort-specific differences in attitudes are apparent, and where, if at all, these can be ‘cut’ to identify distinct ‘structural breaks’ between generations. Only by building a body of knowledge, across different social and economic phenomena will we obtain a true picture of where generational differences lie.

*Keywords:* Generations, generational differences, methodology, period effects, age

effects

The interest in generational diversity, both at work and in society, has exploded since the turn of the 21<sup>st</sup> century. A generation can be loosely defined as “an identifiable group that shares birth years, age, location and significant life events at critical developmental stages” (Kupperschmidt, 2000, p.66). In the current population, there are said to be five generational cohorts: Veterans (1925-1942); Baby Boomers (born 1943-1960); Generation X (born 1961-1981); Generation Y or Millennials (born after 1982) (Strauss & Howe, 1991) and Generation Z or Post-Millennials (born after 2001) (Williams & Page, 2011). Marketing practitioners have long used generational cohorts as a means to segment consumer populations (Nobel & Schewe, 2003) and to target advertising (Bradford, 1993). However, it is only in the past decade or so that human resource management (HRM) practitioners have eagerly adopted the notion of generations as an explanation of differences in employee attitudes and behavior, and as a means to segment the workforce when designing HRM (particularly reward and recognition) systems. The proposition is that there are generational differences in work values that influence all aspects of people management, from recruitment (Jurkiewicz, 2000; Charrier, 2000; Smith, 2008); training and development (Corley, 1999; Tulgan; 1996; Berl, 2006); career development (Ansoorian, Good and Sammuelson, 2003; McCafferty, 2003; McDonald and Hite, 2008), rewards and working arrangements (Carlson, 2004; McCafferty, 2003; Filipczak, 1994) and management style (Tulgan, 1996; Losyk, 1997); as well as having the potential to cause serious conflict within the workplace (Karp and Sirias, 2001; O’Bannon, 2001).

The increasing popularity of generational differences as a basis for designing HRM policies and practices has been accompanied by a rapid increase in the attention paid to this notion in the academic literature. As practitioners have adopted the concept of generations, scholars have strived to examine the differences between generational groups and to provide

evidence for the idea that these different groups have unique values, attitudes, preferences and expectations both in and outside of the workplace. While many researchers are supportive of the concept of generations, a growing group of academics have questioned the validity of the idea that people are psychologically different according to when they were born. For example, Giancola (2006) described the notion of a “generation gap” as “more myth than reality” (p.32), while Lyons, Duxbury and Higgins (2007) noted the lack of sound empirical work investigating popular generational stereotypes. More recently, Costanza and Finklestein (2015) provided several criticisms of the idea of generationally-based differences – first, that there was minimal empirical evidence supporting generational differences; second, that there was ample evidence for alternative explanations of differences; third, that there was no sound explanation of why generational differences should occur; and finally that there is no support for the effectiveness of interventions designed to address such differences. Even more worrying, Costanza and Finklestein (2015) suggest that the use of generations as a means to segment the workforce is actually stereotyping and thus could be discriminatory. Despite such damning criticism, and a number of empirical papers that have failed to find differences between generations (for example, Costanza, Badger, Fraser, Severt & Gade, 2012), the interest in generational differences by academics and practitioners has failed to abate.

### **Aims and Objectives of this Study**

In our own work, (Parry & Urwin 2010; 2011; Buscha, Parry & Urwin, 2013; 2014) we have provided a detailed critique of the evidence-base for generational difference, arguing that it is flawed and methodologically unsound. In this paper, we summarise our previous reviews of the theoretical underpinnings for the study of generations; consider where our criticism of the

empirical work has taken us; and what this might mean for the valid investigation of generational differences. More specifically, our initial consideration of theory and method identifies two significant weaknesses in the research on generational diversity.

First, our discussion of the methodological challenge, highlights the inappropriateness of cross-sectional designs in the study of generations, as it is impossible to identify whether generational, period or age-effects are driving differences between any age-groups surveyed. Second, and more fundamentally, we argue that the approach taken across most generational studies is methodologically flawed, even when more appropriate datasets are used. Generational studies tend to assume (a-priori) that the generational categories are those set out in our *Introduction*. They then test for differences (in attitudes, beliefs, outcomes and behaviours) between these generational categories. It is quite possible that significant generational differences exist, but that these particular generational groups are not valid (as there is no solid evidence to suggest that they are); making these studies hard to interpret.

These two issues have motivated our exploratory work in this area and we describe some findings. We address these two issues by: first, using historical longitudinal data; and, second, by looking for patterns within the data rather than applying generational categories a priori. Ultimately, the practical question we are asking is: do we really believe that there are as many different generations as the current literature suggests, or is it simply a way of selling consultancy services?

### **Theoretical Background**

First, it is important to understand the theoretical basis on which the popular notion of generational differences is based. We disagree with Costanza and Finklestein's (2015) assertion

that there are not sound explanations of why generational differences might occur. In fact, there is a well-established theoretical tradition, within the sociological literature, that explains the reasoning behind the existence of values, attitudes and expectations that are unique to a particular generation.

If we go back to Kupperschmidt's (2000) definition of a generation as "an identifiable group that shares birth years, age, location and significant life events at critical developmental stages", we can surmise that the drivers of a generation's values, attitudes and expectations lie in their experiences as they were growing up. Actually this definition is built on theory by Mannheim (1952) who described a generation as a "social location" similar to that of the class position of an individual in society rather than a "concrete group" (i.e. its members do not have mental or physical proximity or any knowledge of each other). Mannheim (1952) suggested that the existence of generations is made possible by five characteristics of our society 1) new participants in the cultural process are emerging, 2) former participants are continually disappearing, 3) members of a generation can participate in only a temporally limited section of the historical process, so 4) cultural heritage needs to be transmitted and finally 5) the transition from generation to generation is continuous.

Individuals who share a common year of birth have a common location in the historical process, so are limited to a particular range of experience thus predisposing them to a certain mode of thought and experience. However, sharing a common birth year is not sufficient for individuals to also share a generation, they must be in the position to share certain common experiences with others in the group so that a concrete bond is created between members of a generation and so that they share "an identity of responses, a certain affinity in the way in which all move with and are formed by their common experiences" (Mannheim, 1952:306).

The idea of shared experience is central to Mannheim's (1952) theory. Therefore, by definition, a generation is a group of people who have gone through the same key societal and historical life events and therefore share the same collective memories (Halbwachs, 1980; Schuman & Scott, 1989). Research has shown that critical events such as wars or assassinations are remembered by those who experienced them during adolescence and youth (see for example Schuman & Corning 2012). As a result of these collective memories, members of a generation learn similar responses to social and environmental stimuli and develop a set of value systems and ways of interpreting events (Smola & Sutton, 2002).

In addition to memories of critical events, scholars have suggested that cohorts are also affected by a variety of cultural elements in that a generation is "a cohort of persons passing through time who come to share a common habitus and lifestyle" (Turner 1998: 302). Individuals' experiences are therefore associated, not only with events, but with aspects such as music, clothes, film stars, sports, politics and technology (Bryant 2005; Edmunds and Turner 2002; Eyerman & Turner, 1998; Holdbrook & Schindler 1989, 1994; McMullin, Comeau & Jovic, 2007).

The external forces, critical events, cultural symbols and thus collective memories, that influence the creation of shared value systems differ from one generation to the next, leading to differences in values such as the way each generation reacts to authority, their work-related values and what they will do to satisfy those values (Gursoy, Maier & Chi, 2008; Smola & Sutton, 2002). Therefore, it is as a result of the development of collective memories and shared cultural symbols that a generation is formed.

We argue that this strand of literature provides a well-developed theoretical framework: describing how a shared set of experiences may lead to shared values, attitudes, behaviours and

outcomes across a cohort of individuals; that then leads to formation of specific generations. However, whilst there is speculation within this theoretical framework on the possible nature of ‘shared experiences’ and how these may drive generational difference, there is little specific consideration of these [causal] links. Exactly how do ‘shared experiences’ lead to ‘common behaviours and attitudes’; and then subsequently to the formation of ‘distinct generations’? As the following discussion develops, we argue that this existing theoretical construct is useful as a starting point, as it helps us understand what empirical work might be required. However, the lack of specifics in key areas drives us to an inductive approach. For instance, the theory provides no indication of whether generational differences relate to values, attitudes, outcomes or behaviours.

We now use the broad theoretical framework described above to consider the evidence-base for generational differences. Drawing on our previous work, (Parry & Urwin 2010; 2011; Buscha, et al 2013; 2014), we argue that such a consideration makes it very clear the current evidence base is fraught with problems, and existing approaches are not able to take forward understanding in the area.

### **Methodological Difficulties in Existing Generational Research**

Mannheim and others provide a useful theoretical framework, which can be used to clarify what investigation would need to be carried out to prove or disprove the concept of generations. Drawing on the literature on cohorts (see for instance, Rhodes, 1983; Mason & Wolfinger, 2001), and previous critiques of research on generational differences, we can define *three dimensions of the development of a generation*:



1. Significant events or changing trends within a society occur which affect attitudes and behaviours both in the short and long-term. In the short-term, events and trends lead to 'period effects': impacts on views and behaviours for a period of time amongst a broad societal cohort of individuals. In this way, these events and trends cause changes in attributes that do not necessarily persist. For example, attitudes to work might change during a period of recession.
2. In the longer term, we observe generations forming, these events and trends might impact a particular cohort, those in their formative years, in a way that endures beyond that particular 'period'. For example, significant and sustained experiences of unemployment may 'scar' a generation, leading to lasting impacts.
3. A generational impact is observed when this period effect impacts the behaviours/outcomes/attitudes in a way that sustains [for that cohort] as they age. Importantly, these shared attributes are not shared by the subsequent cohort (e.g. as they do not experience such sustained periods of unemployment during their formative years). Subsequent cohorts are impacted by different sets of period effects, that change their behaviours/attitudes for a period, and which may then sustain as they age – giving birth to a separate and distinct generation.

This is essentially the framework of Mannheim (1952) and others, applied to the concept of generations, using the technical language of cohort studies.

The first insight we gain from adopting this perspective, is the inappropriateness of many studies of generational difference, or 'diversity'. Any study, whether quantitative or qualitative, that only considers a group of individuals at one point in time is unable to distinguish between age, period and generational effects as described above. In, addition, cross-sectional approaches,

fail to identify separate effects due to chronological age (i.e. changes in attitudes and behaviours that occur as someone gets older regardless of the events or trends that are occurring in society). The only way to achieve any insight into these three different effects is to investigate generational differences using longitudinal data. We now consider findings from some of our existing work to date, highlighting what can be achieved with richer longitudinal datasets. This also leads to the identification of a more fundamental methodological problem with existing approaches, even when more appropriate data is used.

## **A Way Forward**

### **The Use of Longitudinal Data**

Whilst Chart 1 (Buscha et al, 2013) is simplistic in its approach, it does serve as a good example of what we are attempting to capture when talking of ‘generational differences’ and why cross-sectional studies are unable to do so. Chart 1 presents a ‘smoothed’ data map<sup>1</sup> of the proportion of individuals in the National Food Survey (NFS) between 1974 and 1997 recorded as vegetarian<sup>2</sup>, according to their age. The National Food Survey (NFS) is a repeated cross-section running from 1974 to 1997, and is the longest-running continuous survey of household food consumption and expenditure in the world. The NFS contains approximately 8,000 households each year and members who did the most food shopping were interviewed on household composition and food purchasing. We make use of the vegetarian question, which indicates whether the interviewee (i) eats meat and/or fish or (ii) no meat or fish is eaten.

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<sup>1</sup> We ‘smooth’ by taking averages around each cell, using a simple two-dimensional uniform kernel smoother, where for each cell the estimated value is given by averaging the values of the nearest  $M$  neighbours in both the x-dimension and y-dimension.

<sup>2</sup> Where food ‘logs’ or ‘diaries’ record that no fish or meat has been acquired for consumption by the head of household.

For instance, in the top left-hand cell of Chart 1, zero per cent of those who are aged 19 in 1974 report that they are vegetarian; whilst by 1981, 0.059 [5.9%] of 19 year-olds responsible for the household shop are vegetarian. Each cell of Chart 1 represents the average proportion of vegetarians, amongst a specific age group, within a specific calendar year. As a first step in seeing if there are any clear patterns in the spread of vegetarianism across age groups, through time, we impose a colour scheme. The dark shaded area includes those cells where the proportion reporting being vegetarian is below 0.05 (<5%); the greyer shaded area represents a figure between 0.05, but lower than 0.1 (5% to <10%); and the remaining areas that are only lightly shaded, delineate subsequent higher percentage categories of 0.1 (10%) or above. As suggested already, the 0.05 delineation is arbitrary and therefore we do not wish to place too much emphasis on the specific points where the shading changes (we will return to this issue of where the generations ‘cut’ later).

However, consideration of the patterns in Chart 1 provides a very useful insight into what we are attempting to capture when considering generations. First, consider what the colour pattern would look like if we were picking up vegetarianism as only a ‘period’ effect. We have some difference in the general levels of vegetarianism amongst those aged 19 between 1974 and 1980; and those of the same age between 1981 and 1984. If the higher levels of vegetarianism between 1981 and 1984 were a period effect, we would observe this light grey colour (associated with the 19 year olds between 1981 and 1984) for all age groups between 1981 and 1984. The implication would be that something happened during this period, that meant all age group had higher levels of vegetarianism, but after 1984, this impact would disappear for all age groups – period effects are reflected in Chart 1 by vertical patterns in our colour scheme.

In contrast to the period-effects which drive vertical patterns, any age effects will be reflected in horizontal patterns. For instance, across the entirety of Chart 1, one could perhaps imagine lower levels of vegetarianism amongst those aged 19 to 24 (which would cut across the entirety of Chart 1); and then, as we considered older age groups (no matter what the calendar year), higher levels of vegetarianism (perhaps for health reasons). Age effects are reflected in Chart 1 by horizontal patterns across our colour scheme.

What Chart 1 actually shows, are diagonal patterns across our colour scheme, that reflect cohort/generational patterns in the incidence of vegetarianism. For instance, we observe 19 year olds born between 1981 and 1984 having higher levels of vegetarianism; but this neither drops when they age, nor is it limited to the specific time period. We observe pronounced levels of vegetarianism in this age group between these years, but as this cohort ages, these higher levels of vegetarianism persist and we observe this effect beyond the initial time period. Diagonal patterns in our colour schemes, reflect the persistence of (changed) values/attitudes, beyond the initial time period and into old age, for distinct cohorts of individuals.

Chart 1 shows the challenge that all studies of generational diversity face – if we choose any one year to study, without knowledge of the patterns of (in this case) vegetarianism in all other years, we only observe a very small part of the overall picture. It is only when we have repeated cross sections over many years, or a panel of individuals followed over many years, that we can discern potential generational patterns of behaviours/beliefs, that persist as a cohort ages; as opposed to period or age effects.

(INSERT FIGURE 1 ABOUT HERE)

Most quantitative (and qualitative) studies of generations simply do not have the data to carry out an analysis of generational difference – to follow the attitudes and behaviours of different age cohorts over time and as they age. Even in our consideration of the NFS data, anybody entering the survey after 1985 is not observed beyond the age of 30. There are a few studies that have attempted to investigate generational difference using longitudinal data, or at least data from different age groups at different time points. For example, Smola and Sutton (2002) compared a number of work values between workers in 1974 and 1999 to examine both differences between two generations and whether these work values changed as the workers aged. They found significant differences between the two generations (Generation X and Baby Boomers) in relation to loyalty, work centrality and the desire for rapid promotions. Work centrality also increased as people got older. This supported the idea of change due to both age (maturation) and generation. Alternatively, Twenge and colleagues (Gentile, Twenge & Campbell, 2010; Twenge, 2013; Twenge & Campbell, 2001) have used cross-temporal meta-analyses which rely on time-lagged data to examine age, period and generational effects and found some differences between generations in both work values and personality. However, while these approaches help to identify possible differences between individuals of similar ages, living in different time periods (which therefore are more likely due to differences between age cohorts rather than to maturation effects), Chart 1 begins to show why it is important to observe many years of data, for individuals born to various cohorts, both when they are old and as they age. Only when we have such rich data, can we consider whether generational patterns of difference are apparent, in a way that (i) is aligned to the original conceptualisation of generations; (ii) allows some insight into the potential for ‘period’ effects to confound findings and (iii) allows us to identify where any generational differences ‘cut’.

This last point is most important, as even if studies were to use a more appropriate (longitudinal) set of data, applying the current approach to analysis of generational differences would still invalidate most of the research currently undertaken. Ultimately, this derives from a ‘gap’ that exists between the theoretical underpinnings we identify at the start of this paper and the empirical approaches that have been adopted in recent years.

### **Identifying Where Generational Differences “Cut”**

The theoretical construct posited by Mannheim (1952) and others helps us clarify what is required of empirical evidence, but there are no specific hypothesized causal links between particular environmental factors; changed cohort attributes; and the subsequent formation of generations. This is the methodological challenge, and in the absence of serious debate/investigation of this issue, the gap has been filled by anecdote; leading to an approach that tends to invalidate research findings.

More specifically, the approach to investigation of generations in most studies is to take pre-defined cohorts of Generation X, Generation Y, Millennials etc. (we return to Veterans and Boomers) as representing distinct generations. The a-priori assumption is that extensive evidence has been collected around our *three dimensions in the development of a generation*, and this provides compelling support for this specific categorisation of generations. This assumption is incorrect (as these categories are purely anecdotal) and, as a result, in studies that utilize these existing generational categorizations, any evidence that differing values, behaviours or attitudes are not significantly different between the generations, provides little insight - it can mean either that (i) these cohorts are not good proxies for the generations described (as nobody has produced any evidence that they are), and therefore we would not expect significant differences; or (ii)

these are the correct categorisations and there are no differences in the attributes being considered. By assuming, a-priori, that these are the generations, and testing this; any evidence that these are not the generations, does not provide any insight into whether generational differences exist (possibly across very different cohort categorisations).

It is important to note that (even with appropriate data) an empirically correct approach to analysis of generations is not simple methodologically and this is perhaps why it has not yet been taken up (it is also a key driver of our eventual suggestion for an inductive approach). We must make linkages in research between (i) shared ‘key societal and life events’ in historical time; (ii) which motivate specific behaviours/attitudes within a particular cohort (but not within other cohorts); and (iii) we must then be able to ‘cut’ these cohorts in a way that results in specific generational categories – such that there is a point in time when new cohorts no longer exhibit the persisting behaviours/attitudes specific to the previous cohort.

However, if we consider studies that have appropriate data and deal with these linkages in a more robust way, we can get a clearer idea of exactly where anecdote and hyperbole have crept into this area of study; and why it is the post-boomer generations that need to be fundamentally reconsidered.

Take for example a recent analysis by Bryson, Gomez and Zhang (2015), who consider the *Relative Age, Cohort Size and Career Success in the NHL* (National Hockey League). The authors analyse the performance outcomes of NHL players over 18 seasons between 1990-1991 and 2007-2008, with a focus on identifying the impact of demographic conditions into which a player was born. This work can be seen as the latest in a long line of studies on the labor market effects of being born to large (boom) or small (bust) baby cohorts (Welch, 1979; Berger, 1985; Bloom, Freeman & Korenman, 1987; Wright, 1991; Bachman, Bauer & David, 2009). This is

analogous to the sort of steps that might be taken in an investigation of our *three dimensions in the development of a generation*.

First, we have a generation of Boomers, who are impacted by a period effect – we can clearly define and delineate them as being part of a large birth cohort (we may also suggest that the ‘Veterans’ who experienced the World Wars and their aftermath, are a clearly identifiable prior ‘generation’). The authors are then able to test whether this period effect (of being in the Boomer cohort) has any impacts that endure beyond the particular ‘period’ (in terms of their NHL careers); and they are able to show that these shared attributes/impacts within the Boomer generation, are not shared by the subsequent cohort.

This discussion has brought us to one of the key weaknesses in research on generational differences - a desire to arbitrarily expand the number of generations beyond the Boomers and Veterans. Authors have therefore proposed the existence of Gen X, Gen Y (Millennials) and Gen Z, without any direct evidence that they can be considered as distinct from each other – they may be distinct from Boomers and Veterans, but there is no evidence that they differ significantly from each other and constitute distinct groups.

This has driven the general approach to generational issues in most studies that take these pre-defined cohorts as representing distinct generations, and lead to the fundamental weaknesses we flag above. We now provide an indication of where the research needs to go if it is to seriously answer the question of whether the generational dimension is significant in explaining difference, and the related question of whether there are any ‘post-boomer’ cohorts, or just the one?

**Does a More Valid Methodological Approach Get Us Anywhere?**



Based on discussions to this point, one might imply that we are moving to recommend an approach similar to that of Papavasileiou (forthcoming), who has essentially started to investigate some of the detail around our *dimensions in the development of a generation*, as a first step in proposing generational groups within Greece. However, we now argue why analysis we have carried out to date provides a more realistic foundation for development of empirical research into generational difference. More specifically, following our early work (Parry & Urwin 2009; 2010; 2011) we have carried out a variety of analyses to show how survey data might be utilized in a way that allows us to identify generational categorisations and cut-off points, rather than taking these as given.

Chart 1 provides an introduction to this paper, as it usefully describes the sort of trends we are looking for, if we are to identify generational patterns in existing data (and also emphasizes the richness of the data required). However, it does not provide us with an indication of where (if at all) generational delineations might fall, as we have arbitrarily chosen our cut-off points of <5%, 5% to <10%, etc. – is a 5% difference enough to justify consideration of a cohort as a different generation? To take our work forward we have built on the simplistic starting point of Chart 1, by attempting to identify the extent to which there is a statistically significant difference between shading schemes, using a method that does not force us to specify a-priori exactly how many generational categories we are searching for.

Chart 2 sets out an example of one possible approach to this analysis, using NFS data and the STATA inbuilt non-parametric smoothing command; splicing the z-axis (cohorts) and then overlaying these<sup>3</sup> (Buscha et al, 2013). It is not essential to understand the technical detail, as the intuition is relatively straightforward – we take arbitrarily-defined cohorts (i.e. they are ‘cut’

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<sup>3</sup> In addition, we make use of a more advanced smoothing technique based on local polynomial regression. Separate smoothers are estimated for cohorts born every 10 years, from the 1920s to the 1970s and this approach allows us to estimate confidence intervals around each function.

every 10 years) as in Chart 1, but then use basic statistical techniques to gauge the extent to which the average levels of vegetarianism across these cohorts is statistically different. Ideally we would use even smaller cohorts [for instance, grouped across 5 years] but as we reduce the size of cohorts, we have fewer observations within each cohort on which to base our statistical analysis. If they are statistically different, then this implies that they constitute a distinct generational category. A particular cohort needs to exhibit statistically significant differences in the levels of vegetarianism at different ages, when compared to other cohorts, at the same ages, to be considered a separate generation.

(INSERT FIGURE 2 ABOUT HERE)

The first thing to note from Chart 2, is that it once again emphasizes the data limitations that studies of generational difference will always encounter – we only have 23 years of annual survey data and therefore it is not possible to follow any single cohort for an entire lifecycle, and this results in the rather discontinuous picture profile.

However, there are periods of overlap, when we are able to compare the responses (in this case on Vegetarianism) across individuals from different cohorts, who are at the same point (age) in their lifecycle. For instance, amongst the birth cohort of the 1970s, initial levels of vegetarianism are significantly higher than the 1960s cohort (at the same age) and when we consider the short period of overlap with the 1950s cohort, this is the only cohort (and age group) where we observe a slight fall in the average levels of vegetarianism in the early years (though this could be a result of smaller sample numbers).

Apart from this slight difference for the very latest cohort analysed, we find the most pronounced differences in vegetarianism in the early years of a cohort's development; and in

middle-age such differences become less significant. This suggests cohort effects predominant in early years, but then age effects mean that different cohorts become less dissimilar in their 40s and beyond.

In our work to date (which also includes analysis of *Group Membership* in the British Household Panel Survey, between 1991 and 2008), we find patterns of early adoption by younger individuals in each subsequent cohort, but with strong age-effects remaining as the younger adopters within each cohort revert back to the patterns of previous cohorts. Over time the trend change in behaviour amongst the younger age-group in each subsequent cohort becomes more enduring as they age, and eventually we observe a significant generational change.

We would suggest that the patterns identified in our studies to date are simply a reflection of the fact that proposed differences between generational cohorts are often reflections of more long-term trends in society. There has been a long-term trend increase in the proportion of vegetarians in the UK, with ‘intermediate’ or ‘transitional’ cohorts (1930s, 1940s and 1950s) exhibiting higher levels of vegetarianism at younger ages, but with more of a tendency to revert back to the behaviours of the previous cohort in later years – it is only with the 1960s cohort that we begin to see a stronger generational effect take hold, with much higher levels of vegetarianism in earlier life sustained (in a statistically significant way) into mid-life.

Hopefully, it is not outlandish to suggest that this final set of analyses has clear strengths, most importantly the ability to identify the point when a cohort exhibits a statistically significant set of behaviours/attitudes to a previous cohort, across key points in the age distribution. Following up on our critique of the existing research we have started from a position that none of the generations are clearly defined and focused down on particular attitudes/behaviours – to see

if we can identify a specific generational pattern to changes over time. We have looked at whether specific attitudes/behaviours of cohorts can be seen as ‘generational’ in their nature, and attempting to determine whether we can define specific cut-off points. There is no specific theory or basis to define such cut-off points [post-Boomers], and our choice of which issues (Vegetarianism/Group Membership) to consider has been purely opportunistic (based data availability).

We do have some evidence that, as would be expected, as new cohorts arrive they pick up ideas (like vegetarianism) in their younger years; we see a drop in the proportions who continue to be vegetarian as they age, but each subsequent cohort has higher proportions of individuals who are vegetarian when they are young; and more retain this into old age. There are points where we can see such changes experience something of a boost, but this is more of a wave than a distinct set of cut-off points.

The question we now ask, is what happens if we keep following this road of analyzing different ‘issues’ (attitudes, outcomes, values or behaviours), in different datasets, that allow identification of either panels of individuals, or repeated (representative) cross sections, over long periods of time?

### **Conclusions: Findings and a Way Forward?**

This paper suggests that current approaches adopted for the investigation of generations across most studies are fundamentally flawed. We then set out some of our evidence that takes a very different approach. However, as we make clear, our approach has been driven by availability of appropriate data, as this is an over-riding critique of the existing literature. There

are limited numbers of datasets that (either quantitatively or qualitatively) ask the same questions of individuals, of different ages; as part of a panel or repeated cross-section; over decades.

If we take this approach forward, it may be considered as ‘inductive’, as each study (driven by data availability) would need to find that attitudes to work, play, marriage, the role of women, membership of groups etc. all provide us with similar cut-off points for Gen X, Gen Y etc. When stated like this, we can see that even with Boomers and Veterans (defined on clearer experiences shared across gender, age ethnicity etc.), such commonality may be unlikely across all the issues that are available for investigation – is this proposed approach of any use?

The remainder of this conclusion sets out exactly how this approach might be used and why it is of use, but first it is worth noting that there is currently no other apparent way forward. The approach that researchers have taken to the question of Boomers is simply not open to us when testing for the existence of subsequent generational categorizations, as we do not have an observable phenomenon that clearly delineates a generation.

We therefore suggest a two-stage approach: first to inductively identify where differences in values etc. “cut” using the methodological approaches described above (grouping cohorts so that they cover as few years as possible, whilst still containing sufficient observations to allow statistical analysis); and, second, to seek historical events and societal trends which might explain the differences identified. We have provided examples of the first stage only in this paper, but even from this first-stage perspective, it is clear that there is currently no support for more than one ‘modern’ Post-Boom generation. This is the starting point for analysis.

This approach is not without its challenges. First, identifying a meaningful set of dimensions is difficult, and research is bound to be limited by the availability of longitudinal attitudinal data. Second, this process is time consuming and resource-intensive compared to the

popular approach of comparing groups based on arbitrary birth dates. Third, any generational divides must be large and statistically significant enough to overcome other characteristics (gender, ethnicity, nationality etc.), period effects and ageing effects, in order to be a significant dimension on which to differentiate values, attitudes and outcomes.

We would argue that these are significant challenges, but they are all challenges that we would expect researchers to overcome before providing any specific detail on generational categories. Perhaps a more pressing problem with taking an inductive approach, is the danger of losing theoretical context. However, if we could draw together a variety of research, looking into different possible generational cut-offs, based on different attitudinal/behavioural data, any common cut-off points will begin to provide insights into whether there are distinct generations; where these generations cut; and, importantly, what these attitudes and behaviours are – laying the foundations for a second stage of investigation that considers why?

Take as an example, work on women, men and risk taking. An increasing number of studies identify the potential for differences in the extent to which, “women shy away from competition and men embrace it” (Niederle & Vesterlund, 2007); and work by Booth and Nolen (2009, 2009a) suggests that these differential attitudes towards risk-taking, are further moderated with, “girls found to be as competitive and risk-taking as boys when surrounded by only girls”. There is an important ‘generational question’ here – to what extent has this relationship changed over time? We may be looking at a current situation where women are less keen on overt competition than men (in male settings), but this may be something that is changing from year to year. One may speculate that women are getting more and more willing to embrace competition, for a variety of reasons, and this change may be seen as ‘generational’ in nature – this does not

mean that Gen X are distinct to Gen Y, but across the generations we may see an increase in the competitiveness of women.

If work in this area were to identify a structural break of some sort, where we saw a change in the approach of women towards competition, we would (i) be able to compare this to any studies that took a similar generational approach to the analysis of other attitudes, behaviours etc. and see if there were common cut-off points and (ii) this would allow us some insight into why this might be happening, if other aspects of the research were similarly 'gendered' in nature. Furthermore, such a programme of research would shed light on the extent to which generational differences are only valid, when considered separately for men and women. Generational research can be seen (when properly carried out) as a study of the changing nature of impacts from characteristics/factors that we regularly input into models – i.e. gender, ethnicity, socio-economic background. In all these models, any impacts are assumed to be consistent through time and this may not be true.

Ultimately, this is the alternative hypothesis. Generations may be distinct points on a more general social journey as people become more accepting of women in labor market, less engaged with groups – or exhibit different engagement with groups; and vegetarianism spreads. This is a continuation of attitudinal trends, rather than the sudden step change that the popular media suggest, and which has given rise to generations as a concept. For example, the idea that 'millennials' are more team-oriented is simply a continuation of the increasing 'team-oriented' nature of work over many, many years, following the death of Taylorism.

This is a more dynamic viewpoint than the current conceptualization of generations. For each issue that we subject to generational scrutiny, there would be different theories of change that might be investigated to determine where a significant structural break in generational

attitudes occurred. After many years of such analysis, we may find that there are common ‘cut-off’ points across these various issues, that align with notions of Generation X or Generation Y. Such an approach would be much more rigorous, and constitute a sounder basis for the study of generations.



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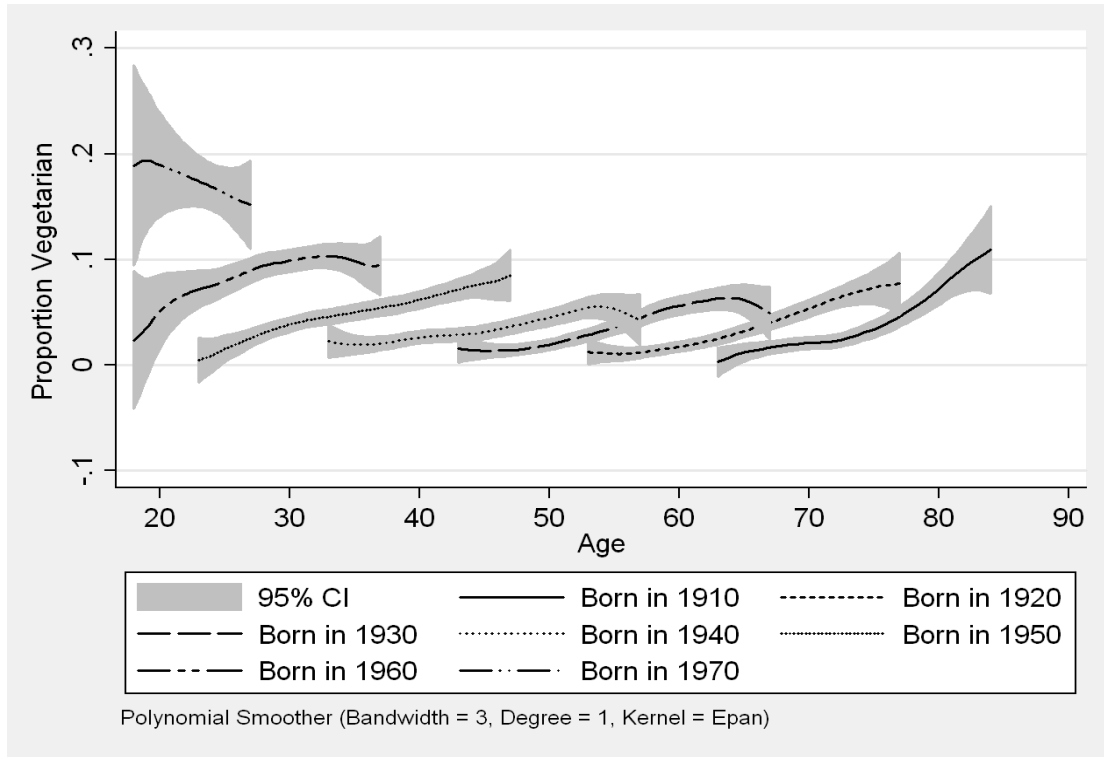
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**Figure 2: Generational Map of Vegetarianism (Smoothed and Overlaid Cohorts with 95% Confidence Intervals)**