ORIGINAL PAPER

Work Motivation Is Not Generational but Depends on Age and Period

Martin Schröder[1]

Abstract

Many argue that work motivation varies with year of birth, suggesting the utility of generational labels such as Z, Y, X, or Baby Boomer. This article tests this generational hypothesis by using multilevel regressions with data from 584,217 individuals sampled by the Integrated Values Survey in 113 countries over more than 30 years. The results show that the importance of work first increases and then decreases with an individual's age and that the importance of work tends to decrease for everyone with the passing of historical time. These age and period effects make later-born generations seem work averse, while birth year and thus generational membership hardly explain work motivation after accounting for age and period effects. The article also tests whether ten other work-related attitudes can be explained through generational membership. The results suggest that the historical time period and an individual's life course explain work motivation and work attitudes better than generational membership. This life course and historical explanation is suggested as an alternative to the generational hypothesis of work motivation and attitudes that prevails in much of the literature.

Keywords APC analysis · Generation Z · Generation Y · Generation X · Babyboomer · Attitude change · Work motivation · Life course · Karl Mannheim

Introduction

Over the twentieth century, a number of purported generations have been identified, notably the so-called (1) World War Generation (born approximately 1925–1945), (2) the Baby Boomer (born 1945–1965), (3) Generation X (1965–1980), (4) Generation Y (1980–2000), and (5) the later-born Generation Z (for an overview, cf. Costanza et al., 2012; similarly, cf. Mahmoud et al., 2021; Twenge & Campbell, 2012; Kowske et al., 2010).

These generations are said to hold very different attitudes. Popular culture describes Generation Y as being particularly lazy (Time, 2013; also cf. Gallup, 2016). Part of the academic literature agrees, arguing that members of Generation Y are "not ready to sacrifice their private life for work" (Kultalahti & Liisa Viitala, 2014: 576f.; also cf. Twenge et al., 2010), "express a weaker work ethic, a greater desire for leisure

and less work centrality" (Twenge & Campbell, 2012: 9) and are "less likely than older generations to be 'engaged' in the workplace" (Milkman, 2017: 9; also cf. Meriac et al., 2010). A sprawling management literature therefore gives advice on how to handle "lazy" and "unengaged" millennials (Deal & Levenson, 2016; Ubl et al., 2017).

However, is an individual's year of birth and associated generational membership indeed related to his or her work motivation? Does this relationship hold after taking into account that individuals change their attitudes over their life course (age effects) and that all members of society change their attitudes with the passing of historical time (period effects)? In other words, can work motivation truly be explained by a person's birth year, or is it better explained by how old a person is and in which historical time period he or she is surveyed?

This article answers this question by showing that after accounting for period and age effects, widely assumed generational effects disappear. While later-born generations may indeed appear work-shy, this is merely because later-born generations are surveyed later (when everyone sees work as less important due to a historical time period effect) and because later-born cohorts are younger (when everyone has always been less inclined to work due to an individual life

course effect). Similar results are found for ten additional work-related variables, which means that generational membership cannot explain work attitudes, while age and time period can.

The following section reviews how generations are classically conceptualized. It then shows how empirical studies have failed to do justice to the classical theory of generations, as they either confuse cohort with age and period effects or simply neglect age and period effects. This failure has led empirical studies to mistakenly conclude that work motivation varies with generational membership.

The classic definition of a generation comes from Karl Mannheim (1952 1928: 298), who argued that generations come into being where individuals "are in a position to participate as an integrated group in certain common experiences." Thus, the first precondition for a generation to come into existence is that a birth cohort has lived through shared circumstances that influenced its members similarly during their impressionable years (Ryder, 1965; Rudolph et al., 2021). Mannheim's (1952 1928: 298) idea behind this was that "[e]arly impressions tend to coalesce into a natural view of the world […] even if the rest of one's life consisted in one long process of negation and destruction of the natural world view acquired in youth, the determining influence of these early impressions would still be predominant." This implies that events that happen while a birth cohort is approximately 15 to 25 years old have a durable effect on this particular birth cohort, but not on other birth cohorts, which have either not yet reached their impressionable years or already passed them. Mannheim wrote his foundational text "The Problem of Generations" shortly after World War I. He was thus under the impression that birth cohorts that lived through the horrors of the Great War were durably scarred by this experience, while birth cohorts that were either too young or too old to have been marked by this experience remained unaffected.

While truly life-changing events such as war service may durably mark a particular birth cohort and thus turn it into a generation, Mannheim also made clear that other birth cohorts never experience such life-changing events during their impressionable years and thus never turn into a generation marked by a common life experience that leads to intragenerationally similar attitudes (Mannheim, 1952 1928: 309).

In contrast, the literature has postulated the advent of a new generation every 10–20 years, often failing to specify which "common experiences" (Mannheim, 1952 1928: 309) or "same event" (Ryder, 1965: 845) have allegedly influenced members of birth cohorts during their impressionable years so that they can be considered a new generation. Others have argued that Generation Y was formed by having witnessed September 11 and the Iraq War, by having grown up with computers, cell phones, internet, and social media (Milkman, 2017; Twenge et al., 2010; Weber, 2017). Even

the bankruptcy of Enron Corporation (Twenge & Campbell, 2012) and the introduction of the Harry Potter book series (Gierzynski & Eddy, 2013) are said to have influenced Generation Y both durably and distinctly. However, some have wondered whether a company bankruptcy or a book series are truly swaying enough to influence one particular birth cohort's attitudes relative to all others. Why, these authors ask, should events influence the attitudes of only one particular birth cohort, rather than those of all birth cohorts or of no birth cohorts at all (Campbell et al., 2017; Costanza et al., 2012; Rudolph et al., 2021)?

The first critique against the concept of a generation is thus whether a particular birth cohort has indeed lived through circumstances during their impressionable years that were exceptional enough to influence this and only this particular birth cohort. If, contrary to this, not only one but all birth cohorts are similarly influenced by a historical event or time period, then one cannot speak of a generational effect; rather, one must indeed speak of a historical *period effect* that influences all members of society similarly, instead of turning one particular birth cohort into a generation whose attitudes differ from all others (Mannheim, 1952 1928; Ryder, 1965; Luo & Hodges, 2022).

Second, the experience of a cohort must have influenced it for the remainder of its life; otherwise, one can only speak of a transitory *age effect*, which does not durably differentiate one generation from all others but simply differentiates the young from the old (Ryder, 1965; Campbell et al., 2017; Costanza et al., 2012; Milkman, 2017; Kiley & Vaisey, 2020). On this second account, the generational literature has also been criticized for not taking age effects seriously. Notably, studies that merely sample data from one time point cannot possibly differentiate what is often described as a generational effect from an age effect because, at each particular point in time, everyone of the same age was born at the same time and thus belongs to the same cohort. To understand why it is therefore impossible to disentangle the effects of age, period, and cohort without repeated measurements of each, consider Table 1, which shows how cohort membership in each year results directly from a combination of birth year and interview year.

Imagine that a sample from the year 2000 is analyzed (first column of Table 1). As Table 1 shows, everyone in this sample who is 20 years old must logically have been born in 1980. Thus, any work motivation found for a person in this group could be either due to the effect of being born in 1980 (cohort effect) or from the combined effect of being 20 years old (age effect) in the year 2000 (period effect). Similarly, with measurements from only the year 2000, it is impossible to tell if work motivation results from being born in 1975 (cohort effect) or from the combined effect of being 25 years old (age effect) in the year 2000 (period effect) because no one in 2000 is 25 years old *without* being born in 1975.

Table 1 Age-period-cohort table

Year	2000	2005	2010	2015	2020
Age					
20	1980	1985	1990	1995	2000
25	1975	1980	1985	1990	1995
30	1970	1975	1980	1985	1990
35	1965	1970	1975	1980	1985
40	1960	1965	1970	1975	1980

This so-called age-period-cohort problem is only solvable when one has measures of individuals from multiple cohorts at multiple times and multiple ages. Because then one not only has a cohort that is 20 years old in the year 2000 but also a cohort that is 20 years old in the year 2005 and so on, which allows to separate the effect of age (everyone changing their opinion as they grow older, irrespective of time period and cohort) from period effects (everyone in society changing their attitude with historical time, irrespective of their age and cohort) and to distinguish both effects from generational differences (individuals having different attitudes because of their birth year, irrespective of age and time period).

However, existing studies often use data from only one cohort, from only one age group, or from only one time period. These studies can therefore *not* disentangle the three effects. Yet this does not stop them from making sweeping generalizations about generations. Kultalahti & Viitala (2014: 576) compared members of different birth cohorts at merely one point in time, still, they argue that "catering for work-life balance was a very critical factor for our sample of Generation Y." Their results might, however, also be due to Generation Y having been relatively young when Kultalahti and Viitala sampled them, and young people might generally care more about work-life balance; thus, the authors' results would be due to age rather than due to generational effects, which they hold responsible. Similarly, Jobe (2014: 306) argued that "Boomers have strong beliefs in work for work's sake." However, Baby Boomers might have been at the peak of their careers when they were interviewed by Jobe; thus, what appeared as an effect of birth cohort and thus generational may have indeed been an effect of age. Because of this structural indeterminacy, researchers such as Cucina et al. (2018: 259f.) have cautioned that cross-sectional designs are "a major limitation to generational research […] since age and generation are confounded."

Some scholars suggest, however, that even after age and period effects are properly accounted for, generational influences on attitudes remain important; they argue that "if we want to make our best guess (net of age) about what a person thinks […] we would be better off knowing what year the person was born than what year we are observing them"

(Vaisey & Lizardo, 2016: 8). Others generalize this argument, claiming that "Generational differences are real and useful" (Campbell et al., 2015: 324). From this, one can derive the following hypothesis, which this article aims to test:

Generational Hypothesis (1): Birth year (birth cohort or purported generation) explains work motivation, irrespective of age and historical time period

As discussed above, an alternative to this generational hypothesis is that age effects rather than generational membership determine individual attitudes. Studies that have not taken the latter into account might merely show that those who are older think differently than those who are young (Meriac et al., 2010); this might also explain why Generation Y's predecessors have been described as similarly lazy when they were young (Smola & Sutton, 2002), whereas now—when they are older—they are seen as the hardworking predecessors of Generation Y (Mahmoud et al., 2021). Seeing a purported generation as being lazy when it is young and hard-working when it is middle-aged is more compatible with an age rather than a cohort effect. This leads to the second hypothesis, which is as follows:

Life Course Hypothesis (2): Age (over an individual's life course) explains work motivation, irrespective of birth year and historical time period

As mentioned above, another part of the literature fails to meet Mannheim's further requirement by not considering period effects. Notably, studies neglect period effects when they compare today's young to those of yesteryear, thus holding age constant, to then argue that "recent generations were progressively more likely to value leisure at work" (Twenge et al., 2010: 1119, 1131; also cf. Twenge & Campbell, 2012; Brandt et al., 2022). However, merely showing that today's adolescents are different from those of yesteryear could just as well indicate that everyone has changed their opinion with the passing of historical time, rather than indicating generational change (Campbell et al., 2015: 325; Arnett, 2014: 195). The possibility that historical time periods may explain what is often seen as generational differences leads to the third hypothesis, which is as follows:

Historical Hypothesis (3): Year of measurement (historical time period) explains work motivation, irrespective of age and birth year

Although age (Hypothesis 2) or period effects (Hypothesis 3) might therefore explain what is often understood as generational differences (Hypothesis 1), many scholars continue to argue for fundamental differences between generations, thus upholding Hypothesis 1 despite alternative explanations (Mahmoud et al., 2021; Campbell et al., 2015). Others caution, however, that "the relatively sparse empirical research published on Millennials is confusing at best and contradictory at worst" (Deal & Levenson, 2016: 191), urging that before any claims about generations can be made, one must account for the confounding influence of age and period, contrary to what existing research has done (Kowske et al., 2010; Costanza et al., 2012; Rudolph et al., 2021).

While this has been done for work satisfaction (Cucina et al., 2018; Kowske et al., 2010), it has not been done for work motivation (Costanza et al., 2012: 381). Especially lacking are studies of work motivation that extend beyond US student and industry samples (Campbell et al., 2015: 325). Particularly, existing studies bemoan that "no known studies have examined generational differences in PWE [protestant work ethic] in European nations" (Zabel et al., 2017: 311). This lack of cross-cultural evidence is problematic because generations are said to be formed through shared experiences, and these are likely to differ across countries. In spite of this, US generational labels are often simply applied to other countries (Campbell et al., 2015: 325), which is clearly nonsensical, as some of the events that purportedly gave rise to generations in the USA simply did not take place in other countries (Rudolph et al., 2021: 949). This makes it an act of faith to assume that alleged generations, whose existence is already in doubt for the USA, can be readily found in other countries (however, cf. a study using German data, Schröder, 2018, 2019). To test whether generations can be found cross-nationally, this article uses data on multiple cohorts sampled at multiple time periods and multiple ages to disentangle the effect of age, period, and cohort on work motivation and other work-related attitudes cross-nationally for the first time.

Data and Method

Data

The Integrated Values Survey merges the World Values Survey and the European Values Study into one large dataset, providing data from 584,217 individuals sampled in 113 countries between 1981 and 2022. Cohorts born before 1925 are omitted, as they were mostly retired during the sampling period, making it difficult to gauge their work motivation. This leaves a sample with a mean age of 42 (sd = 16.1, min = 15, max = 89), of which 49.9% are male, with an average survey year of 2006 (sd = 10.1, min = 1981, max = 2022).

Birth cohorts are defined through 5-year intervals of common birth years, following the usual boundaries in the literature as mentioned above. While these typically classify 15-year birth cohorts as belonging to the same generation, proponents of the generational thesis argue that "[t]here is no agreed on year for the beginning or end of generations" (Campbell et al., 2015: 323). Thus, using 5-year birth cohort intervals gives cohort effects a better chance to emerge than lumping 15-year birth cohorts into one group. For example, if the first Generation X members born 1970–1974 would find work very important, while the last Generation X members born 1980–1984 find work less important, then grouping them all as one Generation X would find no effect overall, while grouping them in 5-year birth intervals would show the respective positive and negative effects that would otherwise cancel themselves out.

If, conversely, all members of a 15-year birth cohort find work more important, then each of the 3×5-year birth cohorts that comprise this purported generation would also find work more important. Thus, using finer-grained birth cohorts brings no information loss but instead adds detail. This approach gives purported birth cohort effects a better chance to emerge, even if these are not always neatly arranged along the exact starting and end dates of purported generations. So why not use ever smaller birth cohorts, such as distinguishing each year as a birth cohort? This would make no sense theoretically, as, e.g., being born in 1998 compared to 1999 compared to 2000 cannot possibly be conceptualized as a generational difference and because statistically, with ever smaller birth cohorts, sample sizes eventually become too small. Table 2 shows how many cases exist per cohort.

One generation must be used as a reference category, with which other generations are compared. Substantively, it does not matter which group is the reference, as, e.g., arguing that Gen Z has a lower work motivation than the Baby Boomer is the same as arguing that the Baby Boomers have a higher work motivation than Gen Z. Although there might be an interest in comparing the "newest" Gen Z birth cohort to all others, Table 1 shows that only 3210 Gen Z individuals are in the sample, and these individuals are at most 22 years old, as Gen Z was born starting in 2000, while the most recent data are from 2022. Because there are so few Gen Z individuals and because they have not yet completed their formative years, Gen Z is not a good reference category. Instead, the Gen Y birth cohort born 1990–1994 is used for this purpose, as it contains 24,313 individuals, which makes for a more robust reference category.

Table 2 Cases per cohort

Birth cohort name	Birth year	Cases	Percent	Cum.
WW ("World War generation")	1925–1929	14,819	2.40	2.40
WW	1930–1934	20,260	3.28	5.69
WW	1935–1939	27,756	4.50	10.19
WW	1940–1944	33,708	5.46	15.65
BB ("Baby Boomer")	1945–1949	42,601	6.91	22.56
BB	1950–1954	51,912	8.42	30.97
BB	1955–1959	58,292	9.45	40.42
BB	1960–1964	63,204	10.25	50.67
BB	1965–1969	60,779	9.85	60.52
X ("Generation X")	1970–1974	60,094	9.74	70.27
X	1975–1979	55,098	8.93	79.20
X	1980–1984	47,757	7.74	86.94
Y ("Generation Y")	1985–1989	39,414	6.39	93.33
Y	1990–1994	24,313	3.94	97.27
Y	1995–1999	13,624	2.21	99.48
Z ("Generation Z")	2000–2004	3,210	0.52	100.00
Total		616,841	100.00	

Table 3 Descriptive data for variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Year of birth (cohort)	616,841	1964	17	1925	2004
Age	616,841	42	16	15	89
Year of survey (period)	616,841	2006	10	1981	2022
Important in life: Work	584,217	3.5	.74	1	4

The main variable of interest is whether purported generations find work "very important" (= 1), "rather important" (= 2), "not very important" (= 3), or "not at all important" (= 4). These numbers are inversed, so that larger numbers indicate a larger importance of work. Table 3 shows the descriptive data for the main variables used.

Method

As mentioned above, cohort, age, and period cannot be linearly separated, as every cohort has the same age at the same time. Therefore, unambiguously assigning influences to cohort, age or period is a "futile quest" (Glenn, 1976: 900; Ryder, 1965; O'Brien, 2011). This is only a problem, however, if age, period, and cohort are measured categorically, as in the example above. The age-period-cohort problem is unproblematic, when trying to measure whether a categorically defined birth cohort has certain attitudes irrespective of *continuous* age and period trends that affect all cohorts similarly (Mason & Wolfinger, 2001; Pampel & Hunter, 2012;

Chauvel & Schröder, 2014; Bell, 2020; Fosse & Winship, 2019a; Schröder, 2018, 2019).

This means that by controlling for the effect of having been asked later in historical time and by controlling for the effect of being one year older in the individual life course, the effect of having been born in a certain year can be separated from the effect of the progression of historical time and of individual age. The effect of belonging to a purported generation, in other words, becomes identifiable relative to the effect of individual aging and the effect of societal changes in work attitudes.

The results section first presents models that explain attitudes through cohort membership, controlling for only age and age squared. Modeling age as a continuous rather than categorical variable makes sense, as age effects are inherently continuous (Bell, 2020). Using not only age but also age squared makes sense, as many life effects are not simply continuous but first go in one direction and then in the opposite direction. For example, work may be more important when one starts working life and then eventually become progressively less important as one approaches retirement. The historical time period is modeled as a continuous variable (year of survey). The intuition behind this approach is that attitudes may change gradually over time. Thus, for example, work attitudes in 2020 should largely result from attitudes in 2019, more than, say, from attitudes in 1995. For this reason, age and period are modeled as continuous rather than categorical variables.

Contrary to age and period, cohorts are conceptualized as categorical, as the argument for distinguishing generations is that one generation is precisely *not* a continuation of the preceding one. For example, Generation Y is not understood as a continuation of the preceding Generation X but rather as something categorically new. Indeed, the literature's claim is that a new generational label is warranted *because* each generation is categorically different.

Calculating the effect of having been born during a certain time after controlling for age and age squared indicates whether birth cohorts find work more or less important, irrespective of age-related changes in work motivation that affect all cohorts similarly. Additionally, controlling for the time period shows whether purported generations hold different opinions, not only irrespective of their age but also irrespective of when they have been surveyed in historical time.

Models other than the standard model proposed herein can be used to calculate cohort effects. However, these models are less useful for the task at hand. Notably, the so-called hierarchical age period cohort (HAPC) models (Yang & Land, 2006) try to minimize unexplained variance by clustering individuals by age, period, and cohort. However, such models arrive at systematically incorrect results, such as suggesting that formal education declines with age, which is impossible (Chauvel & Schröder, 2015; O'Brien, 2017; Bell

& Jones, 2018; Lois, 2019). The problem of such models is that their assumptions are made "under the hood"—that is, an algorithm decides how variation is assigned to cohorts, age, and period—leaving it unclear why certain results come about, which has led critics to argue that authors and users of these algorithms "do not really know why their model works (because it often does not)" (Bell & Jones, 2018: 797).

Rather than hiding assumptions within an algorithm, the literature urges scholars to make the assumptions behind age-period-cohort models apparent (Bell, 2020; Fosse & Winship, 2019a, 2019b). For the calculations below, and in accordance with the hypotheses above, these assumptions are simply that everyone might change their opinions (1) both linearly and nonlinearly with the progression of age over the life course and (2) linearly with the progression of historical time. However, I use an HAPC model as a robustness test to ensure that its results do not contradict the main results, which they do not (see Online Annex "OA5: HAPC" for a discussion and results).

Last, the dependence of attitudes within countries needs to be accounted for. Multilevel regressions inflate standard errors accordingly. For these multilevel regressions, I cluster individuals in countries and calculate random intercepts, which is the simplest way of clustering. Rather than calculating random slopes, I also calculate everything on a per country basis to test whether the results presented below exist in individual countries as well. This approach is also substantively important for understanding whether generations exist in some countries but not in others (for results, see "OA4: Different countries"). The main results present linearly scaled marginal effects. However, using odds ratios yields substantively similar results (see "OA7"). The code used to obtain the results is available online, and the data are publicly available; thus, all calculations are replicable.

Results

How Is the Year of Birth Related to Work Motivation?

The first model shown in Table 4 explains work motivation through cohort membership while controlling for age, measured as the effect of becoming 10 years older (Age) as well as age squared (Age*Age). The second model additionally controls for the time period (Period) by accounting for the effect of 10 years of elapsed historical time. Ten-year increments have been chosen simply for convenience, as the effect size of 1 year is very small, making it easier to interpret the effect of the passing of 10 years of age and calendar time.

In Model 1, Country_SD indicates that the importance of work deviates by 0.2 from country to country, while Individual_SD indicates that the standard deviation between individuals is 0.7. This means that only approximately 7%

of the variation in the importance of work lies between countries, while 93% of the variation lies between individuals (intraclass correlation coefficient = $0.2^2/(0.2^2 + 0.7^2)$). Substantively, Model 1 shown in Table 1 (and its plotted marginal effects in the left-hand graph of Fig. 1) shows that before accounting for time period (the historical time when respondents were surveyed), Generation Y's predecessors indeed seem to have assigned more importance to work. For example, the birth cohort of 1990–1994 (Generation Y) assigned work an importance of 3.58 out of 4 possible points. In contrast, the first birth cohort of 1925–1929 assigned works an importance of 3.85. The importance of work thus indeed seems to decline with each successive birth cohort. This fits the literature's assumption that later-born birth cohorts, particularly Generation Y and Z, are less motivated to work.

Table 4 Multilevel regression models for importance of work

Important in life: work	(1)		(2)	
WW1925	0.27***	(4.69)	0.01	(0.21)
WW30	0.21***	(3.93)	−0.02	(−0.48)
WW35	0.16**	(3.17)	−0.05	(−1.13)
WW40	0.14**	(3.19)	−0.06	(−1.29)
BB1945	0.12**	(3.03)	−0.06	(−1.38)
BB50	0.10**	(2.97)	−0.05	(−1.46)
BB55	0.09**	(2.91)	−0.05	(−1.39)
BB60	0.08**	(2.91)	−0.04	(−1.26)
BB65	0.06*	(2.35)	−0.04	(−1.61)
X1970	0.04*	(2.03)	−0.04+	(−1.68)
X75	0.03+	(1.80)	−0.03	(−1.42)
X80	0.03*	(2.15)	−0.01	(−0.69)
Y1985	0.02*	(2.16)	−0.00	(−0.00)
Y90	0.00	(.)	0.00	(.)
Y95	−0.01	(−0.50)	0.01	(1.05)
Z2000	−0.03	(−1.13)	0.01	(0.34)
Age+10 years	−0.05***	(−4.86)	−0.01	(−1.02)
Age+10*Age+10	−0.05***	(−12.85)	−0.04***	(−12.85)
Period+10 years			−0.04***	(−3.57)
Constant	3.58***	(112.34)	3.69***	(125.03)
Country_SD				
	0.20***	(−27.20)	0.20***	(−27.24)
Individual_SD				
	0.70***	(−19.33)	0.70***	(−19.33)
AIC	1,247,165.41		1,247,127.53	
BIC	1,247,390.97		1,247,364.36	
ICC_level_2	.071		.071	
Countries	113		113	
Observations	584,217		584,217	

Generations: *WW*, World War, *BB*, Baby Boomer

+*p* < 0.1, **p* < 0.05, ***p* < 0.01, ****p* < 0.001

However, Model 1 shown in Table 1, and its visualization shown in the left-hand graph of Fig. 1 only control for a cohort's age. These apparent cohort effects can therefore be due to two reasons. First, later-born birth cohorts might indeed find work less important, irrespective of when they have been surveyed, which would be an actual cohort effect. Second, however, it is important to consider that one's birth cohort is strongly correlated with the historical time period during which an individual was interviewed (r =.42, sig < .001). In other words, later-born cohorts have on average been surveyed later, when everyone may find work less important. In this case, what appears as a cohort effect would truly be a period effect. It would then only appear as if successive birth cohorts find work less important, while the actual reason for declining work motivation is that everyone finds work less important over time (a period effect).

To distinguish between these two possibilities, Model 2 shown in Table 2 controls not only for individual age but also for time period. The right-hand graph of Fig. 1 visualizes the corresponding cohort effects, which are now controlled not only for the progression of an individual's age on work motivation but also for the progression of historical time on an individual's work motivation. Controlling for age and period shows that almost all birth cohorts find work

similarly important. Thus, contrary to the predictions of the literature that later-born generations find work less important *due to a cohort effect*, Model 2 shown in Table 1 and the right-hand side of Fig. 1 show that actual cohort differences hardly exist when cohorts are asked about their work motivation at the same age and the same historical time.

This is possible due to the significant and substantively negative period effect of Model 2 shown in Table 1, which indicates that with every 10 years of calendar time, work is seen as 0.04 points less important by *all* birth cohorts. Thus, with every 10 years of passed calendar time, the importance of work decreases for all cohorts of all ages by a roughly similar magnitude as the difference between two generations. Because later generations have been asked later in historical time, they appear more work averse. However, as the lower level of work motivation is related to the time at which work motivation was queried rather than being related to when an individual was born, this is a period effect instead of a birth cohort effect that could be interpreted as generational.

To show this explicitly, "OA2" in the Online Annex models the importance of work as a function of the historical time period. The graphs thus show how the importance of work tends to decrease after 1990 even *before* controlling for cohort effects. However, *after* controlling for cohort effects,
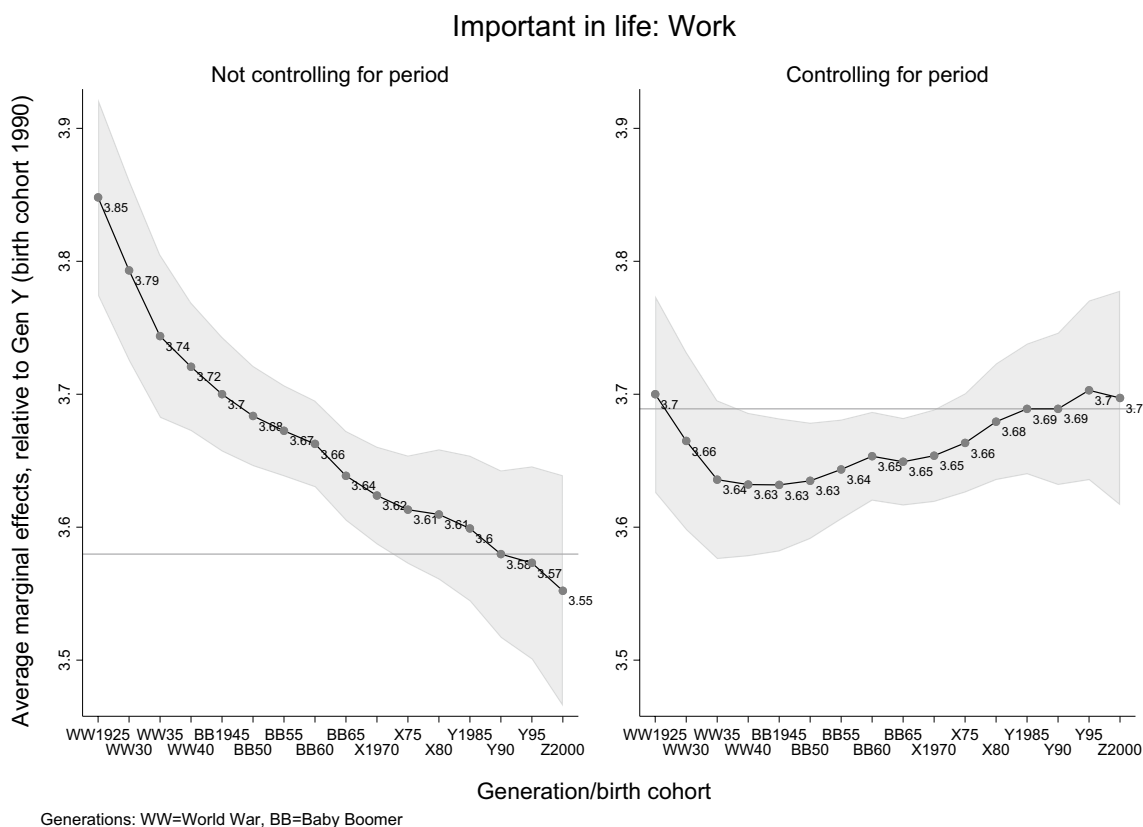

Important in life: Work

Fig. 1 Importance of work before controlling period effects (left) and after (right)

the period effect of declining work motivation remains almost the same. Thus, period effects explain why later-born cohorts find work less important (because they have been asked later in historical time, when everyone finds work less important). Conversely, cohort effects do *not* explain that everyone finds work less important with the passing of historical time. Put even more simply, period effects remain after controlling for cohort effects, but cohort effects do not remain after controlling for period effects.

This outcome implies that studies which claim that work is unimportant for Generation Y assume a cohort effect, when truly what they show is a period effect. Substantively, this means that members of Generation Y, Z, X, or any other generation are not work averse due to when they were born and thus not as a generation. Instead, everyone is becoming work averse over time, and later-born cohorts simply fit into this trend of declining work motivation, which affects all birth cohorts similarly. As later-born individuals have been asked later in historical time, they at first glance appear to find work less important due to when they have been born, when in reality, they find work less important because they have been asked later in historical time, i.e., when everyone finds work less important.

In addition, age effects are much stronger than cohort effects. To illustrate this, the graph under "OA2" in the Online Annex shows a typical "importance of work" age trajectory after controlling for period and cohort effects. This shows how during an individual's life cycle, the importance of work typically increases from 3.42 around age 15 to 3.66 around age 40 and then declines to 2.72 around age 85. Thus, the importance of work varies by as much as 0.94 points over the life cycle, irrespective of cohort membership or period. In comparison, no single cohort is more than 0.06 points apart in how important it considers work to be after controlling for age and period. The importance of work thus varies approximately 15 times more during an individual life cycle than the difference between any two birth cohorts can account for.

Both age and period effects therefore predict the importance of work far better than any generational difference. This disconfirms the Generational Hypothesis (H1) in favor of the Life Course Hypothesis (H2) and the Historical Hypothesis (H3). Simply put, an individual's age and historical time period explain work motivation, while his or her generational membership does not.

Different Specifications and Explanations

Age-period-cohort analysis is sensitive to model specifications. It is therefore particularly important that results are robust across different specifications. First, generational differences might be found beyond the specific variable of work motivation analyzed in the main regression. Regressions shown in the Online Annex, therefore, analyze additional work attitudes, such as the subjective importance of (1) leisure time, (2) good work hours, (3) the opportunity to use initiative, (4) generous holidays, (5) thinking that you can achieve something, (6) having a responsible job, (7) having a job that is interesting, (8) having a job that meets one's abilities, (9) having pleasant people to work with, and (10) meeting pleasant people as important aspects of one's job.

Similar to work motivation, the first eight aspects seem to change (in this case, become more important) from one cohort to the next before controlling for the period of measurement. However, after controlling for the historical time period, no cohort effects remain for any of these variables. Only the importance of "generous holidays" increases slightly from one cohort to the next after controlling for the historical time period. The importance of having pleasant people to work with even slightly decreases from one cohort to the next after controlling for time period. The last variable, which measures the importance of "meeting pleasant people" as an important job aspect, does not even display a clear cohort effect *before* adjusting for the period and still does not do so afterward (for all results and their discussion, see "OA3: Further variables").

These findings support the main result by showing that beyond the specific tested variable of work motivation, cohort membership does not explain other types of work attitudes after accounting for the effects of the historical time period. This means that individuals change their work attitudes with age and over historical time periods, but not on a generational basis.

Second, some scholars argue for "a global generation [with] a global consciousness" (Edmunds & Turner, 2005: 564f). This can be seen as a strong assumption since generational trends might differ from one country to another, as countries have different cultures and different events that might have influenced birth cohorts. That cohorts may differ between countries has already been handled by using multilevel regressions, which cluster individuals within countries, rather than assuming that all individuals pertain to the same homogenous sample. However, it remains unclear whether generations exist in some countries but not in others. This is why "OA4" in the Online Annex displays separate results for each of the 34 countries that participated from the earliest to the latest IVS waves and has at least 100 individuals in the base category of the 1990–1994 birth cohort.

These individual country results, as shown in "OA4" in the Online Annex, support the main result fairly uniformly; of the 34 analyzed countries, only Austria, Chile, Mexico, and Turkey show a cohort-based decline in work motivation after accounting for period effects. In other countries (such as, notably, the USA), no cohort trend exists after accounting for time period, while in yet others (such as Germany), there is even a cohort trend of *increasing* work motivation after accounting for time period.

Thus, whoever wants to postulate a certain cohort trend can find it by handpicking a country that supports one's hypothesis. Overall, however, the cross-country evidence does not speak in favor of a cohort-based decline in work motivation once the effects of individual age and historical period trends are accounted for. Some scholars have argued that the generational hypothesis was never meant to work outside the USA. The results indicate, however, that it does not even work in the USA, let alone in other countries aross the board.

Third, HAPC models are seen by some as an alternative to the more standard APC models used above. I have therefore used an HAPC model as a robustness test. The "OA5: HAPC" section in the Online Annex shows that the HAPC model assigns less than 0.1% of variation in work motivation to cohorts, 10.8% to age, 1.1% to period, 6.7% to countries, and 81.3% to residual individual variation (rest rounding errors). Thus, the results obtained by the HAPC model replicate the main result of this article, i.e., that cohort effects are negligible relative to age and period effects, let alone country and individual differences.

Fourth, generations might only exist in "Western" countries. Thus, "OA6" in the Online Annex uses data from the EU-15 plus Australia, New Zealand, Canada, the USA, Norway, and Switzerland. Again, however, the results are substantively similar; work motivation seems to have declined with successive cohorts in "the West" (until the cohort born in approximately 1980) *before* controlling for historical time. However, *after* controlling for historical time period effects, cohorts starting with the 1950 Baby Boomers seem to have found work somewhat *more* important due to a cohort effect. Using a sample of purportedly culturally more homogeneous "Western" countries thus supports the main result that the decline in work importance is, if anything, a period effect but certainly not a cohort effect.

Fifth, the data could also have been modeled as ordinal, comparing odds ratios instead of marginal effects. Using the group of aforementioned Western countries, as the models did not converge otherwise, the substantive results are found to be the same as those obtained when the data are treated as ordinal; i.e., there seems to be a decrease in work motivation with successive birth cohorts before accounting for the progression of historical time, but this changes into an opposite cohort-based trend once period effects are taken into account (see "OA7: Odds ratios"). This outcome thus replicates the main result that later birth cohorts are not work averse due to a cohort effect. Rather, it shows that decreasing work motivation is due to a period effect, regardless of how it is calculated.

Sixth, the main calculations used both age and age squared to model an individual's life cycle. This approach makes sense, as work first becomes more important and then eventually less important during a typical life cycle (see "OA2"). "OA8: Cohort effects after linear control"

counterfactually assumes that age effects are linear and displays cohort effects after controlling only for age (but not age squared). By doing so, it seems that work motivation increases with each generation until the Baby Boomers born in approximately 1960 and then decreases with each generation. This seems to be the case even after controlling for period effects (see "OA8"). This is therefore the second reason (apart from unaccounted period effects) for the mistaken view that work motivation declines on a generational basis. Notably, individuals of all cohorts find work most important during the middle of their life cycle (see "OA3: Age effects"). Thus, not appropriately controlling for this nonlinear age effect leads to inappropriately identifying cohort effects. This is because when interviewed, 80% of the generation born in approximately 1955–1960 were between 30 and 60 years old. Thus, members of birth cohorts that are typically described as particularly work-motivated due to their generational membership are actually very motivated to work due to a life-cycle effect. Thus, work motivation can be explained through an *age* effect, notably work being important during the period of middle age, rather than because some individuals belong to a generation that considers work as very important (see "OA3"). However, not controlling for age or only controlling for age but not age squared makes it impossible to see this. The mistaken idea that work motivation varies with generations is therefore not only due to a failure to appropriately control for period effects (factoring out that everyone becomes work averse over time) but also due to a failure to properly control for age (factoring out that generations who seem motivated to work are of an age at which everyone finds work important, regardless of which generation they belong to). Thus, the fact that some cohorts seem to find work more important is due to their being middle age and thus a life cycle effect, rather than due to when they were born and thus a birth cohort effect.

Last, one can also control for period squared in addition to period. However, this approach mainly replicates the main results, which suggests that the simpler specification of controlling for period, but not period squared, is adequate to account for period effects (see "OA9").

Discussion

Researchers claim that "[g]enerational differences are real and useful" (Campbell et al., 2015: 324; also cf. Twenge & Campbell, 2012; Twenge et al., 2010; Brandt et al., 2022; Kultalahti & Liisa Viitala, 2014; Milkman, 2017; Meriac et al., 2010). I have termed this claim the Generational Hypothesis (H1).

The results above have shown that this commonly advanced generational explanation of work attitudes neglects

two alternative explanations, both of which explain work motivation better than cohort membership and thus alleged generations. Notably, in accordance with the Life Course Hypothesis (H2), work first becomes more important to individuals (until approximately age 40) and then progressively becomes less important, irrespective of historical time periods and an individual's birth cohort. It is these middle-aged individuals whom the literature typically compares to later-born cohorts who are younger and *therefore* less interested in work, which gives rise to the mistaken view that later-born generations are work-averse as a generation when in reality, younger individuals have never assigned as much importance to work as those who are middle-aged, which is an age effect.

In addition, what I have deemed the Historical Hypothesis (H3) also has explanatory value, as the historical time period during which a measurement takes place explains work motivation irrespective of an individual's age and birth cohort. Everyone is becoming work averse over time, which is a period effect related to the passing of historical time, not a cohort effect. However, because later-born cohorts have been asked later in historical time, the mistaken impression arises that later-born cohorts are work averse as a generation when in reality everyone who is asked later in historical time is less inclined to consider work important.

In lay terms, this means that the generation to which a person belongs has no explanatory value above and beyond the effect that everyone finds work first more important and then eventually less important over the individual life course and that everyone finds work less important as historical time progresses. These alternative hypotheses, i.e., the Life Course Hypothesis (H2) and the Historical Hypothesis (H3), thus explain why the literature has tended to see generations as a useful construct when in reality they are not.

Given these results, it is no wonder that studies that use time periods as short as 8 years argue that cohort effects are more important than age or period effects, seemingly contradicting the results from this study. The problem with these existing studies is that they cannot disentangle the effect of age and period from cohort effects, as some of them self-critically note (Kiley & Vaisey, 2020: 498ff). Indeed, the results have shown that period- and age-based changes are relatively slow; thus, to make them visible compared to cohort changes, databases with long time periods are indispensable. The reason for this is that different cohorts can be measured even with a single data collection point, while longer time periods can only be measured through repeated survey waves, which take time to accumulate. Therefore, one reason why much of the literature argues in favor of cohort effects is probably that sufficiently long time periods and age trajectories have been hitherto unavailable, which means that period and age trends could not previously have been weighed against cohort effects.

Another, more speculative reason why the concept of a generation has appeared useful is that previous historical upheavals may have indeed marked birth cohorts and thus turned them into generations, while recent history may simply not have been radical enough to leave an enduring imprint. It is one thing to argue, as Mannheim (1928) did under the influence of World War I, that individuals drafted into the horror of the trenches may have become marked as a generation. However, it takes a greater stretch of the imagination to accept that having watched 9/11 on TV (Edmunds & Turner, 2005), the Enron corruption scandal (Twenge & Campbell, 2012), the development of social media (Milkman, 2017), or even the publication of the Harry Potter books (Gierzynski & Eddy, 2013) have durably marked Gen Y's attitudes but not those of other generations.

Note, however, that the results do not question the impression that "work was more important before." Instead, the data suggest that this impression exists because a period effect (everyone being less inclined to work with the progression of historical time) and an age effect (the young having always been less inclined to work) is often confused with a cohort effect (one specific generation being unmotivated to work).

This difference is not merely semantic. Instead, first, age effects imply that "work-averse younger generations" will become less work averse as they progress toward middle age. Second, the trend of generally declining work motivation seems secular in affecting all cohorts similarly and will therefore, if it continues, mean that everyone will be less motivated to work, irrespective of their age and birth cohort. Note, however, that while this article has used longer-term period data than any previous article, it can obviously only make statements about the 1981–2022 period.

Given that generational membership tells so little about attitudes, I close with a somewhat provocative idea. Generational membership may have become a new "ism", i.e., a convenient if biased heuristic to make reality simpler than it is. Modern societies consider it illegitimate to stereotype individuals based on sex, race, ethnicity, or other inborn characteristics. Strangely, however, the same categorizing, stereotyping, and discrimination appear unproblematic to many, if based on another inborn characteristic, namely, birth year. To understand the absurdity of this, consider the sexism inherent in describing women as "generally unmotivated" in the workplace. However, when the exact same assumption is made about birth cohorts, many see it as unproblematic (Costanza & Finkelstein, 2015). Yet, there is no reason why such "generationalism" should be seen as more benign than discrimination based on sex, race, or ethnicity (Rudolph et al., 2021), especially because data do not back up the claim of "lazy generations."

Finally, the results of this study have practical implications. Different from studies that argue that organizations must "adapt to the diverse nature of the multigenerational workforce" (Mahmoud et al., 2021: 193), the results presented above instead suggest paying *less* attention to purported generational differences; rather, they suggest first considering that young people have and possibly always will be different than the elderly and that, second, all members of society think differently now than they did in the past. More broadly, the findings of the current study suggest that society changes more with the passing of time than with the passing of generations.

Declarations

References

Arnett, J. J. (2014). *Emerging adulthood: The winding road from the late teens through the twenties* (2nd ed.). Oxford University Press.

Bell, A. (2020). Age period cohort analysis: A review of what we should and shouldn't do. *Annals of Human Biology, 47*(2), 208–217. https://doi.org/10.1080/03014460.2019.1707872

Bell, A., & Jones, K. (2018). The hierarchical age–period–cohort model: Why does it find the results that it finds? *Quality and Quantity, 52*(2), 783–799. https://doi.org/10.1007/s11135-017-0488-5

Brandt, N. D., Drewelies, J., Willis, S. L., Schaie, K. W., Ram, N., Gerstorf, D., & Wagner, J. (2022). Acting like a baby boomer? Birth-cohort differences in adults' personality trajectories during the last half a century. *Psychological Science, 33*(3), 382–396. https://doi.org/10.1177/09567976211037971

Campbell, S. M., Twenge, J. M., & Keith Campbell, W. (2017). Fuzzy but useful constructs: Making sense of the differences between generations. *Work, Aging and Retirement, 3*(2), 130–139. https://doi.org/10.1093/workar/wax001

Campbell, W. K., Campbell, S. M., Siedor, L. E., & Twenge, J. M. (2015). Generational differences are real and useful. *Industrial and Organizational Psychology, 8*(3), 324–331. https://doi.org/10.1017/iop.2015.43

Chauvel, L., & Schröder, M. (2014). Generational inequalities and welfare regimes. *Social Forces, 92*(4), 1259–1283. https://doi.org/10.1093/sf/sot156

Chauvel, L., & Schröder, M. (2015). The impact of cohort membership on disposable incomes in West Germany, France, and the United States. *European Sociological Review, 31*(3), 298–311. https://doi.org/10.1093/esr/jcu091

Costanza, D. P., Badger, J. M., Fraser, R. L., Severt, J. B., & Gade, P. A. (2012). Generational differences in work-related attitudes: A meta-analysis. *Journal of Business and Psychology, 27*(4), 375–394. https://doi.org/10.1007/s10869-012-9259-4

Costanza, D. P., & Finkelstein, L. M. (2015). Generationally based differences in the workplace: Is there a there there? *Industrial and Organizational Psychology, 8*(3), 308–323. https://doi.org/10.1017/iop.2015.15

Cucina, J. M., Byle, K. A., Martin, N. R., Peyton, S. T., & Gast, I. F. (2018). Generational differences in workplace attitudes and job satisfaction. *Journal of Managerial Psychology, 33*(3), 246–264. https://doi.org/10.1108/JMP-03-2017-0115

Deal, J. J., & Levenson, A. (2016). *What millennials want from work: How to maximize engagement in today's workforce.* McGraw-Hill Education 9780071843324

Edmunds, J., & Turner, B. S. (2005). Global generations: Social change in the twentieth century. *The British Journal of Sociology, 56*(4), 559–577. https://doi.org/10.1111/j.1468-4446.2005.00083.x

Fosse, E., & Winship, C. (2019a). Analyzing age-period-cohort data: A review and critique. *Annual Review of Sociology, 45*(1), 467–492. https://doi.org/10.1146/annurev-soc-073018-022616

Fosse, E., & Winship, C. (2019b). Bounding analyses of age-period-cohort effects. *Demography, 56*(5), 1975–2004. https://doi.org/10.1007/s13524-019-00801-6

Gallup. (2016). How millennials want to work and live. https://www.gallup.com/workplace/238073/millennials-work-live.aspx

Gierzynski, A., & Eddy, K. (2013). *Harry Potter and the millennials: Research methods and the politics of the muggle generation.* JHU Press. https://doi.org/10.5860/choice.51-3694

Glenn, N. D. (1976). Cohort Analysts' futile quest: Statistical attempts to separate age, period and cohort effects. *American Sociological Review, 41*(5), 900–904 http://www.jstor.org/stable/2094738

Jobe, L. L. (2014). Generational differences in work ethic among 3 generations of registered nurses. *JONA. The Journal of Nursing Administration, 44*(5) https://journals.lww.com/jonajournal/Fulltext/2014/05000/Generational_Differences_in_Work_Ethic_Among_3.12.aspx

Kiley, K., & Vaisey, S. (2020). Measuring stability and change in personal culture using panel data. *American Sociological Review, 85*(3), 477–506. https://doi.org/10.1177/0003122420921538

Kowske, B. J., Rasch, R., & Wiley, J. (2010). Millennials' (lack of) attitude problem: An empirical examination of generational effects on work attitudes. *Journal of Business and Psychology, 25*(2), 265–279. https://doi.org/10.1007/s10869-010-9171-8

Kultalahti, S., & Liisa Viitala, R. (2014). Sufficient challenges and a weekend ahead – Generation Y describing motivation at work. *Journal of Organizational Change Management, 27*(4), 569–582. https://doi.org/10.1108/JOCM-05-2014-0101

Lois, D. (2019). Haben hierarchische Alters-Perioden-Kohorten-Modelle eine Zukunft? *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 71*(3), 409–435. https://doi.org/10.1007/s11577-019-00636-4

Luo, L., & Hodges, J. S. (2022). The age-period-cohort-interaction model for describing and investigating inter-cohort deviations and intra-cohort life-course dynamics. *Sociological Methods & Research, 51*(3), 1164–1210. https://doi.org/10.1177/0049124119882451

Mahmoud, A. B., Fuxman, L., Mohr, I., Reisel, W. D., & Grigoriou, N. (2021). "We aren't your reincarnation!" Workplace motivation across X, Y and Z generations. *International Journal of Manpower, 42*(1), 193–209. https://doi.org/10.1108/IJM-09-2019-0448

Mannheim, K. (1928). Das Problem der Generationen. *Kölner Vierteljahreshefte für Soziologie, 7*(2), 157–185, 309–330.

Mannheim, K. (1952 [1928]). *Essays on the sociology of knowledge*. Routledge. https://doi.org/10.2307/40092271

Mason, W. M., & Wolfinger, N. H. (2001). Cohort analysis. In J. S. Neil & B. B. Paul (Eds.), *International Encyclopedia of the Social & Behavioral Sciences* (pp. 2189–2194). Pergamon. https://doi.org/10.1016/B0-08-043076-7/00401-0

Meriac, J. P., Woehr, D. J., & Banister, C. (2010). Generational differences in work ethic: An examination of measurement equivalence across three cohorts. *Journal of Business and Psychology, 25*(2), 315–324. https://doi.org/10.1007/s10869-010-9164-7

Milkman, R. (2017). A new political generation: Millennials and the post-2008 wave of protest. *American Sociological Review, 82*(1), 1–31. https://doi.org/10.1177/0003122416681031

O'Brien, R. M. (2011). Constrained estimators and age-period-cohort models. *Sociological Methods & Research, 40*(3), 419–452. https://doi.org/10.1177/0049124111415367

O'Brien, R. M. (2017). Mixed models, linear dependency, and identification in age-period-cohort models. *Statistics in Medicine, 36*(16), 2590–2600. https://doi.org/10.1002/sim.7305

Pampel, F. C., & Hunter, L. M. (2012). Cohort change, diffusion, and support for environmental spending in the United States. *American Journal of Sociology, 118*(2), 420–448. https://doi.org/10.1086/666506

Rudolph, C. W., Rauvola, R. S., Costanza, D. P., & Zacher, H. (2021). Generations and generational differences: Debunking myths in organizational science and practice and paving new paths forward. *Journal of Business and Psychology, 36*(6), 945–967. https://doi.org/10.1007/s10869-020-09715-2

Ryder, N. B. (1965). The cohort as a concept in the study of social change. *American Sociological Review, 30*(6), 843–861 http://www.jstor.org/stable/2090964

Schröder, M. (2018). Der Generationenmythos. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 70*(3), 469–494. https://doi.org/10.1007/s11577-018-0570-6

Schröder, M. (2019). Generationen gibt es, sie sind nur unsichtbar. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 71*(3), 471–480. https://doi.org/10.1007/s11577-019-00634-6

Smola, K. W., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior, 23*, 363–382. https://doi.org/10.1002/job.147

Time. (2013). Millennials: The me me me generation. https://time.com/247/millennials-the-me-me-me-generation/

Twenge, J. M., & Campbell, S. M. (2012). Who are the millennials? Empirical evidence for generational differences in work values, attitudes and personality. In E. Ng, S. Lyons, & L. Schweitzer (Eds.), *Managing the New Workforce: International Perspectives on the Millennial Generation* (pp. 1–19). Edward Elgar.

Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management, 36*(5), 1117–1142. https://doi.org/10.1177/0149206309352246

Ubl, H. L., Walden, L. X., & Arbit, D. (2017). *Managing millennials for dummies*. Wiley.

Vaisey, S., & Lizardo, O. (2016). Cultural fragmentation or acquired dispositions? A new approach to accounting for patterns of cultural change. *Socius, 2*, 2378023116669726. https://doi.org/10.1177/2378023116669726

Weber, J. (2017). Discovering the millennials' personal values orientation: A comparison to two managerial populations. *Journal of Business Ethics, 143*(3), 517–529. https://doi.org/10.1007/s10551-015-2803-1

Yang, Y., & Land, K. C. (2006). A mixed models approach to the age-period-cohort analysis of repeated cross-section surveys, with an application to data on trends in verbal test scores. *Sociological Methodology, 36*(1), 75–97. https://doi.org/10.1111/j.1467-9531.2006.00175.x

Zabel, K. L., Biermeier-Hanson, B. B. J., Baltes, B. B., Early, B. J., & Shepard, A. (2017). Generational differences in work ethic: Fact or fiction? *Journal of Business and Psychology, 32*(3), 301–315. https://doi.org/10.1007/s10869-016-9466-5