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Commentaries

Generational Differences Are Real and Useful

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We propose that generational differences are meaningful despite some theoretical and methodological challenges (cf. Costanza & Finkelstein, 2015). We will address five main issues: operationalizing generations, measuring generational differences, theoretical models of generations, mechanisms of generational change, and the importance of science versus stereotypes.

Operationalizing Generations

We define generations as groups of individuals born during the same time period who experience a similar cultural context and, in turn, create the culture (Gentile, Campbell, & Twenge, 2013). Our cultural psychological perspective is somewhat different from the classic sociological perspective (e.g., Mannheim, 1952) or even the more typical industrial–organizational perspective (Lyons & Kuron, 2014) in that we posit that generations shape cultures and are not simply shaped by them. In other words, we believe there is a dynamic, mutually constitutive relationship between generations and culture (Markus & Kitayama, 2010).

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With this definition, classifying someone as a member of a generation is relatively easy to do: All you need is a birth date and a place. The challenge comes in defining the generational boundaries. There is no agreed on year for the beginning or end of generations; instead, the years tend to be range bound. So, for example, Generation X might start in 1962 or 1965, depending on the definition of Generation X. Second, there is no clear measure of shared culture. Typically, culture is measured at a country level. Most research on generations is done in and is applied to the United States, and it is risky to generalize beyond those borders.

In short, generations are fuzzy social constructs, just like race, gender, ethnicity, and life itself (hence the debates over abortion and end of life care). As with any social construct, boundaries are debated and demarcations will change over time and circumstance. For example, Facebook now has dozens of ways of labeling gender rather than the traditional two. Still, most would agree gender is a useful construct in the social and behavioral sciences. Gender, like generation, is just a somewhat fuzzy construct. Race is similar. We have one set of race constructs in the United States—and these have changed over time—but other countries have a different set. For example, someone of Sumatran descent could be considered "Asian American" or "Native Hawaiian or other Pacific Islander," in the United States but would be considered "coloured" in South Africa.

Measuring Generational Differences

Measuring generational differences is both simple and challenging. There are two common methods. First, generations can be compared cross-sectionally on any variable in a one-time survey. For example, you could compare people born between 1945 and 1965 (Baby Boomers) and people born between 1965 and 1980 (Generation X) to determine a generational difference. Another approach is to compare generations cross-temporally using samples of individuals at the same age at different time periods. For example, you could compare 18-year-olds in 1965 (Baby Boomers) with 18-year-olds in 1988 (Generation X) to determine a generational difference.

The challenge, however, is teasing apart different sources of variance that underlie the generational differences found using these approaches. Variance can come from age, time period, and cohort/generational factors. Cross-sectional data capture both age and cohort variance but not time period; cross-temporal data capture both cohort and period variance.

Usually researchers on generations are interested in the latter two. Thus, relying on cross-temporal data, such as that found in large national surveys like Monitoring the Future or uncovered in cross-temporal meta-analysis, is preferred because it controls for age effects.

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To capture all three sources of variance you need data that contain both cross-sectional and cross-temporal elements such as a multiage sample collected over many years. For example, the General Social Survey (GSS) has sampled U.S. adults since 1972. Specialized statistical techniques based on hierarchical linear modeling can separate age, cohort, and period effects in GSS data (Twenge, Campbell, & Carter, 2014; Yang, 2008). However, even the GSS is limited as it covers most of the adult lifespan only for Boomers. The study started too late (1972) to capture the Silent or "Greatest" generations in their young adulthood and has not gone on long enough to capture the older adulthood of GenXers or Millennials (born after 1980). In addition, multiage, over-time studies like the GSS are rare and limited in the constructs they have included.

Fortunately, more datasets have collected responses cross-temporally on like-aged samples. In these cases, time period and cohort changes are the one and the same; they cannot be separated. For example, children's names have become more unique (Twenge, Abebe, & Campbell, 2010), empathy has declined (Konrath, O'Brien, & Hsing, 2011), work–life balance is more favored (Twenge, Campbell, Hoffman, & Lance, 2010), and anxiety and stress have increased (Cohen & Janicki-Deverts, 2012).

We argue that both period and cohort variance are meaningful for understanding generational change. Generational change might be considered a combination of time period plus cohort effects. For example, young generations can be heavily influenced by the next-oldest generations. Bob Dylan, Jerry Garcia, and the Beatles (all born between 1940 and 1943) were not Boomers, but they are associated with the generation. Steve Jobs was a Boomer and the founders of Google were GenXers, yet they have shaped the Millennial generation. Because each generation is formed in a specific time period often shaped by the existing, older generations, eliminating this period effect might amount to throwing out the generational baby with the cultural bathwater.

Most cultural change is likely driven by both time period and cohort/generational effects. For example, people of all ages might become more individualistic (a time period effect), but a cultural shift toward individualism would affect young people the most because they have never known a less individualistic culture (a generational effect). People of all ages eventually used Facebook, but young people used it first, and the youngest have never known a world without it. Thus, cross-temporal data can capture cultural change, and it may not matter if generational and time period effects are fully separated. To use another example, work–life balance is now more favored (Twenge, Campbell, et al., 2010). If this is partially or completely a time period effect, it affected both Boomers and Millennials, but it likely affected Millennials more because they have never known the previous culture with

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less emphasis on work–life balance. Even if this trend is purely a time period effect, with an equal shift among both Boomers and Millennials, Boomers may resent Millennials enjoying work–life balance privileges Boomers only obtained after many years of work experience. Thus generational factors may come into play even if the changes are due primarily to time period.

In sum, generational change can be measured. The major concern is teasing out age effects, and this can be done empirically with cross-temporal data. Teasing apart period and cohort effects from each other, however, is more often than not impossible—especially when discussing the current generation of young adults whose future remain unwritten—and this teasing apart might not be necessary.

Theoretical Models of Generational Differences

There are three prominent models of generational change. The first is Strauss and Howe's (1991) cyclic model. This model rests on cyclic models of economic changes established by Kondratieff, often called K-waves or economic seasons. Economic cycles begin as expansive or greed based, become overextended, and then become contractive or fear based. Generations should follow these patterns and cycle from expansive generations like the Baby Boomers to civic-minded generations who clean up the mess (the Greatest Generation or Millennials—separated by three generations).

The second model is the modernization model that states that cultures are going through a process of modernization consisting of increasing individualism, tolerance, and civic engagement (e.g., Inglehart & Welzel, 2005). The theory argues that societies develop in fairly predictable stages with a generational progression to a harmonious and civically engaged individualism exemplified by the Scandinavian countries.

The final model is a rising extrinsic individualism model (e.g., Twenge, Campbell, & Freeman, 2012). This model predicts that generations will evolve toward more extrinsic self-focus (e.g., narcissism, materialism), less civic engagement, less trust, more self-expression, and less inward focus (e.g., finding a meaningful philosophy of life).

These three models share some predictions but diverge on others. So, for example, the prediction of higher civic concern among Millennials is consistent with both the cyclic models and modernization models but in contrast to the rising extrinsic individualism model. These differing predictions can be described and tested with data ranging from attitudes and values to voting patterns.

Mechanisms of Generational Change

If the link between cultural markers and individual attitudes and traits is a mutually constitutive system, understanding generational change means

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understanding cultural change: As culture changes so to do the generations of individuals born into that culture.

So, what changes a culture? This is a very large question, but, very generally, there are three schools of thought. One holds that technology—from the stirrup to the Internet—plays a major role. Modern democracy, for example, owes a large debt to the long bow and the printing press. A second model focuses on cultural contact—cultures change (or don't) as they contact other cultures (Simonton, 1997). So, for example, the archetypal Hawaiian cultural artifact—the ukulele—is actually a Portuguese import; and the potato—a cultural touchpoint for Idaho and Ireland—was originally from South America. Third, there is the idea popularized by Strauss and Howe (1991) that major upheavals such as wars or economic changes are the driving force behind cultural change.

From our reading of the data, most generational changes seem gradual rather than abrupt, suggesting that culture is changing as a result of the first two forces rather than the later. There are important exceptions to this, however. For example, the Baby Boom was a direct outcome of World War II, which fits the description of a major upheaval. Similarly, the Great Recession in the United States has had an apparent effect on certain attitudes (Park, Twenge, & Greenfield, 2014; Twenge et al., 2014). For example, Twenge et al. (2014) found that trust in others was at an all-time low in 2012 and that this was largely a period effect.

The Importance of Science Versus Stereotypes

Much of the work on generations has been plagued by a reliance on weak data or anecdote. This fact does not make work on generations meaningless, especially now that better empirical data do exist. The key is operating on the basis of data—and ideally data from multiple and converging sources that include individual personality and attitudes, cultural products and practices, economic data, and sociological data. This type of data on generations is rapidly accumulating, which is good news for the field.

One oft-expressed concern is that talking about generations is an act of stereotyping. This is both true and untrue. It is true that any study comparing human groups—men, women, ethnic groups, leaders, service workers, nurses—can be considered stereotyping. In almost every case there is variance within the group on traits of interest, and in most cases the variance within the group is larger than the variance between groups (e.g., Zell, Krizan, & Teeter, 2015). The same is true of generational differences.

However, the term stereotype is sometimes used to suggest an ill-informed and negative description of a group not based on data. In this sense of the word, work on generations is not stereotyping. Generational

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studies focus on obtaining an accurate understanding of social groups, and this understanding will, in almost all cases, contain positive and negative traits.

Those who criticize the description of the Millennials, for example, often state that the description is not unique to the Millennials and is negative. This criticism is often accompanied by a quote about youth attributed to Socrates or Hesiod that apparently shows that people always have complained about youth. However, the best we can tell from searching the texts of Plato (Socrates left no written record) and Hesiod is that these quotes are apocryphal and were not actually written by these ancient philosophers. Even if we accept that older people have "always" complained about younger people, this does not undermine research on generational differences. First, generational studies typically examine what young people say about themselves not what older people say about them. Second, if cultural changes are linear and have continued for many decades or even centuries (such as the increase in individualism), then these observations may have "always" been true, with the younger generation "always" more individualistic than the older generations. Similarly, Millennials are not unique in their traits per se because they often continue previous trends, but they do differ on average from Boomers and GenXers in several traits, behaviors, and attitudes (Twenge, 2014). In addition, the description of the Millennials, like that of any generation, is both positive and negative. On the negative side are higher levels of narcissism and an inflated self-opinion; on the positive side are higher levels of tolerance and diversity (Twenge, Carter, & Campbell, 2015) and low levels of most forms of physical violence.

Conclusion

Generations do exist. They are fuzzy social constructs like many others in the social sciences, but they are as real as race and ethnicity. Generational differences can be measured if the right data are available. Some differences are large, especially for more behavioral data such as baby names and technology use and for attitudes such as tolerance for different lifestyles, where effect sizes can reach close to a standard deviation (Twenge et al., 2015). Differences in personality traits tend to be small to moderate. Several competing theoretical models of generational differences can be tested and used for prediction, and mechanisms for generational change are proposed. In general, technological growth, cultural contact, and major economic and martial upheavals should have some influence on culture and therefore generations.

We do not contend that all members of a generation are the same. However, ignoring valuable information regarding *real* differences observed between groups of individuals at risk of stereotyping or overlooking other

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valuable information is misguided. In any study of group differences, there will always be outliers and exceptions. Research by no means claims to explain the whole story for every subject within the given population. However, that does not justify ignoring the average differences. The goal of all research is to help explain phenomena. If we do not attempt to make meaningful distinctions between people and predict behavior, we may as well resign from research entirely. Generational groupings have proven to be a useful tool in explaining difference among people.

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Why We Study Generations

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The focal article by Costanza and Finkelstein (2015) shed a light on the current status of generational research at work that often treats generation as an age grouping variable. Although the authors primarily focused on the applicability of research findings to the current workforce, I believe the benefits of studying and understanding generations should not be limited to this purpose. The goal of this commentary is twofold. First, I would like to revisit the concept of generation and the purposes of studying generations at work. Second, given the problems with generational research presented by Costanza and Finkelstein, I would like to propose potential actions that we can take.

Idea of Generations

Generation is a socially constructed concept. The original conceptualization of generation is inherently different from a classification of younger and older workers based on an individual's chronological age. Mannheim (1952) discussed the society comprising a continuous succession of age cohorts in which each cohort shares a common historical and cultural process. In order for generations to emerge, the group of individuals who exist at the same "location" of time, culture, and development would share an experience of some historical events. That is, they live in the same historical period, are bounded

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