

# Exploring the Possibility of an Age of Purpose

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Culturomics reveals a historically unprecedented trend in the pursuit of purpose in life.

## Summary Abstract

There's an emerging and enticing idea in the United States that we're entering an age of purpose - that millennials, more than any other generation, are searching for purpose and purposeful work (Sheahan, 2005) and that we're entering an era or economy of purpose (Hurst, 2014). Yet, measuring purpose is a relatively new endeavor - longitudinal studies of purpose do not exist, and millennials are also referred to as GenMe. What quantitative research we have suggests they (we) are increasingly materialistic, individualistic, and possessing narcissistic personality traits (Greenfield, 2013). Are we entering an era of purpose? This is an inspiring idea and we want it to be true, but is it? Using culturomics to explore trends in digitized literature reveals clear evidence substantiating a cultural trend - an unprecedented interest in purpose-in-life co-emerging with the millennial generation.

## Introduction

The search for purpose is an age-old pursuit. Yet it seems to be gaining recent attention. Universities, non-profits, and companies you'd least expect (the Big Four accounting firms for example) are organizing around supporting purpose. Is this a trending fad? Is it part of a larger cultural shift? How would we know? This study uses available data to test the possibility that we're entering an age, era, or economy of purpose.

Our existing age, the information age, facilitates the collection of big data including our ongoing communications and the digitization of recorded history (e.g., tweets,

emails, blogs, books, articles, academic publications). Measuring purpose in one's life is a new endeavor and, while there are no longitudinal studies of purpose that would allow us to compare the presence of purpose from generation to generation, we can investigate cultural trends by quantitatively analyzing digitized texts. This analysis of big data to study human culture is a newly invented research method coined culturomics (Michel et al., 2011).

Over the course of written history, data grows more robust as time unfolds because more is published and more of what's written is digitized and available to analyze. Moreover, as literacy increases and publishing grows cheaper and more prevalent, we may expect the available data to be increasingly democratized or representative of a whole population. As we take our conversations online and public, we create even more democratized data sources that capture more and more voices. For instance, today scientists have demonstrated analysis of twitter tweets to measure happiness (Dodds, Harris, Kloumann, Bliss, & Danforth, 2011). This type of analysis could provide a real time measures of happiness and/or other values of interest (e.g., purpose) within communities or populations. Researchers are exploring that now, but given Twitter and other services are relatively new, we can't yet explore historical cultural trends using those data sources. What we do have available is Google's digitized book corpus or Ngrams which indexes words and phrases from books published as early as the year 1500.

Google's Ngram viewer allows for the quick analysis of cultural trends within a massive digital corpus containing about 4% of all books ever printed. The Ngram viewer displays the frequency of words or short phrases (up to five words long) as they are used over time. Where there is ample data we can view smooth robust cultural trends of frequently used words and phrases. By contrast, infrequent words or phrases and small sample data generate more erratic results. With a smaller sample of books, each occurrence of a word or phrase more heavily impacts the result. Publishing was rare in the 16<sup>th</sup> and 17<sup>th</sup> centuries, so analyzing the data before 1650 tends to generate highly erratic results with series of spikes rather than clear trends. Analyzing the data from 1650 to 1750 provides somewhat erratic results. However, data after 1800 is sufficient to clearly view trends of moderately popular phrases such as "purpose in life".

## Methods

For this research, analysis includes years 1800-2008, because there is sufficient data to show the context leading up to and the culture during the millennial generation. Millennial is used commonly to refer to anyone born in the 1980's or 1990's, but can sometimes include people born in the early 2000's. This analysis ends at 2008 because today the Google Ngram corpora only include data through 2008. Additionally, the Google Ngram corpus includes several corpora of various

languages (e.g., Chinese, Spanish, German, and French), and separate corpora for English books published in the USA and English books published in the UK. This allows us to begin using an English cultural analysis and then to explore for similar trends across varying languages and geographies.

Ngram viewer plots the frequency of words over time by dividing the number of instances of a word by the total number of words in that year. To calculate the popularity of a phrase, the Ngram viewer divides the number of instances of the specific n-word phrase by the total number of instances of n-word phrases (e.g. a 3-word phrase would be normalized by dividing the instances of the specific phrase that year by the total number of instances of all 3-word phrases in that particular year).

It's necessary to select popular words or phrases that are culturally relevant for our research purposes and because words or phrases with less than 40 instances in a given year are omitted from the corpus to prevent the dataset from growing unmanageably large.

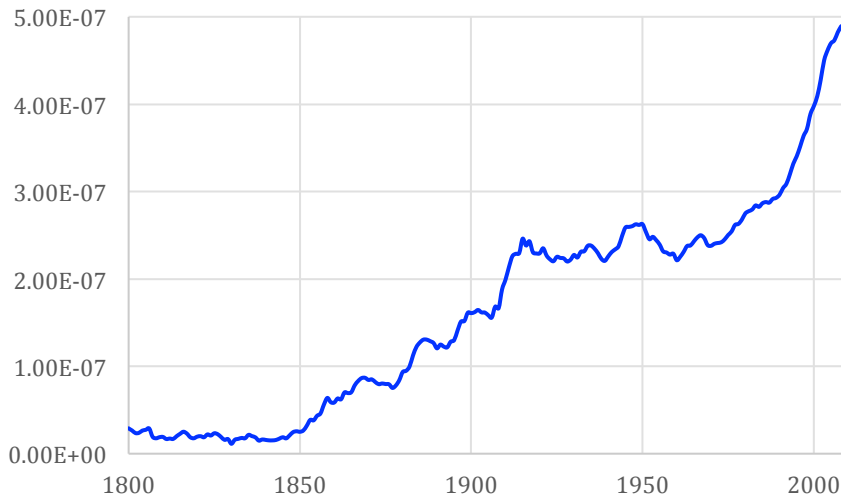
For our analysis to be meaningful, words or phrases must have a relatively narrow range of interpretations such that their use in the data closely represents the intended underlying concept and the frequency of alternate or misrepresentative uses is relatively low. Words or phrases with many meanings will return results that are unrelated to the intended value or concept under investigation. For instance, the word 'give' may have a more collectivistic, less individualistic orientation than the word 'get'. However, inside of the context "I will give you a bloody nose unless you give me your lunch money", the word give doesn't necessarily reflect an underlying collectivistic value such as mutualism or generosity. Ngram viewer provides an easy tool to search within Google Books to see the use of words or phrases in context such that you can evaluate whether the actual use of the words or phrases in the data is aligned with the underlying research idea. Further, by analyzing synonymous words or phrases when available, one can see whether there is a similar pattern present and thus whether there is a cultural trend in the underlying concept or idea that transcends any particular word or phrase.

## Research Finding 1

There is an unprecedented growth in popularity of "purpose in life" throughout the lives of the millennial generation.

This analysis began by exploring the popularity of the phrase "purpose in life" and the results are displayed in Figure 1. There is increasing popularity of the phrase "purpose in life" from 1850 until approximately 1915 at which point popularity plateaus. It begins to climb again just before and throughout the 1980's. Then,

around 1990 the trend accelerates and sustains an unprecedented climb that continues to its peak popularity when our data ends in 2008.



**Figure 1. Frequency of the phrase "purpose in life" in the Google corpus of English books from years 1800-2008. The graph was made with the Google Books Ngram Viewer with a smoothing of 3.**

Searching for “purpose in life” in Google books across various years shows that this particular phrase reflects our intended cultural idea and rarely refers to alternate meanings. Synonymous phrases such as “life purpose”, “life’s purpose”, and “my purpose” produce similar cultural trends. Some phrases such as “purpose driven” were found to be less appropriate because of the wide variety of uses or meanings. The word “purpose” on its own would include all of the phrases above, however it has the widest variety of meanings and uses and thus was found to be a less than appropriate indicator for measuring the concept of interest.

## Research Finding 2

In addition to the popular literature, interest in “purpose in life” is also trending within scholarly literature.

A second analysis was designed to test whether the trending interest in ‘purpose in life’ was limited to popular literature by determining whether a similar trend is emerging within the academic discourse. Using Google Scholar, we can measure the number of academic publications that use the phrase “purpose in life” within each year of publication. Dividing by the total number of publications available in that specific year gives a frequency of publications containing our specific phrase analogous to the Ngram analyses of popular literature. Figure 2 shows unprecedented growth in academic interest in “purpose in life” during the first

decade of the new millennium. While the number of publications containing the phrase “purpose in life” rose from 6150 in 2012 to 6340 in 2013, the total number of publications in the database rose faster, such that our graph of the frequency shows a decline from year 2012 to 2013. This growth starts near 1980 and then accelerates around 2000, or approximately the time the first millennials would have begun attending college.

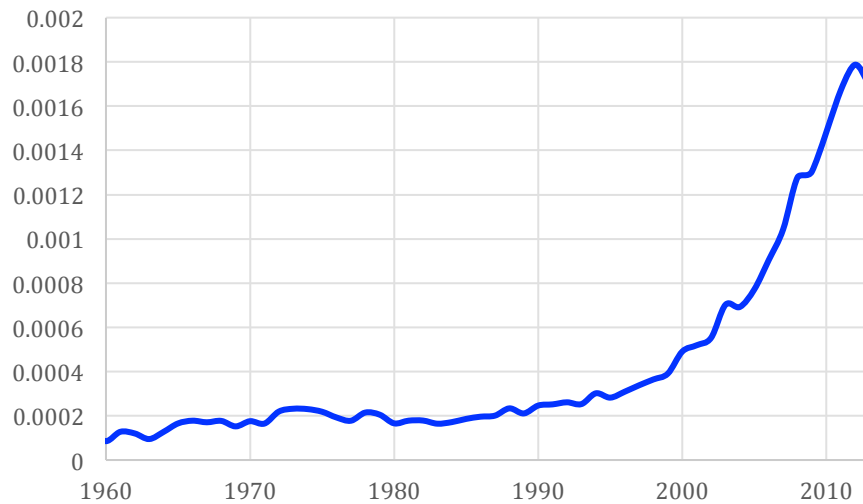
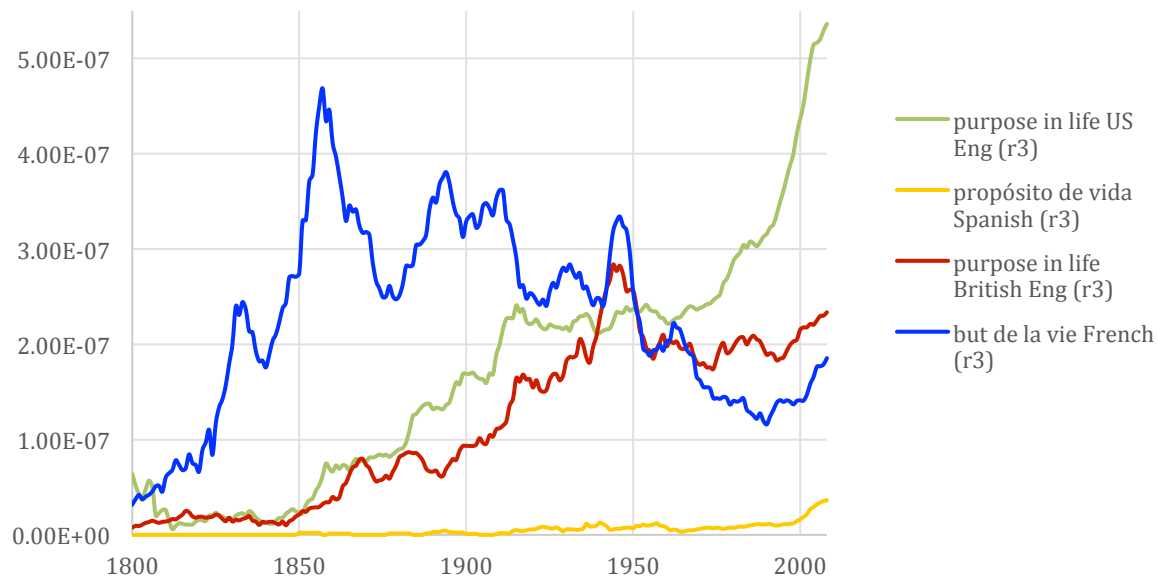


Figure 2. Frequency of academic publications containing the phrase "purpose in life" in a Google Scholar search from years 1960-2013

### Research Finding 3

The unprecedented growth in the popularity of “purpose in life” is predominately a US English phenomena, but “purpose in life” is also trending upwards in French, Spanish, and British English over the lifetime of the millennial generation.

Google Ngrams allows the analysis corpora of several languages, such that we can investigate whether ‘purpose in life’ is trending in other cultures. As can be seen in Figure 3, popularity of ‘purpose in life’ is increasing between 1980 and 2008 in US English, British English, French, and Spanish, however the increases aren’t nearly as significant in other places as can be observed in the US. The concept is notably oldest in the French language and relatively young in the Spanish language. The concept of purpose in life doesn’t translate directly into German. The ‘meaning of life’ is the closest related concept, but ‘meaning of life’ is distinct in the English, French, and Spanish languages and is worthy of a study unto its own.



**Figure 3** Frequency of the phrase "purpose in life" in French, Spanish, US and British in books from years 1800-2008. The graph was made with the Google Books Ngram Viewer with a smoothing of 3.

Chinese is quite distinct. The relationship to purpose, rather than being emergent or coming from within, is often experienced as a top down commandment, a dictated responsibility to assimilate one's aim or role in contributing to society. In 1980, Deng Xiaoping proposed Chinese education be organized around four must-have character traits - Chinese citizens in the new era were to be purposeful, moral, literate, and disciplined. As a result of this directive, several purpose related concepts come into existence in the Chinese corpus or grow very quickly in the year 1980, and then exhibit a sharp decay shortly thereafter. Nevertheless, one concept that emerged during that time, 理想观, translates to purposeview. Like worldview, the concept of purposeview opens an entire domain of how one thinks about or experiences purpose. In our short exploration of how different cultures express and experience purpose in life, we were delighted to uncover a word and concept to represent this domain of inquiry.

## 理想观 purposeview

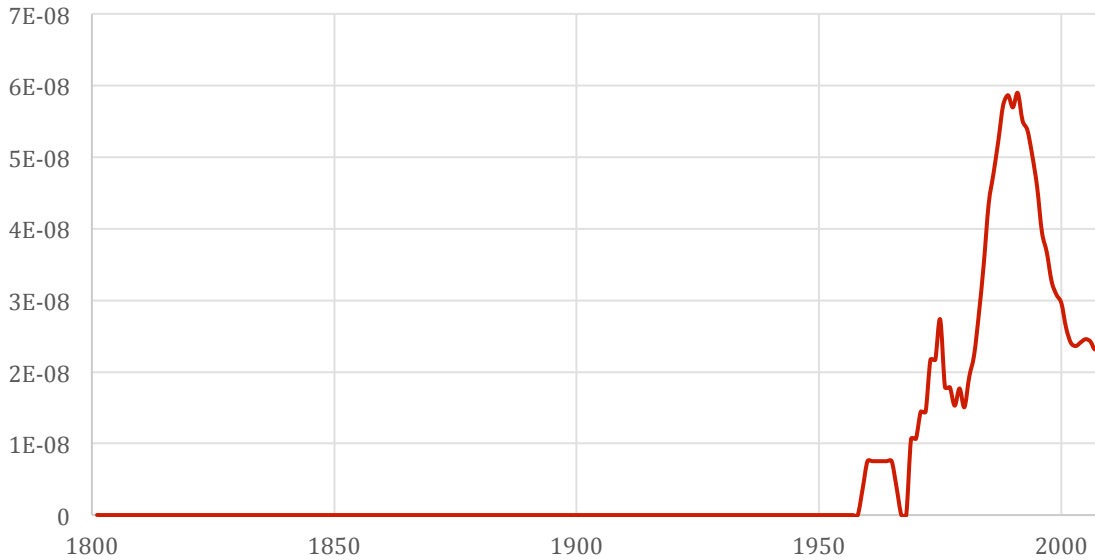
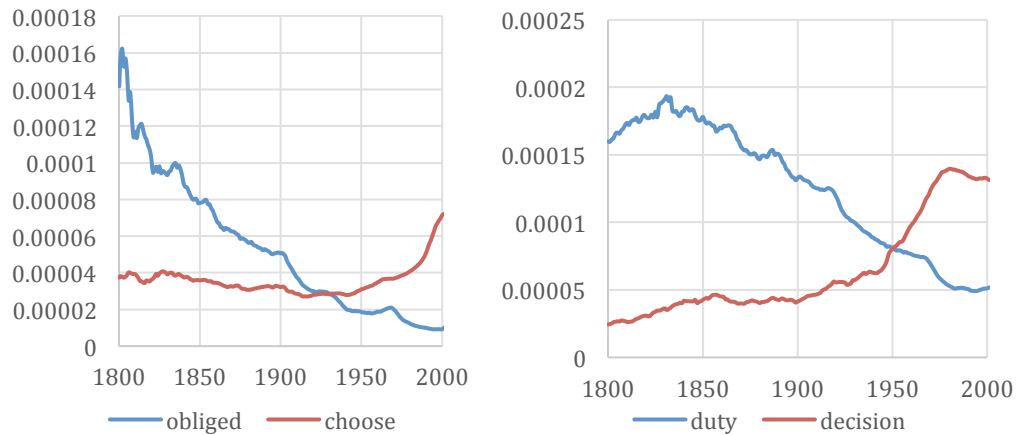


Figure 4 Frequency of the phrase 理想观 or purposeview in Chinese books from years 1800-2008. The graph was made with the Google Books Ngram Viewer with a smoothing of 3.

### Research Finding 4

We may have the most individualistic, materialistic, narcissistic culture that has ever existed. However, we may also have hit an individualistic bottom and, for the first time in centuries, be headed in a new direction.

In “The Changing Psychology of Culture from 1800 through 2000” Patricia Greenfield quantitatively tests and demonstrates her theory of ecological change as a driver of values, behaviors, and psychology which predicts that with “urbanization, increased wealth, technological development, or greater availability of formal education – values, behaviors, and psychology become more individualistic and materialistic” (Greenfield, 2013). As we move away from the village, our survival is dependent more on our individual performance, individual accumulation of possessions, etc., than it is dependent on a particular community. Greenfield plots words like “choose”, “decision”, and “get”, which are associated with individualistic values and meaning alongside words more associated with collectivistic values and meaning like “obliged”, “duty”, and “give”. As expected, the individualistic word popularity in the English language significantly trends upwards during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Meanwhile, the words associated with collectivistic values trend downward, illustrated in Figure 5.



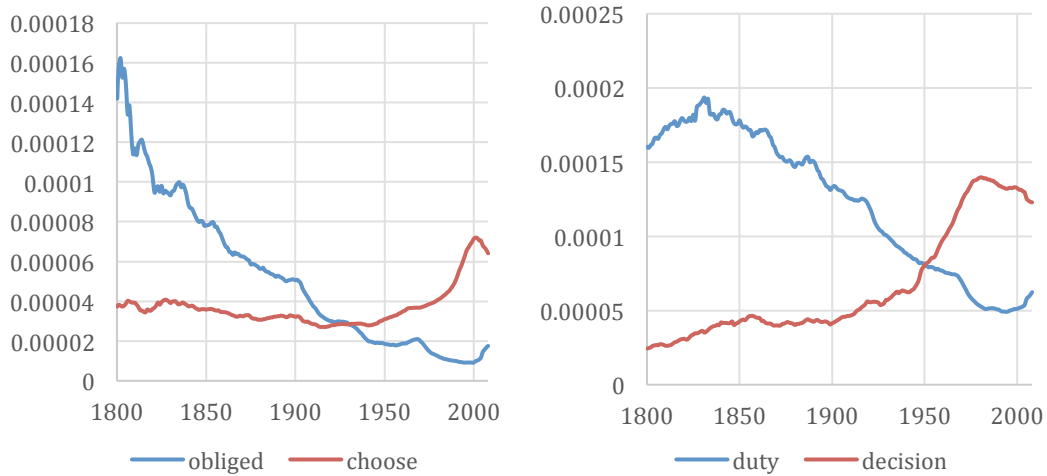
**Figure 5** Frequency of "obliged" and "choose" in English books from years 1800-2000. The graph was made with the Google Books Ngram Viewer with a smoothing of 3.

Provided creating a culture that promotes the welfare of others is of interest, the plots in Figure 5 are bleak and concerning. Prof. Greenfield's theory and this data suggest our U.S. and global cultures are perhaps the most individualistic we've ever been and provided we continue to urbanize, increase wealth, develop technologically, and participate in formal education, we may expect this trend to continue. However, our investigation is specifically interested in what's happening during the millennial generation. Rerunning Greenfield's experiments to include data through 2008 produces a very interesting result.<sup>1</sup>

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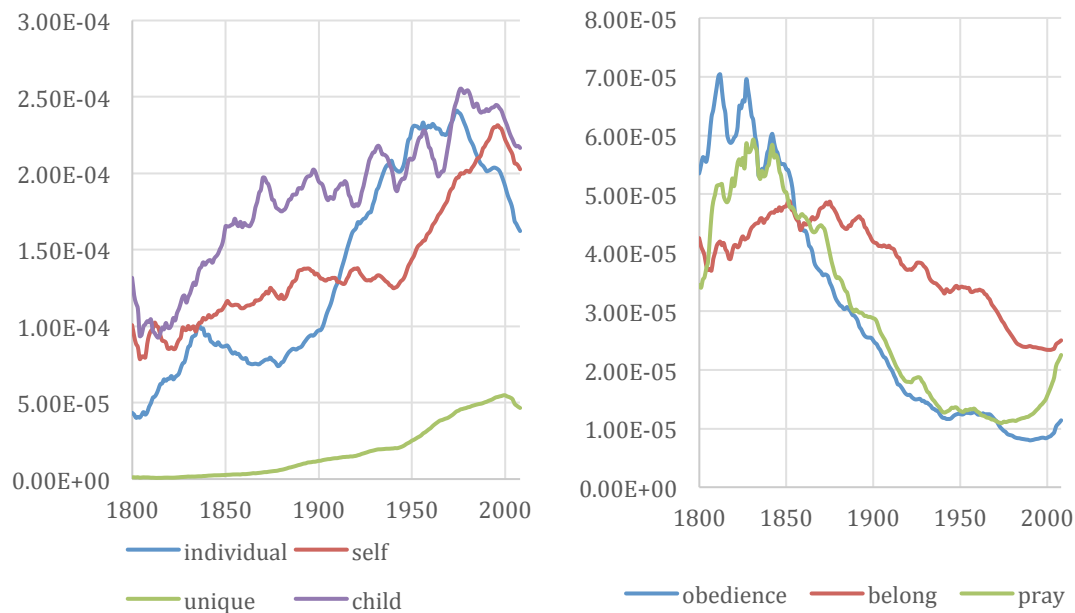
<sup>1</sup> Trends in Figure 1, Figure 5, Figure 6, Figure 7, Figure 8, and **Error! Reference source not found.** are displaying data from all books published in English. Greenfield's analyses shared American English data as opposed to all English data. Although all English trends are used by default in this study, each plot was compared to the equivalent American English plot and no noteworthy differences were found. A large degree of similarity should be expected between the two data sets because US books account for a large portion of all English books digitized by Google.





**Figure 6** Frequency of "obliged" and "choose" and "duty" and "decision" in English books expanded to include data from 2000-2008. The graphs were made with the Google Books Ngram Viewer with a smoothing of 3.

Provided we accept Greenfield’s culturomic indicators of individualistic/collectivistic culture, within the English literature, there appears to be a peak individualistic period and a trend reversal back toward collectivistic values within the lifetime of the millennial generation. This inflection point or trend reversal is visible in the majority of Greenfield’s indicators. 25 of her 28 chosen words show a clear trend toward individualism throughout the 19<sup>th</sup> and 20<sup>th</sup> century. 14 of those 25 show a reversal of that trend and are trending away from individualism since their 1980 values, and 21 of those 25 are trending away from individualistic values toward collectivistic values since the new millennium. See examples in Figure 6 and Figure 7.



**Figure 7** Frequency of "individual", "self", "unique", and "child" and "obedience", "belong", and "pray" in English books expanded to include data from 2000-2008. The graphs were made with the Google Books Ngram Viewer with a smoothing of 3

## Research Finding 5

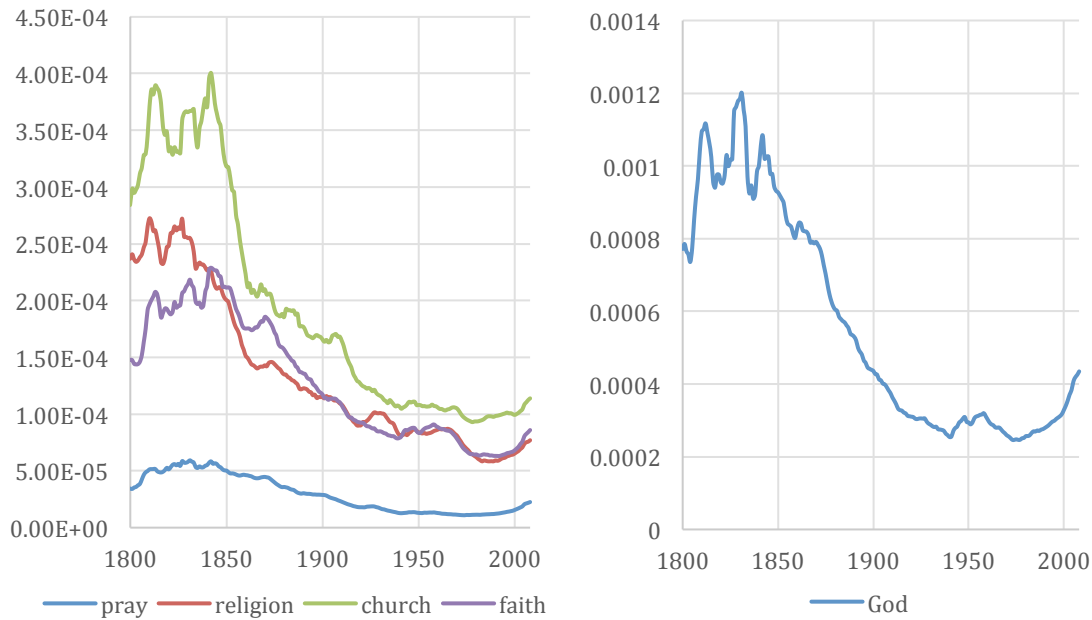
Popularity of spiritually related concepts reached an all-time low around 1980 and have since been trending upward, for the first time in centuries.

Existential thinkers distinguish four basic dimensions of human existence - physical, social, psychological, and spiritual. Greenfield's theory focuses on how changes in the physical dimension correspond with changes in the other dimensions. Her attention to individualistic and collectivistic values, authority, belonging, duty, conformity and power can be said to relate to the social dimension. The attention to choice, actions, feelings, ego, and self, can be said to relate to the psychological dimension. The spiritual dimension is least explored in her study, however the mention of pray and the significant jump during the millennial generation (seen in Figure 7) piqued our interest.

An unprecedented individualistic culture can be described as an existential crisis on a cultural scale. The proceeding growth in popularity or interest in 'purpose in life' would perhaps have been both predicted and prescribed by Victor Frankl as an appropriate and human response to a peak individualistic experience. The cultural reversal away from individualistic toward collectivistic values could correspond with such a transformation in the social dimension. We can apply culturomics to

quickly explore whether similar trends of decline and resurgence exist across the spiritual dimension of the human experience.

Exploring spiritually related terms using Google Ngrams results in a clear trend using a variety of indicators e.g., God, faith, spirituality, prayer, religion, worship, church, etc. The popularity of spiritual terms falls over the 19<sup>th</sup> and 20<sup>th</sup> century reaching their lowest popularity in about 1980 at which point, they level off and begin to grow until 2008 when our data ends.



**Figure 8** Frequency of "pray", "religion", "church", "faith", and "God" in English books from years 1800-2008. The graph was made with the Google Books Ngram Viewer with a smoothing of 3. God is displayed using a different scale because, while the trend over time is similar, the word's overall use is far more frequent than the other indicators.

## Considerations

Exploring this data is quite exciting because we uncover several optimistic trends that appear in support of development of humanity's self-transcendent dimensions. The cultural inflection, which we appear to be glimpsing through this data, is frankly thrilling, yet I invite you to reserve some healthy skepticism surrounding what we're looking at and how we're looking at it.

First, it's important to keep in mind that books and academic articles published between 1980 and 2008 are likely authored by members of older generations, not millennials themselves. Thus, while there is a clearly increasing cultural trend around the idea of purpose in life during the living years of the millennials, one could argue that this is indicative of the 'culture of the time' more so than a reflection of millennials themselves. This culture is likely to influence millennials, but isn't necessarily the product of or a direct reflection of the millennials (they/we still could be GenME). An alternative view could recognize that millennials both exist within and co-create the culture such that distinguishing these cultural trends as pre-millennial would be overly simplistic.

Please also bear in mind that what's published in books is not democratic or a random sample of the population. Authors may tend to be more educated, affluent, and have the luxury of allocating more time for thought and reflection than the general population. As such, they may be early adopters of cultural trends and ideas, perhaps early adopters of existential crises, or a search for purpose. They may also only represent an affluent, well to do, educated class. Alternatively, the idea that pursuing purpose is an elitist idea may itself be an elitist idea. Researchers are often surprised to find people experiencing high levels of purpose and meaning in what many may consider to be 'dirty' jobs.

Google Ngrams and our analysis of the academic literature treats all publications as being equal. Thus, we're not differentiating, for instance, between how many copies of any book were published, or what actually was read much less acted upon. This analysis wouldn't tell us, for example, if books mentioning "success in life" were selling one hundred times as many copies as those mentioning "purpose in life." Each book would count equally. Google Ngrams has enabled a quick quantitative proxy for culture through our language, but this method has its limits and, for instance, falls short of exploring corresponding changes in our behavior.

Using single word indicators to explore dichotomies is as slippery as dichotomies themselves. A single word's meaning changes so easily given the context. In many instances 'individualistic' words are used in collectivistic ways and vice versa. For example, Greenfield uses "emotion" and "feel" as individualistic indicators, however authors more often use the phrase "their feelings" than "your feelings" and "their emotion" rather than "your emotion." As such, even though the author is using the words feelings and emotion, they are often inviting the reader to take the

perspectives of others rather than their own perspective. Is this beyond-the-self focus on one another's feelings or emotions an expression of collectivistic values or an indicator of the concept of individualism? Exploring trends in word popularity from this level and adding interpretation to those trends should be met with healthy skepticism. Phrases allow us to more accurately target a specific concept. There are similar challenges, but far less of them.

The academic literature distinguishes between searching for meaning and the presence of meaning in one's life or similarly, searching for purpose and identified purpose. The growing popularity of purpose in the academic and popular literature most likely indicates interest in or a search for purpose. The presence of a search for purpose could indicate a lack of purpose and/or contribute to the presence of purpose. These findings at best demonstrate a searching for purpose at a cultural or societal level, but they don't tell us whether or not people are experiencing purpose. Whether an experience of purpose in life is found or created and how our behavior is impacted remains to be explored.

This exploration was framed within a dichotomy of individual and collective. However, purpose in life, to many, includes both a self and a beyond-the-self component. Care for the individual and the community are not mutually exclusive, but rather bound up in one another. Thus, a purpose generation may not experience a dichotomy between individualistic and collectivistic, self and other. Some millennials may experience purpose as an opportunity to integrate a prosocial or collectivistic orientation into their identity; meanwhile, other millennials may see purpose as an opportunity to integrate their own self-expression, individualism, or self-determination. Inside an integrated purposeview, rather than being at odds, these pursuits may be considered in parallel or even one and the same. We will need creative ways to allow for the expression of ambivalence - to measure the integration of individualistic and collectivistic objectives concurrently in along two dimensions. Our world or purposeview may evolve to transcend assuming their juxtaposition in a one-dimensional space.

The reemergence of collectivistic values in our post-industrialization individualistic culture of today will likely be very different than our experience of collectivistic values in pre-industrialized cultures. Where as once collectivistic culture may have been a matter of necessity, now it may be pursued or not, as a matter of choice. Promoting and being able to track a beyond-the-self experience of purpose is of particular interest to myself. However, the Google Ngram database doesn't allow us to analyze how the phrase "purpose in life" is used in context or understood. For example, even though purpose-in-life is growing in popularity, we don't know whether people's understanding of that phrase integrates individualistic values, collectivistic values, or both and how that changes over time. This research leaves us wondering how our shared meaning of purpose-in-life has and will evolve. A more in depth review of the literature could provide a historical understanding of our concept of purpose. More recent qualitative studies exploring how people relate to

the concept of purpose today (Hill, Burrow, O'Dell, & Thornton, 2010; Moran, 2014) could also be performed over time for both individuals and populations, allowing us to learn how to cultivate purpose at the micro and macro scales.

Given the trending interest in purpose in the scholarly literature, the good news is that we're learning a lot about purpose and much faster than ever before. A recent book "Purpose in Life" by Kendall Bronk (2013) provides the most comprehensive review of scholarly purpose literature available. What we've learned a great deal about over the past decade are the correlative benefits of purpose. Psychological and physical wellbeing benefits, resilience, ability to cope, motivation, life satisfaction, positive affect, reduced stress, reduced rates of Alzheimer's disease and cognitive impairment, reduced inflammation response, improved cardiovascular and metabolic markers, etc., etc. The list goes on and on. Some holes in the literature include: 1) Purpose measures do not yet include a beyond-the-self component, so we don't know what benefits are associated with a beyond-the-self purpose vs. an individual purpose or life goal. 2) There is a general lack of longitudinal research. As such, the causality of benefits hasn't been determined. Are people healthy because they have purpose or do they pursue purpose because they're healthy? Are they high performing because they have purpose, or do they have purpose because they're high performing? 3) We're just beginning to explore and gather evidence based practices for fostering or supporting purpose. While there are many theoretically grounded recommendations for supporting purpose, empirically evaluated purpose interventions are few and far between. Those that have been done aren't all that remarkable. Nevertheless, given the trending interest, there is a field emerging and there are researchers focused on each of these next steps.

## Conclusions

Perhaps we're both. We're both the most individualistic, materialistic, narcissistic culture on record and we're historically the most interested in purpose in life. Perhaps we could also become the generation to reverse or transform historical trends toward individualism.

There's a clear and unprecedented growing cultural interest in purpose in life. While this may have already appeared to be the case (provided you're so lucky to have a self-selected purpose driven community), OR, while you may have been and remain healthfully skeptical, this data supports the possibility of an emerging purpose generation, era, or age.

On the macro level, the unprecedented interest in purpose is emerging within the most individualistic and materialistic culture we have on record. The individualistic and materialistic culture is oddly shaping out to be our greatest opportunity or historic access point to pursue purpose. Purpose in life is emerging at the time you would least and most expect. In recognition of this paradox I invite people to hold a

similarly powerful context at the micro scale - to consider that each individualistic or materialistic thought of your own or projected judgment onto someone else is an opportunity to invite yourself and someone else into something a little more appealing, something a little more adventurous, something a little more an expression of you, and a little more in service of someone else. Consider it an opportunity to explore something a little more purposeful. The time is right.

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