THE UNIVERSITY OF CHICAGO

HAPPINESS IN AMERICA:
A MULTIMODAL ASSESSMENT

BY

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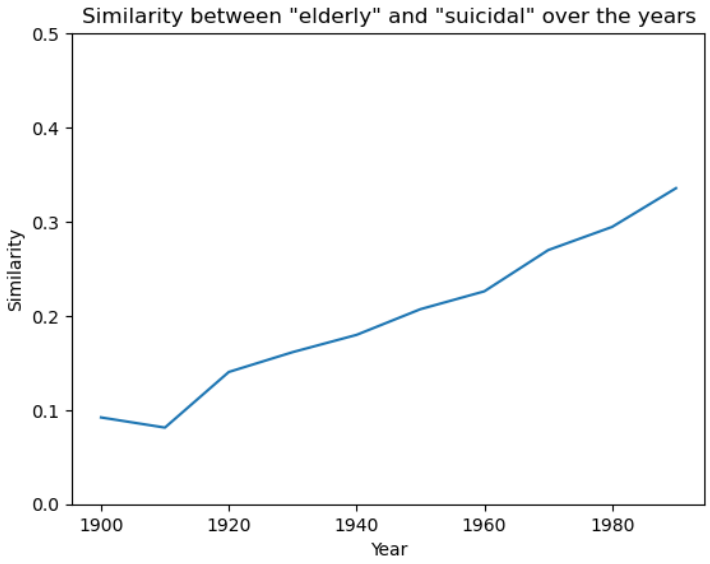


Abstract: *This thesis examines the concept of happiness in America through a multidisciplinary lens, integrating insights from psychology, sociology, political science, and computational analysis. It explores the rising trends of depression and dissatisfaction in modern American society, arguing that understanding happiness requires a rethinking of its conceptualization and history. The study employs multimodal machine learning methods to analyze three distinct corpora: Google Ngrams data, Reddit posts from depressed and non-depressed users, and photographs from the Library of Congress. Key findings include increasing associations between aging and mental health issues over the 20th century, a strong focus on self and on feelings in depressed individuals' language, and complex relationships between political affiliations and mental states. The research suggests that the current operationalization of happiness in psychology and popular culture may be contributing to societal issues, and proposes a return to more holistic, eudaimonic conceptions of well-being.*

I. Introduction

What is happiness in America? A fundamental civic goal; a buzzword of positive psychology; a lost relic; a societal obsession? Perhaps it is all of these; perhaps it is undefinable…but can we at least attempt to say something concerning it?

As social scientists, we hope to *measure* things (aspects of society, particularly). If happiness is a time-dependent scalar, measuring its magnitude is actually *more* difficult than measuring its change over time. We know that in surveys, Americans have self-reported decreasing rates of happiness during the years since 1993 (Alderson and Katz-Gerro 2016). By the 2024 edition of the World Happiness Report, America had fallen out of the world's top 20 happiest countries, and younger Americans were for the first time experiencing *less* happiness than older ones, a situation described by the authors as a "midlife crisis" among American youth (Booth and correspondent 2024).

Meanwhile, depression, which might seem to be the simple inverse of happiness, had in fact begun to rise well before happiness began falling. As early as 1990, psychologist Martin Seligman was referring to the 'depression epidemic' in America in a publication entitled "Why Is There So Much Depression Today?" (Seligman 1990). Seligman's insight, to which we will return, is that a depression epidemic occurs when the locus of self is externalized on a societal level from stable, inward factors to transient external phenomena such as *money* or *fame*. Yet merely on a temporal level, the discrepancy between a depression epidemic and still-rising happiness levels when Seligman was writing prompts the question: how can happiness continue to rise during an epidemic of depression?

In brief (cf. **LITERATURE REVIEW**), the answer is that 'happiness' is operationalized in a very particular way by psychologists, and that hence many psychologists (though not Seligman!)

are really measuring pleasure as a proxy for 'happiness'. The problem here is ultimately one of language: our broad term *happiness* subsumes a variety of intrinsically unrelated and sometimes conflicting concepts which can be generally divided into *hedonia* (pleasure, freedom from pain) and *eudaimonia* (flourishing, living correctly, being blessed). Because the former type of happiness is much more easily measured, it is studied more often, and ultimately society forgets about the other type. As the aphorism goes, "You can't improve what you don't measure."

This paper argues that understanding happiness in America requires a rethinking of the term's conceptualization and history. I attempt to reconceptualize American happiness with a multidisciplinary approach, integrating insights from psychology, sociology, political science, and computational analysis to address the rising trends of depression and dissatisfaction in a modern, individualistic society. I claim that despite some terminological and other differences, many of the greatest thinkers of the past have engaged with this question and arrived at remarkably similar conclusions: that happiness consists in a *non-dependent state of being-at-work* known by the Greeks as 'εὐδαιμονία [*eudaimonia*]', the Chinese as '無為 [*wúwéi*]', in Sanskrit as 'निर्वाण [*nirvāṇa*]), and modern psychology as (basically) 'flow' (Csikszentmihalyi 1991). I then attempt to elucidate the development of 'happiness' in America, arguing that despite being essentially the primary civic goal for Americans, the term is defined overbroadly and conceptualized poorly by both the general public and most psychologists. Finally, I suggest that this missing-of-the-mark may be a causal factor in identifying why the most prosperous country in human history is now experiencing symptoms of its 'end times' (Turchin 2023) including institutional collapse, elite overproduction, popular immiseration, drug epidemics, widespread homelessness, political divisiveness, cultural fragmentation, shortening lifespans, increasing rates of depression, and the aforementioned 'midlife crisis' among youth.

II. Literature Review

We just wanna party (yeah)
Party just for you (yeah)
We just want the money (yeah)
Money just for you (ooh)
I know you wanna party (yeah)
Party just for free (yeah)
Girl, you got me dancin' (girl, you got me dancin')
Dance and shake the frame (ooh)

This is America
Don't catch you slippin' now
Don't catch you slippin' now
Look what I'm whippin' now
This is America (woo)
Don't catch you slippin' now
Don't catch you slippin' now
Look what I'm whippin' now

– Childish Gambino, "This Is America"

In this section, I review the psychological and philosophical literature to understand where America now stands in terms of our societal levels of happiness, and how the ideas of happiness that are dominant in both popular culture and academia came to be. Specifically, I consider 1) the current state of happiness in America; 2) the current state of depression in America; 3) the connections between liberal individualism and American happiness; 4) the development of happiness in philosophy; 5) the development of happiness in modern psychology.

In *Violence: A Micro-sociological Theory*, Randall Collins (2009) pursues a sociology of violence characterized by a refusal to submit to disciplinary siloes. Collins describes how 'violence' is typically studied (or rather, drawn and quartered) by various academic specialties: "homicides in one research specialty, war in another, child abuse in another, police violence yet

elsewhere" (*ibid.*). He shows how these academic silos hinder direct engagement with violence in its immediacy and viscerality, classifying aspects of violence rather than engaging with it directly and phenomenologically. Similarly, I argue that to understand 'happiness' through the lens of any single field or discipline is like 'asking blind men to describe an elephant'.[1] Looking to psychology for its insights into happiness, meaning, depression, loneliness, and well-being (Oishi 2013 & Abe 2016 & Waterman 1993, Morgan and Farsides 2009, Seligman 1990 & Hidaka 2012, Hawkley et al. 2019, Cotton Bronk et al. 2009), gerontology on aging (Polivka 2000), political science to comprehend the "crisis of liberalism" (Deneen 1998, Bloodworth 2013, Deneen 2019), economics on the Easterlin paradox (Easterlin 1974, Easterlin et al. 2010), sociology for its thoughts on suicide and individuality (Durkheim 2006 [1897], Simmel 1972), and philosophy to understand the questions at the bottom of it all (Plato 2012 [380 BC], Aristotle 2011 [330 BC]), is necessary but not sufficient to understand happiness in America.

1. Happiness and Unhappiness

Though it sounds absurd to speak of a 'midlife crisis' in American youth, the reality of the situation is far from amusing. As of the 2024 World Happiness Report, the United States is no longer among the 20 happiest countries due to such a crisis among our youth, who are now less happy overall than older people (Helliwell *et al.* 2024):

> *For the United States, Canada, Australia and New Zealand, happiness has decreased in all age groups, but especially for the young, so much so that the young are now, in 2021-2023, the least happy age group. This is a big change from 2006-2010, when the young were happier than those in the midlife groups, and about as happy as those aged 60 and over. For the young, the happiness drop was about three-quarters of a point, and greater for females than males.*

[1] A Buddhist metaphor for partial knowledge. From Wikipedia: "The story is of the blind men who feel an elephant (Chinese: 盲人摸象; Jyutping: *mang2ren2mo1xiang4*)—the elephant in this tale symbolizes the "Buddha nature". A group of blind men reach out to touch a different part of the elephant—one feels the tusk and thinks it is a carrot, another mistakes the elephant's belly for an urn, and so on. The king seeks that Shakyamuni (Buddha) illuminate their limited perception (symbolized by blindness in the parable) that permits only partial truths."

Such a reversal is previously unobserved, and is *prima facie* evidence for a country in decline. In a country of ascending fortunes, as the U.S. was for the entirety of the 20th century, the youth are happy because they expect their futures to be brighter than their parents. When this sentiment no longer exists, we must surmise that young people in America no longer see a bright future for themselves. The rate of depression among Americans under 14 doubled in the 10 years from 1994 to 2004 (Schwartz and Ward).

The decline of happiness is hardly restricted to the young, however. "The General Social Survey, which has been measuring social trends among Americans every one or two years since 1972, shows a long-term, gradual decline in happiness—and rise in unhappiness—from 1988 to the present" (Brooks 2020). This gradual decline was exacerbated by the "system shock" of COVID-19. Life expectancy in America decreased at a rate greater than 1 year/year between 2019 and 2021, with the US experiencing a decrease in life expectancy of 2.1 years in this 2 year period. This decrease, the greatest in a century, was primarily due to COVID-19, but merely exacerbated a preexisting trend of decreasing life expectancies in America, widening the divide between the US and the rest of the world (Woolf 2023).

The main cause for this trend is increased mortality among working-age (25-64) adults, which began in the 1990s and is due to increases in deaths among three categories: drug and alcohol deaths, suicides, and cardiovascular disease. Initially limited to the younger (25-44), white, rural population, this trend "subsequently spread to encompass most racial/ethnic groups and most geographic areas of the country", but remains most severe in rural regions (Harris 2021) and among those with a high-school education only (Venkataramani 2021).

In the case of drug and alcohol deaths, increased supply of dangerous drugs like fentanyl and increased opioid prescriptions are partly to blame, yet, particularly among the non-college-

educated population, “increasing prevalence of physical pain, deteriorating psychological health, and long-term macroeconomic trends” are also a factor (*ibid.*). In addition to mental disorders considered formally, “Explanations centered on “despair” (which signifies hopelessness but is not itself a formal mental health diagnosis) are also consistent with long-term economic, family, and social changes that have weakened support systems that provide people with purpose and meaning” (ibid.).

Considering suicide, between 2000 and 2018, the rate of suicide mortality in the United States increased by 35% (Martínez-Alés 2022). Rising suicide rates in the United States since 2000 are a significant contributor to the decrease in lifespan. By contrast, suicide mortality has decreased globally during the past 30 years; the only other exceptions are Zimbabwe, Uganda, Liberia, Cameroon, Jamaica, Mexico, and Paraguay (*ibid.*).

Why are Americans unhappy, when we are rich? “One of the greatest paradoxes in American life is that while, on average, existence has gotten more comfortable over time, happiness has fallen” (Brooks 2020). Let us consider the various metrics discussed above and the explanations provided for each. The reasons for the increase in suicides and decline in lifespans are complex, but “social and economic forces are likely to be the central drivers” (Venkataramani 2021). Holt-Lunstad et al. (2017) note trends in the US towards smaller social networks, smaller households, and falling rates of community engagement, and hypothesize that “these trends suggest that Americans are becoming less socially connected.” Researchers have hypothesized that the increase in social isolation and loneliness, if it exists, is caused in part by an aging population (Martínez-Alés 2022). Suicide mortality has two peaks, one in young adults and the second in older adults, especially men (*ibid.*).

Meanwhile, one third of American adults over 45 are lonely, a contributing factor to which is that half do not know any of their neighbors (Anderson 2018). According to Larry Polivka (2000), nowadays "The elderly may find themselves stranded in a postmodern culture where there are few resources for maintaining a stable core identity, which provides the foundation for a coherent life narrative and a sense of experience adding up and culminating in a perception of completion and achieved wisdom." Thus, both elderly and depressed people are confronted by the same problem: inability to define themselves in a rapidly changing world. Polivka cites Chris Phillipson's point that for the elderly today, "Who am I? has become a difficult questions for many to answer" (*ibid.*).

2. Depression

Depression is accurately characterized as a 'disease of modernity'. Researchers have found that across cultures, the amount of modernization "correlates with a higher prevalence of depression in a dose-dependent manner" (Hidaka 2012). In addition to lifestyle factors such as increased obesity, poor diet and decreased exercise, social factors are likely to blame: "the modern social environment is more competitive, inequitable, and lonely. This deterioration of social cohesion among modern-industrialized populations may be a central component to rising rates of depression" (*ibid.*).

Attempting to explain increased depression in Western countries, Martin Seligman wrote in his 1990 essay that "rampant individualism carries with it two seeds of its own destruction" (Seligman 1990). According to Seligman, in Western culture, "the exaltation of the individual creates fertile ground for a rise in depression" (*ibid.*). Seligman points out that trust in America as a nation has declined, as have institutions such as religion and the family "which might replace the nation as a source of hope and identity, keeping young people from turning inward to themselves" (*ibid.*).

Thus, the locus of meaning is displaced from society onto the self, leading to immense risks to mental well-being when individuals fail to achieve a sufficiently 'good' self-image. "To the extent that it is now difficult for young people to take seriously their relationship to God, to care about their relationship to the country, or to be part of a large and abiding family, meaning in life will be very difficult to find. The self, to put it another way, is a very poor site for meaning." (*ibid*.) In this way, an individualism that was healthy in the context of a society with strong institutions becomes self-cannibalizing on its own, and rampant individualism brings depression and meaninglessness.

25 years later, Schwartz and Ward (2004) come to a similar conclusion in considering the 'paradox of choice'. Choice is valuable both instrumentally, in order to obtain other goods, and inherently because it allows self-choice and self-expression. Past a certain point, however, increased choices lead to increased anxiety, when people are unable to 'satisfice', but feel compelled to identify the best option among a multitude to reinforce their individual worth. "Heightened individualism means that, not only do people expect perfection in all things, but they expect to produce this perfection themselves. When they (inevitably) fail, the culture of individualism biases people toward causal explanations that focus on personal rather than universal factors" (*ibid.*). Thus, the limitless panoply of choices ends up meaning that none of them suffice. By contrast, "what seems to contribute most to happiness binds people rather than liberating them" (*ibid.*). Liberty to choose can be a hindrance rather than a good; freedom is "a double-edged sword, as excessive choice can lead to paralytic indecision, greater expectations, stress, and eventual dissatisfaction, blame, and regret" (Hidaka 2012).

3. LIBERALISM

At the same time as psychologists began to question the value of individualism, some political scientists were coming to similar conclusions. The impetus in the political science field was the 'crisis of liberalism'. To quote Pierre Manent (2014), "In a vision that lasted for the space of a moment around the year 2000, Americans saw themselves truly laying down the law to a world which, in obeying them, only obeyed the law of its own nature and of its own development, and thus would arrive at the truth of its own natural order. Now that dream is over and Americans are asking what has happened."

The warning signs in secular trends of an 'age of melancholy' for the West have been visible since at least the 1990s (Seligman 1990) if not the 1970s (Klerman 1988) or earlier (Hallowell 1942). Even during the 'unipolar moment' and not long after Fukuyama's pronouncement of liberal democracy as the end of history (Fukuyama 1989), Steven Wirls noted that "a broad communitarian movement of pundits, theorists, and social scientists – on the left, right, and center – bemoan the loss of civic character and the moral sense" in the United States (Marty 1997: 3).

Liberalism as an idea has some 350 years of history in America (Taverne 2005), and though it still has its defenders (Rousseau and Walker 2016), has increasingly been assailed from all sides by critics (Hallowell 1942, Easton 1949, Marty 1997, Bloodworth 2013). Philosopher John Gray argues that "justification of liberalism is a dead and a liberal ideology an impossibility" (Gray 2009: vii). The rise of the word 'neoliberalism' evinces a skeptical and even hostile attitude towards the liberal paradigm, and has prompted the search for 'post-neoliberal' governance structures (Herrigel et al. 2023). Should the compilation of all these assertions of crises of liberalism lead us to hold a "boy who cried wolf" skepticism about continuing such assertions? Perhaps not: the death of a social order takes a long time, and it may be that time will prove all of liberalism's critics correct.

University of Notre Dame political scientist Patrick Deneen threw his hat firmly into the post-liberal camp with his 2018 polemic *Why Liberalism Failed*, arguing that "Liberalism has failed—not because it fell short, but because it was true to itself. It has failed because it has succeeded." (Deneen 2019). Deneen defines liberalism as a philosophy which "conceived humans as rights-bearing individuals who could fashion and pursue for themselves their own version of the good life" (Deneen 2019). Hence, for Deneen, liberalism is inherently tied to individualism, the idea that "Human beings are … by nature, nonrelational creatures, separate and autonomous" (*ibid.*). The idea of a society based on individuals each of whom pursues his own vision of the good is so fundamental to the views of both modern liberals and conservatives that it hardly ever comes under questioning. And yet, because of that premise of individualism, liberalism as a system is for Deneen ultimately destined to fail: privileging individual rights and freedoms over collective values, it leads to the destruction of local communities and the atomization of the humans within.

4. Philosophical Concepts of Happiness

Psychologists often trace the development of happiness as a concept to Aristotle, who in the *Nicomachean Ethics* engages deeply in the question of 'what is happiness'. For Aristotle, the pursuit of pleasure is a childlike 'happiness'; true happiness must involve the pursuit of something lasting, an *ethos* (εθος: habit, "way of being-at-work") that can endure despite changes in conditions.

Actually, Aristotle does not talk about 'happiness': to state the obvious, the ancient Greeks did not speak English and were not acquainted with the term. He talks about εὐδαιμονία [*eudaimonia*]. This may seem a trivial point, but I will argue, possibly in line with some of Wittgenstein's theories on language games (Hintikka 1979), that the linguistic question *what word should we use to describe 'happiness' [generally defined as 'the thing which everyone*

wants']? is equivalent to the question *what matters in life?*, and that the translation of *εὐδαιμονία* into *happiness* has been a major causal factor in America's abandonment of the former.

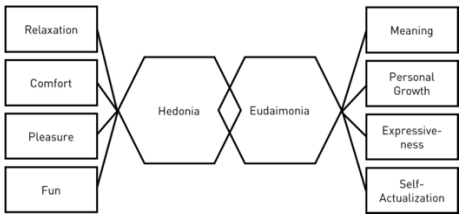
εὐδαιμονία (*eudaimonia*) is a term originating in Plato (Plato 1968 [375 BC]), defined as: "A person's state of excellence characterized by objective flourishing across a lifetime, and brought about through the exercise of moral virtue, practical wisdom, and rationality" (Wiktionary 2024). Hence, εὐδαιμονία is somewhere in-between our concepts of 'happiness' and 'virtue'. Aristotle famously argues that happiness can only consist in living a life in accordance with *aretē* (ἀρετή: excellence, virtue), and that *aretē* is a *hexis* (ἕξις: disposition, habit, 'active having-and-holding').

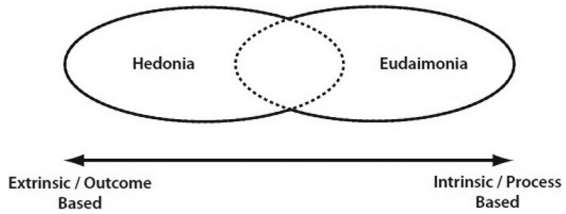
It is difficult to translate much of Aristotle's terminology to English precisely,[2] and 'happiness' is no exception. Following Waterman (1993), it seems that the most accurate English translation for eudaimonia would be "self-realization" or "personal expressiveness" (*ibid.*), or perhaps the slightly more modern "self-actualization". Perhaps these terms are too clunky to be adopted, but one must at least recognize that what Aristotle means by εὐδαιμονία is not at all congruent with certain conceptions of happiness – specifically, those primarily employed by modern psychology.

In psychology, happiness *can* include Aristotle's *eudaimonic* happiness, but also compasses the *hedonic* happiness of Aristippus of Cyrene, who held not only that 'pleasure is the sole good, but also that only one's own physical, positive, momentary pleasure is a good, and is so regardless of its cause' (Waterman 1993). Hedonic happiness is characterized by the pursuit of pleasure and avoidance of pain, and the eudaimonic by the pursuit of internal goals and self-

[2] Sachs (1997) discusses the interpretative difficulties involved

fulfillment. Hence, the former type of happiness is an *outcome* and the latter a *process* (Seaborn et al. 2020, Smith & Reid 2018):





Just as Aristotle was no iconoclast in his views on happiness, but represents a tradition that extends before him with Plato and after with Epictetus, so the Buddha's thoughts on death and life incorporate insights from an earlier tradition. The Chinese philosopher Zhuangzi, for instance, satirizes hedonism through a dream encounter with a skull (Zhuangzi 2003 [300 BC]). For Zhuangzi as well as for Plato, men are fools to pursue power and pleasures over peace and principles. For all of these thinkers, true happiness cannot be characterized by acquisition, but must be a *state*. This state is difficult to describe exactly, but it seems to be characterized not by the presence of desired goods but by the lack of evils, in the absence of which a stable and non-dependent happiness arises.

Indeed, such a state would be reminiscent of that which Mihaly Csikszentmihalyi describes as *flow* (Csikszentmihalyi 1991), "a subjective state that people report when they are completely involved in something to the point of forgetting time, fatigue, and everything else but the activity itself" (Csikszentmihalyi *et al.* 2005). Hence, only when one forgets one's self identity is happiness possible: "Truth can come to you only when your mind and heart are simple, clear and there is love in your heart; not if your heart is filled with the things of the mind" (Krishnamurti 2001). In this state, the mind is described as like a mirror "that reflects everything that comes before it,

without moving toward what is beautiful or away from what is ugly" (Harris 2024, Gebel 2022). Freedom from desire, aversion, conceptual thought and ego-identity bring freedom from suffering.

If this is the case, then our culture is heading in the opposite direction. According to Brandon Hidaka, "A rise in psychopathology among young adults has been attributed to a shifting cultural emphasis away from intrinsic goals, e.g. social relationships, community, and competence, to extrinsic goals, like money, status, and appearance." (Hidaka 2012) This external focus means that happiness is defined by one's status or possessions. This is a very different view from ancient ideas of *εὐδαιμονία* which focus on the self and its moral condition. Paradoxically from a neoliberal or neoconservative standpoint, happiness is not found in possessions or power, nor, as noted above, in any external goods. Rather, from Aristotle to Zhuangzi, Axial Age thinkers concur that happiness consists in living in a way not dependent on external objects. "Despite the currency of the hedonic view, many philosophers, religious masters, and visionaries, from both the East and West, have denigrated happiness per se as a principal criterion of well-being" (Ryan and Deci 2011).

5. Psychological Concepts of Happiness

The identification of 'happiness' with *hedonia* is not limited to popular culture. If Lord Kelvin was right that "to measure is to know" (Collins 2015), academic psychology sometimes does not know *εὐδαιμονία* . Psychology researchers do distinguish between various measures of 'subjective well-being'(SWB), with the two main categories being 'happiness', measured through affect reports ("How happy are you now?", "How happy were you yesterday?") and 'life satisfaction', determined by cognitive life evaluations ("How happy are you with your life as a whole these days?") (Helliwell *et al.* 2012). Within the affect category, positive and negative affect were found by Bradburn (1969) to be independent variables with distinct correlates, not inverses of each

other, leading to a three-dimensional model in which happiness is considered a combination of positive affect, negative affect and life satisfaction (Ryff 1989).

In fact, as Ryff (1989) notes concerning this study, "Reference was made to Aristotle's Nicomachean Ethics, which states that the highest of all goods achievable by human action is happiness (the latter term serving as the translation for the Greek word *εὐδαιμονία*)." Unfortunately, though "it is questionable whether the Greek word εὐδαιμονία is properly translated as happiness" (*ibid.*), no distinction was made between Aristotle's *εὐδαιμονία* and the English word; Aristotle was simply cited as talking about 'happiness', which then became operationalized as SWB. As Ryff discusses, this study was in fact not intended to define well-being, but rather to study the effects of social change on 'difficulties in living'; the choice of affect as the dependent variable was described by Bradburn as lying "more in the realm of intuition and luck than the scientific enterprise", and the result that positive and negative affect were independent was "a serendipitous finding of a study conceived for other purposes" (*ibid.*).

It is unfortunate, then, that its measure for happiness became reified within the field of psychology, apparently supported by Aristotle, but in fact orthogonal to his thought. "Had Aristotle's view of *εὐδαιμονία* as the highest of all good been translated as 'self-realization' rather than as 'happiness', the past 20 years of research on psychological well-being might well have taken different directions" (*ibid.*, emphasis mine). As is, the most widely-used measure of SWB is the Cantril ladder (Nilsson *et al.* 2024), an 11-point scale from 0 (worst possible life) to 10 (best possible life) (Helliwell *et al.* 2012). Evidence suggests that when asked to rate their own lives on this scale, individuals primarily consider the scale in terms of money and power (Nilsson *et al.* 2024), the exact goals which Aristotle took such pains to refute. In addition, regardless of whether affect or cognitive evaluation is studied, experiment shows that all the measures of SWB are highly

correlated (Helliwell 2012). By contrast, *hedonia* and *εὐδαιμονία* are sometimes orthogonal or even in conflict (Wolf 1997, Oishi and Diener 2014). Hence, while there is some correlation between hedonic and eudaimonic happiness (Waterman 1993), it is unlikely that measures of the former can capture the latter *in toto*.

It is natural that psychology should primarily measure hedonic happiness; "hedonic perspectives, with their broadly outcome-based conceptualization, appear to lend themselves particularly well to 'scientific' measurement, and have thus constituted the majority of studies in the growing 'science of happiness' field" (Smith & Reid 2018). But as Carol Ryff (1989) notes, "the literature on psychological well-being was not, in its inception, strongly theory guided", and the continued use of SWB as the main measure of well-being privileges ease of measurement over theoretical support. By contrast, models such as Maslow's hierarchy of self-actualization or Erikson's stages of development have had extensive theoretical development but only "meager empirical impact" because "few of them have been accompanied by credible assessment procedures" (ibid.).

Additionally, synthesizing the multiplicity of theoretical models for objective well-being is difficult, and critics argue that the relevant literature "is hopelessly value laden in its pronouncements about how people should function" (ibid.). However, Ryff argues that these perspectives can in fact be integrated and operationalized through dimensions of self-acceptance, positive interpersonal relations, autonomy, mastery of one's environment, purpose in life, and personal grown (ibid.). In the thirty years between Ryff (1989) and Smith & Reid (2018), it appears based on the latter that little has changed in how psychology conceptualizes happiness. The originator of SWB, Ed Diener, and collaborators do engage substantially with Ryff's arguments in a 1998 article, but defend subjective well-being as an "indispensable component of positive

psychological health" (Diener et al. 1998). SWB may indeed be essential to overall well-being, but my contention is that focusing *solely* on SWB overshadows other, equally important components, including objective well-being, and perhaps also psychological richness (Oishi and Westgate 2022). By contrast, the 2012 World Happiness Report engages in rhetorical sophistry to (once again) claim Aristotle would support SWB:

> *Another related issue, with deep philosophical roots, is the contrast between the hedonistic life, spent in the pursuit of pleasure, and the eudaimonistic life, aimed at achieving excellence. This distinction is captured in modern psychology as the difference between hedonic and eudaimonic well-being, where the hedonic approach has a focus on positive emotions and the eudaimonic approach emphasizes flourishing, meaning and purpose. Does this distinction support the skeptical view of happiness as too frivolous? Does happiness unduly emphasize current pleasures and ignore the deeper and more fundamental aspects of life? These questions hark back to the distinction we have made between emotional reports and life evaluations. Whether framed as questions about happiness or life satisfaction, life evaluations appear to take pleasures and purpose both into account, just as Aristotle suggested they should and would.*

I hope the preceding pages have made clear that this is an absurd conclusion.

6. Summary

We began with several disturbing empirical phenomena: a 'midlife crisis' in American youth; declining rates of happiness since 1988, exacerbated by the 'system shock' of COVID-19; decreasing life expectancies; and rising suicides and deaths of despair. Searching for explanations for these phenomena, we found trends towards less social connection and more individualism, which psychologists warn will lead to widespread feelings of depression and meaningless. Yet the very paradigm of individual freedom and choice which leads to this situation is found to be inseparable from our cultural ideals, leading some to suggest that the very idea of liberalism is flawed. Though Seligman's warnings from 35 years ago are certainly prophetic, in a culture like ours can he ever be more than a Cassandra?

Following this survey of happiness in modern America, we jumped back to the ancient Greeks to examine Aristotle's ideas on the subject, and specifically his fundamental distinction between *hedonia* and *eudaimonia*. We saw how for Aristotle and other Axial Age thinkers, hedonic happiness can never be true happiness; true happiness must be an active state of *eudaimonia* in which the soul is actualized to its highest virtue — not merely tuned to maximizing the body's pleasure and minimizing its pains. Finally, we saw that although modern psychology pays lip service to Aristotle's ideas, its conceptualizations of happiness actually do him a great disservice by ignoring the *hedonia-eudaimonia* distinction and simply focusing on the former, which has been renamed to "subjective well-being" (SWB).

III. Methods: Multimodal Analysis

"you ever wonder what it all really means / if you'll find your dreams?"

— ye

In order to investigate how 'happiness' has evolved in America, I use multimodal machine learning methods. New methods of computational analysis allow large-scale analysis of textual corpora that can bring out cultural trends through correlating shifts in language use (Evans 2016, Grimmer 2022, Arroyo 2022), while multimodal machine learning allows the integration of image and video data in addition to text (Baltrušaitis *et al.* 2019). I use three corpora in this study:

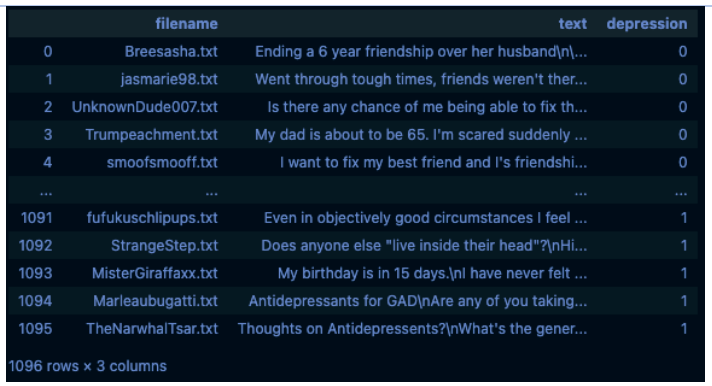
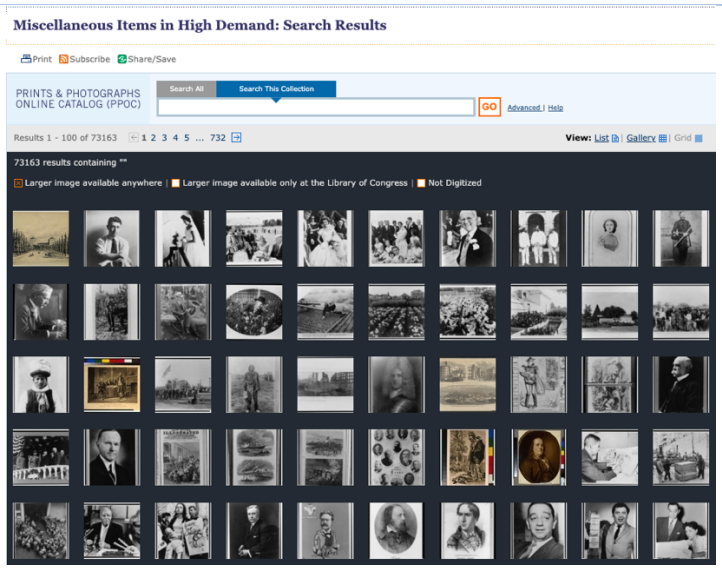
1) the Google Ngrams dataset, a non-representative sample of about 4% of all the books ever printed (Michel *et al.* 2011)
2) a set of Reddit posts from depressed and non-depressed users (Pirina and Çöltekin 2018)
3) photographs and drawings from the Library of Congress's Prints & Photographs Online Catalog (Zinkham 2002)

Dataset	*Corpus size*	*Items collected*	*Image*
Google Ngrams	*5,195, 769 books*	*60,000 words * 10 decades*	

```
start_years = [1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990]
VOCAB_LEN = 60000
```

```
vecs = {}

for year in start_years:
    vecs[year] = KeyedVectors.load(f'/Volumes/Dan2/models/ngrams_{year}_{year+9}_{VOCAB_LEN}.kv')
    # vars()[f'vecs_{year}'] = KeyedVectors.load(f'/Volumes/Dan2/models/ngrams_{year}_{year+9}_{VOCAB_LEN}.kv')
    # vars()[f'vecs_{year}'] = KeyedVectors.load(f'/content/drive/MyDrive/models/ngrams_{year}_{year+9}_{VOCAB_L
    print(year, vecs[year].n_similarity(['sushi', 'shop'], ['japanese', 'restaurant']))
    # a test to make sure the models are working; the similarity should be high (~0.5)
    # print(year)
```

Reddit posts	*1096 posts*	*all*	
Library of Congress	*73163 images*	*1042 images*	

	filename	text	depression
0	Breesasha.txt	Ending a 6 year friendship over her husband\n\...	0
1	jasmarie98.txt	Went through tough times, friends weren't ther...	0
2	UnknownDude007.txt	Is there any chance of me being able to fix th...	0
3	Trumpeachment.txt	My dad is about to be 65. I'm scared suddenly ...	0
4	smoofsmooff.txt	I want to fix my best friend and I's friendshi...	0
...	...	...	...
1091	fufukuschlipups.txt	Even in objectively good circumstances I feel ...	1
1092	StrangeStep.txt	Does anyone else "live inside their head"?\nHi...	1
1093	MisterGiraffaxx.txt	My birthday is in 15 days.\nI have never felt ...	1
1094	Marleaubugatti.txt	Antidepressants for GAD\nAre any of you taking...	1
1095	TheNarwhalTsar.txt	Thoughts on Antidepressents?\nWhat's the gener...	1

1096 rows × 3 columns

Introducing multiple sources of data minimizes the potential for *sampling bias* that might occur if I were to rely solely on a single source of data. For instance, despite its massive size, the ngram corpus samples only 4% of the books printed throughout history in 7 languages[3] (Michel *et al.* 2011). First, books themselves are a non-representative sample of human thought: the written word was not as ubiquitous throughout history as it is today, meaning that the opinions in books represent the literate elite better than the general public. This bias is amplified by the non-representative nature of Google's sampling; their 4% sample was presumably obtained from whatever libraries Google Books had partnerships with, whereas the 96% of books which did not

[3] English, French, Spanish, Chinese, German, Russian, and Hebrew

make it through the filter were more local, peculiar, or else under copyright. Similar arguments can be made for why, on their own, the Reddit posts and LOC material are likely to be a biased sample of human thought over time. However, if a trend can be identified in multiple corpora, it is more difficult to argue that this trend is an artifact of the dataset.

Ngrams: In analyzing text, I take my bearings from Kozlowski, Taddy and Evans' paper "The Geometry of Culture" (2018), which studies the evolution of culture through *word embeddings*, high-dimensional vector encodings of words in a corpus. Kozlowski *et al.* (2019) trained ten different word embedding models, one for each of the decades of the 20th century. They found a significant change in the words which are weighted highly on each axis: for instance, the correlation of words that implied affluence in 1900 with those that imply affluence in 1990 falls to 0.6-0.7.

The authors were kind enough to share their trained models with me, alleviating the need to conduct my own (computationally expensive) training. Their models are saved as text files, which I convert to the word2vec format to allow them to be loaded by the *gensim* natural language processing package as KeyedVectors. I also cut off the size of the models to the top 60,000 words for each year, which I found to be a reasonable compromise between comprehensiveness and usability. With the models loaded, we can examine changes in word similarity over the years.

Reddit posts: I look at data from a group of modern humans which would almost certainly be considered lacking in purpose: posters on Reddit's "r/depression" forum, which describes itself as "Peer support for anyone struggling with a depressive disorder." The data set of observational posts by depressed users, along with control posts by non-depressed users on other Reddit forums, was provided by a previous study by Pirina and Çöltekin (2018). The authors

built a machine learning classifier based on a support vector machine learning algorithm, finding that it was able to distinguish between the two poster types based on the posts' content. For my purposes, rather than simply categorizing posts, I want to know what the most salient words distinguishing each group would be. Accordingly, I perform a *topic modeling* analysis to create a word cloud of the top 500 words used by each group. To narrow down the differences in depressed and non-depressed speech, I use a version of the Fighting Words algorithm implemented inside the ConvoKit package (Chang 2020), which uses Bayesian shrinkage and regularization to identify words or phrases particular to groups (Monroe *et al.* 2017). I compared the word usage of 8542 posts from "r/depressed" with 19693 posts from "r/Cornell" (the control group).

I also conduct a clustering analysis on the Reddit post dataset. Cluster analysis separates posts into a given number of clusters, attempting to maximize the *inertia* or internal coherence of each cluster. I use four of the metrics provided by scikit-learn to evaluate the performance of the clustering algorithm based on a comparison with the actual (depressed or non-depressed) group classification. Specifically, *homogeneity* measures the degree to which each cluster contains only posts from one group (depressed or non-depressed) from 0 to 1. *Completeness* is the converse, a measure of the degree to which all the posts from each group were assigned to the same cluster, also from 0 to 1. *V-measure* is the harmonic mean of the homogeneity and completeness ($2hc/(h + c)$). And *Adjusted Rand Score* measures the similarity of the actual groups and the predicted groups, from -1 to 1.

Photographs: I have thus far collected 1042 photographs from the Library of Congress's "Miscellaneous Items in High Demand" collection. The images in this dataset are mainly of the American elite, or at least those who associate with them. Surprisingly, the first image in the

dataset is of Carl Mydans, who grew up middle-class in Boston before becoming a LIFE photographer, and probably would normally be behind the camera. The next 4 images depict the wedding of John F. Kennedy and Jacqueline Bouvier, including the newlyweds, their family, and guests. The next image, from 1895, shows Seminole brave "Billy Bowlegs", followed by Calvin Coolidge and the 50th Congress Texas Delegation. Hence, while I do not claim that this dataset is in any way proportionally representative of Americans, it does contain a combination of elite and anti-elite subjects.

After being scraped, the images are processed by two machine learning sentiment analysis pipelines. The first is an open-source model trained by Carrara *et al*. (2017). The second is through the proprietary Hume AI model, which derives from Du *et al.* (2014). The first pipeline provides a coarse-grained sentiment analysis, classifying images by proportion of positive/negative/neutral emotion displayed; the second provides fine-grained analysis of 26 distinct emotions, from admiration to triumph.

IV. Results

Natural language processing (NLP) and word embeddings (WE) rely on Firth's principle of collocational analysis, which "suggests that the meaning of a word can be understood by examining the words that frequently appear around it" (Perplexity[4]). In analyzing Google's ngram data, I rely on this principle to examine the collocations of words in the Google Books English language corpus during the years from 1900-2000. I study the *similarity* in collocations between two different words, which, if Firth's principle is correct, is evidence for the similarity in their meaning, and which is measured as the cosine similarity between the words' vectors. Since I am concerned with the change over time in happiness-related concepts, I attempt to identify salient words which experienced changes in the degree of similarity over the course of the 20th century, suggesting a *shift in usage* caused by some underlying trend.

This analysis, it must be noted, remains at the level of correlation, not causation. Philosophers have known for some time that absolute proofs of causation are impossible, since no amount of historical correlation ("the sun rose yesterday", "the sun rose two days ago", … "the sun rose 100 years ago", …) can establish the necessity of future causation ("the sun will

[4] *Perplexity explains further:*
Contextual Meaning
Words do not exist in isolation; their meanings are influenced by the context in which they are used. For example, the word "bank" can refer to a financial institution or the side of a river. The surrounding words help clarify the intended meaning:
- "I need to withdraw money from the bank."
- "We had a picnic on the river bank."

Collocations
Collocations are pairs or groups of words that are often found together. For instance:
- "Strong coffee" (not "powerful coffee")
- "Make a decision" (not "do a decision")

These combinations sound natural to native speakers and are important for language learners to master.
Semantic Prosody
Semantic prosody refers to the positive or negative connotations that a word acquires based on its typical collocates. For example, the word "cause" often appears with negative outcomes (e.g., "cause problems," "cause damage"), giving it a somewhat negative semantic prosody.

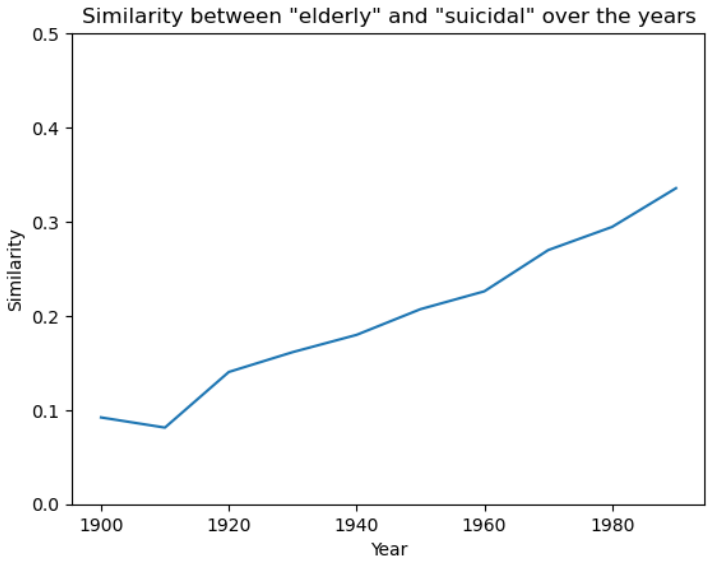
rise tomorrow") (Hume 1986 [1740]); still, we make due with sufficient repetitions of correlation as evidence for causation in both our daily lives (we generally assume the sun will rise each morning, even if occluded) and in science (confirmation by hundreds of experiments is taken as sufficient proof of *ground truth* for causality). In the case of the associations obtained from word embeddings, although researchers have come up with ways to estimate the precise degree of causal effect from a particular treatment (Veitch et al. 2020), my research does not attempt this degree of causal sophistication, remaining content to point out trends related to the hypotheses enunciated in the Literature Review for why Americans are so unhappy.

One particular difficulty with the ngrams corpus is that words are not differentiated by parts of speech.[5] This can be an issue due to the frequent polysemy of English, in which a common word such as *like* can be a verb ("I like it"), noun ("I gave him a like"), adjective ("of like minds"), preposition ("sentences like this"), conjunction ("it seems like"), or even, to the consternation of many parents nowadays, a particle ("She was, like, *sooooo* happy…"). Unfortunately, a word's vector is the aggregate of its total usages, so distinct meanings cannot be disentangled from each other. I note some instances below in which I attempt to address this difficulty with the use of synonyms.

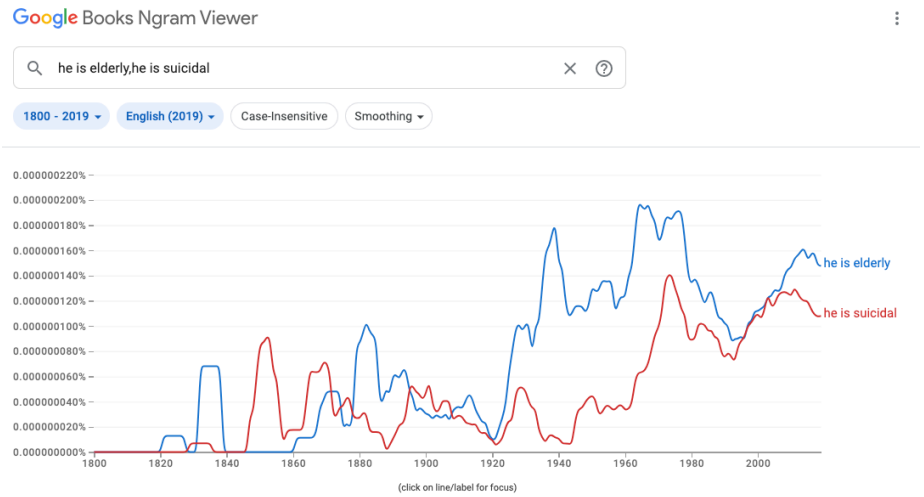
1. Aging and loneliness

One of the most dramatic changes I observed in word usage similarity is between the words "elderly" and "suicidal":

[5] At least the 2012 version I used. I believe the 2020 release may include part-of-speech (POS) tagging



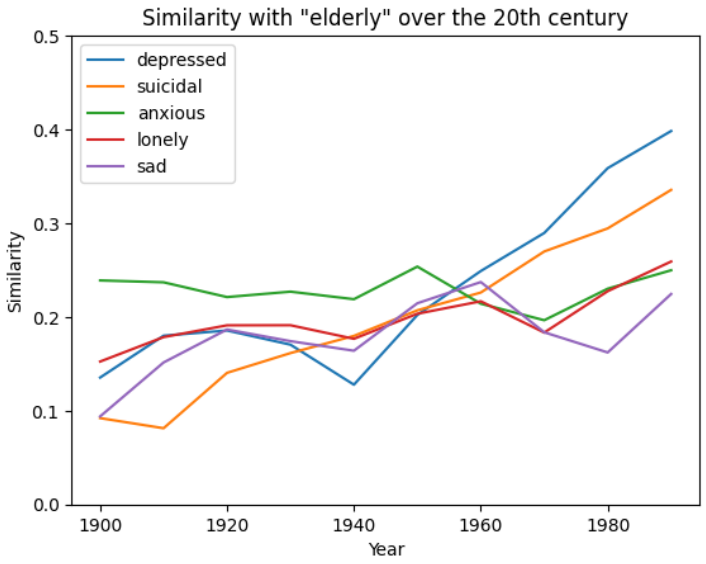
Apart from a slight dip from 1900-1910, the association between these words has risen steadily over the course of the 20th century, meaning that within the ngram corpus, “elderly” and “suicidal” became more likely to be used interchangeably. The base similarity rate is above 0, which is not surprising since both are adjectives and can be used interchangeably in very general sentences like “he is [elderly/suicidal]”. In fact, these two sentences’ historical rates of occurrence within the corpus are fairly similar:



On the other hand, the sentence “he walked like an elderly man” is logical (and occurs 5 times in the corpus), but “he walked like a suicidal man” would be a very surprising sentence and does

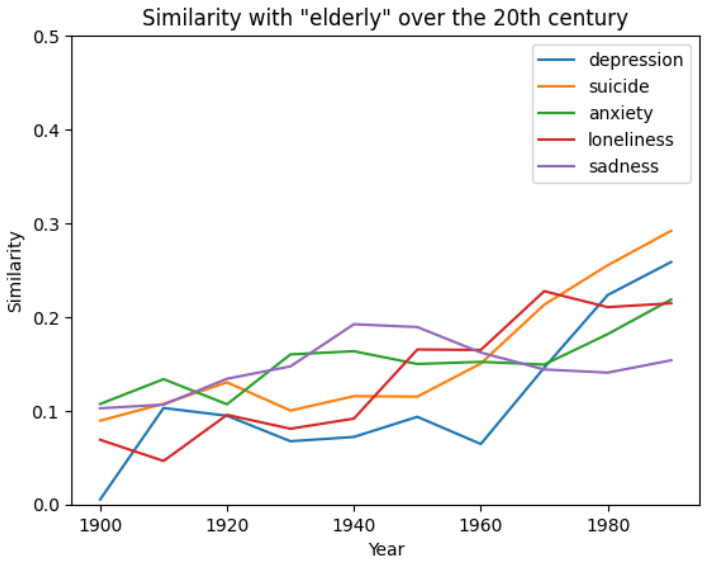
not occur in the corpus. So, during the 20th century, sentences like the latter pair were replaced by sentences like the former pair.

As noted above, this type of trend cannot prove a causation, especially because it is near-impossible to completely disentangle *meaning* from *language use*. Still, if the same trend occurs with sets of similar words, we might *suspect* that an underlying phenomenon exists, even if unable to prove it. In this case, the increasing linguistic similarity of "elderly" and "suicidal" should lead us to give credence to Polivka's idea: that aging in "postmodern America" is increasingly associated with uncertainty about life. We can verify this by including other mental conditions in the analysis:

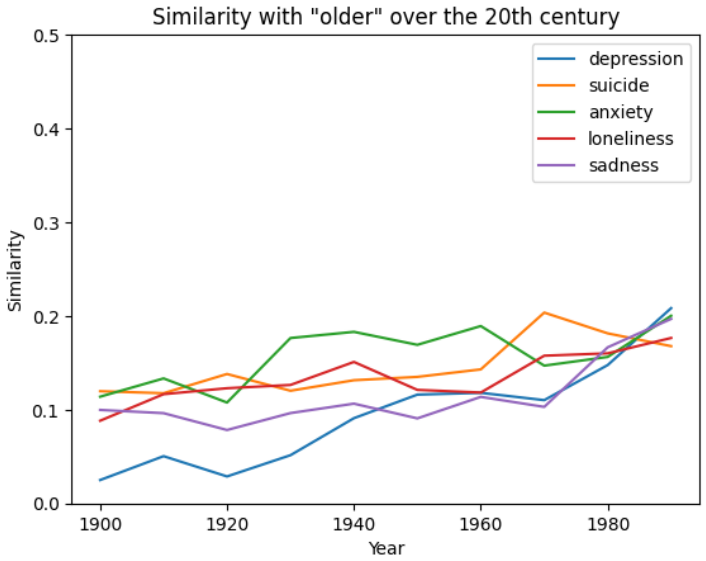


The effect occurs most strongly for "depressed" and "suicidal", to a lesser degree for "lonely" and "sad", and, surprisingly, not at all for "anxious". However, when the noun forms of these mental conditions are used instead, a positive trend does exist for "anxiety"[6]:

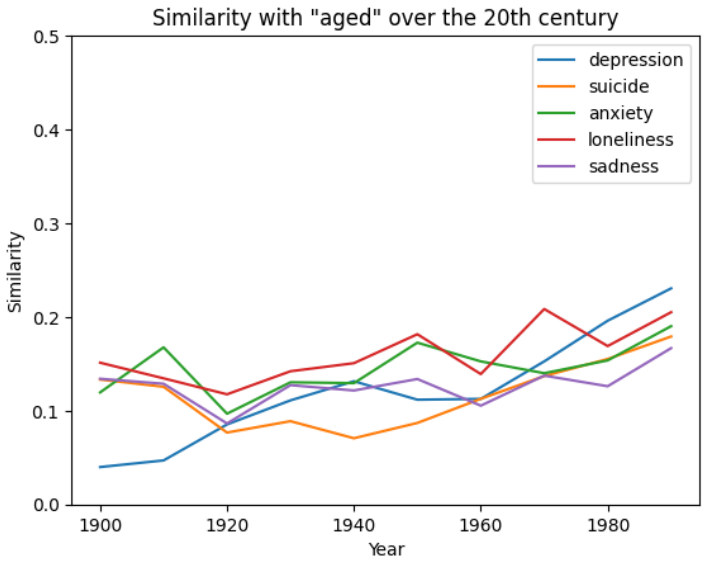
[6] (Note the greater overall similarity for the adjectives (above) than for the nouns (below), which is to be expected since 'elderly' is an adjective and retains greater overall similarity with adjectives.)



The overall positive trend remains when ‘elderly’ is replaced with ‘older’ or ‘aged’[7]:



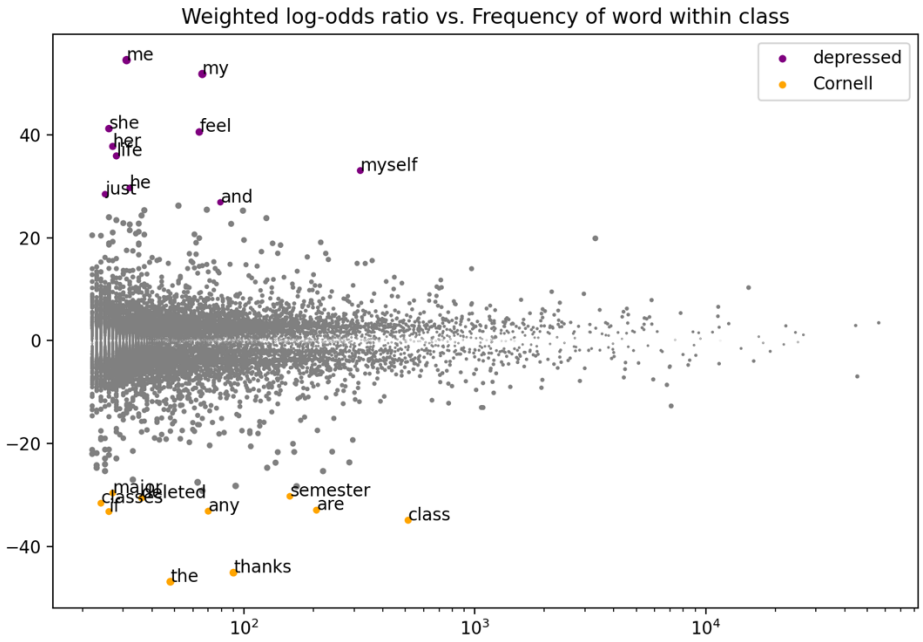
[7] *Aged* is an instance where the problem of polysemy comes up: the word *aged* could be the past preterite or past participle of the verb *to age* (“he aged”, “he has aged”), or the adjective (“women aged 18 to 24”), or even the poetic/archaic *agèd* (Tennyson: “It little profits that an idle king, / By this still hearth, among these barren crags, / Match'd with an aged wife…”). Since I am unable to isolate particular usages, I use synonyms (“older” here) to mitigate this problem when possible.



Overall, the trend of increased cosine similarity for the word embeddings of words related to aging and those related to mental health lends strong support to the idea that aging is increasingly concomitant with loss of purpose over the course of the 20th century.

2. First-Person Pronouns

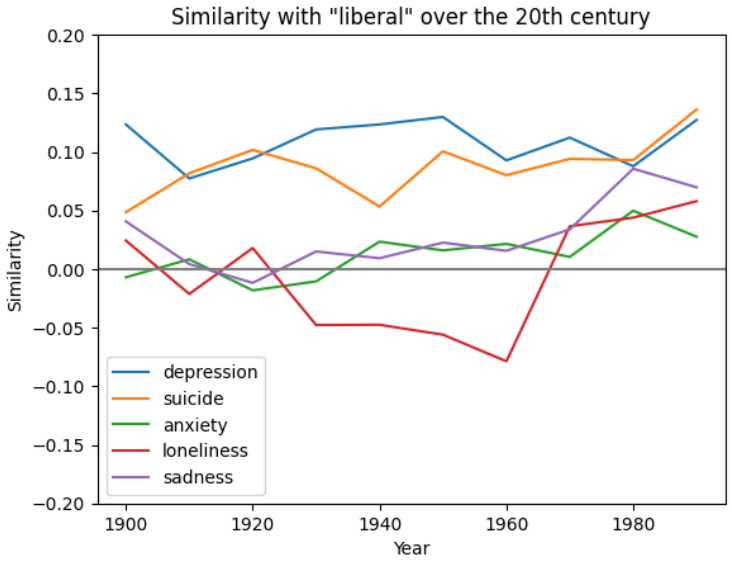
I used the FightingWords package (Monroe *et al.* 2017) to analyze Reddit posts of depressed vs. control posters; the control group was Cornell students (r/Cornell). The results confirm the focus on self, with 'me', 'my', 'feel', 'life', and 'myself' among the top characteristic words of depressed posters:



The Cornell students are concerned with classes, majors, and semesters, while the depressed posters seem to be unable to "get out of their own heads" and are frequently thinking about themselves as individuals. This association between depression and first-person pronoun use is in fact already known within the psychological literature (Holtzman 2017).

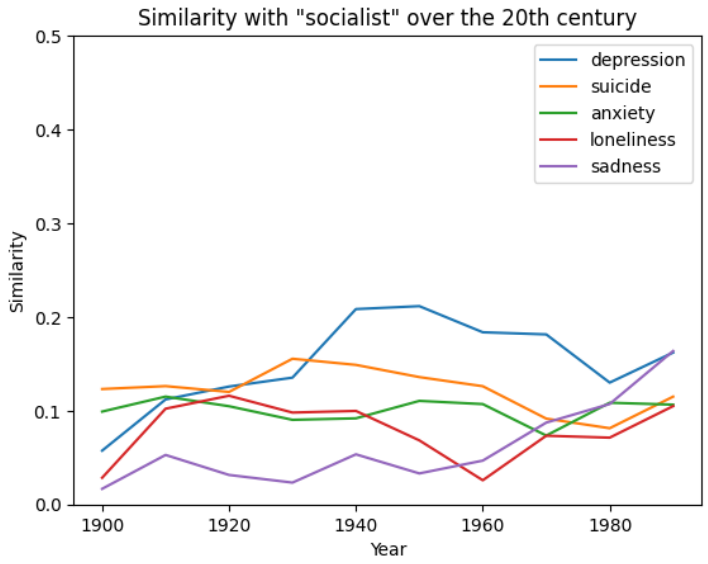
3. Political Affiliation

In order to test the hypothesis that liberalism as a political system is intertwined with the crisis of meaning in America, I examined the similarity of political ideological descriptors such as ‘liberal’ with the same five mental conditions:

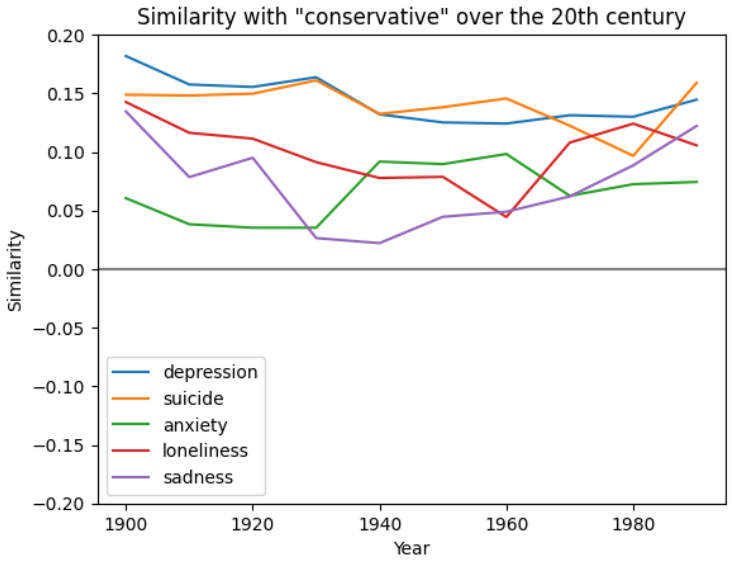


The trends here are complex, but the most striking change is in “liberal” vs. “loneliness”, which started and ended the century as slightly positively associated, but became negatively associated from 1920-1970. It is possible that this ties in with a Western ‘age of melancholy’, but the lack of a similar trend in e.g. “sadness” is puzzling.

The word “socialist”, on the other hand, experienced a marked increase in association with “sadness” over the course of the century, along with “depression”:



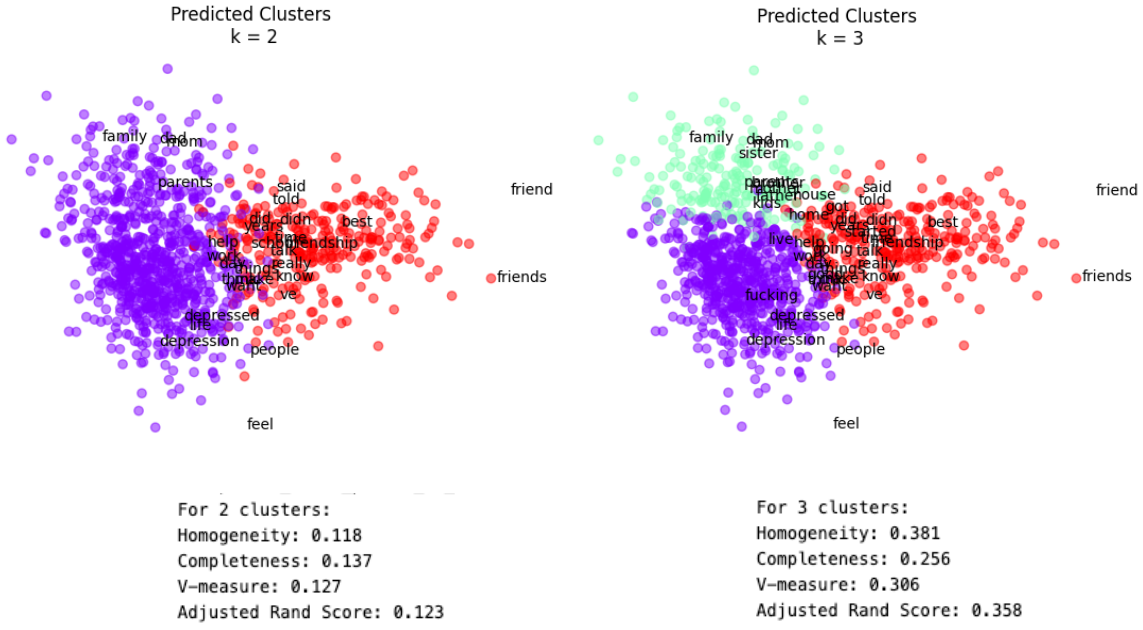
Meanwhile, “conservative” experienced a decline and then resurgence in associations with “sadness”, but overall retained mostly constant associations with these mental conditions over the 20th century:



Overall, it is difficult to discern a clear pattern among political affiliations and mental conditions from this data. While this does not refute the idea that liberalism is to blame for our society’s woes, it does seem to suggest that any connections between political affiliation and mental unwellness have not yet made their way into our language.

4. Friends and Family

I conducted a *k*-means clustering analysis of data from depressed Reddit posters along with a control group. I expected that since the *ground truth* data set was composed of two distinct groups, the *k*-means clustering with k=2 would have high coherence. However, I was surprised to find that the trial with k=3 clusters produced much better performance on all four metrics (also better than higher k-values):



For 2 clusters:
Homogeneity: 0.118
Completeness: 0.137
V-measure: 0.127
Adjusted Rand Score: 0.123

For 3 clusters:
Homogeneity: 0.381
Completeness: 0.256
V-measure: 0.306
Adjusted Rand Score: 0.358

This produced a puzzle: why would 3 clusters do better than 2, given that the data was created from two clearly defined groups? And what *was* the third group?

The purple and red groups are the same in both models; the difference is whether the green group is considered part of the purple group in the k=2 model, or its own group in the k=3 model. The green group is more similar to the purple group than to the red group, yet is not really very similar to either, since both homogeneity and completeness of the clusters increase when they are separated. Examination of the *top terms* for each cluster reveals their identities:

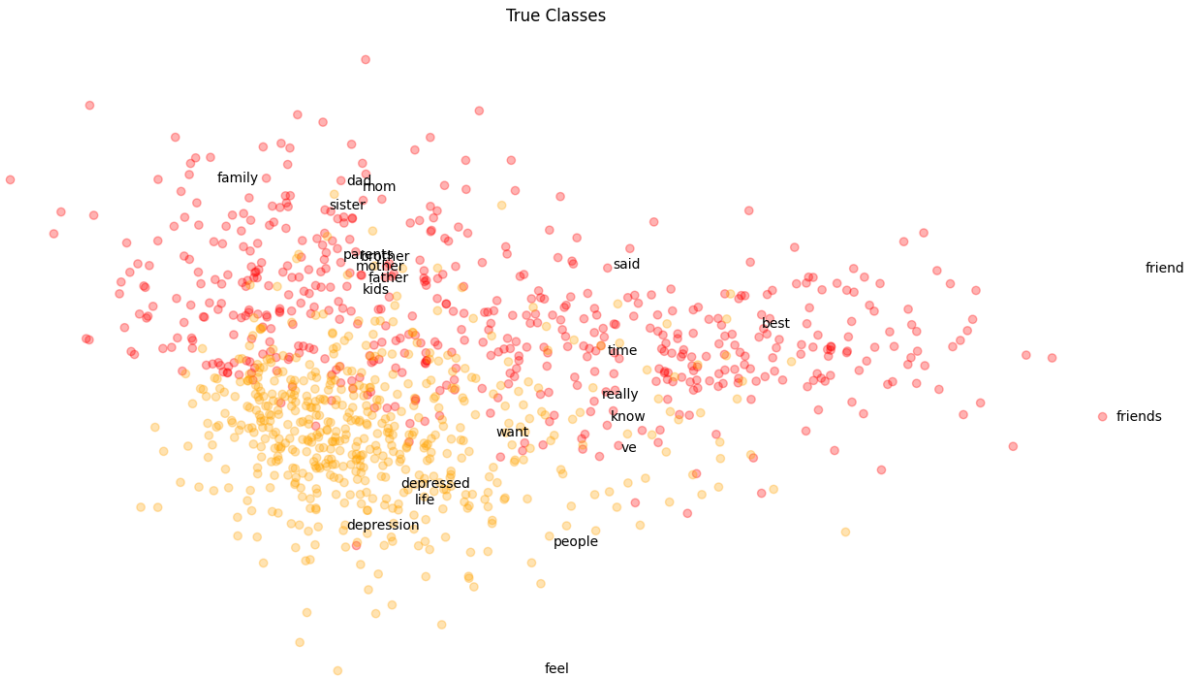
	Cluster 0 [purple]	Cluster 1 [red]	Cluster 2 [green]
Top 50 terms per cluster	feel, life, want, depression, people, ve, know, think, really, time, depressed, things, help, day, fucking, make, work, good, going, years, happy, better, feeling, hate, love, wish, job, talk, makes, need, try, bad, right, sad, thoughts, having, anymore, shit, friends, year, today, tired, way, fuck, doing, school, long, getting, say, does	friend, friends, best, know, ve, feel, time, really, people, want, said, didn, told, friendship, talk, make, years, did, things, started, school, got, think, group, person, new, life, say, going, girl, guy, way, doesn, help, day, tell, hang, bad, talking, boyfriend, good, year, close, recently, months, sure, asked, thing, advice, need	family, dad, mom, sister, parents, mother, brother, father, house, time, want, home, know, years, kids, got, told, live, really, said, husband, help, feel, old, things, didn, year, wife, ve, say, cousin, doesn, away, money, going, think, went, daughter, does, child, work, day, ago, school, car, mum, right, died, asked, care

The purple group is the depressed people; their words include ‘depression’, ‘depressed’ and various swear words. The red group are young people, whose top words include ‘friends’, ‘boyfriend’, ‘school’, ‘new’, and ‘hang’. And the green group are older people, with characteristic words including ‘family’, ‘house’, ‘husband’, ‘wife’, ‘kids’, ‘money’, ‘car’, and ‘time’.

The distinction between the 2-cluster and 3-cluster models is that the former considers cluster 1 as part of this group, while the latter separates it into its own group. That is to say, the green group is more similar to the purple group than to the red group, yet is not really very similar to either, since both homogeneity and completeness of the clusters increase when they are separated. In other words, the machine learning classifier finds the posts of older people to be closer to those of depressed people than those of young people. This finding again bolsters Polivka’s point that aging has become associated with the same uncertainty as mental disorders.

5. Increased Prevalence of Feelings

The following graphic displays a larger version of the *k*-means clustering discussed above for $k = 2$, showing how the machine learning algorithm classifies posts as likely depressed (bottom) or non-depressed (top) and the top feature words for each class:



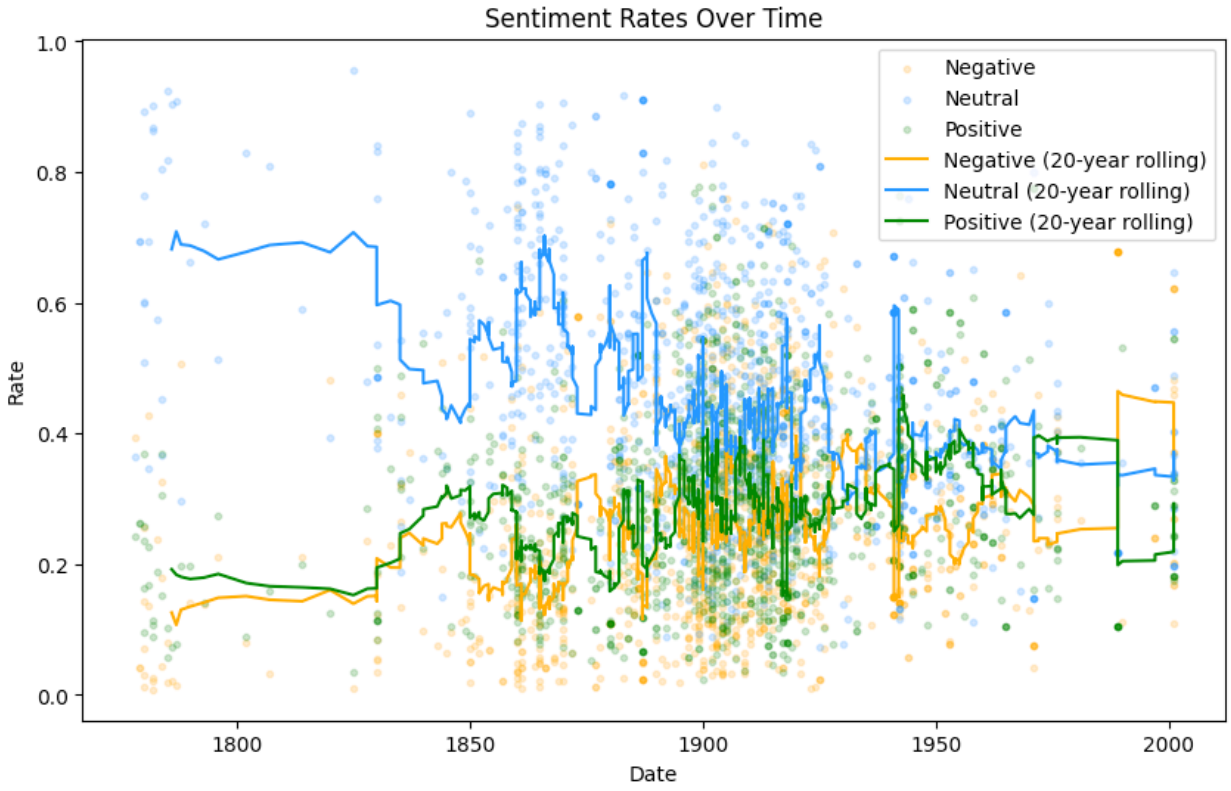
As discussed previously, the strongest feature words for non-depressed posters are those associated with family and friends. However, for depressed users, the single most characteristic word is *feel*.

The correlation of feeling with depression may find support in Seligman's earlier-quoted work, but is perhaps best explained by the work of Bradley Campbell and Jason Manning. Campbell and Manning (2014) argue that the United States evolved from a *culture of honor*, in which reputation is paramount and immediate violence the only response to threat or insult, to a *culture of dignity* in which individuals see themselves as possessing inherent worth and hence tend to pursue non-violent means of conflict resolution. This shift occurred during the twentieth

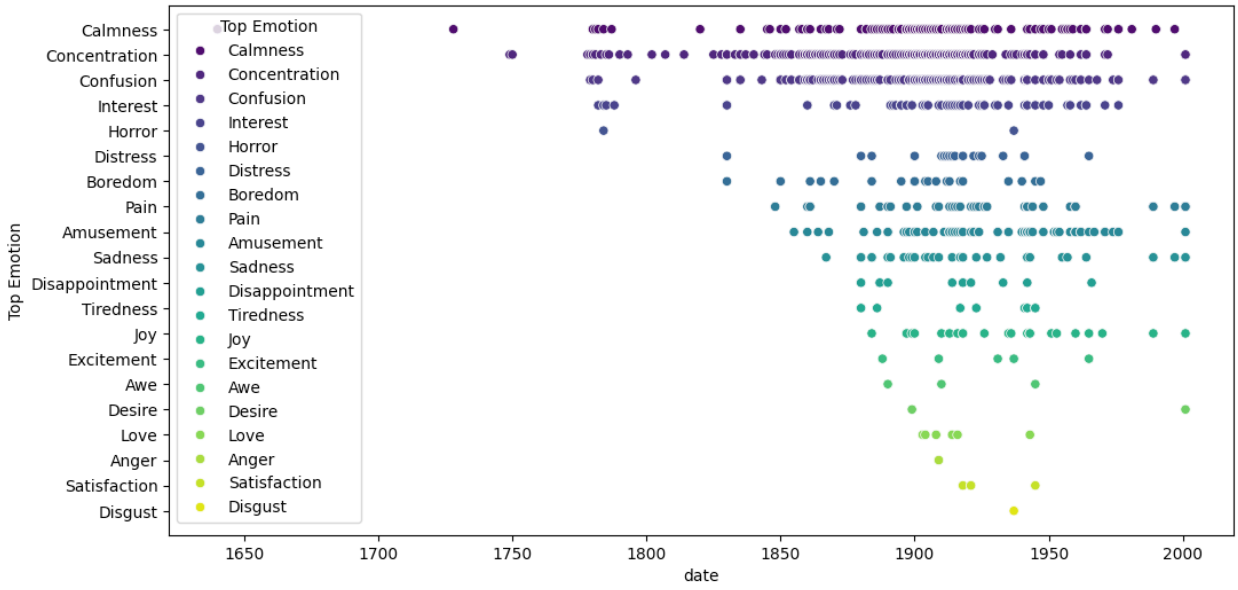
century: “The culture of dignity existed in perhaps its purest form among respectable people in the homogeneous towns of mid-twentieth century America, where the presence of a stable and powerful legal system discouraged the aggressiveness and hostility toward settlement seen in honor cultures, while social closeness – ties of culture and intimacy – encouraged an ethic of toleration or peaceful confrontation” (*ibid.*).

However, by the end of the century, Campbell and Manning see a new cultural type emerging: the *culture of victimhood*. This culture “emerges in contemporary settings, such as college campuses, that increasingly lack the intimacy and cultural homogeneity that once characterized towns and suburbs, but in which organized authority and public opinion remain as powerful sanctions”. Under such conditions, victimhood becomes a virtue: Campbell and Manning give the example of the frequent tendency for college applicants to “write not of their academic achievements but instead – with the encouragement of the universities – about overcoming adversity such as a parent’s job loss or having to shop at thrift stores” (*ibid.*). In this new culture, we should not be surprised to find high expressions of *feeling* as evidence of moral worth.

Results from analysis of the scraped Library of Congress images suggest that there has indeed been an increase in emotionality in photographs:



The rate of neutral sentiment in images has been decreasing since the 1800s in favor of more positive and negative sentiment. Meanwhile, in considering the top emotions demonstrated in photographs, *calmness* and *concentration* have been supplanted by stronger emotions like *joy* and *disgust*:



It is certainly possible that the base explanation for these phenomena is primarily in the medium ("people smiling more in photographs"), but even if so, this begs the question of *why* people feel the need to appear excited or joyful in photographs nowadays, and whether this has anything to do with our depression epidemic. Though not granular enough to prove Campbell and Manning's victim culture hypothesis, these results may be taken as some degree of confirmatory evidence.

V. Conclusion

This thesis investigates the evolving nature of happiness in America, addressing the paradox of increasing unhappiness in a prosperous nation. The study begins by examining current trends in American happiness, noting declining rates since 1988 and a concerning "midlife crisis" among youth. It then delves into the historical and philosophical roots of happiness, contrasting hedonic and eudaimonic conceptions and their implications for modern society.

The research employs a multimodal approach, analyzing textual data from Google Ngrams and Reddit posts, as well as images from the Library of Congress. This methodology allows for a comprehensive examination of cultural trends related to happiness, depression, and well-being. Key findings include:

1. A steady increase in the association between aging and mental health issues over the 20th century, supporting the "postmodern aging" hypothesis.
2. A strong focus on self and use of first-person pronouns among depressed individuals, confirming existing psychological literature.
3. Complex and sometimes counterintuitive relationships between political affiliations and mental states.
4. Evidence suggesting that older adults' language patterns are more similar to those of depressed individuals than to younger adults.
5. Evidence that displays of emotionality have increased in photographs, possibly contributing to the increase in depression.

The thesis argues that the current conceptualization of happiness in both psychology and popular culture, which often prioritizes hedonic well-being, may be contributing to societal issues. A

world which encourages us to “be happy!”, and validates happiness through obtaining “likes” for carefully curated Instagram posts, may in fact dispel any possibility of attaining permanent happiness. Accordingly, it proposes a return to more holistic, eudaimonic conceptions of well-being, drawing on insights from ancient philosophy and modern positive psychology.

The study concludes by emphasizing the need for Americans to re-examine fundamental ideals and conceptions of happiness in the face of changing global dynamics and internal challenges. For Americans, this century must surely be one of trepidation. As our unipolar moment vanishes into the dustbin of history, can we, like the British, accept a diminution of status and move on? Or, like in the case of Rome, will the collapse of empire precipitate the demise of our civilization? Either way, those who survive will need to engage in a process of retrenchment, examining our fundamental ideals, and sifting the wheat from the chaff. It is never too early to begin such an examination.

VI. Future Directions

As with any research project, there are opportunities for expansion and refinement of this thesis. Future studies could build upon this work in several ways:

1. Replication of Patterns: To strengthen the validity of our findings, future research should aim to replicate the patterns observed in this study using different datasets and methodologies. This could include:
    - Analyzing social media platforms other than Reddit (e.g., Twitter, Facebook) to see if similar linguistic patterns emerge among depressed and non-depressed users.
    - Using alternative image datasets to verify the emotional trends observed in the Library of Congress photographs.
    - Employing different word embedding models to confirm the semantic shifts detected in the Google Ngrams data.
2. Extended Timespan: Our study primarily focused on the 20th century. Future research could extend this timeframe in both directions:
    - Analyzing pre-20th century texts to trace the origins of modern conceptions of happiness and examine the trends present in the 19th century.
    - Incorporating more recent data (2000-present) to examine how digital technology and social media have influenced perceptions of happiness.
3. Multilingual Analysis: While our study focused on English-language sources, happiness is a universal concept with culturally specific nuances. Future research could:

- Analyze Google Ngrams data in other languages (e.g., French, Spanish, German, Chinese) to compare how happiness-related concepts have evolved in different cultures.
- Conduct cross-linguistic comparisons to identify universal trends and cultural specificities in the conceptualization of happiness.
- Examine how translations of happiness-related terms have changed over time, potentially revealing shifts in cultural understanding.

4. Methodological Advancements: As AI and machine learning technologies continue to advance, future research could:
    - Utilize more sophisticated natural language processing techniques to capture nuanced emotional content in text.
    - Develop new multimodal models that can simultaneously analyze text, image, and potentially audio data for a more comprehensive understanding of happiness expression.

VII. Bibliography

Abe, Jo Ann A. "A Longitudinal Follow-up Study of Happiness and Meaning-Making." *The Journal of Positive Psychology*, vol. 11, no. 5, Sept. 2016, pp. 489–98, https://doi.org/10.1080/17439760.2015.1117129.

Alderson, Arthur S., and Tally Katz-Gerro. "Compared to Whom? Inequality, Social Comparison, and Happiness in the United States." *Social Forces*, vol. 95, no. 1, 2016, pp. 25–54, https://doi.org/10.1093/sf/sow042.

Anderson, G. Oscar, and Colette Thayer. "Loneliness and Social Connections Among Adults Age 45 and Older." *AARP*, Sept. 2018, https://doi.org/10.26419/res.00246.001.

Aristotle, and Sachs, Joe (tr.). *Nicomachean Ethics*. Hackett Publishing, 2011.

Arroyo, Pedro Alberto. *Devolution, Departure, and Discourse: A Computational Analysis of Political Manifestos in Britain, 1999-2019*. 2022. The University of Chicago.

Baltrušaitis, Tadas, et al. "Multimodal Machine Learning: A Survey and Taxonomy." *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 41, no. 2, Feb. 2019, pp. 423–43, https://doi.org/10.1109/TPAMI.2018.2798607.

Bloodworth, Jeffrey. *Losing the Center: The Decline of American Liberalism, 1968-1992*. University Press of Kentucky, 2013.

Booth, Robert, and Robert Booth Social affairs correspondent. "Young People Becoming Less Happy than Older Generations, Research Shows." *The Guardian*, 20 Mar. 2024, https://www.theguardian.com/society/2024/mar/20/young-people-becoming-less-happy-than-older-generations-research-shows.

Bradburn, Norman M. *The Structure of Psychological Well-Being*. Aldine, 1969.

Brooks, Arthur C. "Are We Trading Our Happiness for Modern Comforts?" *The Atlantic*, 22 Oct. 2020, https://www.theatlantic.com/family/archive/2020/10/why-life-has-gotten-more-comfortable-less-happy/616807/.

Campbell, Bradley, and Jason Manning. “Microaggression and Moral Cultures.” *Comparative Sociology*, vol. 13, no. 6, Jan. 2014, pp. 692–726, https://doi.org/10.1163/15691330-12341332.

Carrara, Fabio, et al. *Cross-Media Learning for Image Sentiment Analysis in the Wild*. 2017, pp. 308–17, https://openaccess.thecvf.com/content_ICCV_2017_workshops/w5/html/Vadicamo_Cross-Media_Learning_for_ICCV_2017_paper.html.

Chang, Jonathan P., et al. *ConvoKit: A Toolkit for the Analysis of Conversations*. arXiv:2005.04246, arXiv, 8 May 2020, https://doi.org/10.48550/arXiv.2005.04246.

Collins, M. W., et al. *Kelvin, Thermodynamics and the Natural World*. WIT Press, 2015.

Collins, Randall. *Violence: A Micro-Sociological Theory*. Princeton University Press, 2009.

Cotton Bronk, Kendall, et al. “Purpose, Hope, and Life Satisfaction in Three Age Groups.” *The Journal of Positive Psychology*, vol. 4, no. 6, 2009, pp. 500–10, https://doi.org/10.1080/17439760903271439.

Csikszentmihalyi, Mihaly, et al. “Flow.” *Handbook of Competence and Motivation*, Guilford Publications, 2005, pp. 598–608.

---. *Flow*. Harper Collins, 1991.

Deneen, Patrick J. “Liberalism and Its Discontents.” *Polity*, vol. 30, no. 3, 1998, pp. 547–54, https://doi.org/10.2307/3235214.

---. *Why Liberalism Failed*. Reprint edition, Yale University Press, 2019.

Diener, Ed, et al. “Subjective Well-Being Is Essential to Well-Being.” *Psychological Inquiry*, vol. 9, no. 1, 1998, pp. 33–37, https://doi.org/10.1207/s15327965pli0901_3.

Du, Shichuan, et al. “Compound Facial Expressions of Emotion.” *Proceedings of the National Academy of Sciences*, vol. 111, no. 15, Apr. 2014, https://doi.org/10.1073/pnas.1322355111.

Durkheim, Emile. *On Suicide*. Penguin UK, 2006.

Easterlin, Richard A. “Does Economic Growth Improve the Human Lot? Some Empirical Evidence.” *MPRA Paper*, 1974, https://ideas.repec.org//p/pra/mprapa/111773.html.

---. “The Happiness–Income Paradox Revisited.” *Proceedings of the National Academy of Sciences*, vol. 107, no. 52, Dec. 2010, pp. 22463–68, https://doi.org/10.1073/pnas.1015962107.

Easton, David. “Walter Bagehot and Liberal Realism.” *American Political Science Review*, vol. 43, no. 1, Feb. 1949, pp. 17–37, https://doi.org/10.2307/1950312.

Evans, James A., and Pedro Aceves. “Machine Translation: Mining Text for Social Theory.” *Annual Review of Sociology*, vol. 42, no. 1, July 2016, pp. 21–50, https://doi.org/10.1146/annurev-soc-081715-074206.

Fukuyama, Francis. “The End of History?” *The National Interest*, no. 16, 1989, pp. 3–18, https://www.jstor.org/stable/24027184.

Gebel, Till. “Mirror Mind - Sam Harris Daily Meditation 2022.08.31.” *Till Gebel*, 31 Aug. 2022, https://www.till-gebel.com/post/sam-harris-daily-meditation-2022-08-31-mirror-mind.

Grimmer, Justin, et al. *Text as Data: A New Framework for Machine Learning and the Social Sciences*. Princeton University Press, 2022.

Hallowell, John H. “The Decline of Liberalism.” *Ethics*, vol. 52, no. 3, 1942, pp. 323–49, https://doi.org/10.1086/290292.

Harris, Kathleen Mullan, et al., editors. *High and Rising Mortality Rates Among Working-Age Adults*. National Academies Press, 2021, https://doi.org/10.17226/25976.

Harris, Sam. *Daily Meditation*. 17 May 2024.

Hawkley, Louise C., et al. “Are U.S. Older Adults Getting Lonelier? Age, Period, and Cohort Differences.” *Psychology and Aging*, vol. 34, no. 8, 2019, pp. 1144–57, https://doi.org/10.1037/pag0000365.

Helliwell, John F., Richard Layard, and Jeffrey D. Sachs. *World Happiness Report 2012*. 4 Apr. 2012, https://worldhappiness.report/ed/2012/.

---. *World Happiness Report 2024*. 20 Mar. 2024, https://worldhappiness.report/ed/2024/.

Herrigel, Gary, et al. “Economic Planning and Democratic Politics: History, Theory, and Practice.” *The Neubauer Collegium*, 2023, https://neubauercollegium.uchicago.edu/research/economic-planning-and-democratic-politics.

Hidaka, Brandon H. “Depression as a Disease of Modernity: Explanations for Increasing Prevalence.” *Journal of Affective Disorders*, vol. 140, no. 3, Nov. 2012, pp. 205–14, https://doi.org/10.1016/j.jad.2011.12.036.

Hintikka, Jaakko. “Language-Games.” *Game-Theoretical Semantics: Essays on Semantics by Hintikka, Carlson, Peacocke, Rantala, and Saarinen*, edited by Esa Saarinen, Springer Netherlands, 1979, pp. 1–26, https://doi.org/10.1007/978-1-4020-4108-2_1.

Holt-Lunstad, Julianne, et al. “Advancing Social Connection as a Public Health Priority in the United States.” *The American Psychologist*, vol. 72, no. 6, Sept. 2017, pp. 517–30, https://doi.org/10.1037/amp0000103.

Holtzman, Nicholas S., and To’Meisha Edwards. “A Meta-Analysis of Correlations between Depression and First Person Singular Pronoun Use.” *Journal of Research in Personality*, vol. 68, June 2017, pp. 63–68, https://doi.org/10.1016/j.jrp.2017.02.005.

Hume, David. *A Treatise of Human Nature (Penguin Classics)*. 1986, http://www.librarything.com/work/1873/book/72871539.

Klerman, Gerald L. “The Current Age of Youthful Melancholia: Evidence for Increase in Depression Among Adolescents and Young Adults.” *The British Journal of Psychiatry*, vol. 152, no. 1, Jan. 1988, pp. 4–14, https://doi.org/10.1192/bjp.152.1.4.

Kozlowski, Austin C., et al. “The Geometry of Culture: Analyzing the Meanings of Class through Word Embeddings.” *American Sociological Review*, vol. 84, no. 5, 2019, pp. 905–49, https://doi.org/10.1177/0003122419877135.

Krishnamurti, J. *The Book of Life: Daily Meditations with Krishnamurti*. Penguin Books India, 2001.

Manent, Pierre. “The Crisis of Liberalism.” *Journal of Democracy*, vol. 25, no. 1, 2014, pp. 131–41, https://muse.jhu.edu/pub/1/article/535541.

Martínez-Alés, Gonzalo, et al. “The Recent Rise of Suicide Mortality in the United States.” *Annual Review of Public Health*, vol. 43, no. 1, Apr. 2022, pp. 99–116, https://doi.org/10.1146/annurev-publhealth-051920-123206.

Marty, William R. “Liberalism without Transcendence.” *Journal of Interdisciplinary Studies*, vol. 9, no. 1/2, 1997, p. 1, https://search.proquest.com/openview/586e818fa9cbbeedbc3ebe86199f76f7/1?pq-origsite=gscholar&cbl=33879.

Michel, Jean-Baptiste, et al. “Quantitative Analysis of Culture Using Millions of Digitized Books.” *Science*, vol. 331, no. 6014, Jan. 2011, pp. 176–82, https://doi.org/10.1126/science.1199644.

Monroe, Burt L., et al. “Fightin’ Words: Lexical Feature Selection and Evaluation for Identifying the Content of Political Conflict.” *Political Analysis*, vol. 16, no. 4, Jan. 2017, pp. 372–403, https://doi.org/10.1093/pan/mpn018.

Morgan, Jessica, and Tom Farsides. “Measuring Meaning in Life.” *Journal of Happiness Studies*, vol. 10, no. 2, Apr. 2009, pp. 197–214, https://doi.org/10.1007/s10902-007-9075-0.

Nilsson, August Håkan, et al. “The Cantril Ladder Elicits Thoughts about Power and Wealth.” *Scientific Reports*, vol. 14, no. 1, Feb. 2024, p. 2642, https://doi.org/10.1038/s41598-024-52939-y.

Oishi, Shigehiro, et al. “Concepts of Happiness Across Time and Cultures.” *Personality and Social Psychology Bulletin*, vol. 39, no. 5, 2013, pp. 559–77, https://doi.org/10.1177/0146167213480042.

Oishi, Shigehiro, and Ed Diener. “Residents of Poor Nations Have a Greater Sense of Meaning in Life than Residents of Wealthy Nations.” *Psychological Science*, vol. 25, no. 2, Feb. 2014, pp. 422–30, https://doi.org/10.1177/0956797613507286.

Oishi, Shigehiro, and Erin C. Westgate. “A Psychologically Rich Life: Beyond Happiness and Meaning.” *Psychological Review*, vol. 129, no. 4, 2022, pp. 790–811, https://doi.org/10.1037/rev0000317.

Perplexity, AI. 28 July 2024, https://www.perplexity.ai/search/you-shall-know-a-word-by-the-c-xpBjtTsXQ2.WHDccqUladQ.

Pirina, Inna, and Çağrı Çöltekin. “Identifying Depression on Reddit: The Effect of Training Data.” *Proceedings of the 2018 EMNLP Workshop SMM4H: The 3rd Social Media Mining for Health Applications Workshop & Shared Task*, edited by Graciela Gonzalez-Hernandez et al., Association for Computational Linguistics, 2018, pp. 9–12, https://doi.org/10.18653/v1/W18-5903.

Plato, and Allan David (trans.). Bloom. *The Republic of Plato. Translated with an Interpretive Essay by Allan Bloom*. Basic Books, 1968, https://cir.nii.ac.jp/crid/1130000793993464832.

Plato, and Sachs, Joe (trans.). *Gorgias and Rhetoric*. Hackett Publishing, 2012.

Polivka, Larry. “Postmodern Aging and the Loss of Meaning.” *Journal of Aging and Identity*, vol. 5, no. 4, Dec. 2000, pp. 225–35, https://doi.org/10.1023/A:1026449621184.

Rousseau, David L., and Thomas C. Walker. “Liberalism: A Theoretical and Empirical Assessment.” *Routledge Handbook of Security Studies*, 2nd ed., Routledge, 2016.

Ryan, Richard M., and Edward L. Deci. “On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being.” *Annual Review of Psychology*, vol. 52, no. 1, 2001, pp. 141–66, https://doi.org/10.1146/annurev.psych.52.1.141.

Ryff, Carol D. “Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being.” *Journal of Personality and Social Psychology*, vol. 57, no. 6, 1989, pp. 1069–81, https://doi.org/10.1037/0022-3514.57.6.1069.

Sachs, Joe. “Three Little Words.” *Formal Lecture Series*, Apr. 1997, https://digitalarchives.sjc.edu/items/show/3727.

Schwartz, Barry, and Andrew Ward. “Doing Better but Feeling Worse: The Paradox of Choice.” *Positive Psychology in Practice*, John Wiley & Sons, Inc., 2004, pp. 86–104, https://doi.org/10.1002/9780470939338.ch6.

Seaborn, Katie, et al. “Eudaimonia and Hedonia in the Design and Evaluation of a Cooperative Game for Psychosocial Well-Being.” *Human–Computer Interaction*, vol. 35, no. 4, July 2020, pp. 289–337, https://doi.org/10.1080/07370024.2018.1555481.

Seligman, Martin E. P. “Why Is There So Much Depression Today? The Waxing of the Individual and the Waning of the Commons.” *Contemporary Psychological Approaches to Depression: Theory, Research, and Treatment*, edited by Rick E. Ingram, Springer US, 1990, pp. 1–9, https://doi.org/10.1007/978-1-4613-0649-8_1.

Simmel, Georg. *Georg Simmel on Individuality and Social Forms*. Edited by Donald N. Levine, First Edition, University of Chicago Press, 1972.

Smith, Thomas S. J., and Louise Reid. “Which ‘Being’ in Wellbeing? Ontology, Wellness and the Geographies of Happiness.” *Progress in Human Geography*, vol. 42, no. 6, 2018, pp. 807–29, https://doi.org/10.1177/0309132517717100.

Taverne, Dick. *The March of Unreason: Science, Democracy, and the New Fundamentalism*. 1st edition, OUP Oxford, 2006.

Turchin, Peter. *End Times: Elites, Counter-Elites, and the Path of Political Disintegration*. Penguin, 2023.

Veitch, Victor, et al. “Adapting Text Embeddings for Causal Inference.” *Proceedings of the 36th Conference on Uncertainty in Artificial Intelligence (UAI)*, PMLR, 2020, pp. 919–28, https://proceedings.mlr.press/v124/veitch20a.html.

Venkataramani, Atheendar S., et al. “Declining Life Expectancy in the United States: The Need for Social Policy as Health Policy.” *JaMa*, vol. 325, no. 7, 2021, pp. 621–22, https://jamanetwork.com/journals/jama/article-abstract/2776338.

Waterman, Alan S. “Two Conceptions of Happiness: Contrasts of Personal Expressiveness (Eudaimonia) and Hedonic Enjoyment.” *Journal of Personality and Social Psychology*, vol. 64, no. 4, 1993, pp. 678–91, https://doi.org/10.1037/0022-3514.64.4.678.

Wiktionary, contributors. “Eudemonia.” *Wiktionary, the Free Dictionary*, 6 Apr. 2024, https://en.wiktionary.org/w/index.php?title=eudemonia&oldid=78763198.

Wolf, Susan. “Happiness and Meaning: Two Aspects of the Good Life.” *Social Philosophy and Policy*, vol. 14, no. 1, Jan. 1997, pp. 207–25, https://doi.org/10.1017/S0265052500001734.

Zhuangzi. *Zhuangzi: Basic Writings*. Columbia University Press, 2003.

Zinkham, Helena. “Pitching Pictures: The Prints & Photographs Online Catalog at the Library of Congress.” *Art Libraries Journal*, vol. 27, no. 3, Jan. 2002, pp. 18–25, https://doi.org/10.1017/S0307472200020071.