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Exploring Birth Year as a Self-Identity Marker and Target for Nostalgia in YouTube Comments on Video Content from 1950 – 2019

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Abstract

Automated text analysis of YouTube comments on videos featuring content indexed by year for each year between 1965 – 1981 (Study 1), each year between 1980 – 2005 (Study 2), and 56 of the 70 years between 1950 – 2019 (Study 3), identified key words associated with users' disclosing their age in the year of the video (e.g., "I was *11 years old* in 1974"). Reported ages ranged from -59 to 45, but 42.1% of the age-related comments referred to the birth year (e.g., "I was *born* in 1963"). Birth also appeared more frequently than other major life events (e.g., birth of a sibling, high school graduation, marriage, birth of a child, etc.). One's birth year is the opening chapter of their life story and an important aspect of self-identity, for which people have no autobiographical memories. Social media like YouTube may fill this psychological void by allowing users to view the world as it was in their birth year and publicly acknowledge the connection with their life story.

Keywords: birth year, self-identity, online nostalgia, YouTube, user generated content, automated text analysis.

Introduction: Why YouTube Users Comment on Video Content from Their Birth Year

Individuals have an inherent need to create and maintain a life story, which is essential for their sense of self-identity (McAdams, 2001). One's birth year is an important aspect of self-identity, connecting them with others who began their life stories near the same time, and who have or will experience other significant life events in the same year (Alwin & McCammon, 2002). Yet, when individuals are asked to talk about their life, they say little about their first year (Munawar, Kuhn, & Haque, 2018), in part because they cannot access autobiographical memories from this early period (Neisser, 2004). Instead, people have historically relied on alternative sources to inform the opening chapter of their life story (Andrews et al., 2015; Leaver, 2015).

Social media may play a particularly important role in helping people fill this psychological void. YouTube, for example,

allows users to vicariously revisit their pasts by viewing content indexed by year, and commenting on how the videos are related to their life story. These online experiences are often tinged with nostalgia, with comments expressing a desire to return to specific periods of the lived past (Sedikides et al., 2015), and that the past was better than the present (Holbrook & Schindler, 1989, Holbrook & Schindler, 2006). Given the significance of birth as a life story event (Habermas, 2007; Rubin et al., 2009), the absence of autobiographical memories from the first year of life (Bauer, 2015), and the role of birth year in creating a sense of self-identity (Alwin & McCammon, 2002), YouTube users may be particularly interested in viewing and commenting on video content from their birth year.

To investigate this proposition, the research reported below applied theoretical insights from previous research showing (1) the relationship between nostalgia and maintaining a sense of self-continuity over time (Sedikides et al., 2015; Youn & Jin, 2017), (2) the need for a complete and coherent life story narrative (Habermas & Bluck, 2000; McAdams, 2001), and (3) how consumers use social media to create and manage self-identity (Närvänen, Kartastenpää, & Kuusela, 2013; Pinto et al., 2015). Three studies examined user comments on YouTube video compilations of television and movie clips (Study 1) and popular song clips (Studies 2 and 3) indexed by year. Automated text analysis of 55,981 comments identified key words related to age (e.g., year, born, time, school, grade), and researchers coded individual comments containing key words to identify age-related comments (ARCs) – users stating how old they were in the year of the video.

The objective was to see how far back in time consumers travel for online nostalgia experience, and whether the predicted focus on the birth year was apparent in user comments. Analysis of the frequency distribution of ARCs by age revealed that 42.1% were users commenting on video content from their birth year, compared to the next highest frequency for age 18 (10.8%). This pattern held regardless of whether comments referred to video content from the 1950s, 1960s, 1970s, 1980s, 1990s, or the 2000s, suggesting that the desire to view and comment on video content from one's birth year is shared by multiple generations.

Birth Year as a Self-Identity Marker

Birth is an essential life event in shaping an individual (Habermas & Bluck, 2000; Wilde, 2022), and can influence multiple aspects of self-identity. *Personal* identity is comprised of personality traits, roles, and relationships with specific others, and captures the attributes and meanings that come to mind when a person thinks of herself as an individual. With respect to personal identity, birth is an important life event that influences one's sense of self (Wilde, 2022). Birth is the beginning of any life, the 'opening chapter' of the life story, and the very event by which the notion of existence begins (Habermas & Bluck, 2000; Romano, 2008). Lejeune (1989) has noted that birth year as an identity marker is facilitated by legal or institutional norms for personal identification documents that include year of birth (e.g., birth certificates, driver's licenses, passports). Indeed, it is difficult for people to conceive of their identity or life story if they are asked to imagine their birth occurring five years earlier or later; under these hypothetical scenarios they perceive they would be a completely different person (Belshaw, 2000).

Collective identity, on the other hand, links an individual to broad categories of people similar or related in some way (e.g., ethnicity, religion, sexual orientation, political ideology, lifestyles and hobbies, etc.), but not necessarily known to one

another on a personal level. In terms of collective identity, a person's birth year connects them with others who began their life stories at nearly the same time, and who have experienced, or will experience, other significant life events at the same stage of life. In American culture, for example, high school graduation year is an important cohort of people who have finished their K – 12 education in the same year, as commemorated by yearbooks, class rings, and reunions based upon graduation cohorts (Humphrey & Humphrey, 1985; Riney-Kehrberg, 2017). A person's birth year is the ultimate cohort determining membership in other cohorts at later stages of life (e.g., beginning kindergarten, Bar and Bat Mitzvah, graduating high school, etc.).

Birth year shapes an individual's collective identity because experiencing major cultural and historical events at a specific age is a potent influence on a person's sense of self and their life story narrative (Alwin & McCammon, 2002). For example, research has shown that birth year influences personal values and personality traits (Twenge, 2000), vocational choice and career trajectory (Bubany & Hansen, 2011), alcohol and drug use (Keyes et al., 2012), dietary habits and obesity levels (Lê-Scherban et al., 2021), political views and ideology (Polletta & Jasper, 2001), the choice of hobbies (Brewer & Gardner, 1996), sexual activity (Beckman et al., 2014), illicit drug use (Keyes et al., 2012), the extent of patriotism and nationalistic sentiment (David & Bar-Tal, 2009), and a sense of cohort or generational identity (Boym, 2002), which perhaps explains the burgeoning online market for tee-shirts and other pieces of apparel allowing consumers to publicly celebrate their birth year (TeePublic, 2022).

Childhood Amnesia and Surrogates for Autobiographical Memory

Despite its significance as a life story event and influence on self-identity, when people of various ages are asked to tell the story of their lives, their birth year receives very little prominence (Munawar et al., 2018), perhaps due to a lack of autobiographical memories from this period. Childhood amnesia refers to people not having memories of the first few years of their lives (Bauer & Larkina, 2014). The exact period of amnesia varies from study to study, but it is generally believed that people form autobiographical memories only after the age of 4 (Olson & Newcombe, 2014).

Since individuals do not have autobiographical memories from their early years, they rely on what they are told rather than what they remember (Wilde, 2022). For much of human history the only way to 'revisit' the first few years of life was via information conveyed by older family members (Andrews et al., 2015; Hayden, Singer, & Chrisler, 2006). The stories told to children by parents, grandparents, uncles, aunts, and older siblings contributed to what was known about the early years of life (Hayden, Singer, & Chrisler, 2006; Misztal, 2003). The autobiographical memories of people who are closely related are often intertwined such that they can help one another to remember events that they have experienced together (Wegner, 1987).

In addition to describing specific events involving the protagonist as a baby (i.e., "When you were 6 months old, you fell..."), older family members can provide the context or scaffolding ("We moved right after you were born"), which children need to complete their life story narrative (Pratt & Fiese, 2004). These inherited stories can facilitate a sense of family history and self-identity and become essential episodes of the life story (Pratt & Fiese, 2004). Although one does not have autobiographical memories from their birth year, the narratives constructed from the stories of others can trigger

nostalgia for this period (Wildschut, Sedikides, & Robertson, 2018).

The stories of older family members and friends are not the only sources of information contributing to the opening chapter of the life story. Family photos can also help individuals learn about their birth year (Lindsay & Read, 2013). Often depicting important events related to the family, such as weddings, holidays, or birthdays, these photos allow individuals to merge their direct memories (i.e., what they remember from their lived experience), with indirect memories (i.e., what they have learned from others), to create a coherent life story (Spence & Holland, 1991).

Home videos also emerged as a useful technology for capturing and preserving the early years of a life story (Kuhn, 2002). Viewing home movies together allows family members to discuss themselves, their relationships with one another and other family members, and the various times, places, and activities experiences together (Sapio, 2014). In general, home movies feature content corresponding to life story events like holidays, family rituals, special events, weddings, and birthdays (Campanella & Hoonhout, 2008). Young children often request viewings of home movies featuring themselves or siblings at younger ages (Kirk et al., 2007). Over time, technological improvements in video production and editing have made it easier to capture and display even unplanned, spontaneous moments (Campanella & Hoonhout, 2008). Video technology became digitalized in the 1990s (Sapio, 2014), providing a segue into the age of the internet, where users could now edit and post digital videos on blogsites (Campanella & Hoonhout, 2008).

Birth Year as a Target for Online Nostalgia

In the age of the internet people have unprecedented ability to capture, organize and revisit the past (Belk, 2013). Social media are particularly well-suited for providing content that facilitates nostalgia experiences (Youn, 2020; Youn & Jin, 2017), and the development and maintenance of self-identity (Belk, 2013). More generally, online communities allow users to develop a sense of personal and collective identity by posting content and interacting with others having similar political views (Gerbaudo, 2011), life experiences (Pechmann et al., 2021), lifestyles (Närvänen et al., 2013), medical conditions (Jayanti & Singh, 2009), sports fandom (Fenton, Keegan, & Parry, 2021), entertainment fandom (Kozinets, 1997), religious affiliation (Cheong, Poon, Huang, & Casas, 2009), ethnicity (Lee, Cotte, & Noseworthy, 2010), leisure activities (Pinto et al., 2015; Seregina & Weijo, 2017), profession/trade (Mathwick, Wiertz, & de Ruyter, 2008), brand preferences (Muniz & O'Guinn, 2001; Muñoz, & Schau, 2005), and sexual orientation (Norris, 2002), even though these group members have never met, and will likely never meet in person. These aspects of collective identity are often the basis for online communities that allow users to search for, discover, and participate in ad hoc groups.

Although birth year is an important aspect of self-identity, it is shared by millions worldwide (Phillips, 2002), many of whom are social media users. Online communities for birth years may be unnecessary because social media allow users to join discussions in ad hoc groups simply by searching for video content indexed by year. YouTube is particularly well-suited for this purpose, allowing users to view and comment on still photos and videos from various periods of the past, lived or otherwise (Areni, Momeni, & Reynolds, 2021). Much of this video content is indexed by year as indicated in the title of videos (e.g., "TV ads from 1972") and the name of channel (e.g., "Top Songs by Year"), allowing users to use the YouTube search engine to choose how far back in time they travel, and which specific years they vicariously (re)

experience.

Research suggests that people are particularly likely to view online video content related to major life events (Koetz & Tankersley, 2016). Often these viewing experiences are tinged with a sense of nostalgia (Areni et al., 2022). For example, viewing video clips of television programs watched during adolescence allows users to reminisce about what it was like to be sixteen (Areni, 2021). Memories of childhood can be evoked by viewing old television ads for toys (Sotelo-Duarte, 2022). YouTube users can even visit periods of the past preceding their own lives (Han & Newman, 2022). From this perspective, viewing, commenting, and discussing content from one's birth year with others is a kind of communal nostalgia (Han & Newman, 2022), allowing social media users to compensate for the lack of memories of the opening chapter of their life story.

Prior research has identified multiple time periods for nostalgia, including emerging adulthood (i.e., late teens and twenties) (Bernsten & Rubin, 2004), childhood and early adolescence (i.e., 5 – 14) (Hepper et al., 2014; Munawar et al., 2018), and older ages associated with major life events (e.g., retirement, birth of a grandchild) (Rubin & Berntsen, 2003; Hepper et al., 2014). People even wish to vicariously experience periods of the past before their own lives began (Han & Newman, 2022). From this perspective, the desire to reexperience one's birth year is a kind of 'origin nostalgia' that lies in between escaping to historical periods preceding birth and revisiting remembered periods of the lived past.

The three studies reported below examine whether YouTube users tend to view and comment on videos featuring material from their birth year, compared to other years of their life story, and the extent to which this tendency emerges across multiple age groups. Studies 1 – 3 below performed automated text analysis of user comments on videos of nostalgia-themed material, indexed by year of origin. Comments on short clips of television programs and ads from 1965 – 1981 (Study 1), and popular songs from 1980 – 2005 (Study 2) and 1950 – 2019 (Study 3) were analyzed to identify key words associated with users reporting their age in the year of the video – a kind of online demographic self-disclosure (Pechmann et al., 2021). The frequencies of age-related comments (ARCs) with respect to users' indicated age in the year of the video were analyzed to test the main research hypothesis – that users are disproportionately likely to comment on videos corresponding to their birth year compared to other ages.

Study 1

Television content from the past is a powerful source of nostalgia (Lizardi, 2015; Niemeyer, 2014), and hence, is a potential source of origin nostalgia. YouTube hosts an significant range of television material from the past, often titled and indexed by year by curators of nostalgia-themed channels (Areni et al., 2022), hence providing a potentially fruitful source of data.

Materials & Methods

A YouTube search of “nostalgia by year” listed a channel featuring 17 videos of television material from each year between 1965 and 1981. Searches for individual years in this range (i.e., “1965”, “1966”, etc.) also listed this channel on

the first or second screen of results, suggesting that users could search for content corresponding to specific years of their life. Each video featured a sequence of 50 to 122 television, movie, and song clips from the year, with each clip lasting 3 – 60 seconds; the 17 videos ranged from 15 to 33 minutes in length (Johnnyboy792, 2021). NCapture extracted up to the 1,000 most recent comments for each video, an extraction limit set by YouTube, and NVivo converted them to comma-delimited spreadsheets. All data were extracted on February 22nd, 2019, which generated 5,728 user comments for analysis.

Leximancer identified the 60 most frequent terms (i.e., common nouns, proper nouns, verbs, adjectives, adverbs, and numerals), and at this point the first author merged frequencies for the terms 'school-School', 'year-Year', and 'grade-Grade', due to different capitalization of the same word. Leximancer then created a co-occurrence matrix – represented as a two-dimensional word map (Leximancer, 2021) – allowing singular/plural versions of the same word to be merged if these terms appeared in proximity, suggesting that they were used either together or had other words in common, in user comments. The terms 'year-years', 'time-times', and 'day-days' were merged at this stage.

Based on research by Bischoff, Firan, Nejd, and Paiu (2009), and common knowledge of expressions related to calendars, dates, and ages, the terms 'Year-year-years', 'time-times', 'born', 'School-school', 'job', 'Grade-grade', 'started', 'day-days', 'era', 'decade' and 'period' were identified as age-related terms (ARTs) – words related to time and life stages that could potentially be used to indicate a person's age in a given year. The only numerals appearing in the frequent terms list were '60s' and '70s', which referred to the decade of the featured video content rather than users' ages. To assess the relationship between ARTs and age-related comments (ARCs), the two authors independently coded a subset of 100 comments containing each ART. The coding instructions were simply to determine whether a comment indicated the age of the viewer in the year in the video title (yes/no), and if yes, the age of the viewer at that time. References to specific events (i.e., "...born two weeks before the moon landing") were included if the event occurred in the year of the video, and references to the school years K – 12 were included by adding six to the year mentioned (e.g., "I was in fifth grade" = age 11).

The authors began with 100 comments containing 'year', the ART with the highest overall frequency. They then proceeded to the next most frequent term, 'time', coding a sample of 100 comments that contained 'time' but not 'year' to avoid duplication; they then proceeded to comments including 'born' that did not also include either 'year' or 'time', and so on for 'school', 'job', and 'grade'. Since 'job' (n = 77) and 'grade' (n = 64) were present in fewer than 100 comments overall, all instances were coded. For each ART, intercoder reliability was assessed for two judgments: (1) whether a comment was an ARC, and (2) if it was an ARC, the user's stated age in the year of the video. The two authors separately read each comment and recorded their responses to (1) and (2) above on a numbered coding sheet.

For judgments of whether a comment was an ARC (i.e., yes/no), the overall percentage agreement was 97.8%, with a Krippendorff's α of .954 (Freelon, 2010; Hayes & Krippendorff, 2007). The results for percentage agreement and Krippendorff's α were consistent across all ARTs. Intercoder reliability for judgments of the age of the user was perfect, with the overall percentage agreement of 100%, and Krippendorff's α of 1.000. The "almost perfect" agreement for judgments of the presence/absence of ARCs, and perfect agreement on the age of the users conveyed in ARCs, were

indications of the simplicity and clarity of the comments (e.g., “I was born in 1968”, “I stated 5th grade when this came out”) Hence, the remaining comments were coded by the first author. Table 1 presents the summary frequencies for all ARTs and ARCs included in the analysis below. No other potential ARTs (i.e., started, days, era, decade, period) were associated with ARCs.

Table 1. ART and ARC frequencies in user comments on videos of TV, movie and song clips indexed by year for each year from 1965-1981.

Term	Overall ART Frequency	Hierarchical ART Frequency	ARC Frequency	Proportion of ARCs*
'Year'	612	612	229	37.4%
'Time'	447	400	35	8.8%
'Born'	287	239	227	95.0%
'School'	197	132	52	39.4%
'Job'	99	77	6	7.8%
'Grade'	86	64	45	70.3%
Total	1,728	1,524	594	39.0%

*Based on hierarchical ART frequency

Results

Figure 1 shows the overall results for all ARCs, indicating a spike of ARCs in the birth year; 251 of 594 ARCs were users commenting on video content from their birth year. A second spike is also apparent for age 18 (49 of 594). Difference in proportion tests, with statistical power approaching 1.0 (Faul et al., 2007), confirmed the visual evidence. Ratios of *number of years over total ARCs* for the target year were created for the birth year (1/251), age 18 (1/49), and all remaining years associated with one or more ARCs (40/289) to create an inverse hit rate index. Results confirmed a disproportionately high frequency of ARCs for the birth year relative to all remaining years ($z = 5.47$, $p < .0001$), and a disproportionately high frequency for age 18 relative to all remaining years, excluding the birth year ($z = 2.34$, $p < .02$).

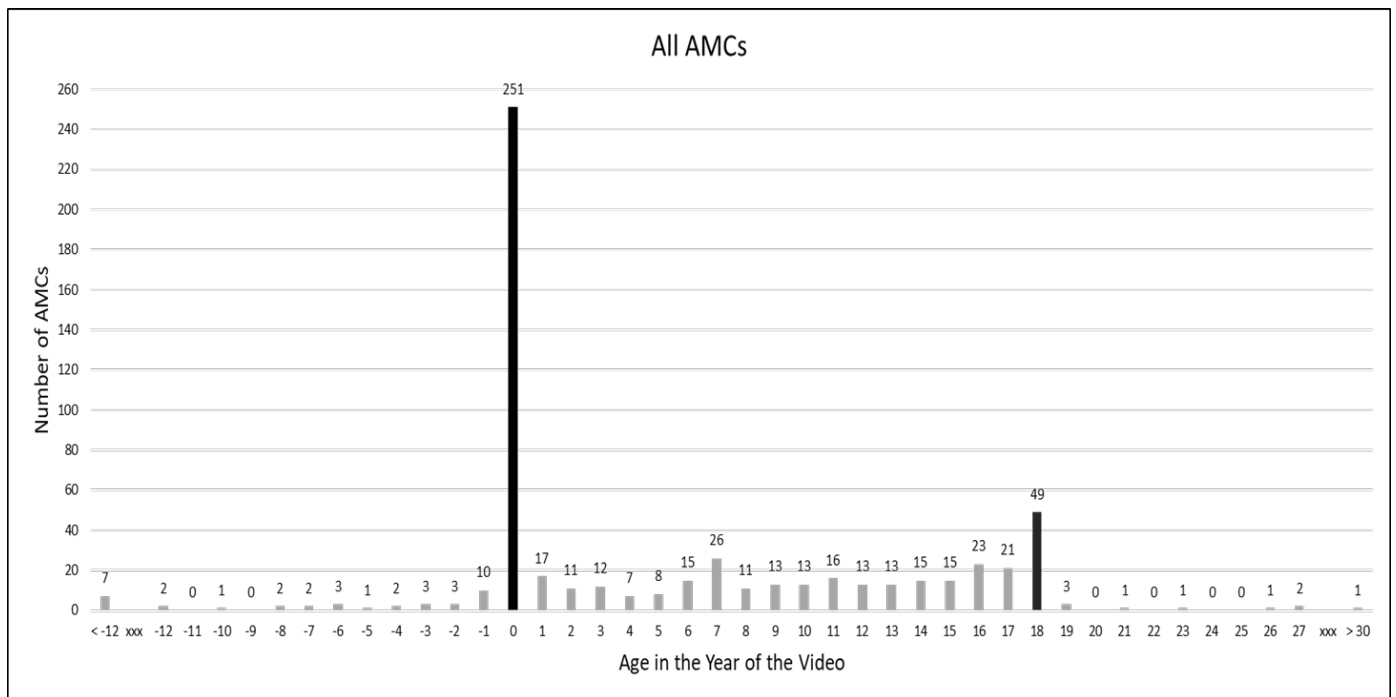


Figure 1. Reported ages of YouTube users in the year of the video when viewing videos of TV, movie, and song clips indexed by year from 1965-1981.

Discussion

The results reported above suggest YouTube users view and comment on video material from their birth year. User comments referred to birth as being a significant life story event that is largely inaccessible due to childhood amnesia.

It did make me smile because I honor(year), as it's the year I came into this world. I always wanted to know what that year was like, even though I was an infant and had just been born.

Comments suggested that the connection between birth year and self-identity was universal; shared by older and younger generations.

(Comment): My daughter was born on(date) and I have spent the past few weeks trying to put together a gift idea for her birthday this year. I choose to create something to show her what the world was like in her birth year.

(Reply): Awesome! My daughter wants to know what the world was like the year I was born.

The second spike for age 18 corresponds to high school graduation, the year a person leaves home to study at a university, and the symbolic and legal transition to adulthood in many cultures (Pillemer, 2001). Together these results suggest that YouTube users comment on video material from years corresponding to major episodes in their life stories, with birth being particularly important because they lack memories of this important event. Study 2 was intended to replicate the results of Study 1 by analyzing comments on videos featuring short clips of hit songs by year.

Study 2

Music has been shown to be a particularly strong elicitor of nostalgia (Barrett et al., 2010), often provoking the feeling that this is the music of ‘my generation’, suggesting a connection with collective as well as personal identity (Van der Hoeven, 2014). YouTube hosts a wide range of music-related videos (Edmunds, 2014), making it a potentially useful source of data.

Materials & Methods

A YouTube search for “hit songs by year” identified 26 videos featuring top charting songs from each year between 1980 and 2005. These videos featured brief 4 – 5 second intros with the title “The (*number*) Best Songs of (*year*)”, followed by between 60 and 105, 5 – 10 second song clips from the year. Each clip had a graphic featuring the name of the artist and the title of the song superimposed on a video of the artist or a photo of the LP/album cover. The videos were between 6:40 and 12:16 in length (Some Random Guy, 2022). NCapture extracted 13,036 comments, which were converted to comma-delimited spreadsheets in NVivo. All data were extracted on August 13th, 2021.

Leximancer generated a list of the 70 most frequently used terms in user comments and created a co-occurrence matrix wherein singular/plural versions of the same word could be merged if they co-occurred or had other terms in common in user comments. The terms ‘day-days’ and ‘time-times’ were merged at this point. The terms ‘year’, ‘time-times’, ‘born’, ‘school’, ‘day-days’, ‘era’, and ‘decade’ were identified as possible ARTs from the list of frequent terms. The first author coded 2,339 comments containing one or more ART. Table 2 shows the frequency of ARCs for each ART. None of the other potential ARTs (i.e., day, era, decade) were associated with ARCs.

Table 2. ART and ARC frequencies in user comments on videos featuring clips of top songs by year for each year from 1980-2005.

Term	Overall ART Frequency	Hierarchical ART Frequency	ARC Frequency	Proportion of ARCs*
‘Year’	1360	1360	326	24.0%
‘Time’	614	612	57	9.3%
‘Born’	412	263	185	70.3%
‘School’	165	104	40	38.5%
Total	2,551	2,339	608	26.0%

*Based on hierarchical ART frequency

Results

As shown in Figure 2, the highest frequency of ARCs is for the birth year. Difference in proportion tests, with statistical power approaching 1.0 (Faul et al., 2007), confirmed the visual evidence. The inverse hit rate index for the birth year (1/262) indicates a higher proportion of ARCs compared to all remaining years combined (45/346) ($z = 5.83$, $p < .0001$).

The spike in ARCs for age 18 is also significantly higher (1/91) than for all remaining years excluding the birth year (44/255) ($z = 3.93$, $p < .0001$).

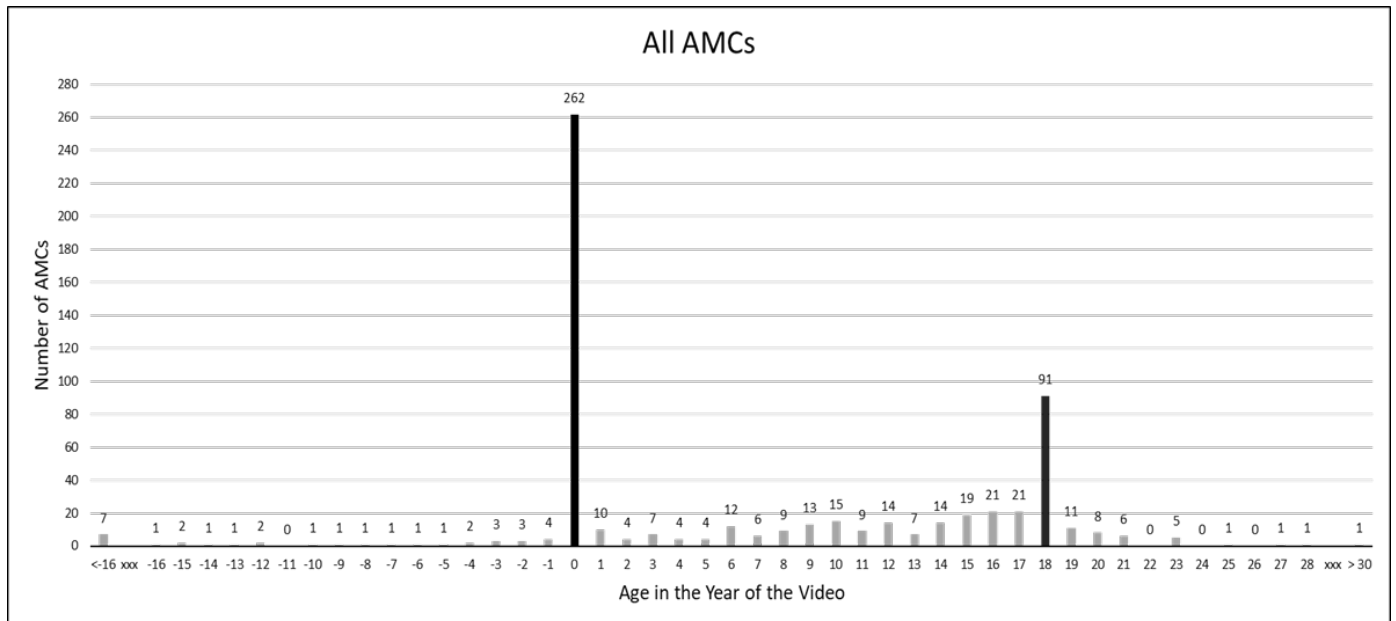


Figure 2. Reported ages of YouTube users in the year of the video when viewing videos of top songs clips indexed by year from 1980-2005.

Discussion

Once again results showed a disproportionately large number of ARCs for the birth year, and to a lesser extent, for age 18. YouTube users appear to view and comment of video material created in years associated with significant life events; in this case birth (i.e., age 0) and the onset of adulthood (i.e., age 18). Exchanges between users suggested that birth is a momentous life event and important aspect of self-identity, forging a sense of collective identity among those born in the same year (Wildschut, Bruder, Robertson, van Tilburg, & Sedikides, 2014).

(Comment): I was born in(year).

(Reply): Me too! The year we joined the world!

Overall, Study 2 replicated the results of Study 1 by showing that YouTube users tend to comment on videos corresponding to their birth year, and to a lesser extent, age 18.

Study 3 explores two additional aspects of birth year as an identity marker in YouTube user comments. First, commenting on content from one's birth year may depend on the age of the user. Children under the age of ten may be too young to experience a yearning for their birth year, or not old enough to be active users of YouTube (Auxier et al., 2020). Hence, the spike in ARC frequency in the birth year may not emerge in comments on video content from the 2010s. Nostalgia for the age of 18 may also have demographic limits. People who turned 18 at some point in the 1950s would be 79 – 88

years old by the year 2020. Mortality statistics and research on social media usage would suggest that people in this age range are not likely to post comments on YouTube (Auxier & Anderson, 2021; Wang et al., 2012). Hence, the spike in the frequency of ARCs for the age of 18 would likely diminish in comments on video content from the 1950s. However, research suggests that the psychological benefits of nostalgia apply across a wide range of ages (Hepper et al., 2021), so in the absence of these demographic constraints, both origin nostalgia and emerging adulthood nostalgia are predicted for the decades in between (i.e., 1960s – 2000s). Study 3 explored demographic constraints on origin nostalgia and nostalgia for emerging adulthood by examining YouTube user comments on videos spanning seven decades (1950 – 2019).

In terms of the method adopted, one additional aspect of birth is important – it occurs in year zero for everybody. Research on life stories has identified multiple cultural narratives or scripts defining multiple milestones a typical person will experience along the way (Bernsten & Rubin, 2004). Many of the most important milestones (e.g., marriage, birth of children, death of parents, etc.) occur at different ages for different people. Given the definition of ARCs in this research, these events would not have produced a frequency spike for any single year, although many YouTube users may have commented on them. This, perhaps, makes it more likely that the ARTs used in Studies 1 – 2 would identify birth year comments over those related to other important life events. Study 3 reports an additional analysis with an expanded list of ARTs to capture the major life events identified by Rubin, Berntsen, and Hutson (2009) (e.g., first kiss, first love, marriage, retirement). Hence, rather than examining the frequency of *ages* reported in user comments, it compares the frequency of *life events* mentioned in comments.

Study 3

Study 3 again relied on YouTube video clips of popular songs from the past, but the comments extracted were users responding to annual top 30 songs for specific years spanning seven decades (i.e., 1950 – 2019).

Materials & Methods

A YouTube search for “hit songs by year” identified 56 videos titled ‘Top Songs of(*year*)’ for the decades 1950s – 2010s. Several years from the 1960s (64, 66, 68, 69), 1970s (71, 74, 75, 77, 79), 1980s (81, 84, 87, 89), and 1990s (91) were not available at the time of the data extraction. These videos featured five second intros with “TOP SONGS OF (*year*)”, followed by 30 numbered song clips from the year, each roughly 20 seconds long and accompanied by a video of the artist or a photo of the LP/album cover. The videos were 10:00 – 10:30 minutes in length (Ultralist, 2016). NCapture extracted 37,217 comments, which were converted to comma-delimited spreadsheets in NVivo. All data were extracted on 25 March, 2020. Leximancer generated a list of the 70 most frequently used terms in user comments, and the terms ‘year’, ‘time’, ‘born’, ‘school’, ‘started’, ‘day’, ‘era’, and ‘decade’ were identified as possible ARTs. The first author coded 6,220 comments containing one or more of these terms. Table 3 shows the frequencies of ARCs for each ART. No other potential ART (i.e., ‘day’, ‘era’, and ‘decade’) was associated with ARCs.

Results

Figure 3 shows that the highest frequency of ARCs occurred for the birth year, and once again, difference in proportion tests confirmed the visual evidence. The inverse hit rate index for the birth year (1/596) indicates a higher proportion of ARCs for year zero compared to all remaining years combined (55/843) ($z = 6.14, p < .0001$). The spike in ARCs for age 18 is also significantly higher (1/144) than for all remaining years, excluding the birth year (54/699) ($z = 3.11, p < .002$).

Table 3. ART and ARC frequencies in user comments on videos featuring clips of top songs by year for 56 of the 70 years between 1950-2019.

Term	Overall ART Frequency	Hierarchical ART Frequency	ARC Frequency	Proportion of ARCs*
'Year'	3,658	3,658	709	19.4%
'Time'	1,752	1,484	176	11.9%
'Born'	1,068	623	440	70.6%
'School'	539	274	100	34.1%
'Started'	299	181	14	2.6%
Total	7,316	6,220	1,439	23.1%

*Based on hierarchical ART frequency

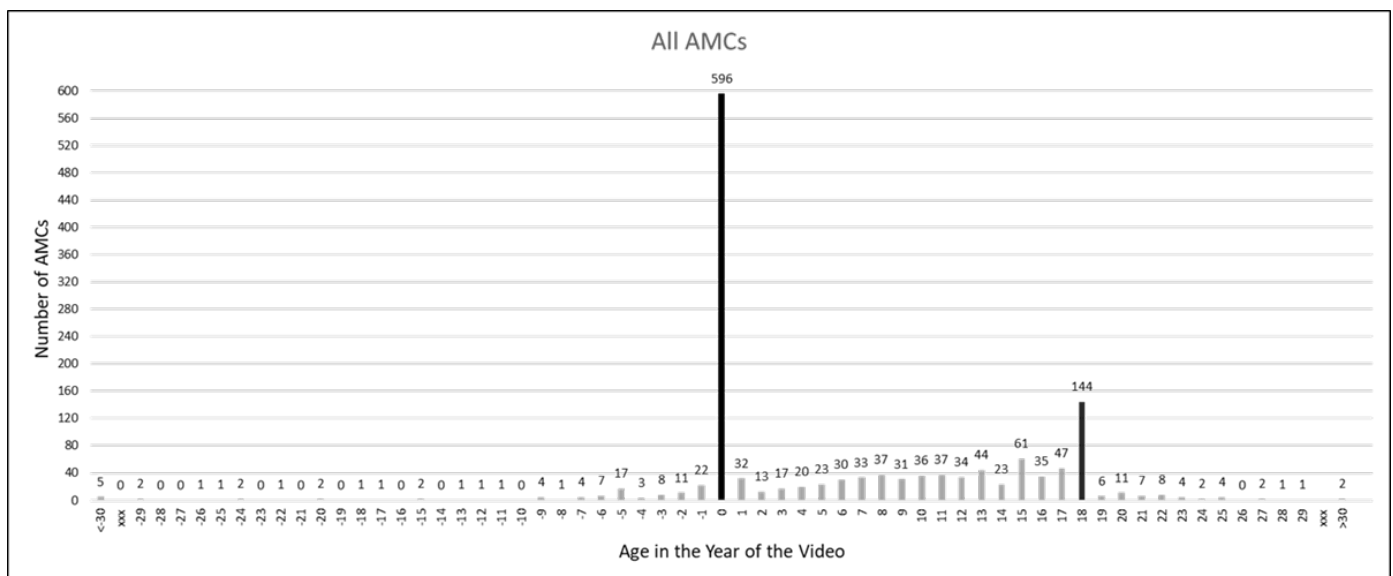
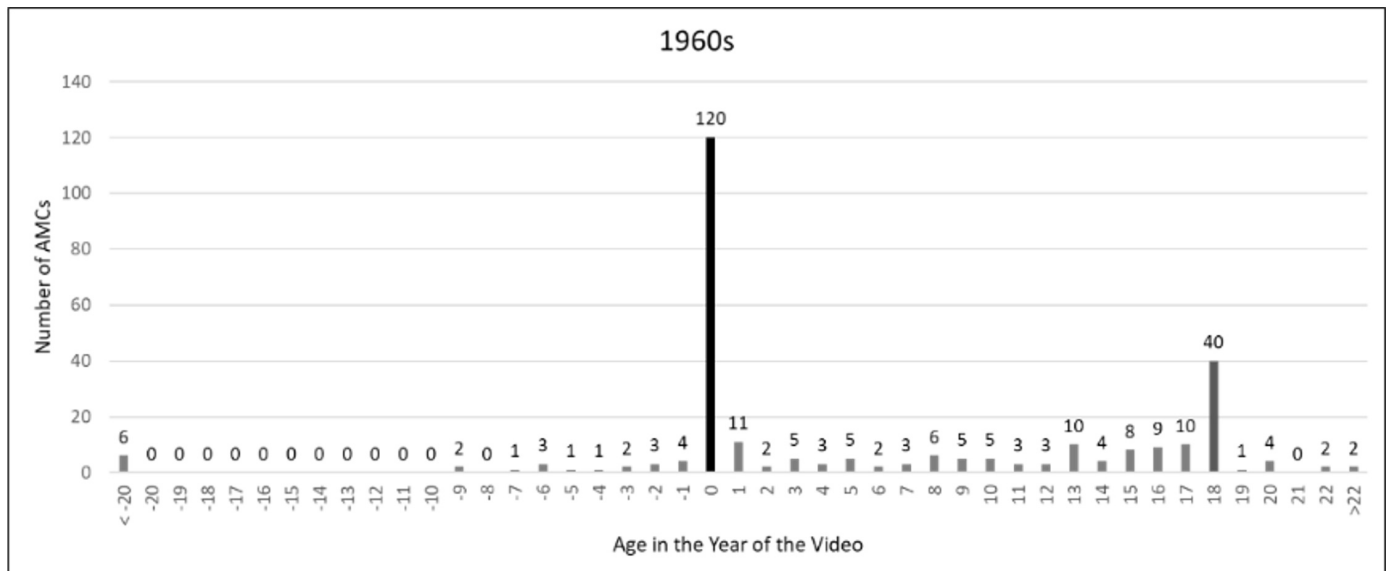
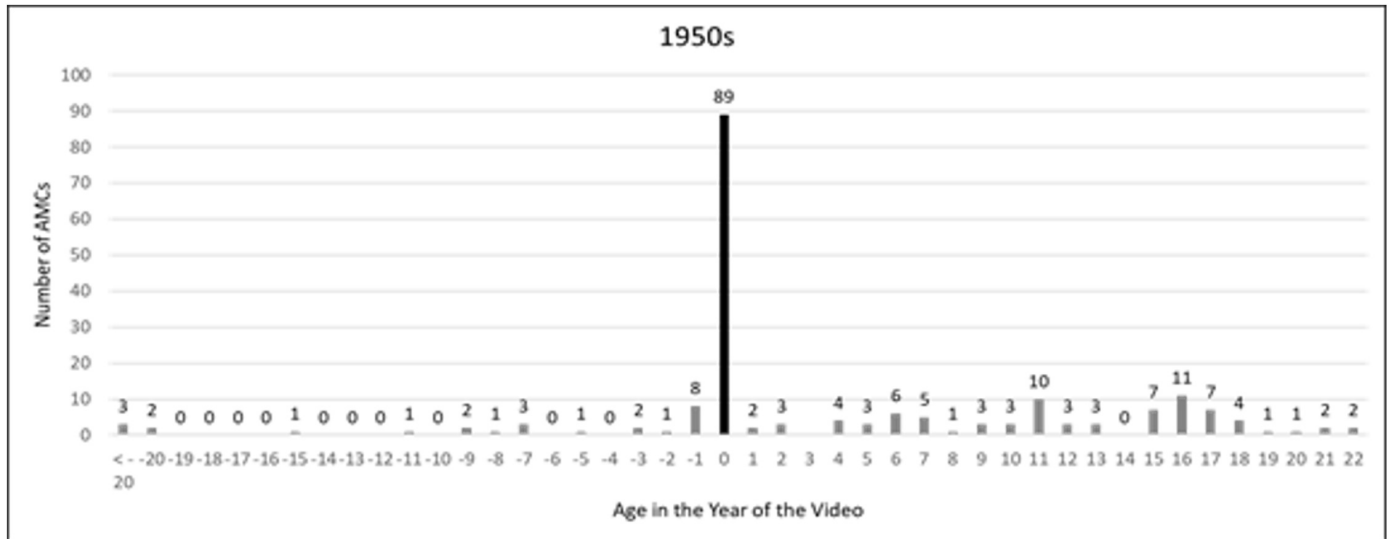
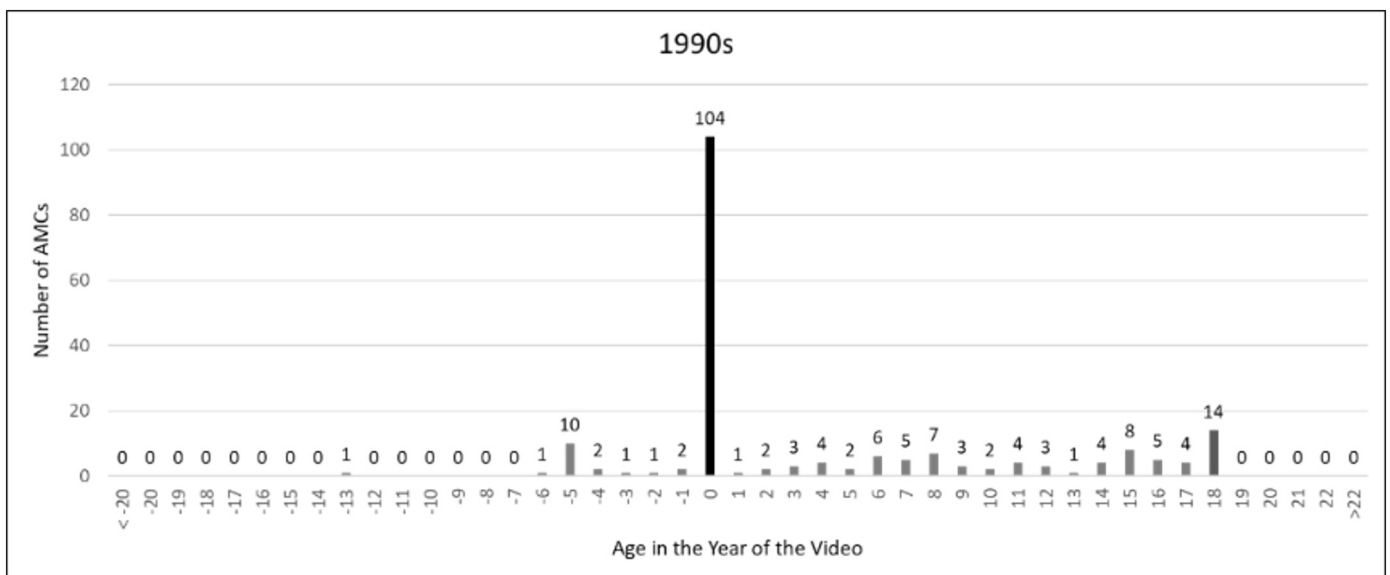
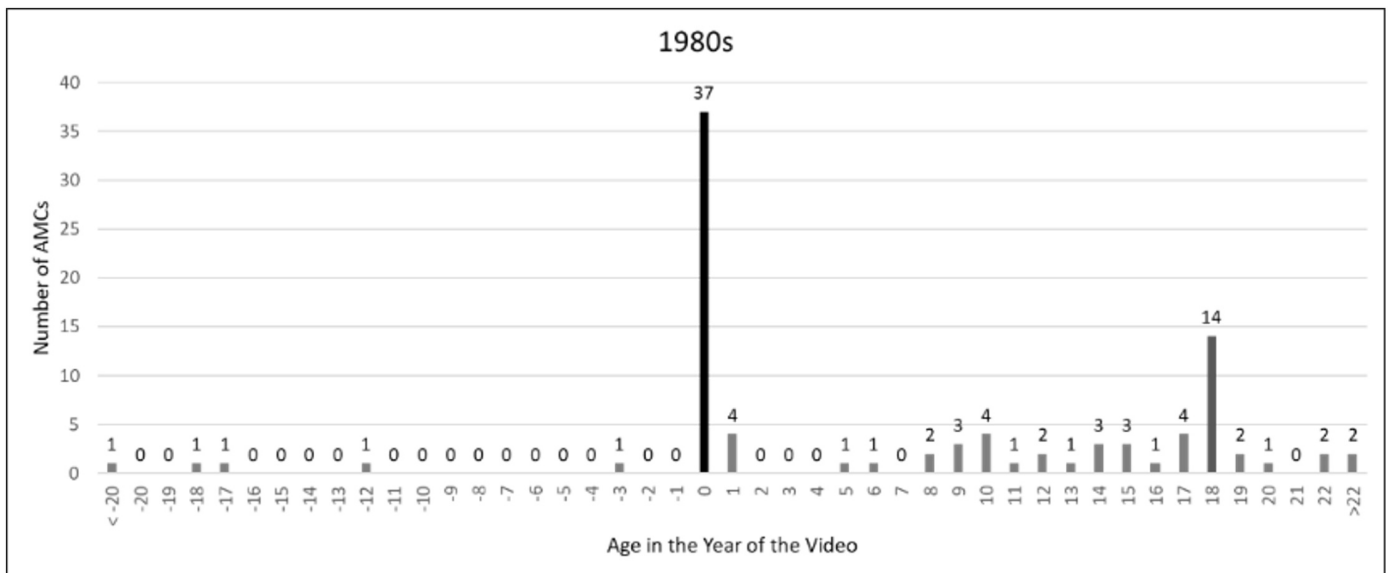
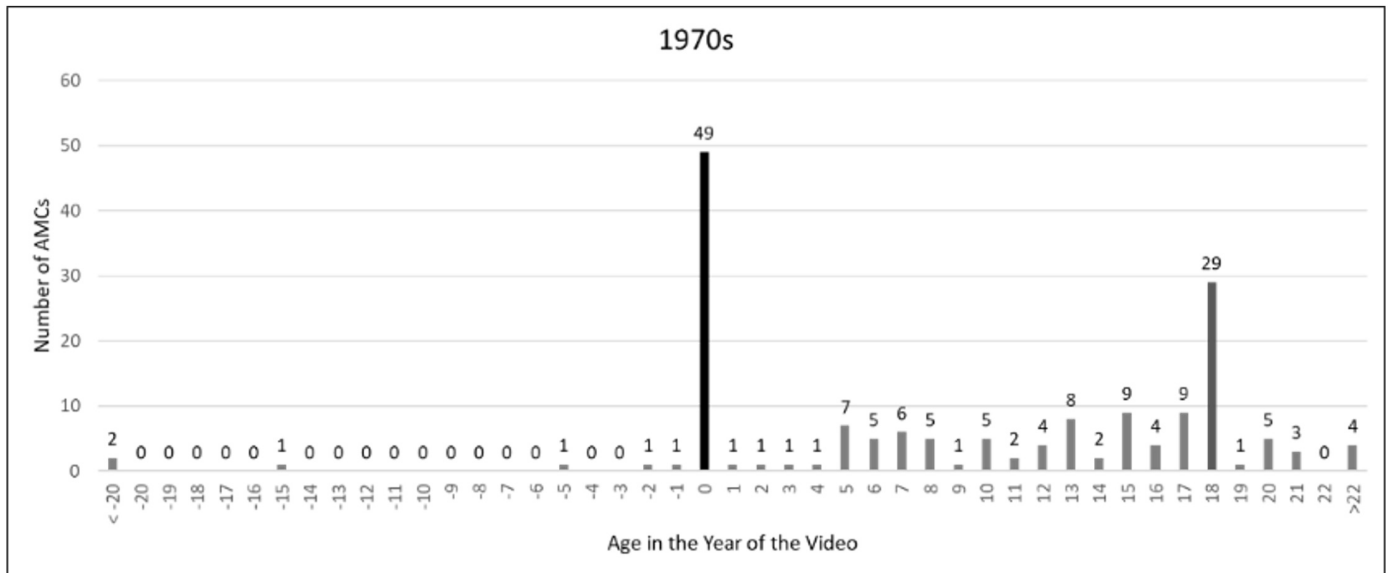


Figure 3. Reported ages of YouTube users in the year of the video when viewing videos of top songs clips indexed by year from 1950-2019.

As shown in Figure 4, when the data were grouped by decade origin nostalgia appeared in all periods, except the 2010s where it accounted for only 3.2% (4 of 125) of all ARCs, which was not significantly different from the proportion for all remaining ages combined ($z < 1$). However, the consistent emergence of origin nostalgia in the remaining six decades suggests a robust phenomenon relevant to multiple generations. As expected, the spike in the frequency distribution for age 18 did not emerge in comments on videos from the 1950s. Due to mortality rates (Wang et al., 2012) and YouTube usage rates by age (Auxier & Anderson, 2021), not many of the people aged between 79 – 88 in 2020 would have viewed

and commented on the videos from 1950 – 1959.





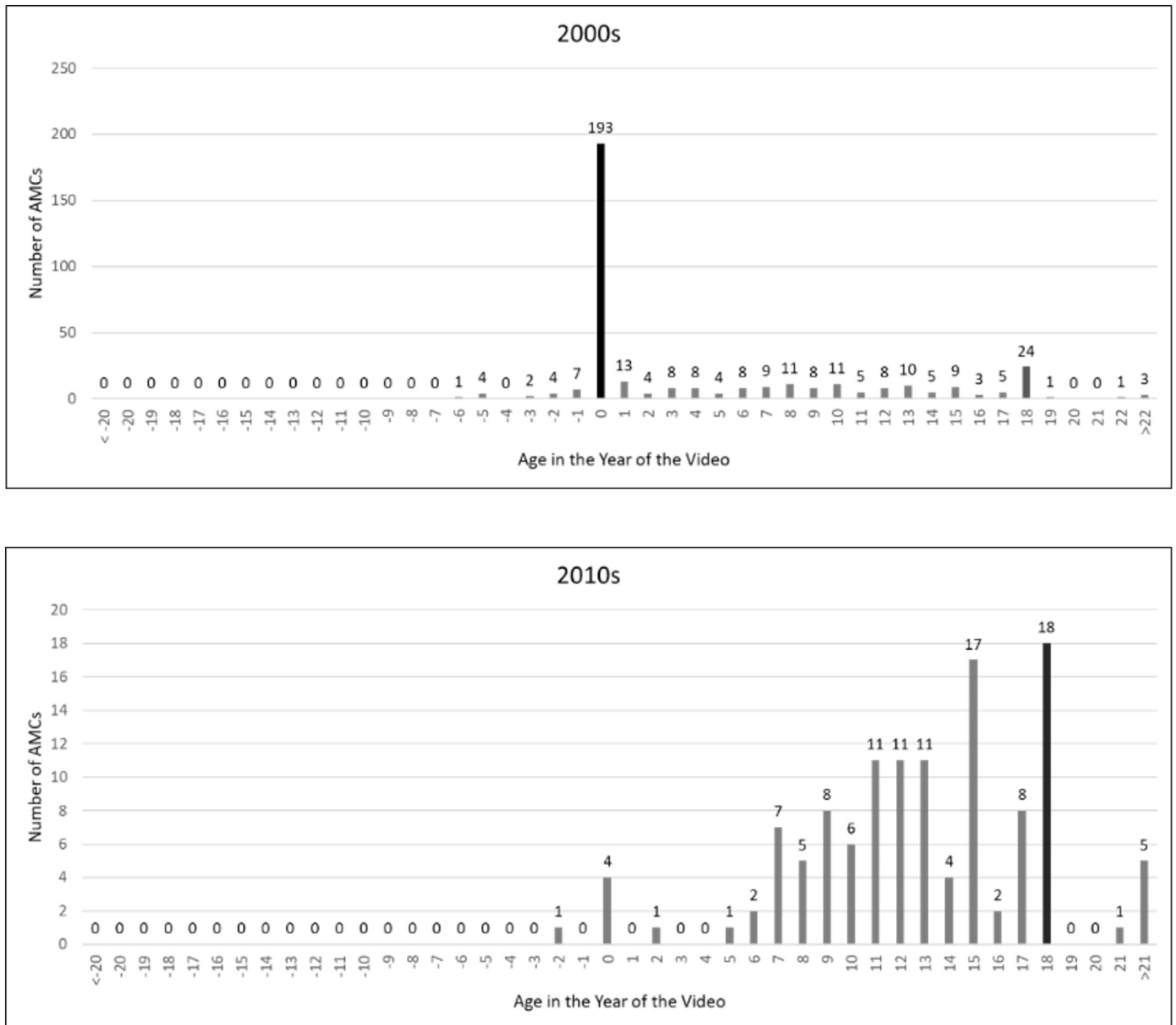


Figure 4. Reported ages of YouTube users in the year of the video for the seven decades from 1950-2019.

Additional analyses were performed to explore the frequency with which other significant life events, which do not necessarily occur at the same age for everybody, were mentioned in user comments. Leximancer provided a list of the next 400 most frequent terms in user comments from Study 3 (i.e., in addition to the 70 terms used in the previous analysis). These 470 terms were mapped onto major life story events identified in prior research (Rubin et al., 2009). For example, the four terms ‘RIP-dead-die-died’ were suggestive of *parent’s death* and *other’s death* as life story events, but collectively generated only 266 instances. The terms ‘graduated-college’ suggested *college graduation* as a major life story event but generated only 217 instances. ‘Married’ appeared only 65 times. In contrast, the merged terms ‘born-birth’ appeared 1,179 times in user comments. Although these terms are potentially relevant to the *birth of a child* or *birth of a grandchild* as major life story events, the corresponding terms ‘son’ (n = 27), ‘daughter’ (n = 16), ‘grandchildren’ (n = 6), and ‘grandson’ (n = 2), appeared infrequently in comments, and ‘kid’, ‘child’ and ‘grandchild’ did not appear at all. None of the remaining terms had any obvious connection to life story events. So, whether results are based on comments

indicating *ages* or major *life events*, the focus seems to be on the birth year compared to other life stages/events.

Discussion

Study 3 provided further evidence of origin nostalgia and emerging adulthood nostalgia and demonstrated demographic constraints on each effect. Origin nostalgia did not emerge in comments on top song videos from 2010 – 2019 because people born in those years were too young to post comments on YouTube at the time the data were collected. However, origin nostalgia was apparent for all of the remaining decades (i.e., 1950 – 2009), and individual comments suggested that YouTube users read the comments of others and noticed this tendency.

Like 3/4 of these be “I was born in(*year of video*)”.

Emerging adulthood nostalgia was not apparent in comments on videos from 1950 – 1959 because people aged 18 during those years were 79 – 88 when the data were collected, and hence, not likely to post comments on YouTube.

Conclusion

Three studies produced evidence of origin nostalgia where YouTube users comment on video content initially created in the year of their birth. The frequency distribution of age-related comments (ARCs), where users indicate how old they were when the video material was made, produced a spike in year zero, indicating a disproportionately large number of ARCs for the birth year (42.1%). This was true for videos of short TV, movie, advertising, and song clips indexed for every year between 1965 and 1981 (Study 1), short clips of top songs for every year between 1980 and 2005 (Study 2), and clips of top songs for 46 years in between 1950 and 2009 (Study 3).

Given the wide range of years captured, Study 3 examined demographic constraints on origin and emerging adulthood nostalgia in the ARC frequencies by age. The lack of an emerging adulthood spike in comments on videos from 1950 – 1959 is due to people aged 79 – 88 not being very likely to post comments on YouTube (Auxier & Anderson, 2021). The absence of origin nostalgia in comments on videos from 2010 – 2019 is likely to reflect that YouTube users born in those years would have been ten or younger when the data were extracted. Young children are not likely to post comments on YouTube celebrating the year of their birth (Auxier et al., 2020). However, origin nostalgia was apparent in comments on videos from 1950 – 2009, suggesting that the onset of the desire to vicariously revisit one’s birth year, and active use of YouTube to do so, begins sometime during the second decade of life.

The method adopted in Studies 1 – 3, automated text analysis of YouTube comments, identifies an intriguing online phenomenon that follows from theory on how people construct and maintain life stories, their sense of personal and collective identity, and how childhood amnesia limits autobiographical memories from early childhood. However, this method may not be optimal for examining cognitive processes or underlying motivations related to origin nostalgia. Future research could combine experimental and survey methods to examine the role of vicariously revisiting one’s birth year in maintaining life story coherence and self-continuity over time (Habermas & Bluck, 2000), exploring important aspects of

self-identity (Wilde, 2022), providing a psychological buffer against impending mortality (Lagerkvist, 2017), creating a kind of virtual pilgrimage experience (MacWilliams, 2002), and other potential motives related to origin nostalgia.

For example, an online survey could provide links to the same YT videos as in Study 1, 2 or 3, with each link labelled as a year. Participants could be asked to choose any three years to view the corresponding videos by clicking on the link. They could then be directed to an online questionnaire asking various structured and open-ended questions as to their motives for selecting a given year. Experimental manipulations could be used to examine whether selections of the birth year are more frequent when the need for autobiographical coherence or impending mortality is primed in some way. However, the method adopted in Studies 1 – 3 above does provide ecologically valid evidence of YouTube users viewing and commenting on video content from their birth year, suggesting a robust phenomenon worthy of future research.

Compared to other social media like Facebook, which allows users to create, store, and access personal images and videos, YouTube tends to feature content from the communal past (Han & Newman, 2022). Rather than facilitating a sense of personal identity, YouTube users may be exploring their collective identity by revisiting the world as it was in their birth year. Consistent with the conventions of multiple literary genres, videos featuring archival footage from the birth year may provide a kind of setting for the opening pages of the story (Gordon & Braun, 1983). It is perhaps the case that different social media platforms perform different functions in allowing users to construct, maintain, and reconfigure their life stories, with Facebook contributing more to the character arc of the protagonist via the creation, organization, and storage of *personal* events over time, and YouTube providing the setting of the story via *public* content capturing the world as it was when the life story began.

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