



International Society for
Quality-of-Life Studies

Working Paper No. 7

DOI:

<https://doi.org/10.5281/zenodo.17432256>

**In a dark wood:
an exploration of
the midlife low in
human wellbeing
and a research
agenda**

October 2024

Alan Piper

In a dark wood: an exploration of the midlife low in human wellbeing and a research agenda

Alan Piper
Economics Department,
University of Leeds
Leeds, UK

October 2024

Abstract: The midlife low is a broader concept than the midlife crisis and seems to be intimately connected to being human (and perhaps even to being animal). This article briefly discusses literature which finds midlife lows in survey data. In addition, reasons why midlife lows exist are put forward and discussed. The evidence provided is interdisciplinary, often presented in literature from the field of psychotherapy which has, at times, heavily concerned itself with the topic. Given that the misery of midlife can be substantial, efforts to understand the phenomenon and how it might be mitigated seem to be worthwhile. In pursuit of this aim, the article concludes with some research questions which emerge from the previous discussion and are testable with current datasets, but currently remain unresolved.

Key words: middle age, midlife, development, ageing, wellbeing

Email address: a.t.piper@leeds.ac.uk

Acknowledgements: I am very grateful for comments to Nick Adnett, Carol Graham, and Margie Lachman as well as seminar audiences at the following institutions and conferences: Berlin Wellbeing Research Network, Berlin (February 2023); Staffordshire University (March 2023); Trier University (May 2023); Leeds University Business School (June 2023); ISQOLS, Rotterdam (August 2023), and the ESRC Festival of Social Science (November 2023).

In a dark wood: an exploration of the midlife low in human wellbeing and a research agenda

“This is a very definite moment in life. It is a point at which many normal people fall ill and come to us [psychotherapists] for help” (Brown 1938, p.164)

Introduction

In a dark wood is where and how Dante Alighieri describes finding himself in the middle of his, and our collective, life journey in the opening lines of his famous *Divine Comedy* (circa 1308-21): “In the middle of our life’s journey, I found myself in a dark wood where I lost my way”. This quote, an illustration of being overcome by sudden confusion and a feeling of being lost, has been used as the epigraph for or within the introduction of several books about midlife written by psychotherapists and others (e.g., Hollis, 1993; Rauch, 2018; Jamieson, 2022). Furthermore, Dante and his poem are also said to have been inspirational to Elliot Jaques who coined the phrase midlife crisis at a conference in 1957. As the epigraph itself demonstrates, troubles and lows in midlife had already been identified well before this coinage. Such books and articles from psychologists and psychotherapists have much to say about our lives and overall wellbeing during this part of the lifespan and are discussed below along with proposals about how social scientists might test the ideas within them, constituting the research agenda mentioned in the title. Similarly relevant literature from other disciplines is discussed, building up a picture of what is collectively known about midlife lows and what is, as yet, unknown. A hope is that this will inspire other scholars to explore wellbeing in midlife, an important issue that merits further study (Lachman, 2004, 2015).

Throughout this article, the term midlife crisis is intentionally avoided for several reasons. This is particularly in keeping with the perspective of psychotherapists who see this stage of life as a necessary transitional phase (and reframe it as a passage, or other euphemisms). This is also more in keeping with the position adopted by some psychologists who argue that a full-blown midlife crisis is an uncommon event, while a low in midlife is much more common. This article is about the latter, much more common phenomenon and since the discussion that follows does

not explicitly discuss a crisis, it is applicable to more people. Midlife crises have their own stereotypes and clichés, which most people, despite feeling low in midlife, might not identify with. People may be reluctant to label what they are going through during midlife as a crisis, particularly because the stereotype is also replete with (ineffective) self-indulgent solutions. A crisis suggests something dramatic whereas the data typically show a general pattern of decline to midlife. A 'crisis' might entail a sudden perception of dissatisfaction at some point during this decline and would not necessarily be triggered by a particular event.

Unlike midlife lows, there are substantial measurement issues with midlife crises. For example, if we ask people if they are going through a crisis, or have had a crisis, perhaps they will respond to the common stereotype. Similarly, is it possible some people more likely to say that they are having a crisis – at any time of life – than other people? Stoical individuals may never say that they have had a crisis even though they feel low and are perhaps in need of help. Alternatively, if researchers and others are going to assign people to categories of having a crisis or not, how low does the midlife low have to be to qualify as a crisis? Some articles have debated the definition of midlife crises, demonstrating its complexity (e.g. Werthington, 2000). Different definitions will yield different levels of incidence in society. Strict definitions often limit these crises to manifestations of internal distress, rather than a response to external events. In contrast, taking a wider focus on midlife lows means that human suffering can be investigated regardless of whether it reflects internal distress and turmoil, whether it is linked to external events, or whether it manifests as cause, correlate or consequence (which can of course be empirically assessed). The decision to relax the delimitation of the object of study from a strictly defined midlife crisis to a general midlife low therefore yields greater inclusivity.

In common with the concept of a crisis, the term midlife itself is also probably best conceived of within a wide frame. In general, the approach taken to midlife has been broad, and not necessarily chronological. Many of the psychotherapists whose insights are discussed below are reluctant to define it. While some scholars do give an age range (Lachman, 2015, for example, states that it is broadly between 40 and 59), others argue against thinking about it chronologically.¹ Lachman herself (2004), for

¹ Erikson's stage of development, which corresponds with midlife and its issues and facets, is meant to start at 40 and end at 65 (1950).

example, considers that such age boundaries are secondary, which is an argument that many of the psychotherapists whose insights into this part of the lifecycle are discussed below would agree with, being reluctant to define it. Moreover, a similar approach is often taken to wellbeing, which is sometimes treated as synonymous with happiness and life satisfaction and sometimes not. In any case, the discussion of the midlife low presented in this paper will not be overly concerned with definitions, whether of a specific chronological notion of midlife or of a precise nuanced understanding of wellbeing.²

In short, when we relax the concept under consideration from a midlife crisis to a midlife low, as experienced by the individual, there is a substantial evidence base demonstrating that some form of midlife low in wellbeing is a prominent aspect of the human experience. This is not to say that it is necessarily universal or, for those who have yet to reach this time of life, inevitable; rather that there is substantial evidence for the existence of such a phenomenon. This evidence, often described as a U-shaped finding, has been observed in many different countries, at different times, using different methods (including longitudinal designs), control sets, and surveys, (see Blanchflower and Graham, 2022 and Lepinteur and Piper, 2022, for recent summaries). This nadir during midlife has been demonstrated empirically many times with survey data (e.g., Blanchflower and Oswald, 2008; Cheng et al., 2017; Blanchflower, 2021; Blanchflower et al., 2023) and with more objective data on, for example, hypertension, prescriptions of depressants, suicidal ideation, deaths of despair and more (see Case and Deaton, 2015, 2020; Graham and Pinto, 2019; Giuntella et al., 2022; and Section 2 of Blanchflower et al., 2023). Despite being the dominant finding with a substantial evidence base, there is still some debate about the nature of the age and wellbeing relationship over the lifespan. Such work can also be subject to substantial challenges originating from low sample sizes and omitted variable bias. See the reviews mentioned above for additional details.

Furthermore, the decline in wellbeing from youth to midlife can be substantial. A simple comparison of averages shows that the decline in wellbeing from youth to midlife is almost as large as the difference in wellbeing between those who have trouble walking up stairs and those

² The term midlife low in wellbeing itself has, of course, two definitions: feelings of dissatisfaction and similar felt in midlife; the low point in wellbeing over working life. For much of recent history, both have been appropriate but given recent cohort-based changes with the young also being unhappy (Haidt 2024, Blanchflower et al. 2024), the former is arguably currently more appropriate.

who do not – two subsets with evidently different levels of quality of life (Blanchflower and Piper, 2022). Moreover, despite the vast literature investigating wellbeing across the (working) lifespan, not much is known about why this phenomenon occurs or how it might be mitigated against. People in midlife are suffering, for a multitude of reasons, and we do not have much knowledge regarding why. This article hopes to contribute to closing this gap in our understanding of these midlife lows in three main parts. The first part considers what might cause midlife lows, using modern empirical evidence. The second part, the paper's key novel contribution, discusses the psychology and psychotherapy literature (and to a lesser extent related work from other areas). This work, particularly that from psychotherapists, contains ideas and insights which are perhaps unknown to quantitative social scientists working on the relationship between ageing and wellbeing. This is unfortunate because there is a great need for more empirical investigations of these insights and hypotheses. To further such investigations, the third part of the paper discusses how the ideas and hypotheses presented in psychology and psychotherapy literature might be usefully investigated, listing potential research questions, investigation of which could lead to better understanding of wellbeing in midlife, which in turn should help to mitigate these lows. These three sections are followed by some concluding remarks.

What might be behind the midlife low?

That a U-shape in wellbeing over the lifespan, concomitant with a midlife low, has been traced by (at least) several hundred studies covering much of the world, and that these studies have used data collected over multiple decades, from different countries and datasets, and with different methods and control sets (including designs without controls), perhaps suggests that a biological basis exists for midlife lows. This section starts by discussing a famous study inspired by this possible reason for relatively low wellbeing in midlife, and then moves on to recent empirical studies that distinguish differing levels of wellbeing at midlife between different groups, which in turn suggests a role for individual volition and/or circumstance.

That biology may be implicated in the midlife low in human wellbeing is suggested by the notable study of Weiss et al. (2012). Rather than assess

the wellbeing of humans, this interdisciplinary team investigated the wellbeing of great apes and concluded that they too suffer from midlife lows. Weiss et al. (2012) had people responsible for the care of the apes answer four questions regarding ape wellbeing. These apes were chimpanzees and orangutans in different habitats in different countries, and the conclusion was that ape wellbeing is lower in midlife. The article proposes that the midlife low may partly have its origins in the biology humans share with great apes.

Studies which investigate the association of human wellbeing with sleep are also perhaps suggestive that a biological reason is partially responsible for midlife lows. Giuntella et al. (2022) found that individuals in midlife sleep less than individuals at other ages - a result found in many countries and robust to many different socio-demographic considerations. In a nationally representative dataset, Piper (2016) found that, on average, most individuals sleep less than is considered ideal for optimal life satisfaction and maximal happiness, that low sleep duration was associated with low wellbeing, and that those in midlife sleep less than the, already suboptimal, average. Foster (2023) argues that the same neural networks which promote good sleep also promote good mental health. In other words, he argues, sleep and mental health are intimately connected in our brains. Similarly, Esch (2022), draws on neurobiology to offer a biological explanation for the midlife slump in wellbeing. Some of the findings of empirical studies regarding who suffers more at midlife are supported by brain imaging studies, as discussed below.

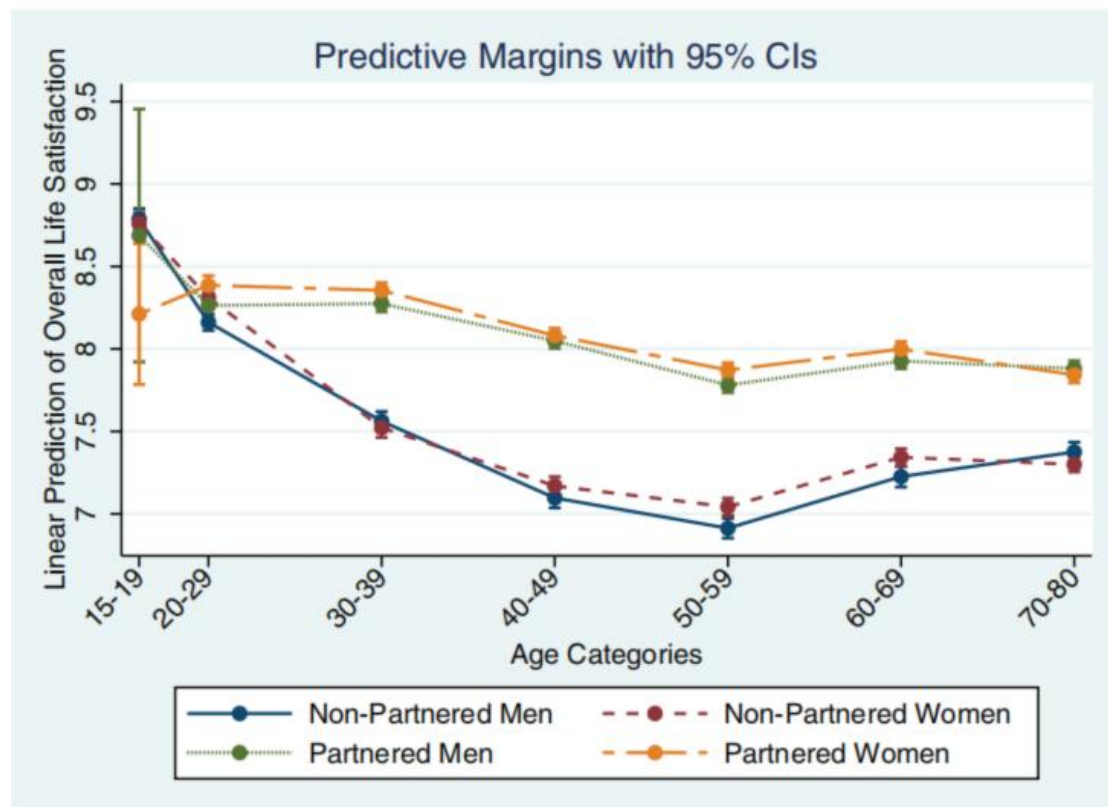
The biological explanation suggests that the midlife low is something everybody goes through, however there is other evidence that different individuals go through it differently.³ As Stein asserts in the introduction to an early work on this topic by Fried, “each of us goes through it in his own way, experiences it with greater or lesser intensity, and emerges from it more or less reconciled to the years ahead. It is a ‘natural’ developmental crisis, and it is unavoidable” (Fried 1967, vii). This Stein quote also gives us some clues as to what psychotherapists and psychologists think is the underlying reason for the midlife period, which is discussed further in the next section. Here, the intention is to suggest that different groups of people may go through midlife in systematically

³ To be sure, this does not mean that everyone will go through a midlife trough even if biology is implicated. Some people may have substantial compensations which really aid wellbeing in midlife. One such candidate for compensation is a good marriage or relationship, as discussed below. In any case, the midlife low, found by a large majority of empirical studies, is an average effect.

different ways. This claim is supported by recent research: as, for example, discussed by Lepinteur and Piper (2022), work by Helliwell et al. (2019), Clark et al. (2021) and Piper (2021) presents evidence of different passages through the midlife years.

Findings related to the possibility that the midlife low differs by gender have been inconclusive. However, other factors are more relevant. Helliwell and co-authors assigned individuals to two different groups and showed that those not married or in a relationship had a greater midlife dip than those who were, while those who had lived in their neighbourhood less than fifteen years had a greater midlife dip in comparison to those who had lived in their neighbourhoods longer and, in the work environment, those whose manager was more like a boss than a partner had lower wellbeing in midlife. All groups showed a midlife dip on average, but some groups showed a systematically deeper one, while for some groups the midlife low is a minor affair.

Figure 1 The age and life satisfaction relationship by partnership status, EU-SILC 2013 data



Source: Clark et al. (2021); Taken from their table 2, column 5, OLS regression with country fixed effects from 32 European Countries (EU-SILC 2013)

Furthermore, as Figure 1 shows, Clark et al. (2021) derived a substantial difference in life satisfaction at midlife (and at other times) for those in marriage or a partnership compared to those not. For those in a relationship, the midlife dip is rather small; for those who are not, it is substantial, at close to a full point difference on this scale.⁴ This difference far outweighs the slight difference attributable to gender. Given that these data are averages, and that relationship quality can vary, perhaps those in excellent marriages and relationships (on average) do not have any dip at all. Similarly, those in poor relationships might be more likely to experience a deeper midlife dip than the average finding illustrated in Figure 1. Using basic regression analysis, I compared life satisfaction at different ages for those reporting high average family satisfaction and low average family satisfaction as an average throughout their appearances in the German SOEP (Socio Economic Panel, data not shown). The obtained coefficients support the possibility of a varying passage through midlife based on (self-perceived) relationship quality, though there are endogeneity concerns with partnership in survey data investigations of wellbeing (as people move in and out of marital status by age as a function of wellbeing).⁵

Piper (2021) found further evidence of a systematically different midlife low. This evidence, from Germany, relates to a link between depth of low and an individual's employment contract status, whether permanent or temporary. Both groups suffered a midlife low, but those on temporary contracts had a much larger midlife dip than those on permanent contracts. Furthermore, only one-sixth of this substantial gap was found to be attributable to fears about job security. Something else must be responsible for this midlife difference. Other factors are clearly important,

⁴ Clark et al. (2021) also address mortality bias, empirically finding that happier people living longer does not have much of an effect on the overall relationship between age and wellbeing.

⁵ There are some non-survey investigations supporting the results of both Clark et al. (2021) and Helliwell et al. (2019) regarding marriage (or good partnerships). Neurological studies of individuals show that the parts of the hypothalamus that register a threat 'light up' a lot when a threat is faced alone (e.g., Brown et al., 2017; Coan et al., 2006 and Coan et al., 2017). These same studies show that holding the hand of a friend causes this brain activity (indicating threat) to lessen and, furthermore, holding hands with one's partner almost entirely stops this region from being activated when a threat is induced. One caveat is that the marriage must be good. If the marriage is bad, then the brain activity registering threat is more prominent than that for those who did not hold anyone's hand, i.e. those who faced the threat alone. One of the studies' authors suggested that this is because of "this pain-in-the-butt spouse who's just adding another problem" (Hagerty 2017, p.191). Good marriage, the argument goes, offers protection and support in challenging times which is even evident in brain scans; the idea that life's troubles can be faced with someone completely trusted calms one's nervous system and, more speculatively, is perhaps at least somewhat responsible for the attenuation of the midlife dip in wellbeing experienced by those married or in a partnership.

and Piper (2021) suggested as possibilities "a sense of failure, a sense of inadequacy, an existential fear, a feeling of not belonging or being lost, regrets, achieving a less successful career than had been expected, and other more general unfulfilled aspirations" (p.11).⁶ Of these possibilities, when also considering the other systematic differences regarding wellbeing at midlife discussed just above, a general feeling of not belonging seems a particularly fruitful avenue for future investigation. The lack of a stable personal relationship, the temporary nature of one's job and, perhaps to a lesser extent, not being established for a long time in a neighbourhood might all be indicative of, or contribute to a feeling of, limited belonging.

In general, a greater sense of belonging in midlife has been linked to subsequent better psychological health later in midlife. As just one example of many more, a study using the British Cohort Survey found that, other things being equal, individuals with fewer friends at forty-five had poorer psychological wellbeing at fifty (Cable et al., 2013). Additionally, they found an association between having a smaller kinship network and poorer psychological wellbeing for men (and presumably an impact on the size of the midlife low). Further investigating a general sense of belonging may help to explain some of these differences in wellbeing in midlife and, in turn, help us to understand how we might mitigate the reductions in wellbeing reported in midlife.⁷ Returning to the results above, it is possible that individuals may (involuntarily or voluntarily) 'self-select' into the categories of lower wellbeing (no relationship, temporary employment), perhaps representing a limited capacity or feeling for belonging. Why might this be so?

Psychologists and psychotherapists, in this context, discuss the primacy of childhood for (among other things) giving us a sense of belonging and safety, whether we perceive the world as somewhere we can be safe, where we can be ourselves, or not.⁸ When the childhood environment is difficult, achieving a sense of belonging is more difficult. Some children may not have learned compassion (including self-compassion) and connection in the parental home, which may well have consequences. In

⁶ Gundert and Hohendanner (2014) find, using German PASS data, evidence supportive of the notion that the temporarily employed feel less affiliated with society than those permanently employed.

⁷ A policy response here could be the creation of local community groups, perhaps for specific purposes.

⁸ Bowlby is a pioneer here (e.g. 1951, 1988). Ainsworth (1993) argued that mothering in the early years is responsible for a person's attachment style, i.e. whether that is anxious, avoidant or secure. More recent evidence has been put forward regarding how a sense of belonging might be fostered in youth, and thus be beneficial in midlife. One example about belonging in school is provided by O'Connor (2010).

short, differences in a general sense of belonging, or even what we might term relational inequalities, may have developed at an early age and be, at least partly, behind the systematic differences noted above. Thus, some individuals may be less successful in forming lasting relationships, gaining permanent employment, or even being happy or content enough to settle in a particular neighbourhood; in other words, individuals, because of their early life experience may be 'self-selecting' into these categories with the deeper midlife dips. Piper (2021) investigated the issues of causation and selection regarding temporary employment and life satisfaction and found evidence more in line with causation going from entering temporary employment to lower life satisfaction, rather than individuals with lower wellbeing 'selecting' into temporary work. However, the argument being advanced here is that such 'selection' happened before adulthood, and thus before the individual's entry into most surveys and panel datasets, like the SOEP investigated by Piper (2021). Exceptions here are cohort surveys which follow individuals from birth onwards like the National Childhood Data Survey and the British Cohort Survey. Given that they started in 1958 and 1970 respectively, individuals have so far been traced up until at least midlife (62 in the NCDS and 50 in the BCS at the time of writing) and the relationship between early life and midlife can be shown. Interesting questions can be asked.⁹

More understanding about midlife lows can come from better understanding these midlife dip differences that have been identified. One further potential reason is having a purpose in life, which has been shown to be important and relevant for many aspects of our lives including wellbeing and longevity (Hill and Turiano, 2014; Kim et al., 2014; Koizumi et al., 2008; Teas et al., 2022). It is easier to have purpose in life within good marriages and relationships, when being a long-term member of a community or neighbourhood, when having good working relationships and when having a permanent employment contract. Other differences and ways forward will emerge as this lively research area develops. Such possibilities have the potential to be investigated in the context of midlife and are returned to in the penultimate section, which proposes a research agenda for further advancing understanding of the midlife low. That follows a discussion of relevant work from psychoanalysts and others who are trying to understand human wellbeing and particularly why a midlife low exists.

⁹ Examples of studies that have used cohort data to ask interesting questions include Layard et al. (2014); Frijters et al. (2014); Fleche et al. (2021). A relevant book is Clark et al. (2018).

Insights from the psychology and psychotherapy literature and related works

Why midlife lows happen and how they might be mitigated has been discussed at length in literature from the fields of psychology and psychotherapy. As well as thinking at length about this topic, psychologists and psychotherapists have also attributed a substantial proportion of their client base to midlife issues (e.g. Hollis, 1993; Jamieson, 2022). As mentioned above, in general this literature avoids the word crisis and uses more neutral terms like passage, transition and turn. One recent book by a practicing psychiatrist even refers to midlife lows positively, calling them humanity's secret weapon, and stating that this period of the lifecycle offers an "unmatched opportunity to review our lives and explore our personalities" (Jamieson, 2022 p.3). The most popular notion in this literature is that midlife is a liminal, developmental, period in the human lifecycle; a time when individuals slowly reorientate their lives from their 'old selves' to 'new selves' (e.g., Hollis, 1993; Stein, 2014). This connects midlife with gestalt therapy notions of a 'fertile void' (Perls, 1969), the "emptiness through which we all must pass to let go of one set of experiences, in order to fully engage with a new set of experiences" (Clarkson, 1993 p.65). Highlighting this belief as more generally held, recall the quote from Murray Stein regarding midlife being a natural development period through which we must all go, to a greater or lesser extent. Psychotherapists, subsequently supported by the mass of quantitative studies mentioned above, assert that there is a decline in our wellbeing in the first half of adult life to where we "flounder amid ordinariness in the sour leaves of midlife" (Hollis, 1993, p.33).

Such assertions are not new. Predating Elliot Jaques's coinage of the term midlife crisis by over 20 years is an introduction to psychotherapy which states that "the depression of the middle age is something we frequently see in our consulting-rooms among people otherwise normal" (Brown, 1938, p.165); and that this is "a turning point in life [which] varies from one person to another according to physique, type of mind, past history, and the extent to which the individual has escaped physical or mental illness... but sooner or later... the individual has to adapt himself to this

situation...[and] this is a very definite moment in life. It is a point at which many normal people fall ill and come to us [psychotherapists] for help” (Brown, 1938, p.164). Brown calls the problems that occur ‘in the late forties and early fifties’ the problems of the mature personality.¹⁰ That Brown writes this in a very matter-of-fact way suggests that midlife lows were a well-known and uncontroversial issue even then. He also, albeit briefly, states why these problems occur, and what is necessary. This resembles subsequent writings on this topic, including those of Jaques.

In his seminal article “Death and the Midlife Crisis” (1965), Elliot Jaques argued that midlife was the time when an unconscious depressive anxiety emerges, which can lead to feelings of loss and thoughts of suicide, though he also emphasises external circumstances and one’s role in society. A central suggestion was that an increasing awareness of mortality was a reason behind this anxiety, the recognition that ‘we are all going to die’ causing an existential panic. Jaques argued that maladaptations resulted such as hypochondria and “the emergence of sexual promiscuity in order to prove youth and potency, and a hollowness and lack of genuine enjoyment of life” (1965, p.511). These attributes (and others) he summarises as an impoverishment of emotional life and warns that real character deterioration is possible. His solution: suffering individuals need to craft creativity and serenity in their lives as a route out of their slump. This last comment connects with the work of more modern psychotherapists (Hollis, 1993; Polden, 2002; Stein, 2014; Jamieson, 2022), who argue that midlife is when development towards a more emotionally meaningful life should take place, and also with Erik Erikson’s argument that people in what he termed the second stage of adulthood (i.e. midlife) need to make a choice (knowingly or not) between generativity and stagnation (1950). Both are discussed below, along with the notion that an increasing awareness of death plays a role in our wellbeing in midlife.

Before moving on to these considerations, just why do people in midlife need to change or develop? These writers (Jaques, 1965; Hollis, 1993; Polden, 2002; Stein, 2014; Jamieson, 2022) argue that adults in midlife come to a realisation that their old routines and adaptations no longer work and there is a need to create new ones. In short, this is said to result in a sense of dissatisfaction with life in midlife, which provides the drive

¹⁰ It is noteworthy that Brown’s age range is in the middle of the rough range mentioned in the introduction and reflects the nadir in life satisfaction identified in hundreds of subsequent empirical studies.

for change and development. There is also an evolutionary argument for midlife, its lows, and (necessary) change and development, discussed below. Above, we have also seen that the sense of dissatisfaction in midlife is felt at different degrees by different groups of people; such differences may reflect different levels of urgency or need for development. They may also reflect innate personality differences and this possibility inspires some of the research questions covered in the next section. In any case, this relative unhappiness drives individuals to make changes in their lives. The psychotherapists' interpretation is that in the first half of their lives individuals are following 'ego' goals, for example establishing careers and families, and making a place in the world for themselves. In doing so, the argument runs, individuals are following directions set out by society which, whether achieved or not, become dissatisfying. Even if these ego goals have been met, people may still find themselves dissatisfied, perhaps because of goal cessation, as suggested by Setiya (2017) in his reflections on midlife, but also perhaps because of our inability to predict what will make us happy (e.g. Odermatt and Stutzer, 2019).¹¹

As well as seeking so-called 'ego goals' in the first half of life, psychologists and psychotherapists assert that individuals are following adaptations and behaviours formed and developed in childhood for survival and to get needs met, which no longer serve the individual in their adult life.¹² As summarised by Jamieson (2022, drawing on the work of Grof, 1985 and Gerhardt, 2014 among others), the balance of these early influences indicates whether "anxiety or a sense of contentment be the predominant attitude to life" (p.48). This is relevant in midlife, because it is argued that only then do people have sufficient emotional assets to overcome their start in life; when individuals are psychologically ready to address these 'primitive agonies' from their very first years (Winnicott, 1974).

In midlife, individuals realise that both 'scripts' (ego goals and childhood adaptations) provide decreasing levels of satisfaction, inducing action. Hollis summarizes as follows, "our stories that we work hard to serve... no longer serve us" (2023, p.19) and in midlife we "face a summons to something larger" (p.20). Part of the solution is argued to involve

¹¹ Whether realised or unrealised goals are more harmful in midlife is an open question; one of the many future research questions offered in the penultimate section of this article.

¹² This seems to also have a biological developmental element. Recent work with MRI scans and brain autopsies have discussed the influence of the very early years and particularly the release of oxytocin, serotonin and dopamine on both the hippocampus and amygdala.

unpicking these (increasingly dissatisfying) processes and patterns and, as Jamieson (2022) puts it, taking up the “unprecedented opportunity to review our lives”. Moreover, “a period of introspection and self-examination is an essential need at this stage in life” (Jamieson, p.57). Thus, rather than ‘ego goals’, based in part on society’s roles and conventions, individuals should strive to pursue paths that they find are more emotionally meaningful. This might reflect the creativity and serenity that Jaques called for, and serenity as a goal fits with research about the changing meaning of happiness over the lifespan. For example, Mogilner et al. (2011) studied blogs and conducted a variety of small experiments, finding evidence that younger people view happiness as meaning excitement and new experiences whereas older people equate happiness with relaxation, feeling content and at ease, and having peace of mind. Of course, people with different personality traits may have differing capabilities to develop in line with what psychotherapists think needs to happen in midlife, and this forms the basis of the first subsection of the research agenda presented in the next section.

While there are authors who frame this ‘summons to something larger’ (or need for more emotionally meaningful paths) as individually important and developmental, others, perhaps paradoxically, consider that it is important for society. Among the former, some scholars, for example Carl Jung with his notion of individuation, argue that the second half of life is less about society and more about us as individuals, involving the shedding of what society has told us we want, which no longer works for us.¹³ Similarly, Hollis (a psychotherapist in the Jungian tradition) identifies a careful ‘inner accounting’ of what our real needs and desires are, rather than just following (by rote) those given to us by society (as in the first part of adulthood), including our identity at work, and our parents. According to the Jungian tradition and similar arguments like Heidegger's *sein zum Tode* notion, ego goals are replaced by the goals of the psyche, or the whole person (the Self in Jungian terminology).¹⁴ Restated without Jungian terminology, this could simply mean individuals in search of their authentic selves, which people are better able to do in

¹³ The subtitle of one recent book about midlife succinctly expresses these changes as a movement ‘shifting from role to soul’ (Zweig, 2021) and, indicative of some of the changes argued to be typical, a journalist’s book-length account of midlife reports that people told her they were happy to swap their large ambitions for smaller commitments to family and friends (Hagarty, 2016).

¹⁴ Given what modern psychologists and psychotherapists say about midlife, Jung himself seemed to have an ‘archetypal’ midlife crisis experience between 1913 and 1917, a period of his life when he was very depressed: “the hero, no longer suited me... it had to be killed. This identity with my heroic idealism had to be abandoned, for there are higher things than the ego’s will, and to these one must bow” (Jung 1965, p.180-181).

midlife. This search might help individuals combat the “hollowness and lack of genuine enjoyment of life” that Jaques observed many people feel in midlife (1965, p.151).

In contrast to the arguments about individuation being a key goal of the second half of life, other scholars argue that an authentic connection to society becomes paramount; that the reduced focus on ego goals should be replaced by goals that are societally useful. Rauch (2018), for example, argues that people in midlife are repurposed for a new role in society. Rauch summarises this line of thinking as follows: over time individuals’ worldly ambitions are increasingly seen as distractions from the life they want to lead, thus tracing a path away from ambition and towards connection with both themselves and others. Jamieson (2022) makes similar comments, and even states that this repurposing in midlife has substantial evolutionary purpose. There are two main strands of thought which connect ideas of individual development with improvements in society. One relates to an argument based on generativity versus stagnation, proposed by Erikson (1950), and another – more recent – we could call the evolutionary argument, as advanced by Jamieson (2022), whereby the changes in the life of an individual at midlife are important for the evolution of society and culture.

Erik Erikson wrote about various stages of human development and the stage most closely aligned with the concerns of midlife outlined above is his second stage of adulthood, which occurs between 40 and 65 and is centred around the conflict between generativity and stagnation (Erikson, 1950). Generativity meant doing developmental things for one’s self (which includes meeting the challenges of midlife mentioned above), for society, and for the next generation, finding benefit and meaning in doing things for others and for those who follow. Doing so is expected to reinforce individuals’ credentials and enhance their talents as parents and as leaders of organisations and communities.¹⁵ Such engagement is thus of benefit for both the individual and society. Slater’s (2003) elaboration of Erikson’s generativity vs stagnation conflict highlights the similarities between this stage of life and Maslow’s notion of self-actualisation; both, he argues, reflect the change from a self-centred orientation to an other-

¹⁵ Lachman (2015) recounts how at the end of a semester she asked her students, “to reflect on what they learned about themselves and another person, either a family member or a friend.” and that, in response, “One student remarked that learning about generativity helped her to understand that her parents’ deep concern for her is a part of their own developmental journey, and not a reflection of their lack of trust for her decisions.” (pp. 331-2)

centred orientation. Through generativity, individuals are better able to help and contribute to society when they are better able to more fully be themselves.¹⁶

In contrast, not engaging with the challenges of midlife can lead to, in Jung's words "stagnation and desiccation of the soul. Our convictions become platitudes ground out on a barrel-organ, our ideals become starchy habits, enthusiasm stiffens into automatic gestures." (1967, pp. 356-7). Individuals in midlife can try to avoid this outcome by individuating and engaging (and being better able to engage because of individuation) with society and the next generation. The possibility of failure to achieve generativity, succumbing to stagnation, also suggests that some individuals might not achieve a rebound in wellbeing after midlife. Of course, in common with the midlife dip, the uptick after midlife found by empirical studies also represents an average effect and thus is concomitant with the possibility of different trajectories in wellbeing after midlife.¹⁷

In turn, the evolutionary argument, is as follows: society needs both the young and the old, with their typical traits and characteristics; a functioning society needs both the energy, audacity and impetuosity of the young and the wisdom, experience, moderation and foresight of the not so young. The midlife transition is an often uncomfortable, liminal phase between these two, during which individuals move from the former to the latter. This change is slowly 'formed on the anvil of crisis' in Jung's words, and creates individuals who are capable of wise, individuated eldership in society. Jamieson (2002) supports this general argument and follows Jung in asking why humans are one of two species who are capable of a longer post-reproductive life than their reproductive life.¹⁸ He argues that "our midlife experience therefore is crucial in providing our species with the wisdom, compassion and altruism necessary to guide humanity safely through the challenges ahead (p.4)". Rauch (2018) calls this reorientation a change in emotional direction, one that repurposes us for a changing role in society and a new stage of life. Relatedly, and linked to the midlife goal change arguments, Carstensen and Löckenhoff (2003)

¹⁶ Some evidence for this comes from interviews and sentence completion tests of 50 individuals in midlife which supports "the argument that generativity implies a blending of agency and communion in human experience" (McAdams et al. 1986). The authors acknowledge, however, that their sample is small and mainly white and middle class.

¹⁷ Levy et al. (2002) find evidence that how an individual views ageing, whether they see it as positive or negative, can also play a role regarding their actual trajectory post-midlife.

¹⁸ The other is the Orca, or killer whale, whose pods 'are often led by very old females whose long experience and deep intuitive knowledge allow them to search out the rich grounds of food necessary to keep the pods well fed' (Jamieson, 2022, p.5).

assert that a focus on individual strivings ('ego goals') early in adulthood (i.e. during "reproductive life") and then changing to focus on emotional goals (which typically benefit kin) later in life improves reproductive success.

Seen through this lens, the midlife process is therefore conceptualised as involving becoming more reflective about our lives; no longer being carried by the prevailing culture but being more introspective about what still works for us and what no longer does. This might mean the dropping or changing of some ego-based goals that may have been useful in the past, and helped to establish individuals in life, career and families. Hollis (1993), Jung (1965) and others state how hard this "confrontation with inner demons and outer misfortune" (Jamieson, 2022 p.2) can be and, as the empirical evidence shows, this midlife transition can take years. This is not something that can be easily solved by simply aiming for a more cheerful disposition.

However, as biology has been argued to be partially responsible for the relationship between age and life satisfaction, biology may also partially help us climb out of any midlife lows. Partially is an important word here. While the next paragraphs briefly present evidence of such a biological role, suggesting that most individuals, on average, can wait any midlife lows out, some individuals will be suffering extreme distress in midlife. Suicides, and particularly male suicides, are relatively prevalent in midlife and such individuals will need active support. Even though biology is implicated as both cause and solution, its role is partial.

Carstensen (e.g. 1999) has provided some evidence regarding how our neurobiology, in particular, may help us out. With co-authors she has presented arguments, supported by evidence from brain scans and other research, that as individuals age, they gain more life experience and can see the world and their own problems with more equanimity (see also Mather and Carstensen, 2005; Carstensen and Mikels, 2005). Indeed, this work has shown that negative emotions decline as we age while positive ones increase. This "positivity effect" helps us to both appreciate life more and to take less notice of anything negative in our environment as we age.¹⁹ These are candidate reasons for the uptick in wellbeing after midlife that is maintained until, dependent upon the dataset, the late 60s and

¹⁹ "Since the first explicit reference to the positivity effect in 2004 (Kennedy et al., 2004) more than 100 peer-reviewed articles have addressed the concept. This flurry of scholarship has provided overwhelming support for the basic concept" (Reed and Carstensen, 2012, p.1).

early 70s, for which the data are less clear cut. Evidence for this positivity effect was put forward via imaging of the amygdala, the part of the brain that is said to direct our attention, which, as we age is visibly less activated by negative images and more by positive images. In youth, it is the reverse, with negative stimuli being more prevalent within the brain, and in midlife there is more balance. This balance of positive and negative feelings seems to align well with the U-shape finding for wellbeing over life (at least until near the end of life) and is thus a pattern entirely consistent with that uncovered in most of the empirical studies using survey data (e.g., Blanchflower et al., 2023).

Carstensen is one of the most noteworthy social scientists in this area of enquiry and has also contributed via her socioemotional selectivity theory, which offers a positive counterpoint to a key part of Jaques's article on midlife "death and the midlife crisis". Jaques (1965) suggested that in midlife people become aware of their own mortality, realising perhaps for the first time that we are all going to die. Relatedly, psychoanalytic theorist Kohut calls acceptance of life's transience a major challenge of midlife. This awareness is said to cause existential angst and contribute to lows in midlife, but the work of Carstensen and others suggests that it is also partly responsible for the uptick in wellbeing following midlife. The argument proposes that acceptance of the finitude of our lives, felt keenly in midlife according to Jaques (1965), leads us to be more appreciative of them, and of the gift of life, helping us to draw more emotional meaning from and for our lives. Declining time horizons help this process, which involves a letting go (Carstensen, 2006); this is an issue even more prevalent for the old than the middle-aged. Blanchflower and Oswald made a similar suggestion in an important empirical paper: "Perhaps, by the middle of their lives, people relinquish some of their aspirations and thereby come to enjoy life more" (Blanchflower and Oswald, 2008). The evidence supports such notions.²⁰

In general, the psychology and psychotherapy literature is more focused on 'the call from within' but this period of crisis and reflection can be prompted by external events like the death of a spouse or parent, a career disappointment or professional disillusion, or a severe injury. For example, the empty nest syndrome is known to cause a drop in life satisfaction for some parents (Piper and Jackson, 2017; Piper, 2021) and

²⁰ Schwandt (2016), discussed in more detail below, provides evidence about how this process might (painfully) happen.

a recent self-help guide to midlife also identifies empty nest syndrome as being enough of a change in role and identity to possibly provoke a lack of meaning and a midlife 'crisis' (Hannan, 2023). Perhaps some of these external events connect with Elliot Jaques's conception of midlife involving a renewed or heightened awareness of our own mortality, and a subsequent reckoning with it? Unhappiness at midlife can also precipitate changes in employment and marital status.²¹

As the next section makes explicit, some of these ideas can be reformulated as empirical questions, and some progress has already been made in this respect. Approaching the subject from the perspective of economics, Schwandt (2016) makes a noteworthy contribution to our collective understanding about the age-happiness relationship. His empirical findings are supportive of at least two main strands in the psychotherapy and psychology literature discussed above. Using the SOEP, he compared what individuals said about their expected life satisfaction in five years' time with their actual life satisfaction realised and reported in that year i.e. five years later. The comparison showed that younger respondents systematically overestimated their future life satisfaction, concomitantly with the decline of life satisfaction to midlife. In contrast, those above middle age systematically underestimated their future life satisfaction. There was also a small period at the bottom of the traditional U-shape (which, for the SOEP, is in the fifties age range) where the predictions are more accurate.²²

This broad result was shown to be robust and to apply to distinct groups in society. Schwandt argues that one explanation for the decline of wellbeing in the first half of adult life is unrealistic expectations, which (cumulatively) take a toll, and are partly responsible for falling wellbeing. In midlife, it seems that a more accurate appraisal takes place as people give up some of their aspirations and illusions and reassess their life.²³ Hollis (1993) discusses the (necessary?) shattering of illusions that happens during the midlife passage, an issue returned to in the next

²¹ Dissatisfaction has been shown to predict job quitting and divorce (e.g. Clark et al., 1998; van Scheppingen et al., 2020)

²² With such a comparison, it is important that an individual's scale for their own wellbeing does not substantially change over the lifecycle. However perhaps the positivity effect mentioned above and other age-related changes mean that older individuals become more willing to rate their life satisfaction as an 8 or 9 out of ten, for example, than when young.

²³ Of note is that, in a US sample (n<4,000), Lachman et al. (2008) made a similar comparison and found that both the young and those in midlife had higher than realised estimations about their future wellbeing whereas older people displayed more temporal realism.

section. Secondly, Schwandt's finding also supports the evolution-based arguments. Perhaps society needs its young to have high expectations, to pursue lofty goals without being burdened by the knowledge of how unrealistic they might be? Like Schwandt, social scientists can use modern datasets and methods to investigate some of the thoughts and hypotheses of psychotherapists and others regarding midlife. The next section presents an explicit discussion of how this might be done.

In pursuit of greater understanding: suggested avenues for future research

Several avenues for research emerge in relation to the considerations outlined thus far. These are grouped for discussion into four separate subsections, although some elements addressed under different headings share similar reasoning underlying why they are worthy of investigation. A list of research questions follows the discussion of each theme, and the ultimate paragraph of this section gives some suggestions about how they might be researched.

Personality and personal traits

The discussions and ideas presented in this subsection follow on from the view that midlife is an important development point and assume that different individuals may develop, and hence navigate midlife, in different ways. Psychologists and psychotherapists, with their especial focus on the individual, present suggestions and ideas regarding personality and habits. For example, the more selfish one is in the first half of adult life, the deeper the midlife low. The more narcissistic one is in the first half of adult life, the deeper the midlife low. Perhaps relatedly, the more childish one is in the first half of adult life, the deeper the subsequent midlife low. Some of these possibilities have also been suggested by Hollis, "The hopes of the nascent ego for immortality and celebrity are in direct proportion to childhood fear and ignorance of the world. Similarly, the bitterness and depression of midlife is linked to the amount of energy invested in the phantasmal wishes of childhood." Kernberg (1975) goes further and argues that notions of midlife crisis are solely about narcissism, however this seems a bit reductive given that we know biology plays a partial role

in the changing age-happiness relationship. Jaques (1965) suggested that the emotionally immature are unprepared for midlife's demands; such immaturity, he argued, sows the seeds for a crisis of middle life. Hollis (2023) calls midlife an immense maturation phase. Given this, a potential research question presents itself: perhaps, for some people, the midlife transition is simply about 'growing up', and thus a forced and necessary development that some need more than others?

In contrast, the more agreeable one is, perhaps the quicker one gets out of a midlife low. Being open, measured as a high score on the big-5 trait of openness, for example, is another facet that could be linked to an individual having an easier passage through the midlife transition. Expressing and feeling gratitude is another such trait, and more grateful individuals might be expected to have a less pronounced midlife low than those with a less developed sense of gratitude. Carstensen's socioemotional selectivity theory also suggests that those who are more present focused will have an easier time in midlife than those who are more fixated on the future or the past. Finally, once more with regard to personality, extroversion seems less clear cut: on the one hand, extroverts would likely find it harder to move from external drivers and motivations for behaviour and hence find it harder to leave the midlife low; on the other hand, extroverts may find it easier to talk to others about the lows they are experiencing and so be able to leave the midlife trough quicker. This is clearly another empirical question that can be tested.

Table 1, below, lists a number of research questions that could guide investigations into the links between personality and personality traits and the midlife low.

Research question
Is a higher degree of narcissism related to a deeper midlife low?
Is the midlife low deeper, the more selfish one is?
Does one leave a midlife low quicker if one is more agreeable?
If one is more open, is any midlife trough shallower?
What is the relationship between degree of extroversion and wellbeing in midlife?
Do those who express and feel gratitude have a less problematic wellbeing than those who do not?
Do people who are more 'present focused' have a lighter midlife trough?
Do people who are more externally focused have a deeper midlife low?

Does an individual's locus of control change as they age, and particularly in midlife?

Table 1: Research avenues for investigating associations between personality and personal traits and midlife lows

Generativity versus stagnation

Erikson argues that we have a choice to make in midlife - an active decision between stagnation and personal growth. These ideas of generativity versus stagnation raise further research questions. For example, do people who engage in training or new hobbies have a better life after midlife (i.e. have more wellbeing)? Do individuals whose jobs involve much personal development and new experiences have a better midlife? Do individuals who are more active (sedentary) in midlife have a better (worse) life after midlife? Biological explanations for the U-shape suggest we can wait midlife out – things will eventually get better – but this idea suggests that the average finding of a moderate upturn in wellbeing after midlife can be supported or even enhanced (or harmed) by our behaviours and decisions in midlife. Nature yes, but 'nurture' too.

Other questions follow. The more education that someone has, the greater the midlife low. This was suggested by Polden (2002) and was also indicated by the findings of Schwandt (2016). Education, in general, raises expectations and aspirations as well as outcomes. However, when these are not met reductions in life satisfaction can result (e.g. Piper, 2015; Ahmed-Lahsen et al., 2024). The greater the education, the higher the expectations and, if unmet the greater the reduction in happiness. Although not noted above, among the arguments of Jamieson (2022) is the suggestion that those with a worse midlife will be induced to make greater changes and will thus have a greater than average upturn. This too can also be tested.

Table 2, below, lists a series of questions indicating elements of interest in the relationship between the Generativity versus Stagnation dilemma and the midlife low.

Research question

Do people who regularly engage in on-the-job training in midlife have a stronger uptick in wellbeing after midlife?
Do people who take up new hobbies in midlife have a stronger uptick in wellbeing after midlife?
Do those in jobs which promote personal development and offer new experiences have a shallower midlife trough?
Are people who are more physically active in midlife happier in post-midlife life?
Are realised or unrealised goals more harmful to our wellbeing in midlife?
Do people who set themselves self-oriented goals feel the midlife low more strongly than those who pursue other-centred goals?
Does changing these goals from self to other-centred help one get through midlife lows?
Does having a 'vocation' (doctors, nurses, priests, ambulance drivers, firefighters, etc.) support greater happiness in midlife than having an achievement drive (politicians, lawyers, accountants, entrepreneurs, etc.)?

Table 2: Research avenues for investigating associations between generativity, stagnation and midlife lows

Life events

As mentioned above, psychotherapists often view midlife as something internal to the individual, with some scholars asserting that midlife crises are purely internal. However, our subjective feelings and states of mind and our external circumstances are likely quite strongly linked. It is not hard to imagine a strong bidirectional relationship between feeling low and divorce for example. Indeed, as mentioned in a footnote above, there is evidence showing that life dissatisfaction led to divorce and quitting jobs. Complementing this evidence, could divorce induce a midlife low or could career disappointment induce midlife lows? Perhaps there is some external event which 'guides' individuals towards the lows at midlife, at least for some people. Maybe some subsequent life events are themselves induced by midlife lows.

While the psychology literature is more focused on 'the call from within', this period of crisis and reflection can potentially be prompted by external events like the death of a spouse or parent, a career disappointment or professional disillusion, perhaps a severe injury or a major health scare.

Moreover, causality could also be in the opposite direction; as seen unhappiness at midlife can also precipitate changes in employment and marital status. Studies have presented evidence of low wellbeing predicting job quits and divorce, and unemployment and divorce have been shown to lower wellbeing. Such factors and others could be assessed in the context of midlife to see if they induce a slump.

Table 3, below, lists questions for investigation of the role played by significant life events in midlife lows and by midlife lows in significant events, with indications of how they might be answered.

Research question
Which external events induce or catalyse a midlife low?
Which events occur during a midlife low and how do they affect wellbeing?
What events are caused by or a consequence of (or typically subsequent to) midlife lows?

Table 3: Research avenues for investigating associations between life events and midlife lows and midlife lows and life events.

Miscellaneous

In addition to the research avenues categorized as related to personality, to generativity (stagnation) and to important life events, Table 4 lists interesting questions related to midlife lows that do not easily fit into these three categories.

Research question
What is the relationship between wellbeing in midlife and the experience of parental divorce (or other potential adversity) when a child?
What is the relationship between deprivation (however defined) as a child and wellbeing in midlife?
Does the higher the education level achieved lead to greater midlife lows (on average)?
Does the extent of misprediction, and unrealised expectations, in the first half of adult life lead to a deeper midlife low?

Do those who have a deeper midlife low have post-midlife wellbeing that is better than the average?

Table 4: Research avenues for investigating possible additional associations with midlife lows.

Some of the questions from these four tables can be answered quantitatively with cross-section data. For example, the first question on table 1 can be answered with individual-level data containing both a validated scale for measuring narcissism and contemporaneous information about life satisfaction or other wellbeing measure. However, when analysing age-related differences in outcomes, the possibility of cohort effects driving the found differences cannot be easily ruled out and thus weaken the argument for the use of cross-sectional data. Some require longitudinal data, for example the first question in Table 2. Here individual level data is required about the quantity and, if possible, quality of on-the-job training and both contemporaneous and subsequent wellbeing data. Others require data from cohort surveys that track an individual from birth, or at least from early life. An example here is the first question in Table 4, which requires information about the individual as a child, including family status, and wellbeing as an adult in midlife. Unusual for this research, interventions could also be considered. As an example, researching the second question in Table 2 could involve a randomised control trial where a treatment group of individuals in midlife is induced to participate in a new hobby and any changes in subsequent wellbeing are compared with a similar, perhaps artificially matched, control group who do not. Difference-in-differences techniques could be used to estimate a causal effect of this (and other) interventions; where interventions are not practical, Instrumental Variables could be used. The other questions all fall into one or more of these four categories: cross-section analysis; longitudinal analysis; cohort study; an experiment or intervention.

Concluding remarks

Lachman (2004, 2015), a researcher who has published notable work on midlife, has called for much more research to help to further our understanding of this understudied period of life. This article has taken up her challenge, discussing the existing empirical research and offering

some explanations for the midlife low and a set of research questions to enhance our understanding of this period of the lifecycle in the future.

This article's most important contribution to social science is to investigate the psychotherapy (and related) literature and reflect upon the insights it has to offer regarding the midlife experience and, subsequently, offer research questions which fall out of these reflections and can now be undertaken with modern datasets and methods. Psychotherapists are particularly important because they were the first people to uncover these midlife issues; the epigraph is from a book published over eighty-five years ago which reports about the frequent midlife issues that were deemed to exist then. Rather than seeing midlife as a crisis, in general they see it as an (albeit tricky) development period. This development period can, supporting the more modern empirical work, last for years, is said to be a readjustment and a repurposing for the second half of adult life and is often viewed as natural. Rauch (2018), for example, compares midlife struggles to those of adolescence, drawing parallels between these development periods in the typical human lifespan. The notion of midlife being a development period offers, as well as a reframing of midlife struggles, much food for thought for future research around midlife. As well as midlife being developmentally important, some psychotherapists even view a successful midlife transition as important for humanity's evolution.

Consideration of this literature leads to the research agendas proposed in the third section of this article, raising more than twenty-five research questions – all eminently researchable with modern methods and quantitative data – which, if answered, will push on our collective knowledge about this tricky and important part of the lifecycle.

References

- Ahmed-Lahsen, A., Piper, A., & Thiele, I.-A. (2023). The role of gender inequality in the overeducation and life satisfaction relationship: An empirical analysis using panel data from Korea. *Education Economics*.
- Ainsworth, M. S. (1993). Attachment as related to mother-infant interaction. *Advances in Infancy Research*, 8, 1–50.
- Alighieri, D. (2009). *The Divine Comedy* (H. F. Cary, Trans.). Wordsworth Editions.
- Blanchflower, D. G. (2021). Is happiness U-shaped everywhere? Age and subjective well-being in 145 countries. *Journal of Population Economics*, 34, 575–624.
- Blanchflower, D. G., & Graham, C. (2021). The U-shape of happiness: A response. *Perspectives on Psychological Science*, 16(2), 1435–1446.
- Blanchflower, D. G., & Graham, C. (2022). The mid-life dip in well-being: A critique. *Social Indicators Research*, 161, 287–344.
- Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science and Medicine*, 66(8), 1733–1749.
- Blanchflower, D. G., & Oswald, A. J. (2009). The U-shape without controls: A response to Glenn. *Social Science and Medicine*, 69, 486–488.
- Blanchflower, D. G., & Oswald, A. J. (2016). Antidepressants and age: A new form of evidence for U-shaped well-being through life. *Journal of Economic Behavior and Organization*, 127, 46–58.
- Blanchflower, D. G., & Oswald, A. J. (2019). Do humans suffer a psychological low in midlife? Two approaches (with and without controls) in seven data sets. In M. Rojas (Ed.), *The Economics of Happiness* (pp. 439–453). Cham: Springer International Publishing.
- Blanchflower, D. G., & Piper, A. (2022). There is a mid-life low in well-being in Germany. *Economics Letters*, 214.
- Blanchflower, D., Bryson, A., Lepinteur, A., & Piper, A. (2024). Further evidence on the global decline in the mental health of the young. NBER Working Paper, 32500.
- Blanchflower, D. G., Graham, C. L., & Piper, A. (2023). Happiness and age – Resolving the debate. National Institute of Economic Research.
- Bosanquet, N. & Gibbs, B. (2005). *The Class of 2005 – the IPOD Generation Reform report* (<http://www.reform.co.uk/filestore/pdf/The%20Class%20of%202005.pdf>).
- Bowlby, J. (1951). Maternal care and mental health. *Bulletin of the World Health Organization*, 3, 355–533.
- Bowlby, J. (1988). Attachment, communication, and the therapeutic process. A secure base: Parent-child attachment and healthy human development, 137-157.
- Brown, W. (1938). *Psychological Methods of Healing: An Introduction to Psychotherapy*. University of London Press Limited.
- Brown, C. L., Beckes, L., Allen, J. P., & Coan, J. A. (2017). Subjective general health and the social regulation of hypothalamic activity. *Psychosomatic medicine*, 79(6), 670-673.

- Cable, N., Bartley, M., Chandola, T., & Sacker, A. (2013). Friends are equally important to men and women, but family matters more for men's well-being. *Journal of epidemiology and community health*, 67(2), 166–171. <https://doi.org/10.1136/jech-2012-201113>
- Carstensen L.L., Isaacowitz, D.M. Turk-Charles S. Taking time seriously: a theory of socioeconomic selectivity. *American Psychologist*, 54 (1999), pp. 165-181.
- Carstensen, L. L., & Lockenhoff, C. E. (2003). Aging, emotion, and evolution: the bigger picture. *Annals of the New York Academy of Sciences*, 1000, 152–179.
- Carstensen, L. L., & Mikels, J. A. (2005). At the Intersection of Emotion and Cognition: Aging and the Positivity Effect. *Current Directions in Psychological Science*, 14(3), 117–121. <https://doi.org/10.1111/j.0963-7214.2005.00348.x>
- Carstensen L. L. (2006). The influence of a sense of time on human development. *Science (New York, N.Y.)*, 312(5782), 1913–1915. <https://doi.org/10.1126/science.1127488>
- Case, A., & Deaton, A. (2015). Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences*, 112(49), 15078-15083.
- Case, A., & Deaton, A. (2020) *Deaths of Despair and the Future of Capitalism*. Princeton University Press.
- Cheng, T.C., Powdthavee, N., & Oswald, A.J. (2017). Longitudinal evidence for a midlife nadir in human wellbeing: results from four data sets. *The Economic Journal*, 127: 126–142.
- Chowdhury, R., Sharot, T., Wolfe, T., Düzel, E., & Dolan, R. J. (2014). Optimistic update bias increases in older age. *Psychological medicine*, 44 (9): 2003–2012.
- Clark Andrew E., Georgellis Yannis, Sanfey Peter. 1998. Job satisfaction, wage changes, and quits: Evidence from Germany. *Research in Labor Economics*, 17: 95–121.
- Clark, A. E., Flèche, S., Layard, R., Powdthavee, N., & Ward, G. (2018). *The origins of happiness: The science of well-being over the life course*. Princeton University Press.
- Clark, A.E. (2019). Born to be mild? Cohort effects don't (fully), explain why well-being is U-shaped in Age. In: Rojas, M. (ed.). *The Economics of Happiness. How the Easterlin Paradox Transformed Our Understanding of Well-Being and Progress* (pp. 387-408). New York: Springer.
- Clark, A.E, d'Albis, H., & Greulich, A. (2021). The age U-shape in Europe: the protective role of partnership. *Vienna Yearbook of Population Research*, 19: 1-26.
- Clarkson, P. (1993). *On Psychotherapy*. Whurr Publishers.
- Coan, J. A., Schaefer, H. S., & Davidson, R. J. (2006). Lending a hand: Social regulation of the neural response to threat. *Psychological science*, 17(12), 1032-1039.
- Coan, J. A., Beckes, L., Gonzalez, M. Z., Maresh, E. L., Brown, C. L., & Hasselmo, K. (2017). Relationship status and perceived support in the social regulation of neural responses to threat. *Social cognitive and affective neuroscience*, 12(10), 1574-1583.
- Daly, M.C., Oswald, A.J., Wilson, D., & Wu, S. (2011). Dark contrasts: The paradox of high rates of suicide in happy places. *Journal of Economic Behavior & Organization*, 80 (3): 435-442.
- Erikson, E. H. (1950). *Childhood and society*. W. W. Norton & Company.

- Esch, T. (2022). The ABC Model of Happiness—Neurobiological Aspects of Motivation and Positive Mood, and Their Dynamic Changes through Practice, the Course of Life. *Biology, 11*: 843.
- Flèche, S., Lekfuangfu, W. N., & Clark, A. E. (2021). The long-lasting effects of family and childhood on adult wellbeing: Evidence from British cohort data¹. *Journal of Economic Behavior & Organization, 181*, 290-311.
- Foster, R. (2023). *Life Time: The New Science of the Body Clock, and How It Can Revolutionize Your Sleep and Health*. Penguin Life.
- Fried, B. (1967). *The Middle-Age Crisis*. New York: Harper - Row.
- Frijters, P., Johnston, D. W., & Shields, M. A. (2014). Does childhood predict adult life satisfaction? Evidence from British cohort surveys. *The Economic Journal, 124*(580), F688–F719.
- Gerhardt, S. (2014). *Why Love Matters: How Affection Shapes a Baby's Brain* (2nd ed.). London: Routledge.
- Giuntella, O., McManus, S., Mujcic, R., Oswald, A. J., Powdthavee, N., & Tohamy, A. (2023). The midlife crisis. *Economica, 90*(357), 65-110.
- Glenn, N. (2009). Is the apparent U-shape of well-being over the life course a result of inappropriate use of control variables? A commentary on Blanchflower and Oswald. *Social Science and Medicine, 69* (4): 481–485.
- Graham, C., & Pinto, S. (2019). Unequal hopes and lives in the USA: Optimism, race, place, and premature mortality. *Journal of Population Economics, 32*(2), 665-733.
- Graham, C. & Ruiz Pozuelo, J. (2017). Happiness, stress, and age: How the U curve varies across people and places. *Journal of Population Economics, 30* (1): 225-264.
- Grof, S. (1985). *Beyond the brain: Birth, death, and transcendence in psychotherapy*. State University of New York Press.
- Grözinger, G. & Piper, A. (2019). Gender(un)gleichheit im Lebensverlauf. *Wirtschaftsdienst, 99*: 272–277.
- Gundert, S., & Hohendanner, C. (2014). Do fixed-term and temporary agency workers feel socially excluded? Labour market integration and social well-being in Germany. *Acta Sociologica, 57*(2), 135-152.
- Hannan, J. (2023). *The Midlife Crisis Handbook*. Morency Limited.
- Hagerty, B. B. (2016). *Life Reimagined*. Riverhead Books.
- Haidt, J. (2024) *The Anxious Generation. How the Great Rewiring of Childhood is Causing an Epidemic of Mental Illness*, Penguin, Random House.
- Helliwell, J.F., Huang, H., Norton, M.B., Wang, S. (2019). Happiness at Different Ages: The Social Context Matters. In: Rojas, M. (eds) *The Economics of Happiness*. Springer, Cham.
- Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological science, 25*(7), 1482-1486.
- Hollis, J. (1993). *The Middle Passage: From misery to meaning in midlife*. Inner City Books.
- Hollis, J. (2023). *A Life of Meaning: Relocating Your Center of Spiritual Gravity*. Sounds True.

- Howker, E. & Malik, S. (2010). *Jilted Generation: How Britain has Bankrupted its Youth*. London: Icon Books.
- Jamieson, A. (2022). *Midlife: Humanity's Secret Weapon*. London: Notting Hill Editions.
- Jaques, E. (1965). Death and the midlife crisis. *Int. J. Psychoanal.* 46 (4): 502-514.
- Jung, C. G. (1965). *Memories, dreams, reflections*. New York, NY: Vintage Books.
- Jung, C. G. (1967). *Symbols of Transformation* (2nd ed., Vol. 5). Princeton University Press.
- Kennedy, Q., Mather, M., & Carstensen, L. L. (2004). The Role of Motivation in the Age-Related Positivity Effect in Autobiographical Memory. *Psychological Science*, 15(3), 208–214.
- Kernberg, O. (1975). *Borderline conditions and pathological narcissism*. New York: Jason Aronson.
- Kim, E. S., Strecher, V. J., & Ryff, C. D. (2014). Purpose in life and use of preventive health care services. *Proceedings of the National Academy of Sciences*, 111(46), 16331-16336.
- Koizumi, M., Ito, H., Kaneko, Y., & Motohashi, Y. (2008). Effect of having a sense of purpose in life on the risk of death from cardiovascular diseases. *Journal of epidemiology*, 18(5), 191-196
- Kratz, F. & Brüderl, J. (2021). *The Age Trajectory of Happiness*, working paper.
- Lachman, M. E. (2004). Development in midlife. *Annual Review of Psychology*, 55, 305–331
- Lachman, M. E. (2015). Mind the gap in the middle: A call to study midlife. *Research in Human Development*, 12(3-4), 327–334.
- Lachman, M. E., Röcke, C., & Ryff, C. D. (2008). Realism and illusion in Americans' temporal views of their life satisfaction: Age differences in reconstructing the past and anticipating the future. *Psychological Science*, 19(9), 889-897
- Layard, R., Clark, A. E., Cornaglia, F., Powdthavee, N., & Vernoit, J. (2014). What Predicts a Successful Life? A Life-course Model of Well-being. *Economic Journal*, 124(580), F720–F738.
- Lepinteur, A., & Piper, A. (2023). Well-Being Over the Work Life. In K. F. Zimmermann (Ed.), *Handbook of Labor, Human Resources and Population Economics*. Springer.
- Levy, B. R., Slade, M. D., Kunkel, S. R., & Kasl, S. V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology*, 83(2), 261–270.
- Lukianoff, G. & Haidt, J. (2019). *The coddling of the American mind: How good intentions and bad ideas are setting up a generation for failure*. Penguin Press.
- McAdams, D. P., Ruetzel, K., & Foley, J. M. (1986). Relations among social motives, ego development, and adults' plans for the future. *Journal of Personality and Social Psychology*, 50(4), 800-807.
- Mather, M., & Carstensen, L. L. (2005). Aging and motivated cognition: The positivity effect in attention and memory. *Trends in Cognitive Sciences*, 9(10), 496–502.
- Mogilner, C., Kamvar, S., & Aaker, J. (2011). The shifting meaning of happiness. *Soc. Psychol. Personality Sci.*, 2 (4): 395-402. <https://doi.org/10.1177/1948550610393987>
- O'Connor, M. (2010). Life Beyond School: The role of school bonding in preparing adolescents for adulthood. *Independence*, 35(1), 24-28.

- Odermatt, R., & Stutzer, A. (2019). How accurate are people in predicting their future life satisfaction? *European Economic Review*, 17(1), 245-283.
- Oswald, A.J. & Tohamy, A. (2017). Female suicide and the concept of the midlife crisis. *SSRN Electronic Journal*.
- Perls, F. S. (1969). *Ego, Hunger, and Aggression: The Beginning of Gestalt Therapy*. Random House.
- Piper, A. (2015). Sliding down the U-shape? A dynamic panel investigation of the age-well-being relationship, focusing on young adults. *Social Science and Medicine*, 143: 54-61.
- Piper, A. T. (2016). Sleep duration and life satisfaction. *International Review of Economics*, 63(4), 305-325.
- Piper, A. (2021). Temps dip deeper: temporary employment and the midlife nadir in human well-being. *The Journal of the Economics of Aging*, 19: 100323.
- Piper, A. (2021). An empirical investigation of the empty nest syndrome. SOEPpapers on Multidisciplinary Panel Data Research, 1119. DIW Berlin, The German Socio-Economic Panel (SOEP).
- Piper, A. (2022). What does dynamic panel analysis tell us about life satisfaction? *Review of Income and Wealth*.
- Piper, A., & Jackson, I. (2017). She's leaving home: A large sample investigation of the empty nest syndrome. SOEPpapers on Multidisciplinary Panel Data Research, 910. DIW Berlin, The German Socio-Economic Panel (SOEP).
- Polden, J. (2002). *Regeneration – Journey through the Mid-life Crisis*. London: Continuum.
- Rauch, J. (2018). *The Happiness Curve: Why Life Gets Better After 50*. New York, NY: St. Martin's Press.
- Reed, A. E., & Carstensen, L. L. (2012). The theory behind the age-related positivity effect. *Frontiers in Psychology*, 3, Article 339.
- Schwandt, H. (2016). Unmet aspirations as an explanation for the age U-shape in wellbeing. *Journal of Economic Behavior and Organization*, 122: 75–87.
- Setiya, K. (2017). *Midlife: A Philosophical Guide*. Princeton University Press.
- Slater, C.L. (2003). Generativity Versus Stagnation: An Elaboration of Erikson's Adult Stage of Human Development. *Journal of Adult Development*, 10(1), 53-65.
<https://doi.org/10.1023/A:1020790820868>
- Stein, M. (2014). *Midlife: Crisis, anger, & change*. Chiron Publications.
- Teas, E., Friedman, E., & Amireault, S. (2022). Purpose in life and personal growth: The unique and joint contribution of physical activity and basic psychological needs. *Applied Psychology: Health and Well-Being*, 14(3), 795-818.
- Twenge, J.M. (2007). *Generation Me: Why today's young Americans are more confident, assertive, entitled--and more miserable than ever before*. New York: Free Press.
- Weiss A., King J.E., Inoue-Murayama, M., Matsuzawa, T. and Oswald, A.J. (2012), 'Evidence for a midlife crisis in great apes consistent with the U-shape in human well-being', *Proceedings of the National Academy of Sciences*, 109, 49, pp. 19949–19952.

van Scheppingen, M. A., & Leopold, T. (2020). Trajectories of life satisfaction before, upon, and after divorce: Evidence from a new matching approach. *Journal of Personality and Social Psychology*, 119(6), 1444–1458. <https://doi.org/10.1037/pspp0000270>

Wethington, E. (2000). Expecting stress: Americans and the “midlife crisis.” *Motivation and Emotion*, 24(2), 85–103.

Winnicott, D. W. (1974). Fear of breakdown *International Review of Psycho-Analysis*, 1(1-2), 103–107.

Wunder, C., Wiencierz, A., Schwarze, J., & Küchenhoff, H. (2013). Well-being over the life span: Semiparametric evidence from British and German longitudinal data. *The Review of Economics and Statistics*, 95: 154–167.

Zweig, C. (2021) *The inner work of age: Shifting from role to soul*. Park Street Press.