De Ethica (2024) 8.2:33–43
https://doi.org/10.3384/de-ethica.2001-8819.248233

On Age

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Age is determined by the amount of time that someone or something has existed. For example, a person born in 1980 and a 1980 vintage wine would each be 40 years old in 2020. Recently, Joona Räsänen has challenged this belief, arguing that in some cases one's age is not determined by how long one has existed, but by some feature or set of features about one's biology, experiences, and/or beliefs about themselves. In many cases, age is an ad hoc indicator of physical health, psychological development, and the like, but for Räsänen, it seems age isn't merely an indicator of such things; it's derived from these things! Here I argue Räsänen's alternatives to chronological age are ontologically burdensome and inconsistent with our intuitions in both normal and weird cases.

Introduction

Age is determined by the amount of time that someone or something has existed. In the year 2020, a person born in 1980 would be 40 years old, and we can say the same about a 1980 vintage wine.[1] Often, you can learn a lot about a person or thing by its age; for example, you can make educated guesses about one's health and life experiences by their age in much the same way you might make educated guesses about the flavor and chemical composition of a wine by its age.

We often use age as an *ad hoc* indicator of physical or mental capabilities. For example, you might expect a 12-year-old child to be able to reach higher shelves, carry more books, run further distances, or eat more than a 6-year-old child. Similarly, you might expect a 21-year-old adult to be a safer driver, more informed voter, and more responsible drinker than a 16-year-old teenager. By the same token, one might chastise a 21-year-old adult for acting immaturely by telling them to "act your age," or compliment a studious child by saying they are "wise beyond your years."

Recently Joona Räsänen (2019a, 2019b, 2020) has challenged this chronological account of age, and proposed a variety of alternatives – a biological account (2020), experiential account (2020), emotional age (2019a), and physiological age (2019a) – and suggested that a legal age might be a category plausibly be divorced from chronological age, to prevent discrimination (2019a) or better reflect their medical needs (2019b). His position seems to be informed by recent work in the medical field that draws a distinction

[1]Some people believe that human beings and many other organisms come into existence at conception, or soon afterwards, rather than birth. If this is true, humans can be said to be about 9 months older than generally reported. This inexactness is understandable, as while one's birth date is generally known, one's conception date is often less certain. As such, I don't think this inexactness should be taken to suggest that we generally believe that we come into existence at birth, only that it's easier for the bookkeeping if we treat this as such.

between chronological age and biological age (Goggins WB, Woo J, Sham A, *et al*., 2005; Jylhävä J, Pedersen NL & Hägg S., 2017; Mitnitski AB, Graham JE, Mogilner AJ, *et al*., 2002). Räsänen further bolsters his analysis with engaging thought experiments about strange cases in which he thinks our intuitions about a subject age might differ from their chronological age (2020).

Though engaging, Räsänen's analysis seems to go awry. Iain Brassington (2019) argues that Räsänen mistakes figurative speech for literal. Similarly, Toni C. Saad (2019) argues that the relationship between chronological age and Räsänen's alternatives is one of analogy. William Simkulet (2019) argues that Räsänen's alternatives to chronological age are confused and morally irrelevant.

Here, I raise new objections to Räsänen's analysis. Notably, Räsänen's proposed alternatives to chronological age are somewhat vague, but also seem to be quite ontologically burdensome. He seems to believe that talk about age for living and non-living things are radically different enterprises, such asking the age of a bottle of wine is a completely different kind of question than asking the age of a living thing. Furthermore, they seem prohibitively complex, seemingly jumping through hoops to correlate with chronological age in normal cases.

In short, Räsänen's alternatives to chronological age are inconsistent with our intuitions about age and aging in most cases, take metaphorical speech literally, and largely seem aimed at turning age from merely an *ad hoc* indicator of health, well-being, competence, or the like into something derived from one or more of those things.

I. Psychological Accounts of Age

When discussing alternative accounts of age, it seems customary to begin the discussion with a case in which chronological age might sensibly differ from our intuitions. Räsänen (2019a) begins with a discussion of Dutchman Emile Ratelband, at the time 69, who asked the government to change his date of birth by twenty years to better reflect his emotional state, in an effort to prevent ageist discrimination preventing him from finding work and love.

In the same vein, I think it's appropriate to begin this discussion with an adaptation of the story of another dutchman, Rip Van Winkle:

> *Rip Van Winkle*: Rip Van Winkle, born 1734, was a kind, but lazy fellow. In 1764, his wife berates him for sleeping 16 hours a day, and he heads off to the mountains for some respite. There, he meets a fellow dutchman in old fashioned clothing and they share a drink. Soon after, Rip falls asleep, only to awaken in 1784, with a long gray beard and body to match. (Adapted from Washington Irving's *Rip Van Winkle*)

According to the commonsense account of age, it is (normally[2]) a simple matter to discern one's age; you simply subtract one's birthdate from the current date to determine one's

[2]I think our commonsense account of age is robust enough to handle abnormal cases in which age cannot be reliably determined by subtracting one's birth date from the current date. Two such cases are time dilation and time travel stories.
Time dilation is the phenomena predicted by the theory of special relativity by which time slows down as one's speed increases, such that if you synchronize two clocks and place one of them in a fast-moving vehicle, such as an airplane or shuttle, the two clocks will become unsynchronized, with the clock in the vehicle having experienced less time than the (relatively) stationary clock. Although this

age. For example, Rip falls asleep in 1764 and was born in 1734, so he is 30 years old when he goes missing. By the same token, it makes sense to say that he is 50 years old when he awakens in 1784.

Räsänen calls this account of aging the chronological account:

> *Chronological account:* the amount of time one has been alive determines how old one is. (Räsänen, 2020, 3)

Oddly, Räsänen's account of chronological age only applies to living things, excluding non-living things. This account of chronological age is *prima facie* inconsistent with how we often talk about age; as it makes sense to say that non-living things like wine, automobiles, philosophical writings, and the like have an age, and that their age is at least *prima facie* determined in the same way as the age of a living thing. As such, a better account of (chronological) age might be:

> *Inclusive chronological account:* the amount of time that a person or thing has existed.[3]

On either chronological account, Rip is 50 when he awakes; but Räsänen proposes an alternative in which Rip would only be 30.

> *Experiential account:* The amount of time one has been conscious and lived her life determines how old one is. (Räsänen, 2020, 4)

On this view, Rip has only "lived" 30 years (1734-1764), so when he awakes in 1784, he has an experiential age of 30, despite his chronological age being 50.

I find two things interesting about Räsänen's account of experiential age. First, though presented as an alternative to the chronological account, the experiential account of age *is* a chronological account, but one that only counts some of the time that one has existed – the time that one has experienced, or lived, their life.

Second, this experiential account seems to be more figurative than literal. The average person spends a good portion of their life asleep – let's say they sleep 8 hours a day, or 1/3rd of their life – therefore a typical chronologically 30-year-old person would *literally* have an experiential age of 20 (as they've slept for about 10 years of their life). The problem with literal experiential age is that it is (practically) never consistent with how we speak about age.

phenomenon may initially appear bizarre, intuitively our commonsense account of time asks us to track the time tracked by the individual clocks.

By the same token, our commonsense account of time is easy to grasp science fiction and fantasy stories involving time travel, whether a person travels back in time to before they were born, skips to the future, or relives the same day over and over again. As with time dilation, merely subtracting one's birth date from the current date is insufficient to calculate age in these stories, but, as with time dilation, our commonsense account of age will count the time that actually passes for these atypical time travelers.

[3] In most cases, Räsänen's chronological account and this one yield the same numbers for people; though Räsänen constructs a case in which they might yield different accounts. In *Cryopreservation while dead* (2020, 3) Bianca is killed at age 40, her body is frozen, and she is revived 50 years later. According to Räsänen's account, Bianca has been alive for 40 years, and dead for 50, so she's chronologically 40; while according to this account she's existed for 90 years, so she's chronologically 90. However, it's not clear that Räsänen's case is as described; by definition, death is often said to be irreversible (DeGrazia, 2017), but suppose scientists were able to breathe "new life" into Bianca, it's not clear that she would be the same person. If death is irreversible and Bianca is the same person, then she has been alive for 90 years, although near-death for 50 of it.

Yet, Rip sleeps 16 hours a day, so when he is chronologically 30 years old, while Räsänen would have us believe he's (figuratively) experientially 30 years old before (and after) his big sleep; he's (literally) experientially 10 years old; but this is ridiculous. It wouldn't make sense to say that chronologically 30-year-old Rip is half the age of a normal chronologically 30-year-old person merely because he sleeps twice as long!

Furthermore, keep in mind that even if people, on average, get 8 hours of sleep a night, this varies from person to person and night to night, so it would be practically impossible to calculate how old any person is according to the experiential account. But this is absurd; most people are rather confident that they know how old they are, but on this account, the only way one could really know their experiential age is to keep track of their waking and sleeping states and do copious amounts of math. I dare say that if the experience account of age is correct, no one has ever known their own age!

In short, though the experiential account is *prima facie* plausible, it seems to fall apart upon analysis. Räsänen seems committed to the idea that under normal circumstances, a chronologically 30-year-old will be experientially 30 years old as well. Räsänen asks us to consider the following case:

> *Alex:* Alex, chronologically age 40 in 2020, suffers from a disease with no cure. She is cryopreserved until the 2070, when a cure is discovered, and she is revived and treated. She has no recollection of the time she spent in cryopreservation. (Adapted from Räsänen 2020, 2)

One way to read Räsänen here is that he's not concerned with the amount of time one has actually experienced, but rather the amount of time one can experience things as normal. One solution here is to evoke the distinction between first-order and second-order capacities used by substance view theorists (Lee, 2004; Lee and George, 2008; Friberg-Fernros, 2015, 2018).[4] To have the *first-order capacity* to do x is to have the immediate ability to do x when prompted, while to have the *second-order capacity* to do x is to have the ability to do x at some point in the future should the right conditions obtain. For example, during the summer, an oak tree has the first-order capacity to photosynthesize, but during the winter, when it has lost its leaves, it only has the second-order capacity to photosynthesize – it can begin photosynthesis only after it comes out of hibernation, not immediately.

From 1980 to 2020, we might say that Alex possesses the first-order capacity to have conscious experiences, even when she's asleep. However, from 2020-2070, while she is cryopreserved, we might say that Alex lacks the first-order capacity to have conscious experiences despite having the second-order capacity to have conscious experiences (should she be revived).[5] When Alex is revived in 2070, the revival process restores her first-order capacity to have experiences. By the same token, we might contend that

[4] While the distinction between first-order and second-order capacities may be practical in other areas, substance view theorists use the distinction to argue that human fetuses, from conception, are inherently rational substances despite lacking the first-order capacity to engage in reason. Substance view theorists believe human beings are inherently rational substances, and that any substantial change that would add or remove rationality results in the destruction of one substance and the creation of another. However, they also believe that human fetuses are numerically identical to the first-order rational persons that they develop into. As such, they contend that (most) human fetuses have the second-order capacity to engage in reason, or the capacity to engage in reason (without substantial change) should certain conditions obtain.

[5] Räsänen might say the same about Bianca in *Cryopreservation while dead* (2020, 3), but this assumes that Bianca exists when she's dead, seems to be *prima facie* inconsistent with how we think of death.

someone in a reversible coma lacks the first-order capacity for conscious experience but has the second-order capacity for conscious experience.

Similarly, from 1734-1764, Rip possesses the first-order capacity to have conscious experiences, even though he sleeps more than normal; as such Räsänen could argue Rip has an experiential age of 30 in 1764. However, Rip *also* sleeps from 1764-1784!

If Rip was cryopreserved, or in a coma, or perhaps cursed like Charles Perrault's Sleeping Beauty, we might say that he lacks the first-order capacity for conscious experience, but for all we know Rip's sleep is merely quantitatively different than normal, not qualitatively different. If it is quantitatively different, Rip is 50, but if it qualitatively different (and he can't awaken), Rip is merely 30.

This wild discrepancy between (experiential) age in the story of Rip Van Winkle highlights a problem with an appeal to the distinction between first and second order capacities in general; specifically they seem to shift the focus from the topic at hand – in this case experiences – to some hypothetical underlying capacity that it not as clearly relevant or desirable – the capacity to have experiences… provided that such and such conditions obtain.

Räsänen proposes an experiential account of age to better capture our intuitions in strange cases where he thinks our intuitions about chronological age are dubious; yet it seems that he does not actually believe that experiential age is determined by the amount of time one has actually experienced. Instead, it is as though he wants one's experiential age to match the chronological age of a normal person with similar experiences.

For example, if the average person spends 2/3rds of their time conscious, the average 30-year-old would have 20 years of conscious experience, so they would be both chronologically 30 and experientially 30. However, by stipulation, Rip only spends 1/3rd of his time conscious, so in 1764 he has only had 10 years of conscious experiences, akin to someone whose chronological age is 15. Rip can say the same in 1784, when he awakens from his long slumber, so on this account he would have an experiential age of 15 before the slumber and 15 afterwards. But a normal person who faces Rip's bizarre circumstances would have an experiential age of 30 before and after their slumber.

It strikes me there are two substantive problems with the experiential account of age. First, both interpretations of the experiential account discussed above go to great lengths to make sure that chronological age and experiential age *normally* match up – in both cases introducing conceptual extra steps to make sure that the time a normal person lacks experiences counts towards their experiential age.

The chronological account is far more parsimonious than either of these interpretations of the experiential account, and has the same explanatory power, barring weird cases. Of course, Räsänen introduces weird cases to illustrate that the chronological account of age is incompatible with our intuitions; but John T. Wilcox (1989/1993) rather infamously argued that we cannot trust our intuitions in weird cases. Of course, David Boonin (2002) argues that hypothetical cases are essential tools for philosophers, so we cannot reject weird cases in their entirety. Still, our intuitions are informed, largely, by familiar situations, so the fact they are *prima facie* inconsistent with a weird case is not necessarily sufficient to justify an unparsimonious overhaul of our concept of aging, let alone one inconsistent with our intuitions in familiar cases – like our intuitions about the age of non-living things. A *prima facie* plausible theory of age should be consistent with both our everyday use of the concept and sensibly applicable to unfamiliar, but coherent, situations. It's far from obvious as to whether Räsänen's alternatives to the chronological

account of age fare better at explaining unfamiliar situations, but they certainly fail to be consistent with how we talk about age in normal, everyday situations.

This leads to my second concern; the experiential account seems to exclude a wide variety of living things that exist but lack experiences – plants, fungi, bacteria, and simple animals. Furthermore, it suggests that experiential age may be relative to one's species. In short, rather than age being a universal concept that applied to everyone and everything, on this view there are many different kinds of aging, each picking out a distinct concept, but (thus far) all related to chronological time.

Räsänen (2019a) offers an experience-adjacent account of age, what he calls "emotional age" or (oddly) "experienced age" (Räsänen, 2019a, fn iv). For the sake of differentiating it from his (2020) experiential account, I will refer to it by the first of these names:

> *Emotional age:* the age someone feels and identifies himself. (Räsänen, 2019a, fn iv)

Brassington contends it's difficult to tell what Räsänen means by emotional age (2019, 468), while Simkulet contends that Räsänen seems to be concerned with something like emotional maturity (2019, 469). However, as presented, emotional age has nothing to do with emotion or experience. Instead, it seems to be an oddly compound concept; one's emotional age is the (chronological) age one (i) feels like and (ii) self-identifies as.

For example, at (chronological) age 69 Ratelband wished to self-identify as 49 (by way of deceiving people about his actual date of birth); but this only satisfies *part* of Räsänen's account of emotional age; to genuinely have an emotional age of 49, Ratelband must also feel himself to be chronologically aged 49. But this makes no sense, as Ratelband knows he is chronologically 69. At best, as Saad notes, one might believe that they, temporarily or permanently, possess a status typically associated with a person of a different age (2019, 465).

If we take Räsänen's naming convention seriously, perhaps he means that Ratelband must not only self-identify as 49, but also believe that he is either emotionally or experientially comparable to someone whose chronological age is 49. Of course, chronological age may correlate with emotional maturity or a certain quality or quantity or diversity of experiences, but as is evidenced by the child "wise beyond their years" or adult told to "act their age", one's emotional or experiential background is different from what we normally mean by age.

As with experiential age above, here I think Räsänen means that a person must feel that they are comparable to how a normal person feels at a certain age; Ratelband would need to believe that he's more like the normal chronological 49 year-old than any other age. But what does this mean? Consider the following case:

> *Neil:* Neil is an atypically bright and emotionally mature chronologically 15-year-old who earned his doctorate at a young age. Neil argues that he should be allowed to vote in the presidential election because his emotional maturity, experiential diversity, and extensive educational background far exceeds that of the normal citizen eligible to vote.

(Chronological) Age is often used as an *ad hoc* indicator of emotional, physical, and intellectual maturity, as well as an indicator of competence and (legal and/or moral) culpability. However, just because many (chronologically) 15-year-olds aren't competent enough to vote responsibly doesn't mean that they all are.

Suppose Neil were to follow in Ratelband's footsteps and appeal for legal age change; what age would Neil self-identify as? Different states have different voting age requirements; one state might require voters to be 18, and another 16. But Neil contends he's more competent than a normal citizen, whose chronological age might be somewhere in the 30s or 40s.

The problem here is that emotional maturity, as well as other metrics, seems to plateau as one ages, such that while there may be a wide gap between an average 5-year-old and 10-year-old; there may be no appreciable gap between an average 25-year-old and 30-year-old. Similarly, Ratelband may wish to self-identify as 49, but whatever he believes (accurately or not) about his emotional state, he cannot sensibly believe that he is substantively more like a 49-year-old than a 44-year-old or 54-year-old; as emotional maturity usually plateaus far before one hits their 40s.

That said, like Brassington, I'm not sure I know what it feels to be a certain age (2019, 468); I know what it feels like to be me, and (I think) I know my own age, but I have no way of knowing how other people feel at my own chronological age. Suppose an adopted child believes themselves to have been born 20 years ago, but it turns out they were really born 21 years ago; would they feel like they are 20 or 21?

Perhaps a bigger problem with emotional age is that it seems to be yet another account of aging that serves to exclude; according to Räsänen's definition, someone who self-identifies differently than they feel simply has no emotional age. A 16-year-old who think they feel like an 18-year-old and self-identifies as a 21-year-old to buy beer has no emotional age. In light of this, it seems like a mistake to say that our everyday concept of age picks out emotional age, as while most people agree that everyone (and thing) has an age, charitably only some people (and necessarily no things) have an emotional age.

II. Biological Accounts of Age.

Consider the following case, adapted from Bernard Williams's discussion of the titular character from a play by Karel Čapek (1973):

> *Makropulos*: Elina Makropulos, chronologically aged 342, took an elixir of life 300 years ago, at chronological age of 42. At that point, her body stopped showing signs of aging (no more wrinkles, no more telomere shortening, etc.); however, her mind has continued to accrue experiences. She has grown bored of life, so she decides to refrain from taking the elixir again, which will lead to her death.

Perhaps unsurprisingly, I have the strong intuition that Elina is 342 years old; but it's also easy to imagine someone mistaking her for 42. For those with the intuition that Elina might be 42, Räsänen offers another alternative account of age:

> *Biological account:* One's biological fitness and health determines how old one is. (Räsänen, 2020, 5)

This account is similar to an earlier account he calls "biological age" or "physiological age" (Räsänen, 2019a, fn iv). For the sake of differentiating it from the biological account, I will go with the latter name here:

> *Physiological age:* The age one's body and mind appear to others by objective measures. (Räsänen, 2019a, fn iv)

For all intents and purposes, this account of physiological age is a hodgepodge of nonsense. Like emotional age, physiological age seems to be a compound concept; one's physiological age requires that their (i) bodily age and (ii) mental age appear to others to correspond. However, whereas emotional age seems to be determined internally, physiological age seems to be determined externally, though Räsänen doesn't say much about the criteria by which others might judge bodily and mental age. And, as with emotional age, some people will just lack physiological age when there is a mismatch between how their body and mind appear to external observers.

When Alex emerges from cryopreservation, we might expect her to look and act much as she did when she went in at the (chronological) age of 40. Thus, assuming Alex looks and acts her (chronological) age, she would have a physiological age of 40 despite having a chronological age of 90.

However, when Rip awakens from his 20-year slumber, while he acts the same, he looks much older, so he simply has no physiological age on this view.

But what of Elina? To others, her body looks 42. Though Williams tells us she is more world-weary than one might expect from a 42-year-old, in Čapek's story she has become adept at deceiving others about her true (chronological) age; as such we might expect that Elina, though possessing the world-weary mind of a 342-year-old, appears to others as a 42-year-old by at least some objective criteria. If age is determined by how one appears to others, as the physiological account seems to require, then Elina is 42.

Of course, the primary problem with the physiological account is that it's not concerned with how things are, but how things appear to be. Elina might appear to have a mind comparable to an average 42-year-old, but her mind is, by objective measures such as those relevant to experiential age, clearly much older than that.

However, her body both appears, and by some objective measures is, comparable to that of an average 42-year-old (that is, if we assume Elina's body was average when she first took the elixir)!

The primary problem with the physiological account is that it focuses on appearance, rather than how things are. Because Elina can pass as mentally and physically chronologically 42, she has a physiological age of 42 on this account. However, if we're worried about how things actually are, as presumably any theory of age should be, Elina is not 42.

Fortunately, Räsänen's account of biological age seems to be concerned with how things are – actual facts about an agent's biology. Simkulet contends that rather than physiological age, Räsänen would be better off talking about physical maturity (2019, 469), but while chronological age can be used as an *ad hoc* indicator of physical maturity, much like with emotional maturity, it seems to plateau at a point, making assigning particular biological ages a foolish proposition.

Brassington, however, argues that this kind of discussion of bodily and emotional age is meant figuratively.

> When we say that a 50-year-old has the body of a 40-year-old, we are—again—speaking figuratively. We mean that their body displays the kinds of things that we would typically expect of someone of that age. We do not mean that they are in any way actually younger or that anyone would be mistaken to think that the date on their birth certificate is a reliable guide to their age. (2019, 468)

Brassington's analysis seems to be quite consistent with how we might speak of Rip; he awakens after a 20-year-old nap and in Washington Irving's original story, he falls back

into his old habits. But we can talk sensibly about Rip without knowing everything about how his brain and mind function, or whether being off his feet for 20 years might have given him better than average posture for his chronological age due to his inaction.

One might joke that a rich person's hands are child-like as they show no signs of labor compared to a carpenter of the same chronological age, but we wouldn't argue that this means labor artificially ages us, or that lack of labor arrests the aging process.

In response to this criticism, Räsänen (2019b) contends that the medical field introduced the idea of biological age to help categorize and address a variety of biomedical issues (Goggins WB, Woo J, Sham A, *et al.*, 2005; Jylhävä J, Pedersen NL & Hägg S., 2017; Mitnitski AB, Graham JE, Mogilner AJ, *et al.,* 2002). That said, Räsänen neglects to address the issue of whether such jargon is merely figurative, an attempt to better categorize patients based on their capacities and treatment needs rather than appealing to chronological age as an *ad hoc* indicator of such things.

Furthermore, even if biological age turns out to be a sensible medical category, Räsänen has yet to give reasons to suggest that talk about age in normal, especially nonmedical, capacities is best understood as talk about biological age.

As technology progresses, and we find ways to seemingly arrest the aging process, as Elina's fictional elixir does, chronological age would naturally become less useful an *ad hoc* indicator of medical need, wisdom, retirement, and the like. However, this should come as no surprise; such technologies would be largely aimed at fixing, arresting, or otherwise addressing common issues faced as one (chronologically) ages normally; often aimed at making the prospect of growing (chronologically) older less problematic.

This inexorable march of medical progress, however, undermines the medical practicality of Räsänen's account of biological age. For example, we have good reason to think the average (chronologically) 60-year-old person in 2020 is in substantively better health than the average (chronologically) 60-year-old person was in 1920, etc. Perhaps a complete account of biological age will talk about an average person, *sans* medical intervention, but given how small changes in our daily lives correct or prevent long term medical issues, as well as how genetics and natural selection play a part in changing what this average would be, what we expect to find with the average person of a certain (chronological) age, even *sans* medical interventions, would likely substantively change as technology, healthcare, and the spread of information progresses (or regresses). As such, biological age doesn't seem to be particularly *descriptive*, rather, as Saad argues, it seems to be one of analogy (2019, 465).

Conclusion

Räsänen (2020) ultimately contends that though chronological, experiential, and biological age are at least *prima facie* consistent with our intuitions in some cases, upon analysis each seems to have some insurmountable hurdles that render them inconsistent with how we talk about age. He goes on to propose the following:

> *The two-tier principle of age:* Whenever the accounts from chronology, consciousness, and biology contradict one another on the question of someone's age, we should seek guidance from whichever two accounts differ the least from one another, and reject whichever account. (Räsänen, 2020, 3)

In some respects, this appears to be a revised version of physiological age, with two substantive improvements. First, though he's light on the details, both experiential age and

biological age are said to be based on objective measures of how things are (rather than how they appear to be). Second, while both emotional and physiological age were compound concepts that required agreement between two options, the two-tier principle doesn't require agreement, but merely similarity between two of the three proposed accounts of aging. It's not clear exactly what Räsänen means by this; but it does mean that everyone will have an age (or, at least something like an age-range) on the two-tier principle account, while many will fail to have an age range for both emotional and physiological age.

However, Räsänen rejects the two-tier principle account as well, arguing that it is inconsistent with our intuitions in at least some cases. But this should come as no surprise; the two-tier principle account doesn't seem to be interested in picking out how we use age, merely looking for consistency between different (weird) accounts of age.

In many respects, Räsänen's two-tier principle account seems to be more of a decision-making tool than anything else; helping him to break ties in odd cases where two accounts of age match up. This is comparable to an ethicist, who when confronted with a moral dilemma, applies utilitarianism, Kantianism, and virtue theory to the dilemma then chooses the option that two of the three theories prescribe! However, utilitarianism, Kantianism, and virtue theory each offer strikingly different accounts of ethics; the utilitarian asks us to maximize happiness, the Kantian to treat people as ends, and the virtue theorist to seek a golden mean. Much like how Räsänen's competing theories of age come to the same conclusion in normal cases, these normative theories come to the same prescription in normal cases, but for vastly different reasons. Utilitarianism claims lying is wrong because it causes pain, the Kantian that lying is wrong because it treats others as means only, and virtue theory warns liars live short, unsuccessful lives. However, though all three prescribe telling the truth, they do so for very different, and often incompatible, reasons. By the same token, the two-tier principle of age owes any success it has to the fact that its component accounts of aging are arguably *prima facie* consistent with how we talk about age but fails to say anything interesting about age.

Ultimately, Räsänen contends we have to "bite the bullet" with regards to three accounts at the heart of his two-tier approach – chronological age, experiential age, and physiological age. But this simply isn't the case. Age refers to the amount of time that someone or something has existed; the only thing Räsänen needs to give up is treating age as though it is a reliable indicator of mental or physical fitness when (chronological) age is, at best, an *ad hoc* indicator of such things in normal cases. That (chronological) age is an especially poor indicator of such things in some cases (whether by coincidence, technology, or magic) is not evidence that our normal concept of age needs to be revised; only that discrimination based on age, rather than capacity, is *prima facie* immoral. Räsänen's discussions of age seem to make a metaphorical fallacy, mistaking figurative and metaphorical language about age as literal.

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