



Science & Religion: Reframing the conversation

The promise of scientific immortality: who wants to live forever?

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This research is part of the project *Science and religion: reframing the conversation* undertaken by Theos and [The Faraday Institute for Science and Religion](#). The project, funded by the [Templeton Religion Trust](#), seeks to analyse the understanding of science and of religion today, as a means of better grasping and navigating the relationship between the two. Over three years, the research team interviewed more than one hundred leading experts and commissioned a YouGov survey of 5,000 UK adults. Theos has analysed data provided by YouGov. The results can be found at www.theosthinktank.co.uk This paper is in collaboration with the Religion Media Centre, with whom the findings were discussed in a webinar which can be found on the RMC's YouTube channel: [Religion Media Centre - YouTube](#)

Summary

- Most people are not keen on the idea of 'scientific immortality' – 60% reject the idea, 19% are in favour.
- Men are consistently more in favour than women.
- The younger you are the more likely you are to want to live forever by scientific means
- The pull of scientific immortality is slightly stronger among the non-religious. The more individuals participate in religious practices (attending religious services, praying and reading holy texts) are less likely they want to live forever by scientific means.
- The same patterns apply to being cryogenically frozen (men keener than women; young keener than old), though generally speaking this was not an appealing proposition to anyone.
- The prospect of cloning oneself was no more popular, with the overwhelming number of

people against the idea.

- That noted, 11% of men agreed that they would like to clone themselves if they could, compared to only 4% of women.
- Those who were highly confident in their knowledge of science were more likely to want to clone themselves (14%) than those who have a medium (6%) or low confidence (4%) in their science knowledge.

Introduction

Over the last ten or so years, there has been a sharp rise in the number of biotech companies being set up to defeat death.¹ The super-rich, able to buy everything except eternal life, have set their sights on immortality. Billionaires such as Jeff Bezos² and Peter Thiel³ have been pouring their wealth into start-ups such as Altos⁴ and Unity Biotechnology⁵ in the hope they might “slow, halt, or reverse diseases of aging”, and by extension prolong life itself.

Billionaires are not necessarily reflective of everyday opinion. (To quote Mr Burns from *The*

Simpsons: “The man has no idea how to behave like a billionaire. Where’s the dignity? Where’s the contempt for the common man?”) How far is the enthusiasm of these super wealthy for eternal life on earth representative of wider opinion? What does Mr Burns’ “common man” think about the prospect of scientific immortality? Is there a gender difference in this? And how do these views about earthly immortality compare with those of the more traditional religious form?

It has been a popular (and well-worn) caricature that the religious urge among humans originates in our ability to imagine the future and therefore our own death. We are haunted, at least according to this story, by a profound fear of death, which we need assuaged whether by religion or by science.

So, do we fear death? Would we like to live forever? And if so, how?

Data

To explore this issue, we commissioned a YouGov survey which addressed a number of questions and statements to a nationally representative sample of UK adults. (Technical details in Appendix). Theos analysed data provided by YouGov. Questions were scored on a standard five-point scale from strongly agree to strongly disagree. We will be using the results from three of these statements in this paper:

- Q13_1 “I would like to live forever if scientists were able to engineer it.”
- Q13_3 “I would like to be cryogenically frozen after my death so I can be revived centuries later.”
- Q13_4 “I would like to clone myself if I could.”

Additionally we also asked respondents to indicate to what extent (definitely, probably, probably or and definitely not) they believed in:

- q23b_1. Life after death

The results presented and discussed at length in this paper are statistically significant at $p = \leq 0.05$ unless otherwise stated.

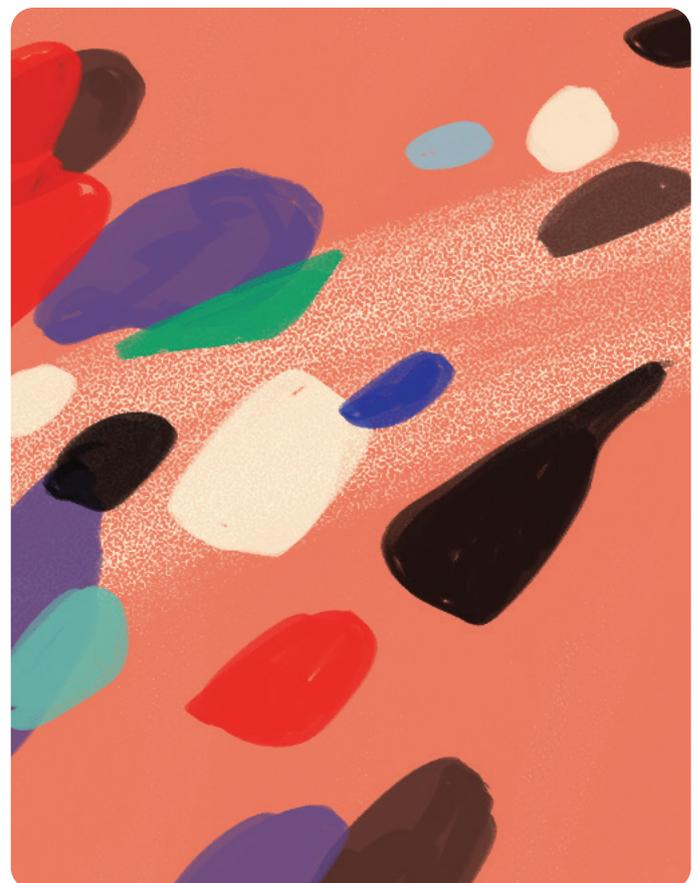
Background research

Research into death and immortality is not new. In 2018, YouGov found that 9% of Britons wanted to live till over 200 and a further 17% wanted to live

forever. Perhaps not surprisingly, younger people were the most keen on extended life spans; those over 65 least so. Broadly speaking, public opinion was quite even on this issue, although YouGov did identify an attitudinal group, which it named ‘Tech Disciples’, nearly a third (30%) of whom wanted to live forever.⁶

A survey in the US, from five years earlier, found that around one-in-ten (9%) adults said they would like to live to more than 100, 4% beyond the age of 120, but only 1% per cent forever.⁷ The study was also able to probe whether views on extreme life extension vary by religion. It found that Black Protestants were among the most likely to say radically longer life spans would be a good thing for society, 54% saying it would be, compared with 41% of mainline Protestants and 35% of white evangelical Protestants, and 31% of white Catholics.

Beyond that, there was no significant correlation between respondents’ religious beliefs and practices, and their views about the effects of radical life extension on society. There were also few differences about receiving life-extending treatments according to religious beliefs or practices, like frequency of prayer, belief in life after death, belief in God or a universal spirit, and belief in heaven or hell.

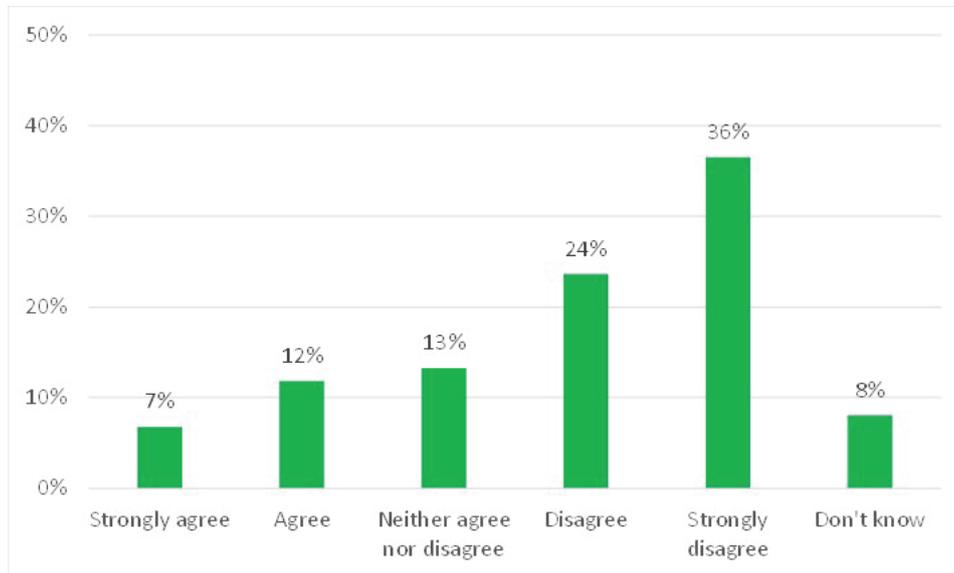


Results

Forever Young?

Our study found that the majority of individuals do not want to live forever if scientists could engineer it (see figure 1), 60% rejecting the possibility and only 19% favouring it.

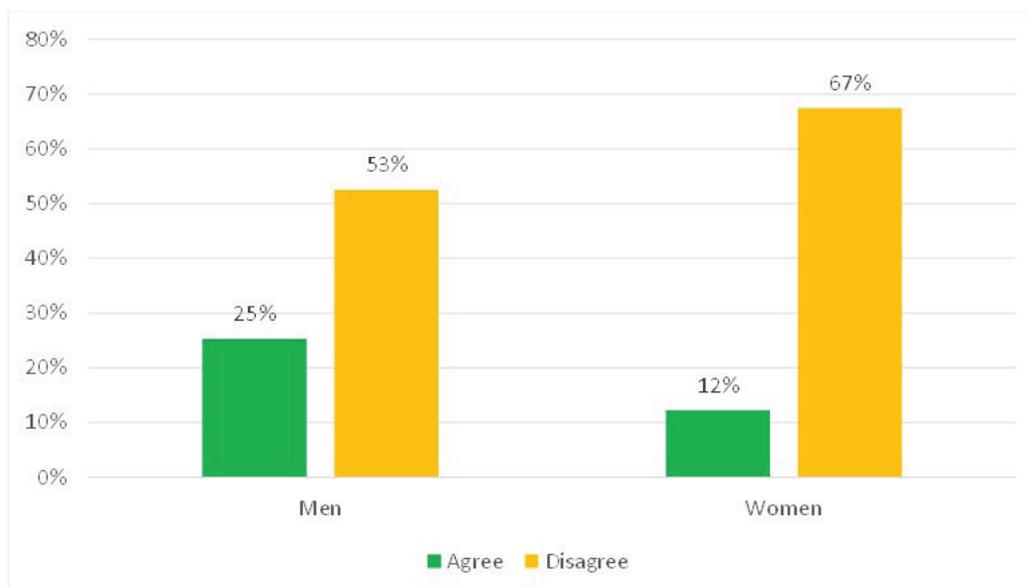
Figure 1: “I would like to live forever if scientists were able to engineer it”: by total sample.



Source: Theos/Faraday/YouGov 2022: Q13_1 (total n=5153)

Men are noticeably more likely than women to want ‘scientific immortality’: 25% vs 12% (figure 2). This trend was also discovered by the 2018 YouGov research mentioned above which found that 21% of men (vs 12%) of women want to live forever,⁸ as well as in wider academic research.⁹

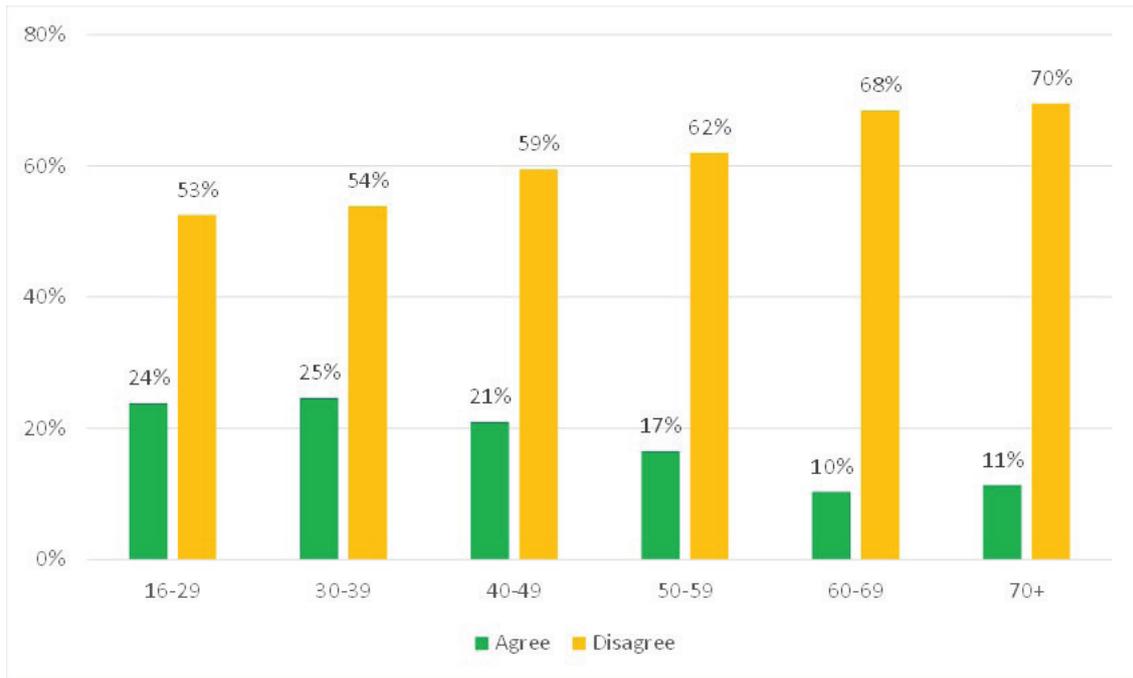
Figure 2: “I would like to live forever if scientists were able to engineer it”: by gender



Source: Theos/Faraday/YouGov 2022: Q13_1 (total n=5153)

As with previous research, we found that the younger you are, the more likely you are to want (scientifically) to live forever (see figure 3).

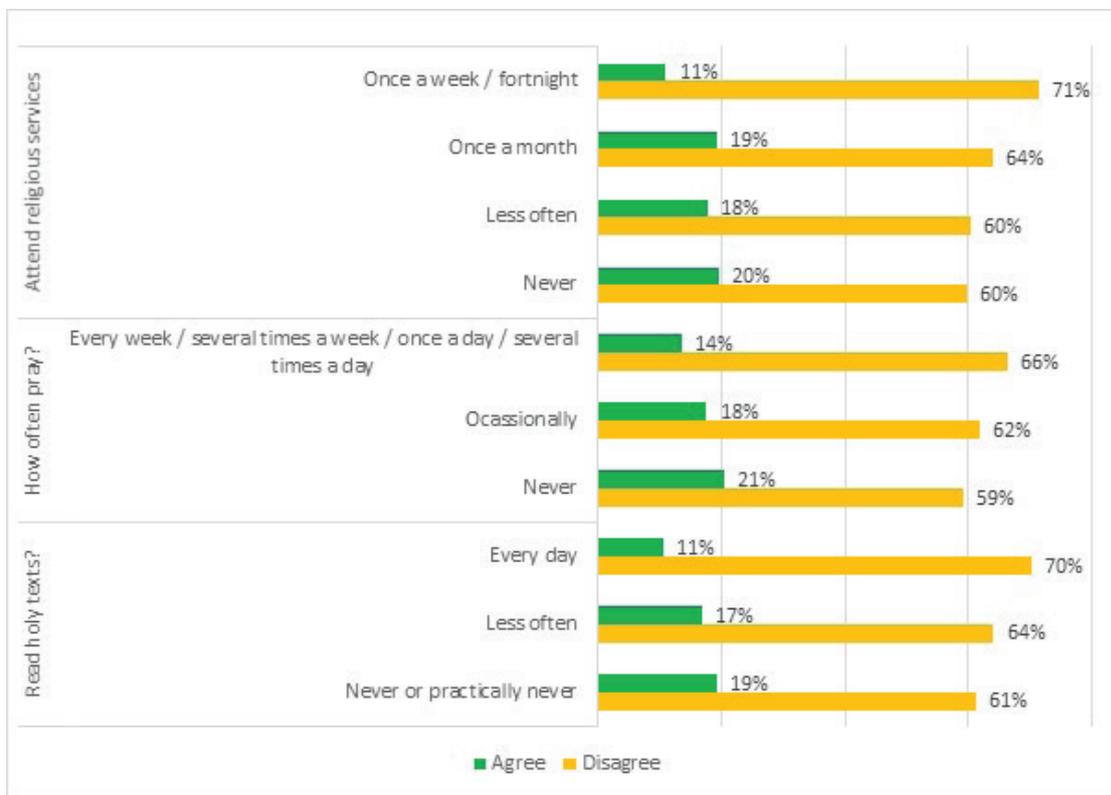
Figure 3: “I would like to live forever if scientists were able to engineer it”: by age



Source: Theos/Faraday/YouGov 2022: Q13_1 (total n=5153)

How does religious belief and practice shape this? The more individuals *participate* in religious practices (attending religious services, praying and reading holy texts) are *less likely* to agree that they would want to live forever if scientists were to engineer it.¹⁰

Figure 4: “I would like to live forever if scientists were able to engineer it”: by religious practices

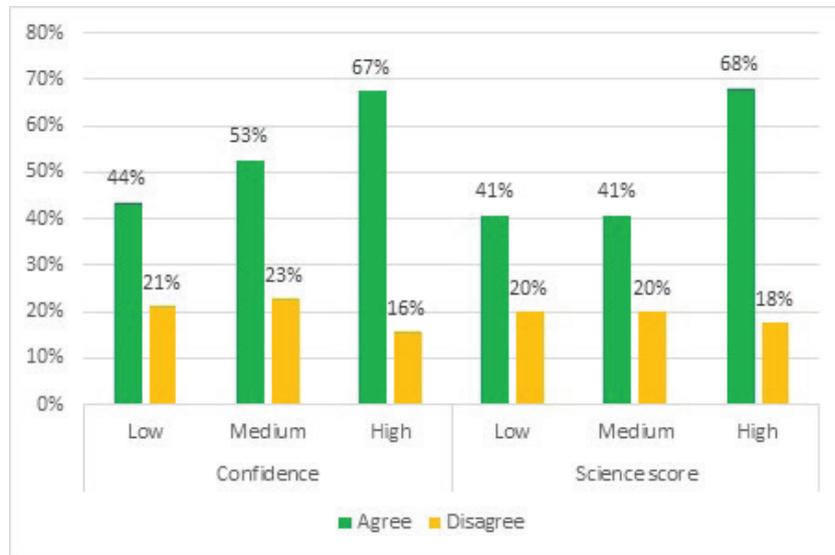


Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

In other words, the pull of scientific immortality is (slightly) stronger among the non-religious.

Finally, those with high levels of science knowledge and high confidence in their knowledge also have higher levels of agreement with the statement (68% and 67% respectively) compared to those with a medium or low science knowledge/confidence.

Figure 5: “I would like to live forever if scientists were able to engineer it”: by science knowledge/confidence



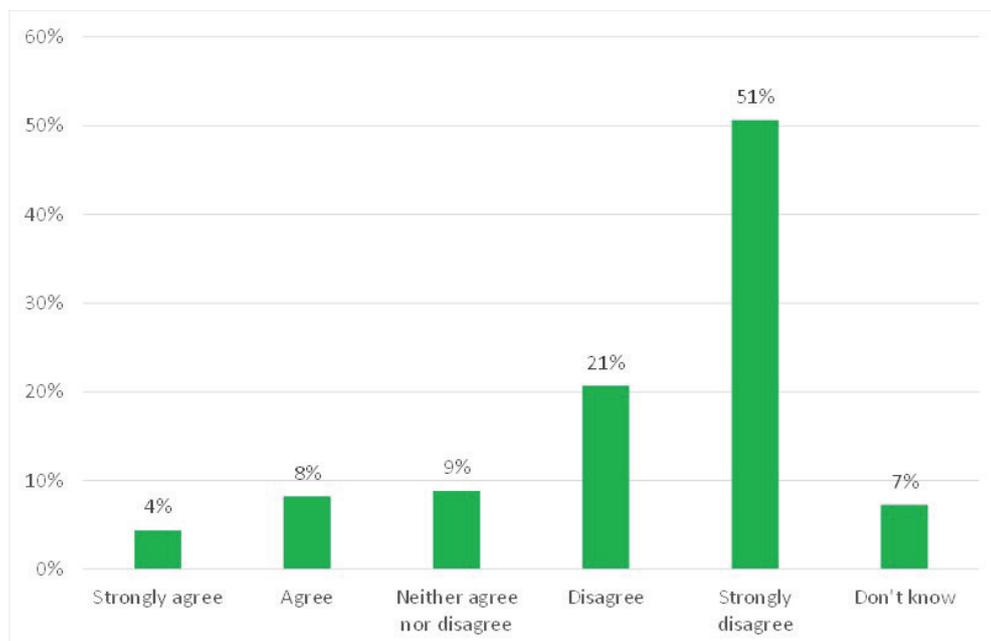
Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

Cryogenic Freezing

How might scientists be able to engineer immortality? One possible way, already in existence, is ‘cryonics’, the practice of cryogenically freezing and storing humans *post mortem* in the hope of being able to thaw and revive them at some point in the future.

We asked participants if they “would like to be cryogenically frozen after my death so I can be revived centuries later.” Perhaps not surprisingly, we found that overwhelmingly people *do not* want to be cryogenically frozen, with only 13% of individuals strongly agreeing/ agreeing that they would. (Figure 6)

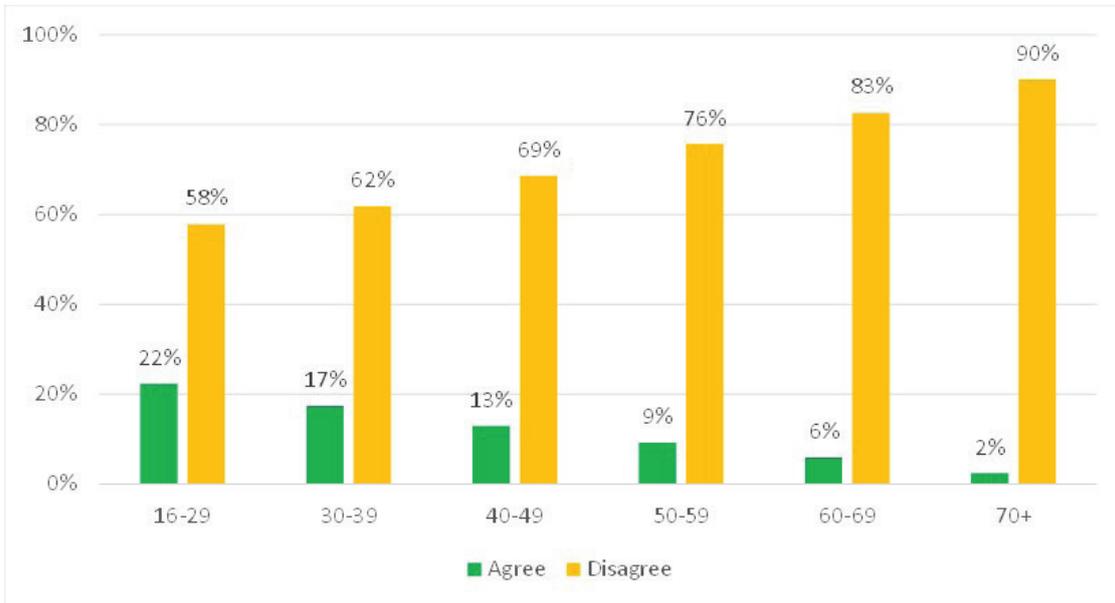
Figure 6: “I would like to be cryogenically frozen after my death so I can be revived centuries later”: by total sample



Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

The overall male inclination towards scientific immortality is evident here, with men being noticeably more likely to want to be cryogenically frozen than women (18% vs 8%). Figure 7 shows that there was also a clear age trend to this issue. Those aged 16-29 are the most likely to want to be cryogenically frozen (22%) followed by those 30-39 (17%) compared with those over the age of 40.¹¹

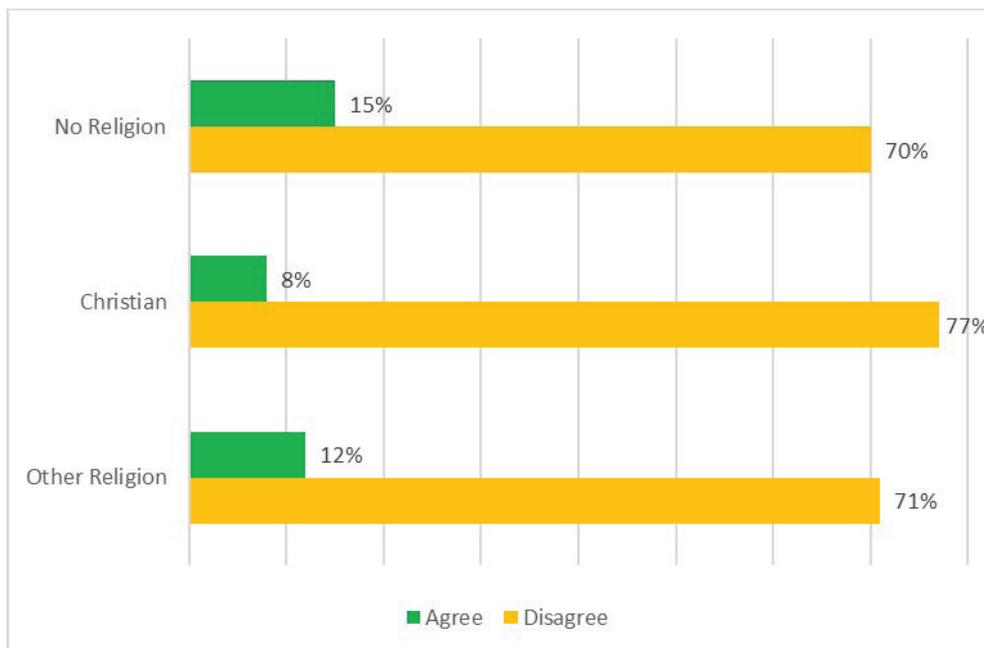
Figure 7: “I would like to be cryogenically frozen after my death so I can be revived centuries later”: by age



Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

Those who are not religious are slightly more likely to consider being cryogenically frozen, (see figure 8), as were those who never pray, attend religious services or read holy texts.¹²

Figure 8: “I would like to be cryogenically frozen after my death so I can be revived centuries later”: by religion



Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

When attitudes to cryogenics was analysed according to belief in life after death, the most notable results was, not surprisingly, how those with a strong belief in life after death were inclined against cryogenics (table 1). They were, however, followed in this view by those who definitely *did not* believe in life after

death, suggesting that results here were in some measure driven by the strength of people’s opinion as by what their opinion actually was.

Table 1: attitude to cryogenics by belief in life after death

		I believe in life after death (%)				Total
		Def.	Prob.	Prob. not	Def. not	
I would like to be cryogenically frozen after my death so I can be revived centuries later	Strongly agree	7	4	4	5	5
	Agree	6	11	9	8	9
	Neither agree nor disagree	6	13	10	8	9
	Disagree	14	25	28	19	22
	Strongly disagree	67	47	49	61	55

Source: Theos/Faraday/YouGov 2022: Q 13_1 and Q23b_1 (total n=4541)

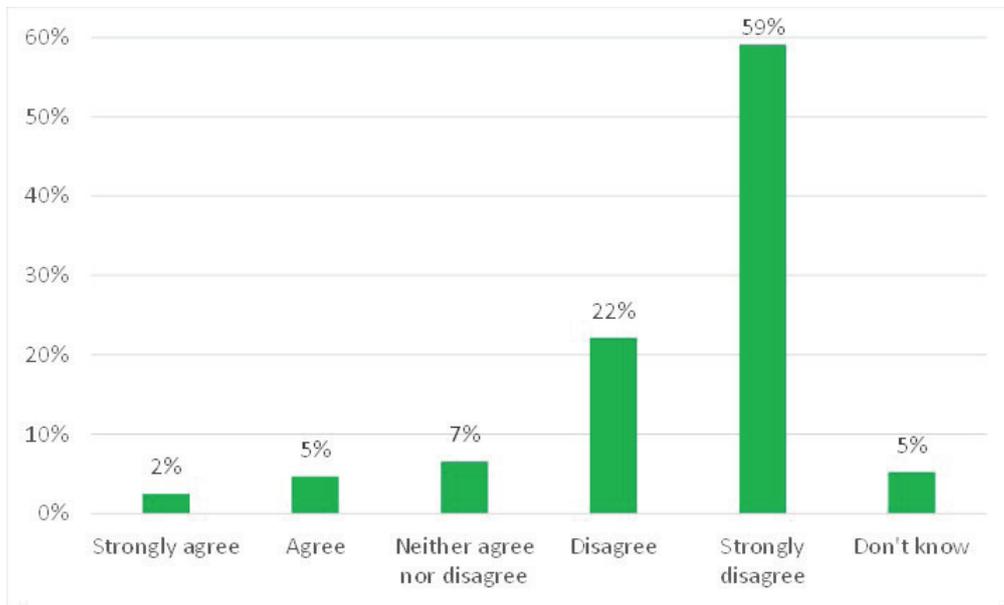
Finally, when it comes to education, we found that those who obtained higher levels of terminal science education were slightly more likely to contemplate being cryogenically frozen, although the differences were marginal.¹³



Cloning me

Another, somewhat different, form of scientific immortality comes with the prospect of cloning. We investigated whether individuals would want to achieve a kind of immortality through the possibility of cloning themselves. Once again, the vast majority of individuals did not find this prospect particularly appealing (see figure 9).

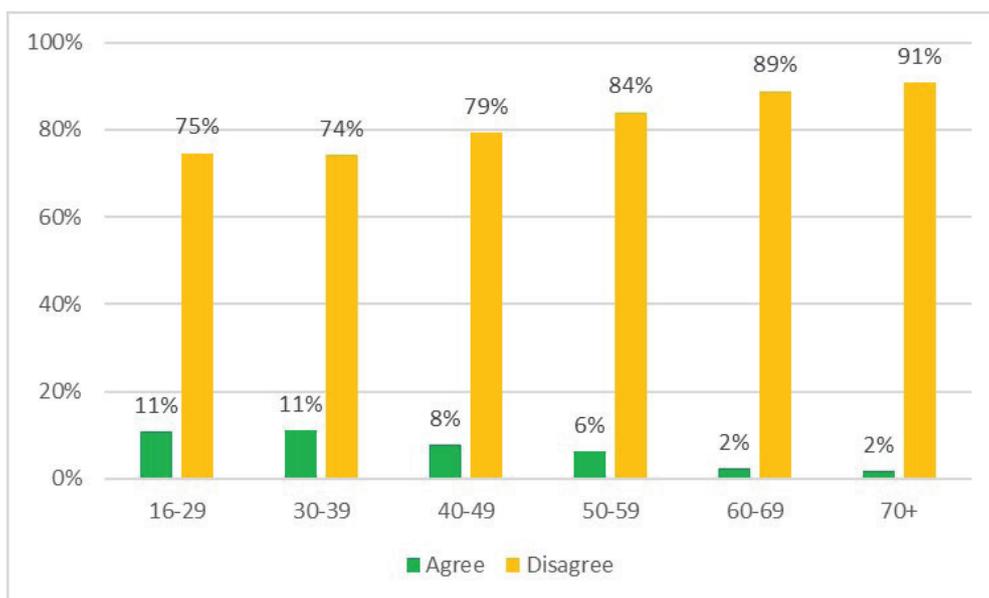
Figure 9: “I would like to clone myself if I could:” by total sample



Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

We found that men were considerably more open to self-cloning than women (not a surprise that!), with 11% of men agreeing, “I would like to clone myself if I could” compared to only 4% of women. Figure 10 illustrates an age affect in how individuals respond to the question, with those under the age 40 being slightly more likely to consider cloning themselves.

Figure 10: “I would like to clone myself if I could”: by age



Source: Theos/Faraday/YouGov 2022: Q 13_1 (total n=5153)

We also found that religious affiliation, frequency of religious attendance, frequency of prayer, attitudes to holy texts and the frequency of reading holy texts did not have any significant effect on an individual's

thoughts about cloning themselves. Similarly, we did not find that levels of education in either science or religion, or knowledge of science or religion had any bearing on whether an individual would want to be cloned. However, we did find that those who were highly confident in their knowledge of science were more likely to want to clone themselves (14%) than those who have a medium (6%) or low confidence (4%) in their science knowledge.

Reflection

Given the money that is currently being poured into attempts to defeat death, the public's overwhelming aversion to scientific immortality is worth noting. However (un)realistic the prospect of scientific immortality is, it is not especially appealing.

There are various explanations for this. The obvious one is that common to all such techno-ventures: unfamiliarity. People always resist new technologies, all the more those that feel invasive. Vaccination was deeply mistrusted when first proposed, and not without reason. How much more would people be reluctant to fill their recently deceased veins with liquid nitrogen or to copy themselves and release the results onto the world?

The question, as with all such ventures, is whether such resistance declines with familiarity. Superficially these data suggest they might, with younger people being slightly more inclined towards scientific immortality. However, this is just as likely to be down to the "age affect" rather than the "cohort effect", i.e. an opinion grounded in the

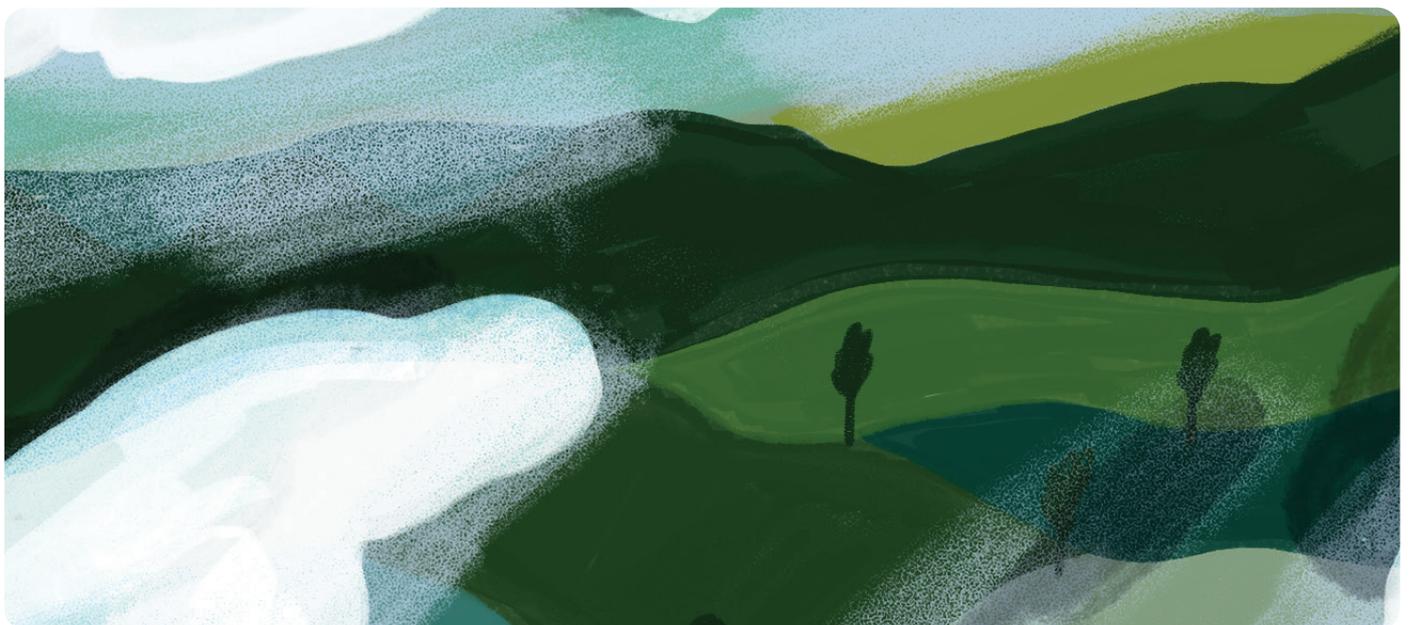
fact that people are in their 20s rather than born at the millennium, with the same respondents losing their enthusiasm for eternal life on earth once they've been around for 80 or 90 years. Longitudinal data will help resolve this.

More generally, these data place a question against the longstanding assumption that religious belief is grounded simply in fear of death. That humans (normally) fear death is not in doubt and that they have fantasised about escaping it through history is also undeniable. However, it is no incidental detail that religious belief in immortality has also traditionally be accompanied by belief in some form of human transformation. In other words, however undesirable death may be, humans need somehow to be different kinds of creatures in order to sustain the weight of eternal life.

Discussion points

The data within this report are intended to serve a prompt for reflection and discussion, for example:

- How realistic is the prospect of 'scientifically' defeating death, or at least prolonging life substantially?
- What would be the environmental, economic and social impact of doubling human lifespan?
- Why is the desire for eternal life so strong in the human species? And yet...
- Why is the prospect of scientific immortality so undesirable for so many people?



- What (if anything) would have to change about human nature and/or society to make the prospect of immortality (more) appealing?

Appendix

The quantitative element of this research surveyed 5,153 UK adults, in fieldwork conducted by YouGov between 5 May and 13 June 2021. The survey was conducted using an online interview administered to members of the YouGov Plc UK panel of 800,000+ individuals who have agreed to take part in surveys. Emails were sent to panellists selected at random from the base sample. The e-mail invited them to take part in a survey and provides a generic survey link. Once a panel member clicked on the link, they were sent to the survey that they are most required for, according to the sample definition and quotas. Invitations to surveys don't expire and respondents can be sent to any available survey. The responding sample was weighted to the profile of the sample definition to provide a representative reporting sample. (The profile is normally derived from census data or, if not available from the census, from industry accepted data.) Theos has analysed data provided by YouGov.

- 1 [Can we defeat death? | Financial Times \(ft.com\)](#)
- 2 [How Jeff Bezos is backing one of the world's top scientists in a bid to help us all live longer | ITV News](#)
- 3 [If they could turn back time: how tech billionaires are trying to reverse the ageing process | Ageing | The Guardian](#)
- 4 [Altos Labs](#)
- 5 [Unity Biotechnology • Targeting a Root Cause](#)
- 6 [One in six Britons want to live forever | YouGov](#)
- 7 Pew Research Center, *Living to 120 and Beyond: Americans' Views on Aging, Medical Advances and Radical Life Extension* (2013)

- 8 YouGov asked: "if the aging process could be halted, and good physical and mental health could be guaranteed, how long would you want to live for?" And found that 17% of the sample population wanted to live forever, and within that, 21% of men wanted to live forever compared to 12% of women. Link here as need to ref properly. <https://yougov.co.uk/topics/health/articles-reports/2018/07/12/one-six-britons-want-live-forever>
- 9 Michael D.Barnetta and Jessica H.Helphrey, 'Who wants to live forever? Age cohort differences in attitudes toward life extension' *Journal of Aging Studies* 57 (2021); https://www.sciencedirect.com/science/article/abs/pii/S0890406521000219?dgcid=rss_sd_all#
- 10 71% of those who attend religious services once a week/ fortnight disagree with this statement (vs. 11% who agree), 64% of those who attend a religious service once a month disagree (vs. 19% agree), 60% of those who seldom attend religious services disagree (vs 18% agree) and finally 60% of those who never attend religious services disagree (vs 20% agree).66% of those who frequently pray (every week/ several times a week/once a day/several times a day) disagree, (vs 14% who agree), 62% who occasionally pray (vs 18% agree) and 59% of those who never pray disagree with this statement (vs 21% who agree). Finally, we found that 70% of those frequently/ daily read the holy texts disagree (vs 11% who agree), 64% of those who occasionally read holy texts disagree (vs 17% who agree) and 61% of those never read holy texts disagree (vs. 19% who agree).
- 11 An interesting finding that further supports the age dimension is that 22% of those still at school or in higher education would consider being cryogenically frozen. This is vastly different compared to the 8% of those who finished full-time education at 15 (or under), 12% of those who finished education aged 16 - 18, 14% of those aged 19 and 12% of those who finished full time education 20+.
- 12 14% of those who state that they never pray agreeing with this statement (vs 70% who disagree), 11% of those who occasionally pray agree (vs 74% who disagree) and 9% of those who pray every week/ several times a week/once a day/several times a day (vs. 78% who disagree). 13% of those who never read holy texts agree (vs. 73% who disagree) compared to 11% of those who read holy texts infrequently agree (vs 76%) and, only 9% of those who read holy texts frequently would consider being cryogenically frozen (vs. 81% who do not). Finally, 14% of those who never attend religious services agree they would consider being cryogenically frozen (vs 71% who disagree) compared to 10% of those who occasionally attend religious services (vs 73% who disagree), 12% who attend religious services once a month (vs 75% who disagree), and 8% who attend a religious service once a week/fortnight (vs. 82% who disagree).
- 13 17% of those who obtained either a Master's degree or Ph.D. in science would like to be cryogenically frozen, compared to only 14% of those who have undergraduate degree in science. 15% of those with A Levels/ scottish Highers/IB, 12% of those with GCSE/Scottish Standard Grades and 10% of those who do not have a science qualification

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