

# Prosocial behaviour across the lifespan

Unravelling the neurobiology of empathy and compassion: implications for brain disorder treatments and well-being, National Academy of Sciences, USA

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**No conflicts of interest declared**



**Decade  of Healthy Ageing  
2020-2030**



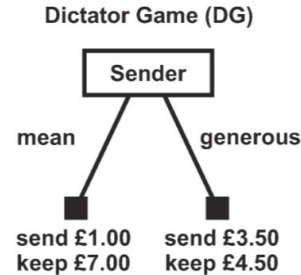




# Do we get more prosocial as we age, and if so, why?

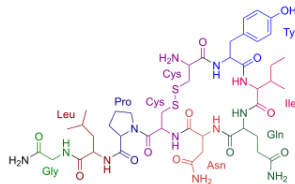
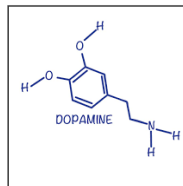
The importance of control measures and global data

**Greater donation  
in dictator game**  
(Engel, 2011)



**Time horizon changes prioritise  
socioemotional goals**  
(Carstensen et al., 1999)

**Dopamine declines  
oxytocin stable**  
(Backman et al., 2006;  
Wierda et al., 1991)



**Older adults have  
accumulated more  
wealth** (Mayr &  
Freund, 2020)

Are older adults  
more prosocial  
**everywhere?**



1. Use precisely controlled experiments where the cost to oneself is not financial but **effortful**
2. Use big-data global mega studies controlling for wealth with a spectrum of ages

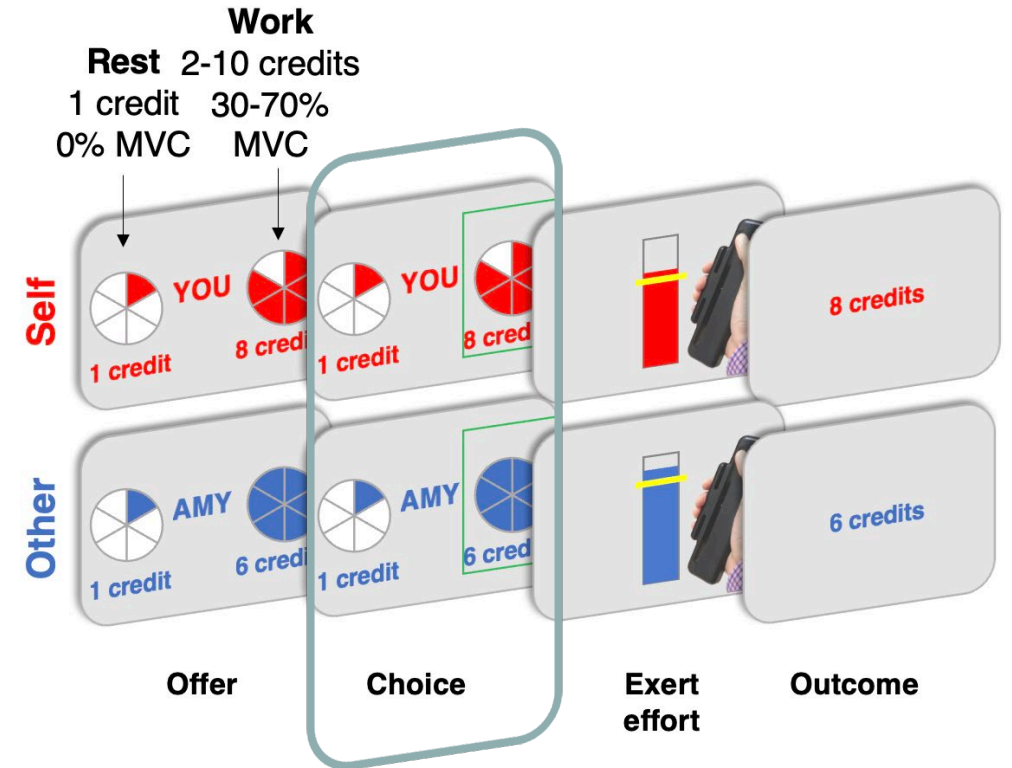
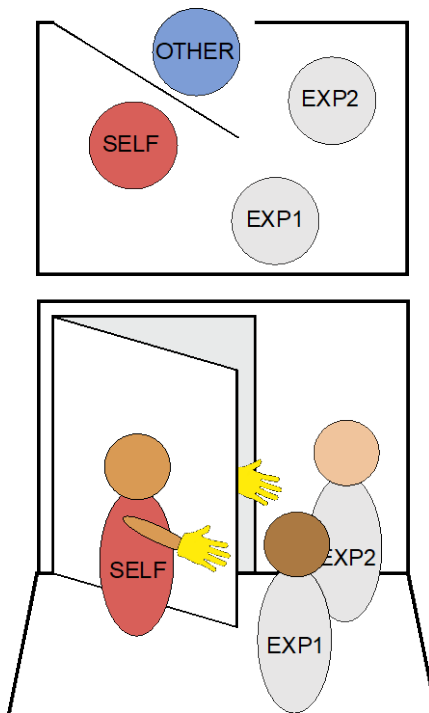
# Prosocial motivation and healthy ageing

How willing are people to put in effort to help others?

92 younger adults (age 18-36, M=24)

95 older adults (age 55-84, M=69)

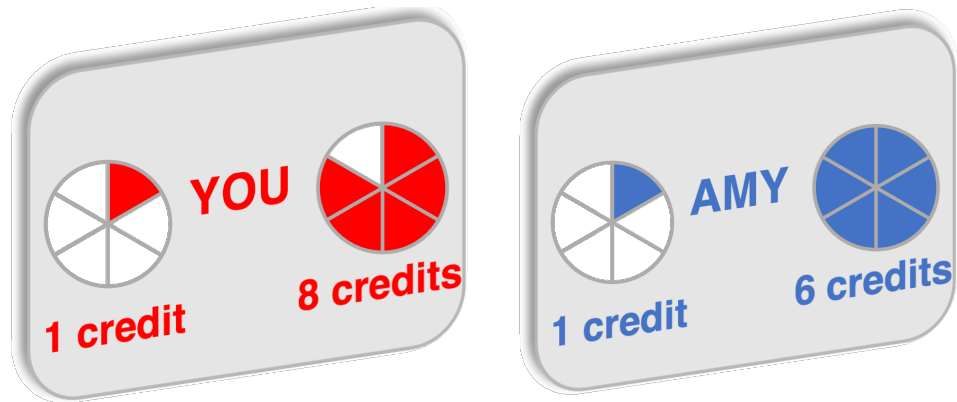
Matched on **gender** and **years of education**. Older adults screened for dementia.



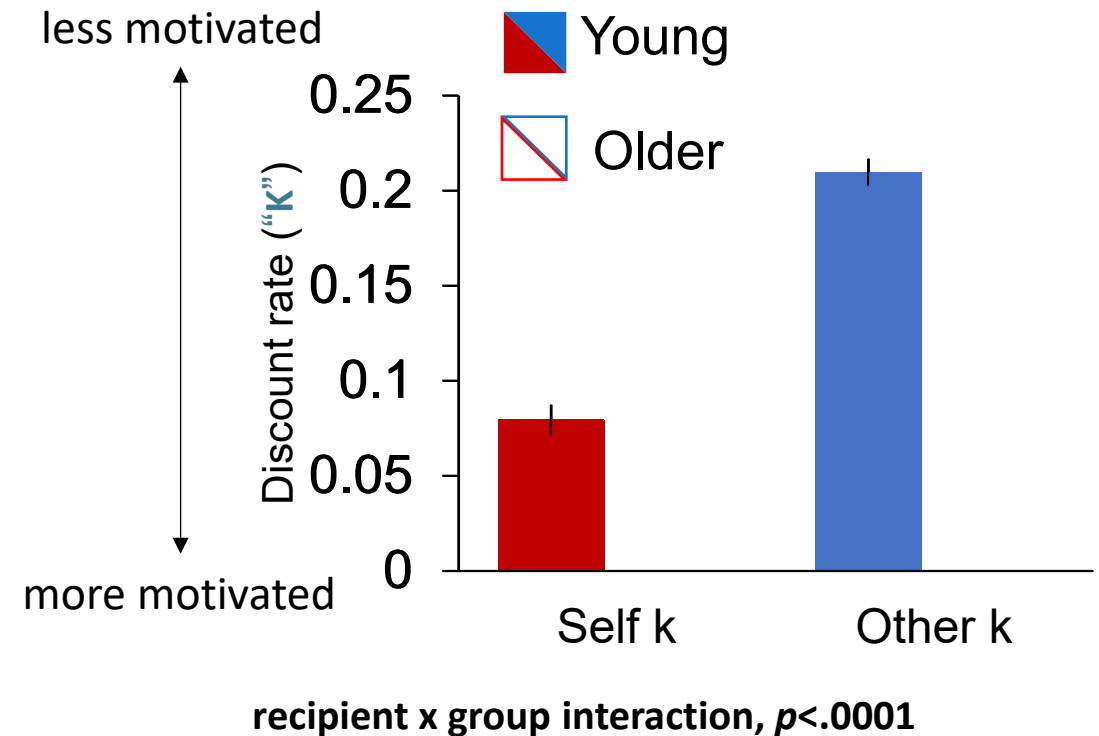
Are young and older adults equally willing put in effort to reward self and other?

# Greater prosocial motivation in older adults

Lower discounting when deciding for others

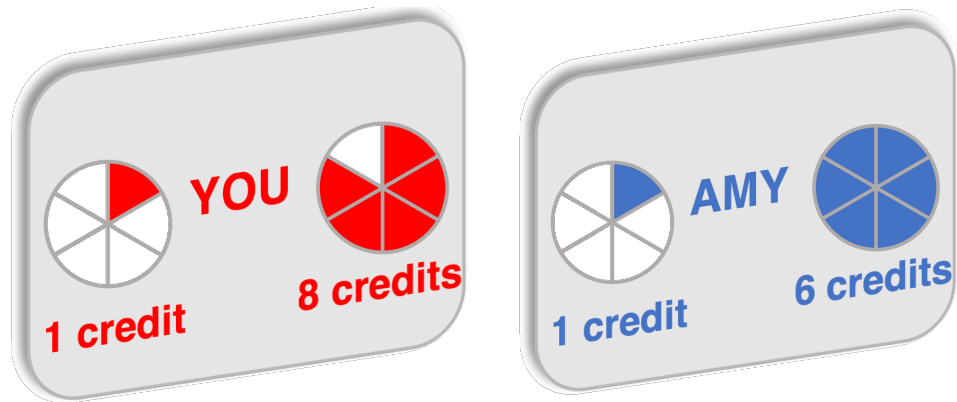


*"K" High = less motivated*  
*"K" Low = more motivated*

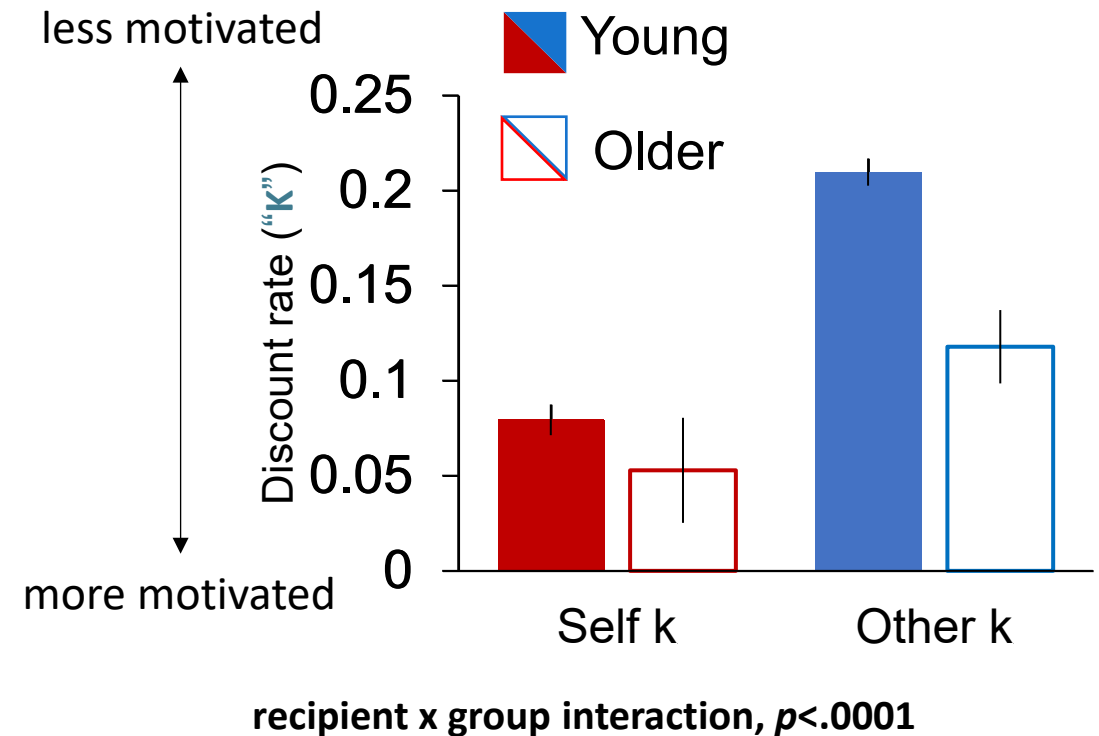


# Greater prosocial motivation in older adults

Lower discounting when deciding for others



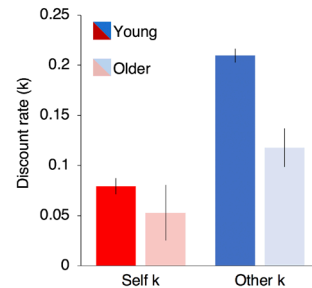
*“K” High = less motivated*  
*“K” Low = more motivated*



# Age differences in prosociality around the world?

Are older adults more prosocial to everyone, everywhere?

Older adults choose to put in more effort to help than young adults



Are older adults more prosocial to everyone? **Less support for foreign aid.**

Are older adults more prosocial **everywhere?**





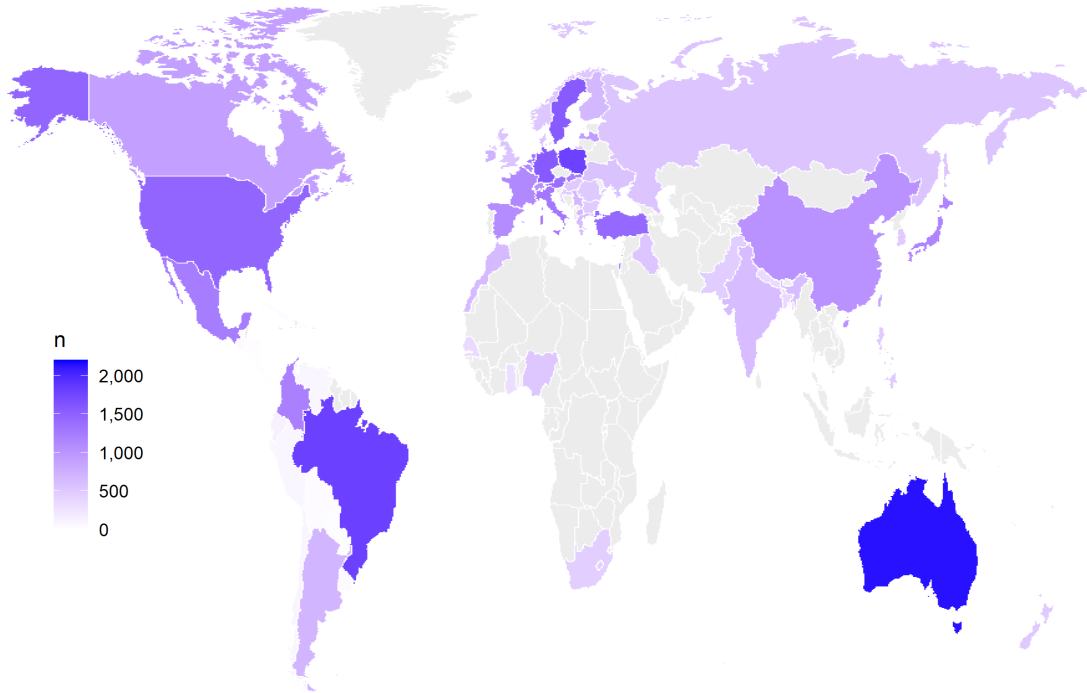
# Does age predict prosocial behaviour around the world?

International Collaboration on the Social & Moral Psychology of COVID-19



Dr. Jo Cutler

**46,576** participants  
Aged **18 - 99**  
**67** countries and territories



- **Donations** – national & international
- **Perceived risk** of catching COVID-19
  - **Physical health**
- **Subjective wealth and Country wealth**
  - **COVID-19 severity**
  - **Age adjusted by life expectancy**

Hypotheses & study analysis plan pre-registered

## Hypotheses:

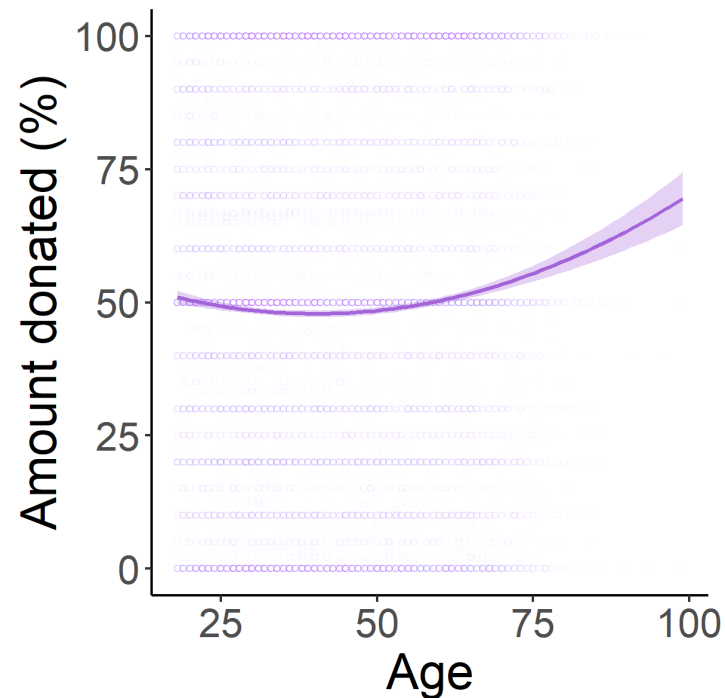
**Older adults will be more prosocial, reporting greater donations**

**Older adults will be more biased in donating to national over international charities**

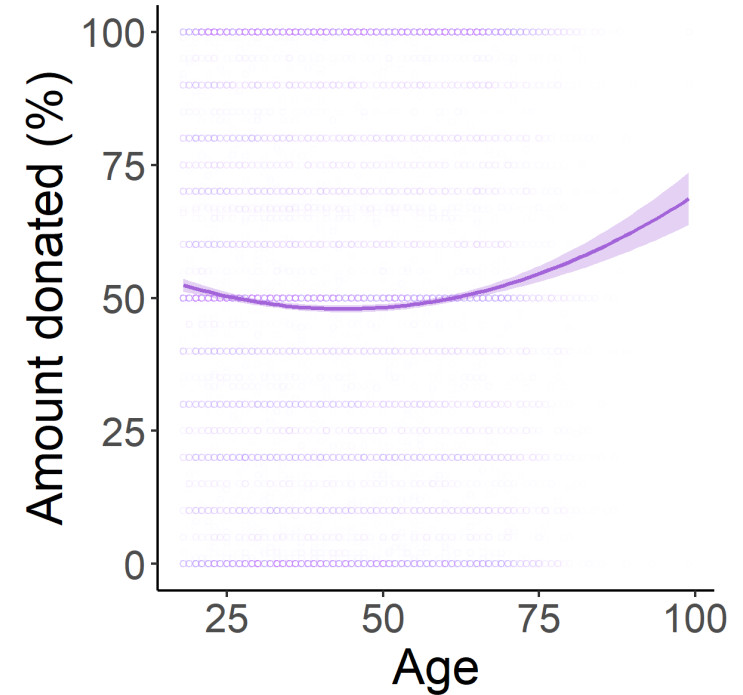
# Do older adults donate more to charity?

Older people report they would donate a greater proportion of their income to help others

*Subsample 1 (n=23,228)*



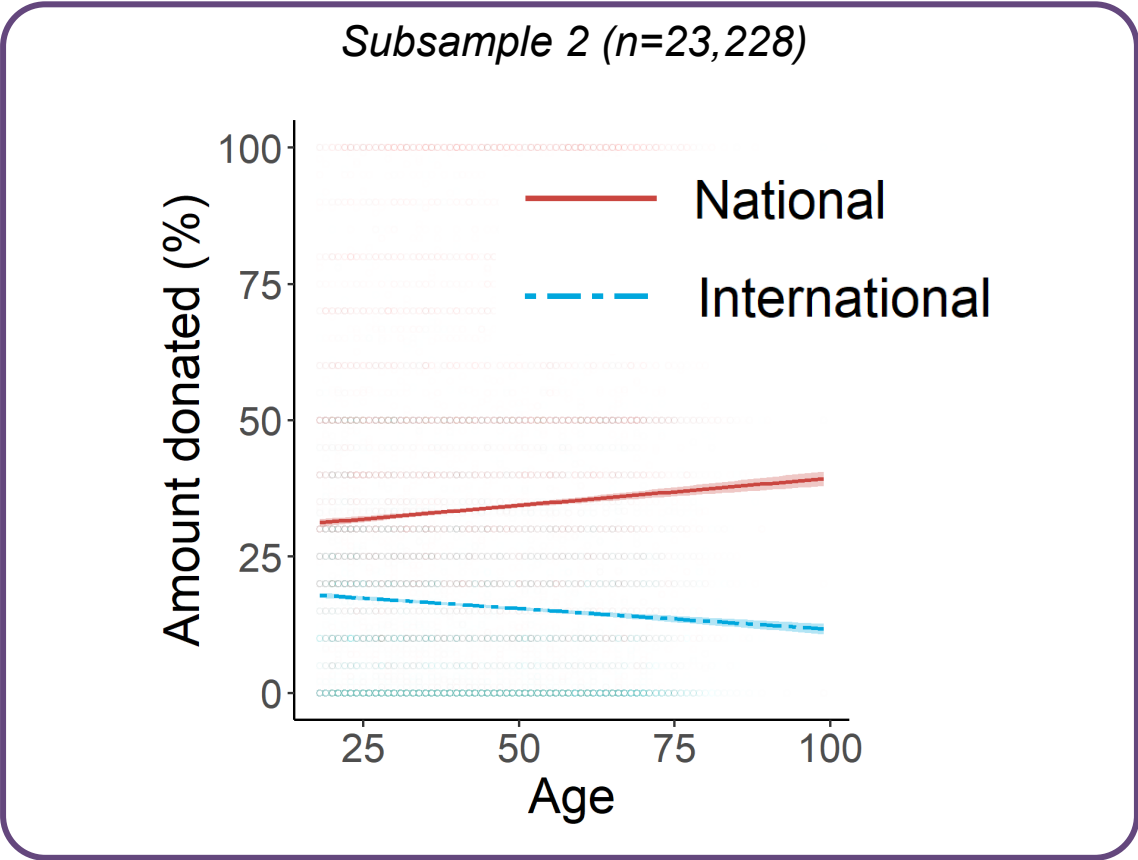
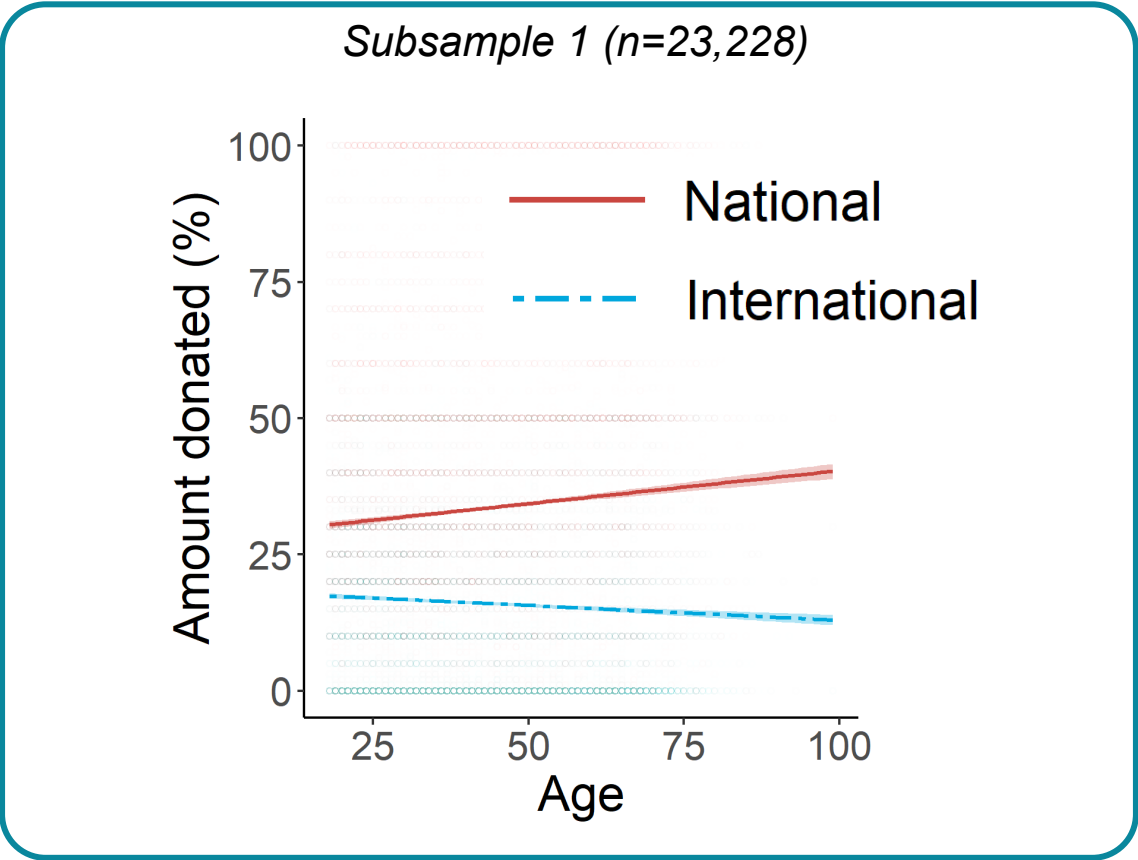
*Subsample 2 (n=23,228)*



**Effect of age after controlling for subjective wealth and objective wealth  $p < .001$**

# Are older adults more selective in who they donate to?

Interaction between age and charity location



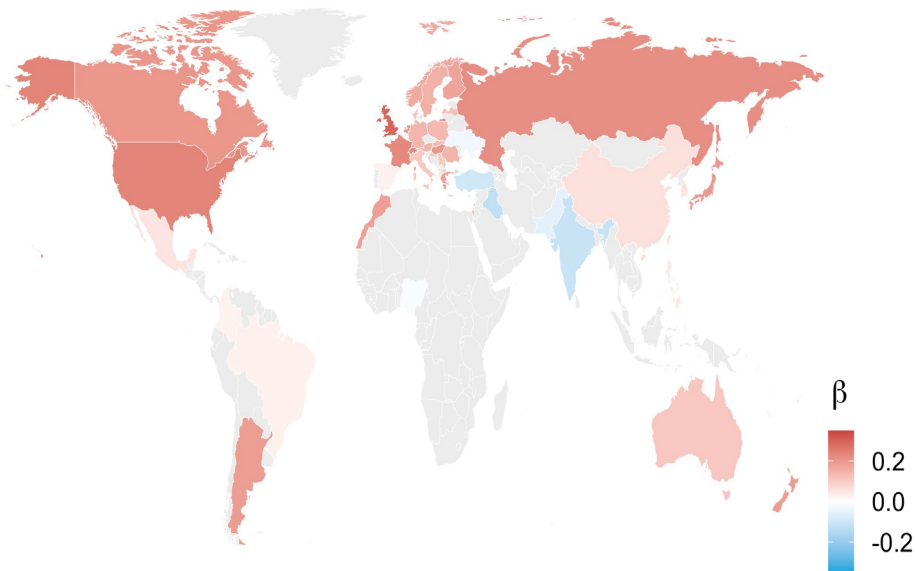
Age \* charity interaction  $p < .001$



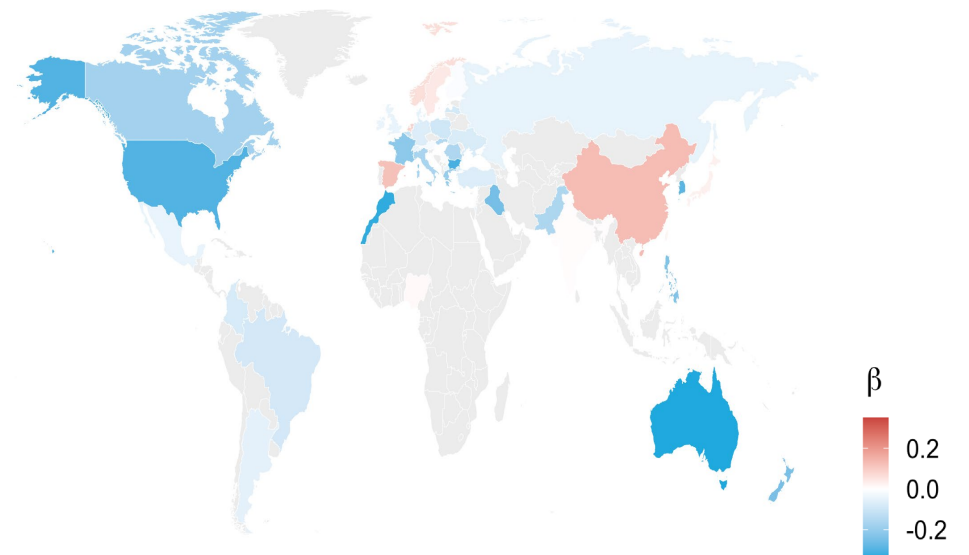
# Global effects of age on donations

In most countries, older people donate more overall, but also more to national, and less to international

## Donations (national)

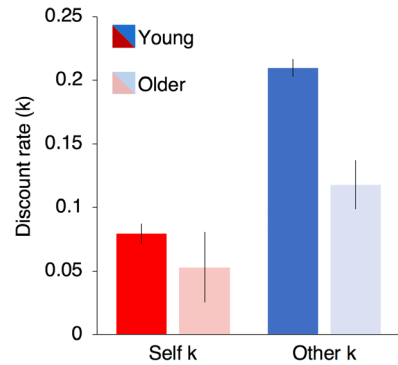


## Donations (international)



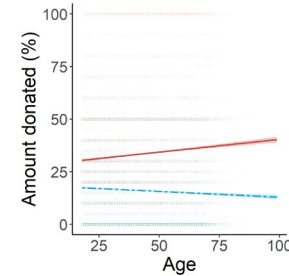
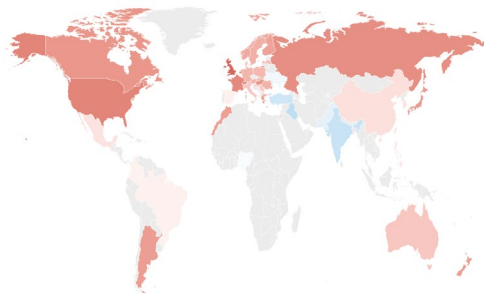
Regression coefficients for the effect size of **age**: **red = positive**, **blue = negative**, after all control variables, in each country

# Increased prosocial behaviour in older adults



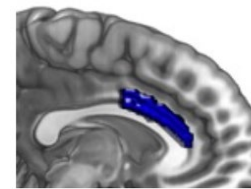
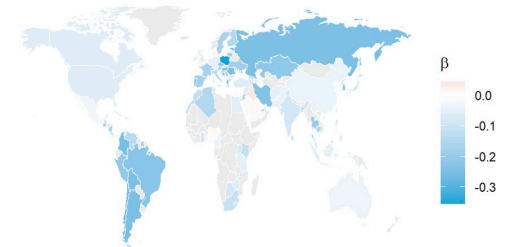
Older adults choose to put in **more effort to help** than younger adults

Age consistently predicts **higher prosocial behaviours** around the world

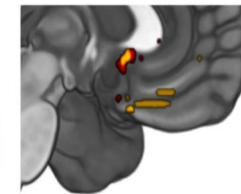


Older adults show **greater in-group preferences** in who they help

Ongoing work in 80,000+ aged 15-76 on multiple prosocial preferences and behaviours (Cutler et al., in prep)



**ACC gyrus**



**subgenual ACC**

Recent work shows a **specific neural basis** of prosocial motivation (Lockwood, Cutler Nat. Hum. Behav, 2024; Lockwood et al., 2022, Current Biology)

# Thank you!



## University of Oxford

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Prof. Claus Lamm

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Sir Henry Dale Fellowship

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Jacobs Foundation Fellowship

ESRC Impact Acceleration  
Award

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Psychology



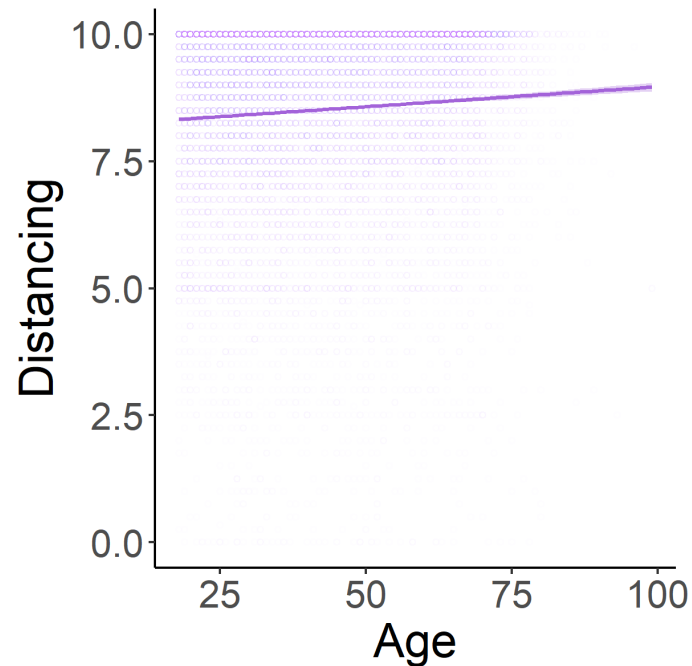
Our Promise to Youth



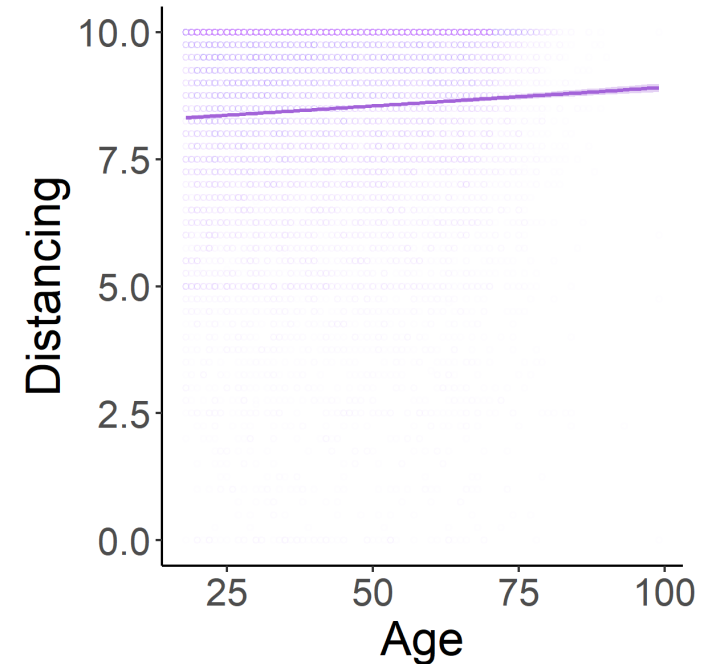
# Are older adults more likely to distance?

Older people reduce their social contact to protect themselves and others

Subsample 1 (n=23,228)



Subsample 2 (n=23,228)

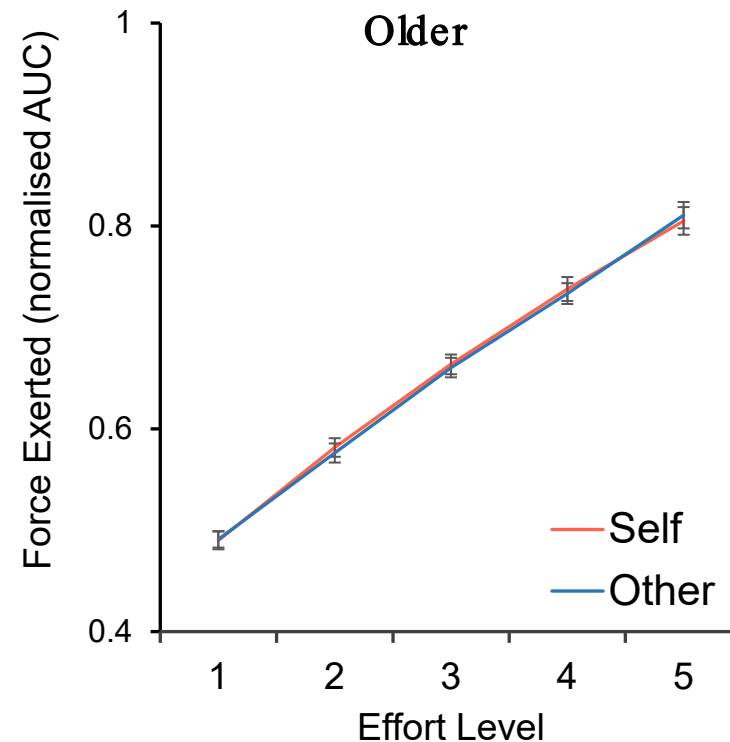
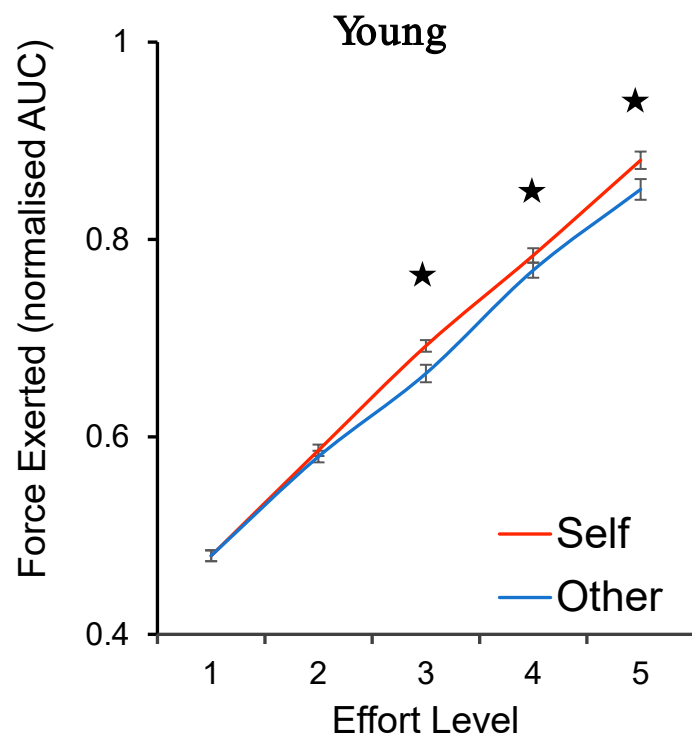


Effect of age after controlling for perceived risk & current health  $p < .001$



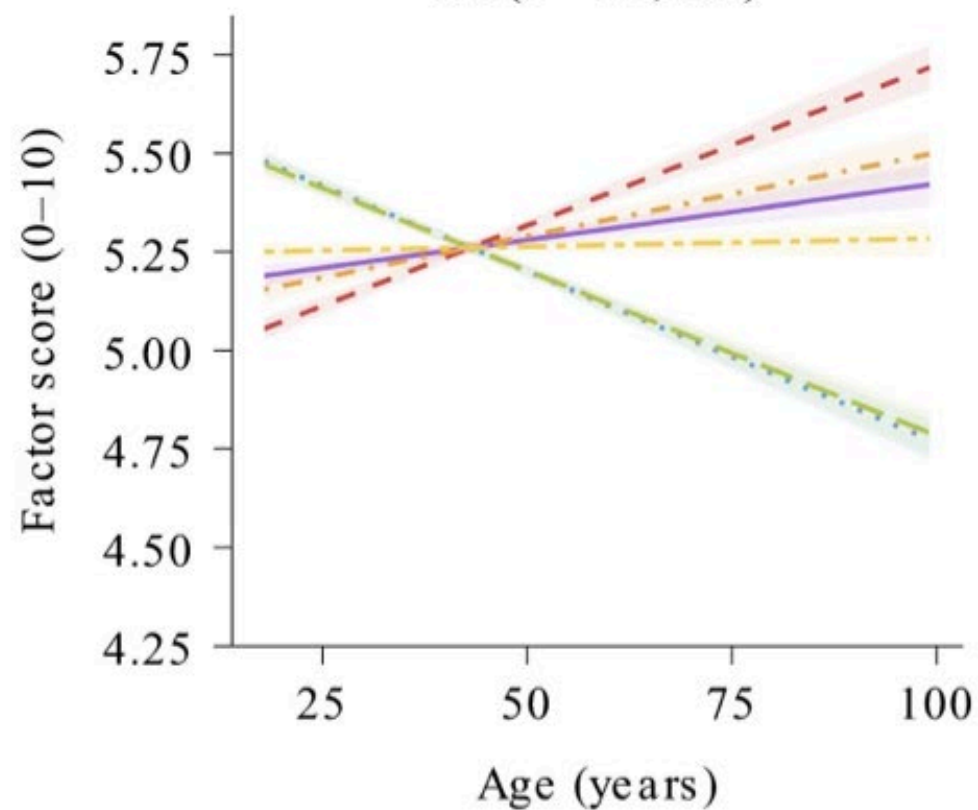
# Older adults exert similar force to help

No differences between young and older adults in success

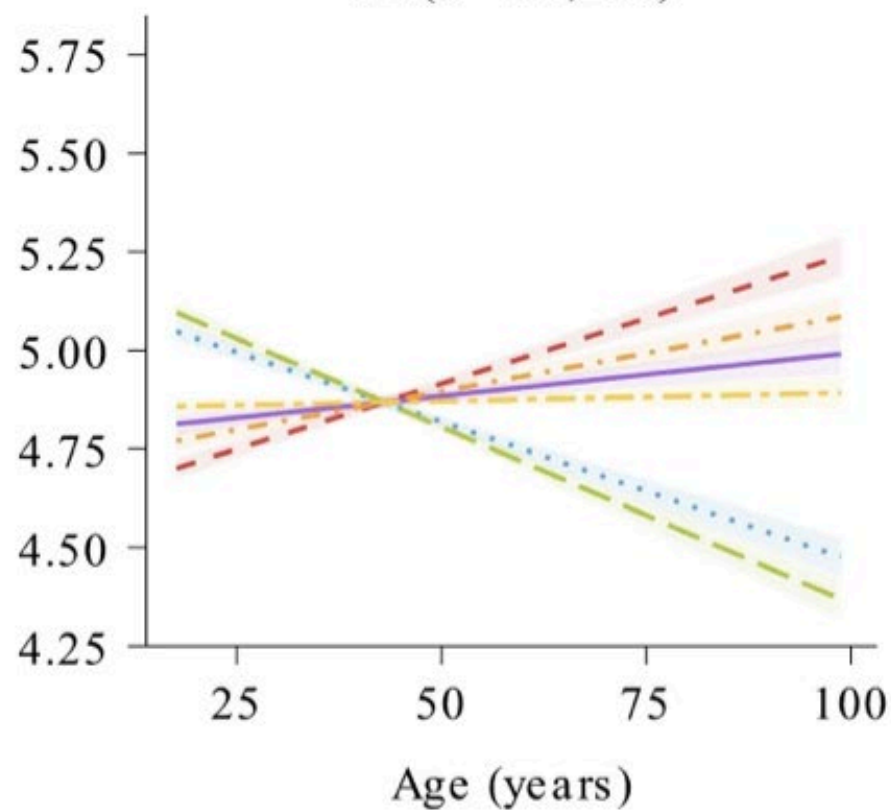


Group x recipient x force interaction,  $p < .0001$ , no significant difference in success

a



S2 (n = 22,275)



Trait factor:

Positive traits

Optimism

Well-being

Self-esteem

Social belonging

Self-control

Negative traits

Open-mindedness (-)

Narcissism

In-group preference

Collective narcissism

National identity

Political ideology

Interpersonal morality

MaC - heroism

MaC - reciprocity

MaC - group

MaC - family

MaC - deference

Material morality

MaC - property

MaC - fairness

General morality

Moral identity

Moral circle

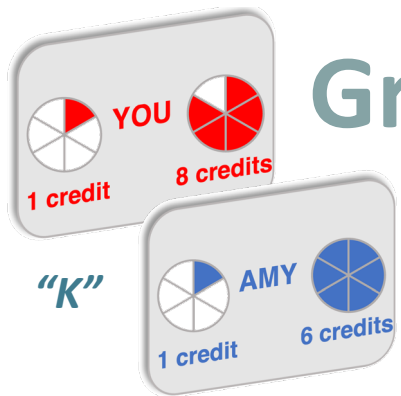


# Global challenges and opportunities of healthy ageing



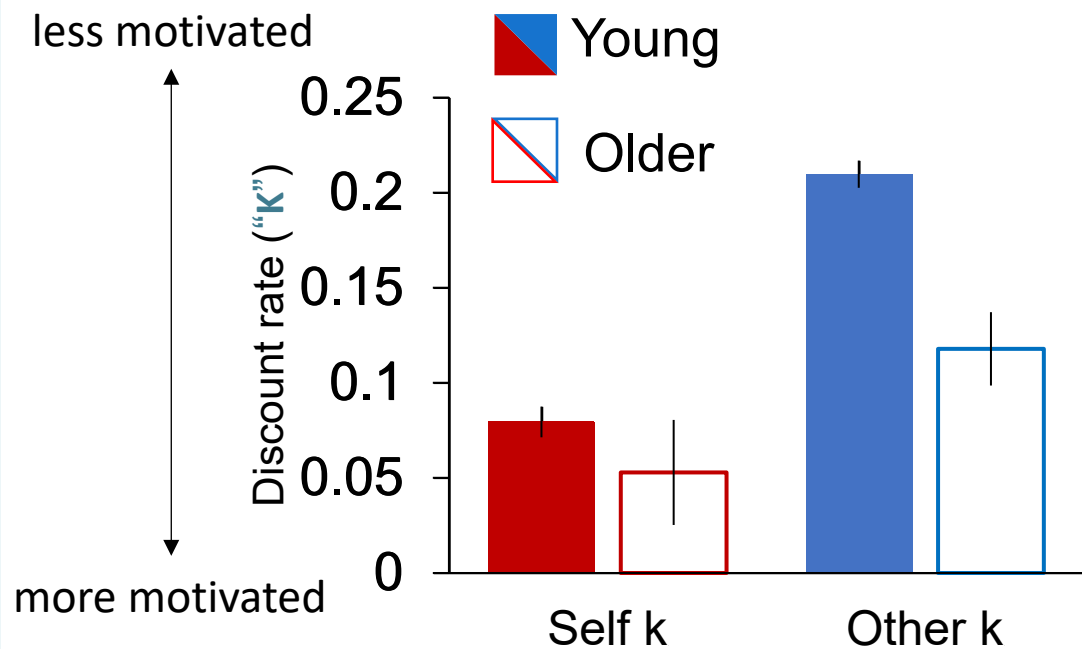
**Decade of Healthy Ageing**  
2020-2030



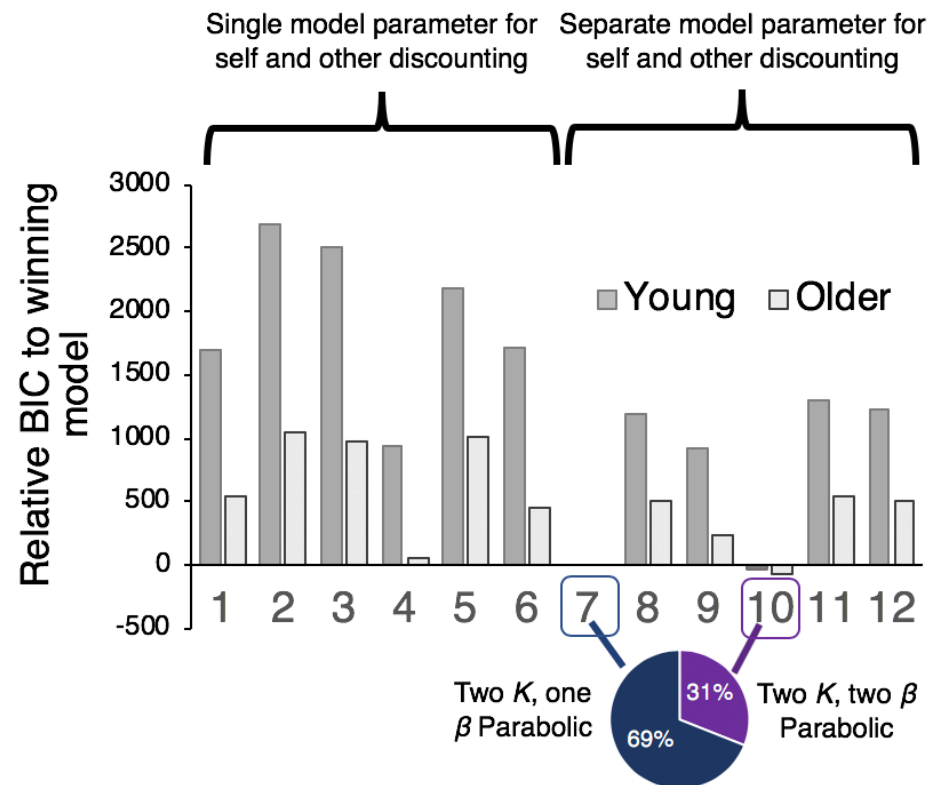


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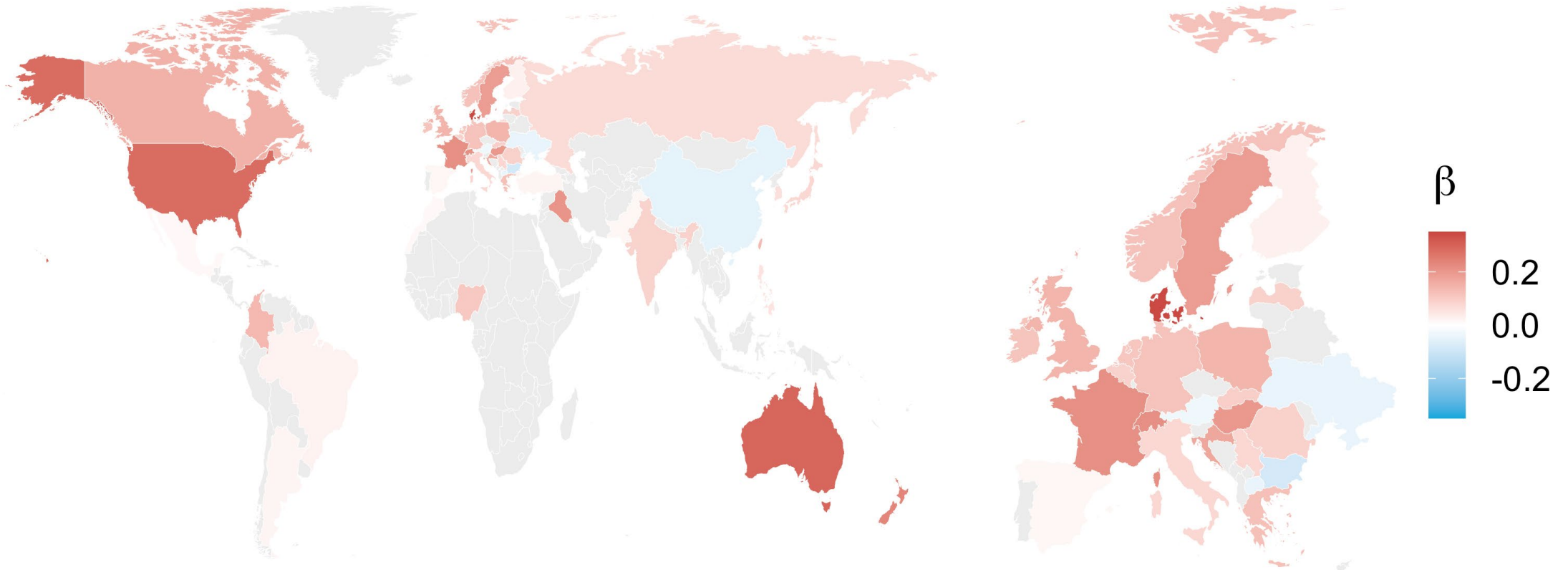


Robust regression (rlmer using robustlmm in R)  
recipient x group interaction,  $p < .0001$



# Age and distancing

In most countries, older people distance more



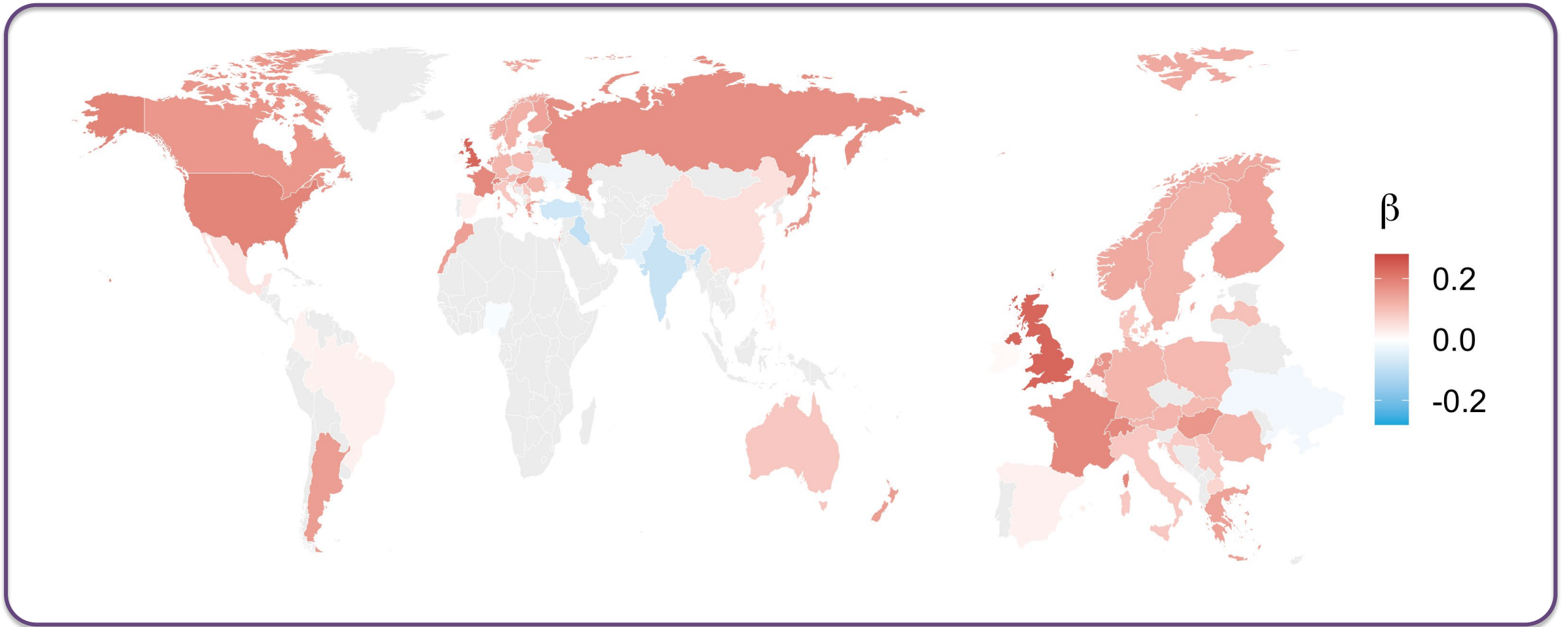
Regression coefficients for the effect size of **age**, after controlling for **perceived risk**, in each country

*Cutler et al., (2021) Nat. Aging*



# Age and donations to national charities

In most countries, older people donate more



Regression coefficients for the effect size of **age**, after controlling for **subjective wealth**, in each country

*Cutler et al., (2021) Nat. Aging*