

DoGoodology[®]

THE SCIENCE
OF DOING GOOD

Intro

Have you noticed that whenever you do good (such as donating money to a charity, volunteering, campaigning for a cause or a kind act) you get the “warm ‘n fuzzies”? Recently I’ve donated to PetRescue, sat with a homeless man in Collins Street and heard his story, signed the petition to stop live sheep export and volunteered for Kids Under Cover. I’m no angel and it takes time, but I’m addicted to the high that follows! For many years, especially in non-profit circles, this has been known as *The Giving High*.

Now, thanks to the wonders of cutting edge neuroscience, where fMRI¹ machines monitor brain activity after acts of altruism, we know precisely what this High is and why it happens. It’s fascinating! This publication summarises some of the amazing research into altruism, pro-social behaviour and doing good - and the science is in: **humans are neurologically hard-wired to do good.**

As with all academic research, it can be a bit ‘heavy’ so if you’re time poor or after a light read whizz to pages 8 and 21-22 for the plain English research summary and key insights.

As a marketer and Do-Goodologist, not an academic, I’ve relied heavily on a handful of talented people to sniff out and summarise the credible research from around the world. They include Dr Andrew D Watt, PhD (original compilation 2013), Eva Merce Maldonado (update 2017) and Ryan Menner (update 2018). I am forever grateful for their contribution.

I hope that you enjoy this exploration into the science of doing good and spread the word – because doing good is really good for you, and we need more goodness in the world, don’t you agree?

Hailey Cavill-Jaspers

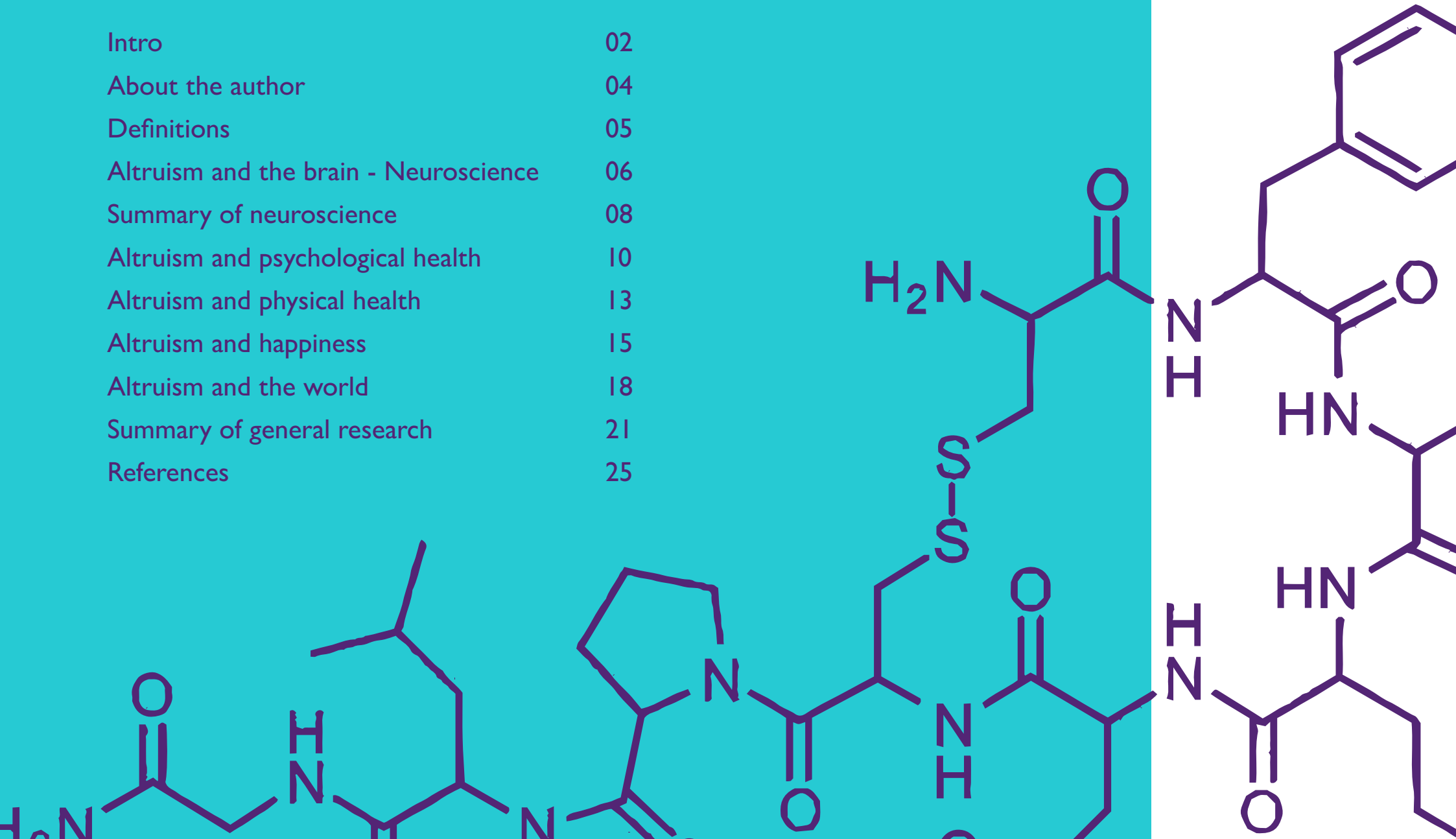
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¹functional Magnetic Resonance Imaging



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About the author

Hailey Cavill-Jaspers is the Founder and Fearless Leader of Cavill + Co, a boutique company that helps organisations to do good.

Cavill + Co helps companies with their Corporate Social Responsibility, community investment strategy or philanthropic Foundation by finding the perfect cause partner to achieve both commercial & societal objectives. In 23 years Hailey's team has built 50 partnerships worth \$40m for companies like Mondelez, Disney Australia, Seek, Vodafone and many more.

Hailey also empowers non-profits through her other business BePartnerReady.com, an online training and implementation program that upskills changemakers in corporate partnering.

Hailey also advises organisations on best practice CSR & Social Good communication based on the latest research statistics and

cutting-edge neuroscience. She speaks widely both in Australia and overseas on the power of altruism – in the workplace and in life.

If you'd like Hailey to come and speak to your peeps about the power of altruism, check out www.cavill.com.au/speaker. Her provocative talk 'Better than Sex®' is both humorous and profound.

OTHER PUBLICATIONS BY HAILEY CAVILL-JASPERS

Talking the Walk® 2, 2018

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Cavill + Co
PO Box 417
Warburton
VIC 3799



dogoodology@cavill.com.au
Cavill.com.au

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Definitions

Doing Good comes in many forms and has many words. Altruism, philanthropy, volunteering, charity, donating – and the popular term in the corporate sector is Corporate Social Responsibility.

For the purposes of this report altruism can be defined as the “disinterested and selfless concern for the well-being of others” (Oxford Dictionary). At its core, altruism is a sense of motivation to provide something of value, such as one’s time, expertise, money or personal possessions, to any party other than one’s self.

It is important to note that altruism is distinct from both duty and obligation, and ‘pure’ altruism has no expectations of benefit or recompense. Throughout the report the terms altruism, donating money and volunteering are called DoGooding^{®2}. The first part of this report aims to investigate our contemporary understanding of the neuroscience underlying acts of altruism.

Adding context to the neuroscience finding is a review of contemporary research into the psychology of altruism, which generally correlates to the changes in brain chemistry. Importantly, however, research also indicates that most Australians are not aware of the pleasure they can derive from acts of altruism. This raises the concern that people are less inclined to altruism than they would be if they knew how happy it could make them. Eight years ago Australia and NZ were the most giving countries in the world but we have now slipped to no. 6 in the world, beaten by developing countries like Myanmar.

Cavill + Co is committed to promoting the power of altruism in Australia and presents this review of recent research as a free resource to encourage greater awareness and conversation about DoGooding – and more importantly how this can help us to become more purposeful, happy and work together to solve some of society’s most pressing societal issues.

² DoGooding[®] is a registered trademark of Cavill + Co

Altruism and the brain - Neuroscience

The 'Helper's High' or often called the 'Giving High' is a notion that describes the unmatched feelings of well-being which stem from knowing that our actions have helped someone else. It is only of recent times that science has provided the tools to understand how this natural 'high' relates to chemical reactions occurring in the brain.

Research by the National Institute of Neurological Disorders and Stroke in Bethesda, Maryland, has given a valuable insight into the neural basis for unselfish acts. Modern neuro-imaging techniques have enabled researchers to identify the brain regions that are activated when people perform an altruistic act – and they have found considerable similarity with known sources of pleasure such as sex, drugs, money and even maternal love.

FMRI RESEARCH INTO ALTRUISM RESPONSES

The use of functional Magnetic Resonance Imaging (fMRI) has become one of the most widespread tools to measure brain activity. fMRI analyses the reaction of the brain to different stimuli and generates images that very precisely localise the areas of the brain activated by these stimuli. Several studies using fMRI have provided a good understanding in the regions of the brain related to altruistic actions, empathy and prosocial behaviors (Moll et al, 2006; Lockwood et al 2016; Majdandžić J et al 2016).

Moll et al. conducted a behavioral study that used fMRI to analyse the activation of brain areas of participants who had to support (economical cost for participant) or oppose (economical reward for participant) charitable organisations.

Over the course of the study, the team discovered that when participants acted altruistically by donating to organisations at a personal cost to themselves, they activated an area of the brain known as the mesolimbic–striatal reward system. The same brain regions were activated when participants received a monetary reward (pure reward). However, altruistic behavior engaged further brain areas: the subgenual area and areas of the anterior prefrontal cortex, indicating that these regions play an important role in altruism. (Moll et al, 2006.)

The first area described in the study by Moll et al., the mesolimbic system, is responsible for regulating reward reinforcement and has been recognized for its central role in motivated behaviours, various types of reward and, more recently, in cognitive processes (Alcaro, Huber et al. 2007, (Harbaugh, Mayr et al. 2007; Tankersley, Stowe et al. 2007). The mesolimbic system is a dopaminergic system which means that activation of the region results in the release of dopamine, often referred to as the 'pleasure neurotransmitter'.

"The dopamine junctions represent a synaptic way station ... where sensory inputs are translated into the hedonic messages we experience as pleasure, euphoria or 'yumminess' (Wise 1980)

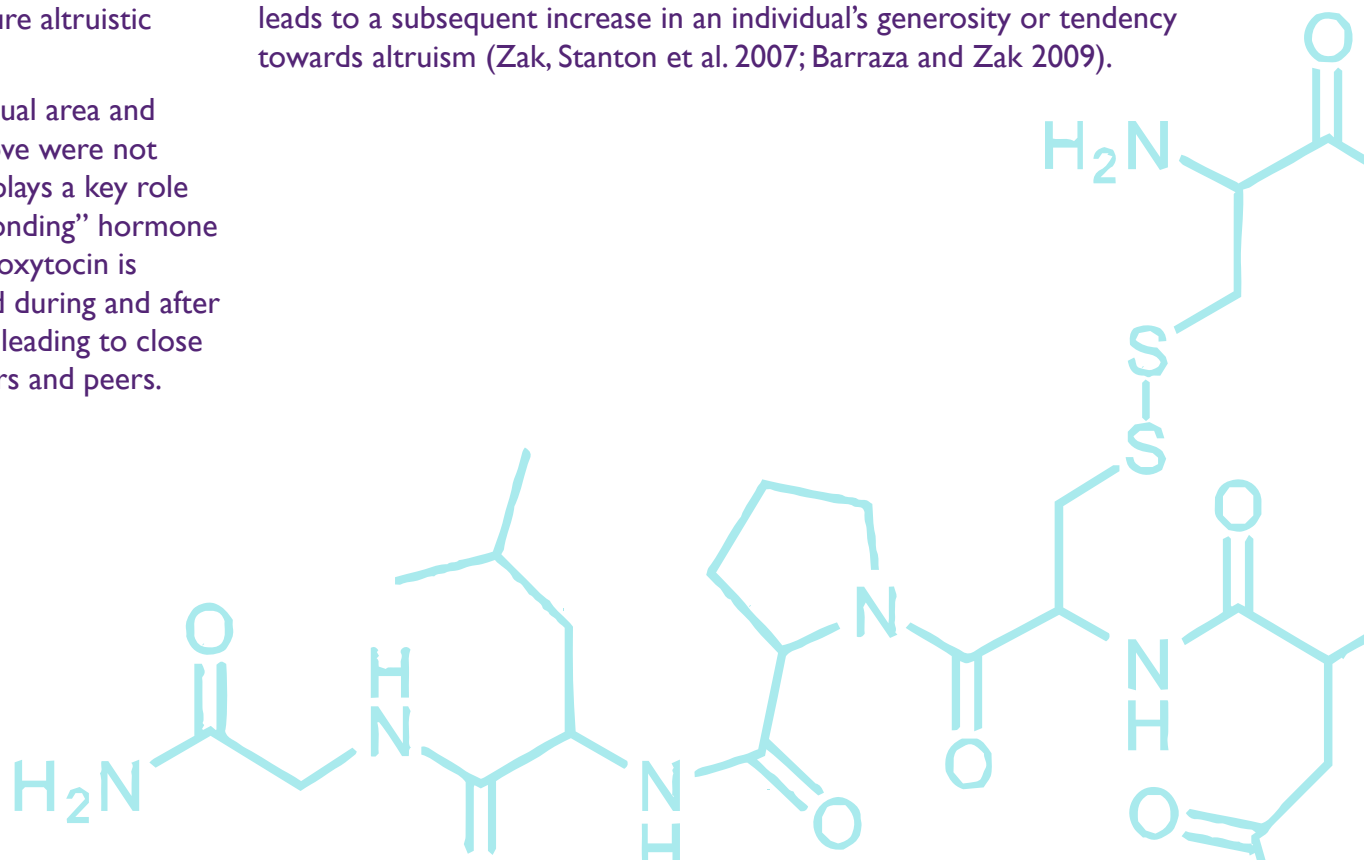
The mesolimbic system has also been found to be activated by food, sex, drugs and money (Moll, Krueger et al. 2006). The reinforcing nature of the dopaminergic mesolimbic system suggest that the 'Helper's High' associated with acts of altruism will reinforce future altruistic behaviours.

Acts of altruism were also found to activate the subgenual area and the anterior prefrontal cortex which, as highlighted above were not activated by the monetary reward. The subgenual area plays a key role in the release of oxytocin, known colloquially as the "bonding" hormone due to its role promoting human bonding, for example oxytocin is responsible for maternal-offspring bonding and released during and after sex (Borrow and Cameron 2012) or even in processes leading to close friendship, enhancing the social connection with partners and peers.

Further support for the role of oxytocin in altruism comes from studies which report that those individuals with a higher number of oxytocin receptors were found to be significantly more generous in pro-social games (Israel, Lerer et al. 2009).

In addition to this, a recent study demonstrated that during a trust exercise, subjects administered oxytocin "show no change in their trusting behaviour (even) after they learned that their trust had been breached several times, while subjects receiving a placebo decrease their trust" (Baumgartner, Heinrichs et al. 2008).

In other words, Oxytocin helps to establish a neuronal environment in which we are able to more readily feel connected to and trust the people around us, providing the ideal setting for altruism to occur. Additional studies have demonstrated that oxytocin release occurs in response to an empathic response from an individual and this in turn leads to a subsequent increase in an individual's generosity or tendency towards altruism (Zak, Stanton et al. 2007; Barraza and Zak 2009).



Summary of neuroscience

1

Acts of altruism (DoGooding) release a combination of the neurotransmitters dopamine and oxytocin

2

Dopamine (known as the “pleasure” or “reward” hormone) activates brain regions associated with motivation/reward, the same regions activated by food, sex, money and drugs

3

Oxytocin (the “bonding” or “love” hormone) makes you feel more connected and increases generosity, making altruism self-perpetuating (a virtuous cycle)

4

It is the joint activity of these two neurotransmitters in the striatum area of the brain that results in the so called “Helper’s High”

5

Very few acts can prompt the release of both these hormones – only childbirth, breastfeeding, sex and altruism

6

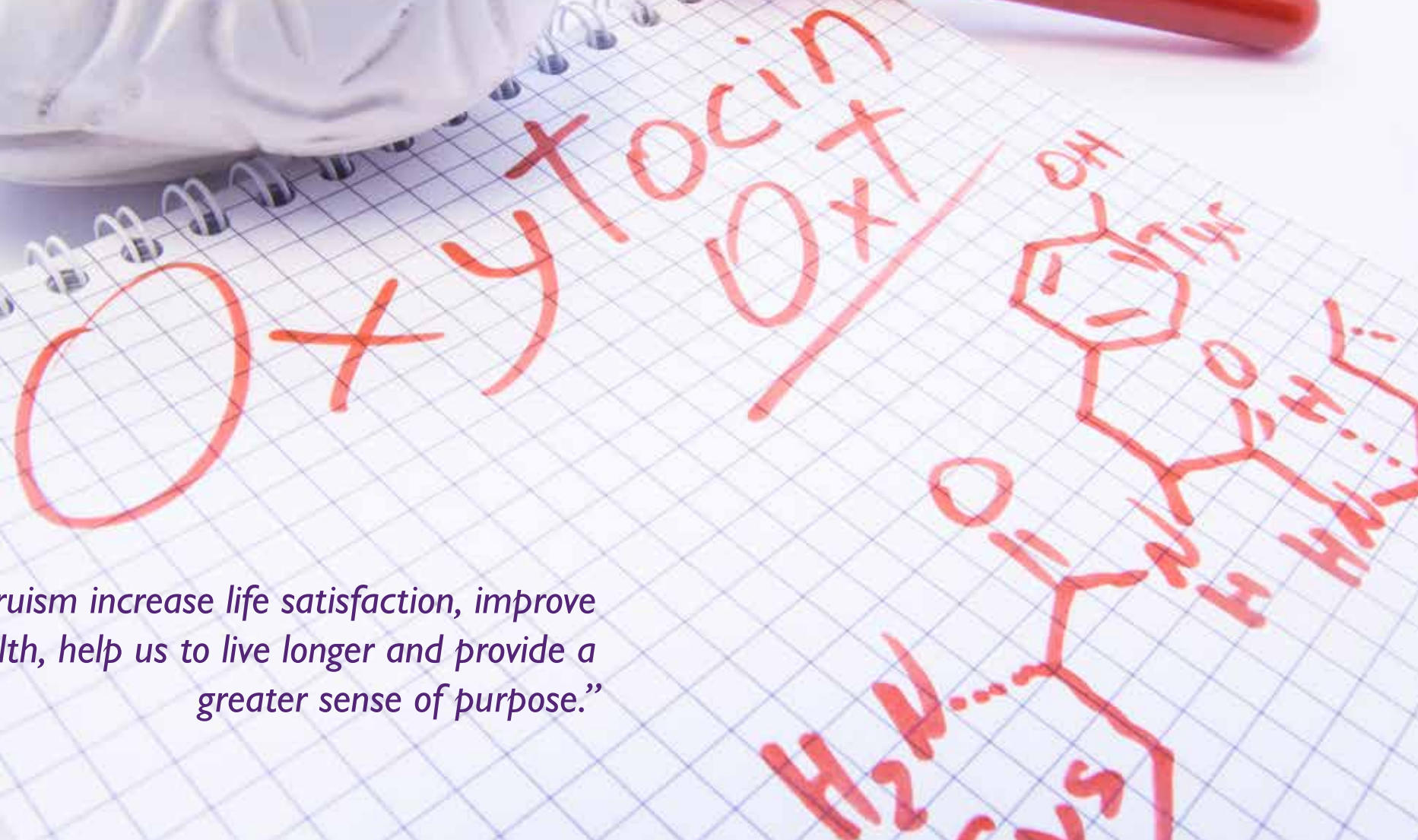
This indicates that humans are hard-wired to do good

7

Acts of altruism increase life satisfaction, improve physical health, help us to live longer and provide a greater sense of purpose

8

DoGooding
=
happiness!



“Acts of altruism increase life satisfaction, improve physical health, help us to live longer and provide a greater sense of purpose.”

Altruism and psychological health

Psychological research correlates with the neuroscience findings to suggest that altruism plays a key role in shaping the psychological wellbeing of volunteers. It is not clear whether we feel good because we are altruistic or whether we are altruistic because we feel good, although most indications are that these two factors co-exist in a mutually beneficial cycle of altruism and happiness.

THE NITTY GRITTY

- Dulin and Hill found that altruistic activity was a significant predictor of positive affect in “the stable disposition to experience positive emotions”. In other words DoGooding is associated with increased happiness and contentment (Dulin and Hill 2003).
- Schwartz et al. (Schwartz, Meisenhelder et al. 2003) found that giving help was more significantly associated with better mental health than receiving help, even after adjusting for variables like age, gender, stressful life events, income, general health, religious coping and praying to God.
- “Helping others is associated with higher levels of mental health, above and beyond the benefits of receiving help and other known psycho-spiritual, stress, and demographic factors.” (Schwartz, Meisenhelder et al. 2003)
- Further supported by recent research identifying the role of “giving support behavior” and how recursive giving can then contribute to mental and physical health the long-term” Inagaki, 2018.

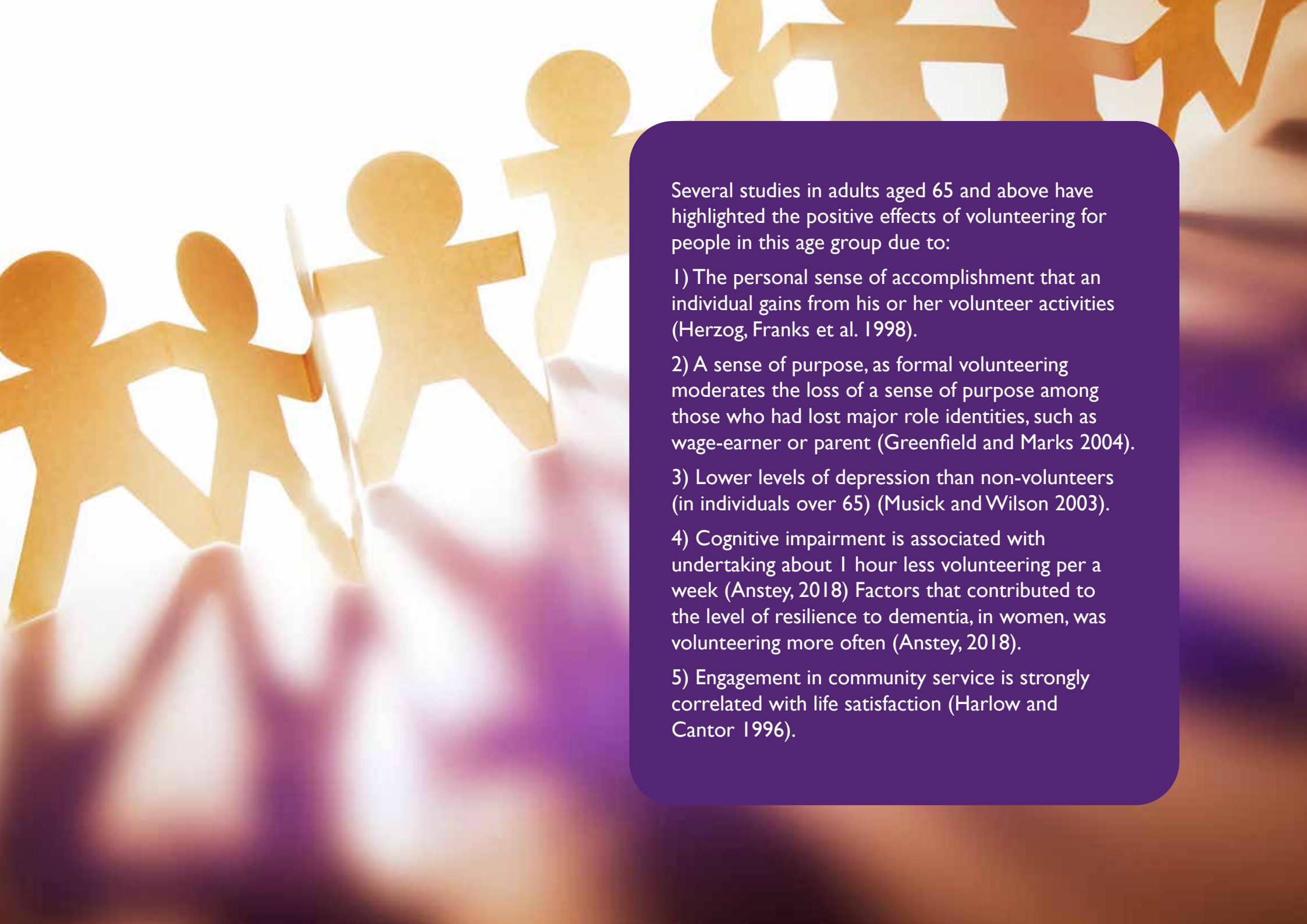
Snippe et al. 2017, found daily pro-social tasks (DoGooding) was positively related to the DoGooders’ daily mood. With findings further suggesting that those who had signs of depression, loneliness and anxiety exhibited a higher positive increase in their daily mood.

Considering that Gao et al. 2018 found that individuals with depression, loneliness, anxiety etc. were found to be less prosocial. Encouraging them to engage in prosocial activities could be part of a suite of options for improving their mental health.

Recalling previous pro-social spending (spending money on someone else) made participants significantly happier than recalling a previous personal spend (spending money on themselves), and increased pro-social spending in the near future. Pro-social spending is evident among adults around the world and can even be detected in toddlers. (Aknin, Dunn and Norton. 2012 Harvard).

Watch Michael Norton talking about the research on TED





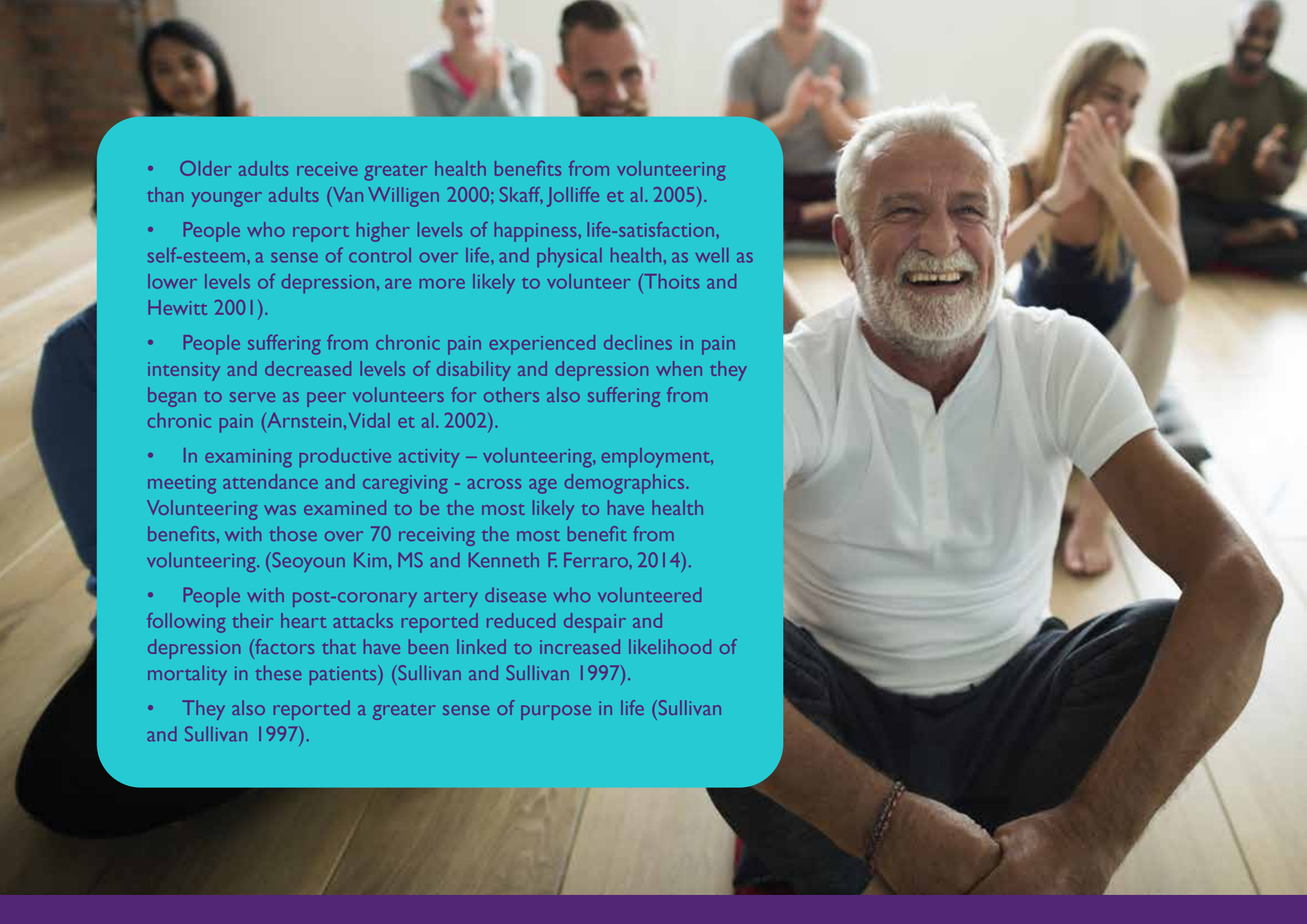
Several studies in adults aged 65 and above have highlighted the positive effects of volunteering for people in this age group due to:

- 1) The personal sense of accomplishment that an individual gains from his or her volunteer activities (Herzog, Franks et al. 1998).
- 2) A sense of purpose, as formal volunteering moderates the loss of a sense of purpose among those who had lost major role identities, such as wage-earner or parent (Greenfield and Marks 2004).
- 3) Lower levels of depression than non-volunteers (in individuals over 65) (Musick and Wilson 2003).
- 4) Cognitive impairment is associated with undertaking about 1 hour less volunteering per a week (Anstey, 2018) Factors that contributed to the level of resilience to dementia, in women, was volunteering more often (Anstey, 2018).
- 5) Engagement in community service is strongly correlated with life satisfaction (Harlow and Cantor 1996).

Altruism and physical health

In addition to the effects of altruism on psychological health, altruism has also been shown to play a key role in determining physical health.

- Volunteering in elderly females relates to better psychological functioning and a lower mortality risk, even after adjusting for prior health, social supports and exercise (Shmotkin, Blumstein et al. 2003).
- Musick et al. (Musick, Herzog et al. 1999) reported that for a lower mortality risk volunteering must be kept manageable, under 40 hours for a single organisation, to be beneficial and avoid being overwhelmed.
- Oman et al. (Oman, Thoresen et al. 1999) found that the reduction in mortality associated with volunteering was greater than the reductions associated with physical mobility, exercising, and religious observation.
- Volunteering for at least 100 hours in a year slows the decline in self-reported health and functioning and improves mortality rates for volunteers (Luoh and Herzog 2002; Lum and Lightfoot 2005).
- Morrow-Howell et al. (Morrow-Howell, Hinterlong et al. 2003) found, in a study of more than 1500 adults, that volunteering predicted significantly less functional disability 3 – 5 years later.
- Volunteering is significantly associated with higher levels of physical activity (Oman, Thoresen et al. 1999; Shmotkin, Blumstein et al. 2003; Harris and Thoresen 2005) and lower levels of smoking (Oman, Thoresen et al. 1999) than non-volunteers.
- Volunteers report greater life satisfaction and better physical health than non-volunteers (Van Willigen 2000).
- Plus their life satisfaction and physical health improves at a greater rate as a result of volunteering (Van Willigen 2000).

- 
- A photograph of a group of people, including an older man in the foreground, sitting on the floor and clapping. The man has a white beard and is wearing a white polo shirt and dark pants. He is smiling broadly. In the background, several other people are visible, some clapping and others looking towards the camera. The setting appears to be a bright, indoor space with a wooden floor.
- Older adults receive greater health benefits from volunteering than younger adults (Van Willigen 2000; Skaff, Jolliffe et al. 2005).
 - People who report higher levels of happiness, life-satisfaction, self-esteem, a sense of control over life, and physical health, as well as lower levels of depression, are more likely to volunteer (Thoits and Hewitt 2001).
 - People suffering from chronic pain experienced declines in pain intensity and decreased levels of disability and depression when they began to serve as peer volunteers for others also suffering from chronic pain (Arnstein, Vidal et al. 2002).
 - In examining productive activity – volunteering, employment, meeting attendance and caregiving - across age demographics. Volunteering was examined to be the most likely to have health benefits, with those over 70 receiving the most benefit from volunteering. (Seoyoun Kim, MS and Kenneth F. Ferraro, 2014).
 - People with post-coronary artery disease who volunteered following their heart attacks reported reduced despair and depression (factors that have been linked to increased likelihood of mortality in these patients) (Sullivan and Sullivan 1997).
 - They also reported a greater sense of purpose in life (Sullivan and Sullivan 1997).

Altruism and happiness

The link between pro-social behaviour and one's wellbeing, or happiness, dates back as far as ancient Greece. Aristotle argued that the goal of life was to achieve eudaemonia, a contented state of being happy and healthy and prosperous, from the successful performance of their moral duties.

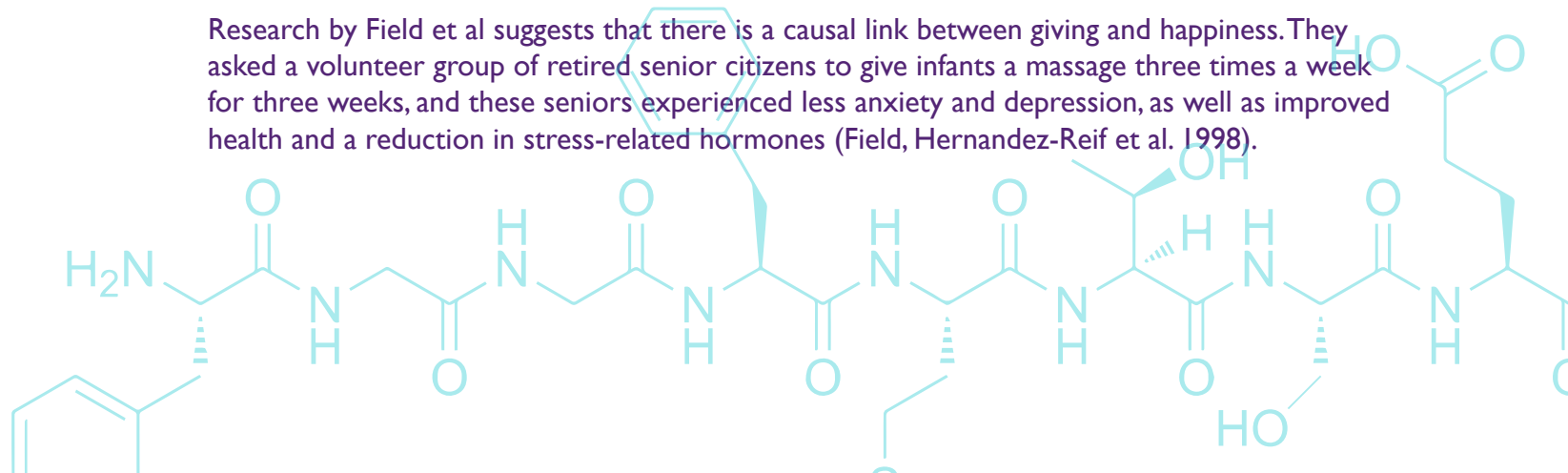
More recently popular opinion, self-help gurus and community organisations have all actively endorsed the notion that DoGooding is a potent source of an individual's sense of wellbeing. Whilst these claims have at times outpaced available evidence, there is a growing body of literature that shows support for the hedonic benefits of generosity.

- The act of donating one's money activates the ventral striatum, the brain's pleasure centre, suggesting that making charitable donations is inherently rewarding (Moll, Krueger et al. 2006; Harbaugh, Mayr et al. 2007; Tankersley, Stowe et al. 2007).
- Engagement in community service is strongly correlated with life satisfaction (Harlow and Cantor 1996).
- Meier and Stutzer demonstrated that volunteering increases life satisfaction, using the German Socioeconomic Panel, a longitudinal study of German households (Meier and Stutzer 2008).

Higher levels of volunteer work were associated with higher levels of overall life satisfaction. (This research was undertaken shortly after the fall of the Berlin wall but prior to German reunification, a time when volunteering opportunities dropped dramatically in Eastern Germany.)

Happiness of East Germans can be compared to a control group who experienced no change in their volunteer status. Using this design, the authors were able to conclude that helping others increases well-being (Meier and Stutzer 2008).

Research by Field et al suggests that there is a causal link between giving and happiness. They asked a volunteer group of retired senior citizens to give infants a massage three times a week for three weeks, and these seniors experienced less anxiety and depression, as well as improved health and a reduction in stress-related hormones (Field, Hernandez-Reif et al. 1998).



Altruistic financial behaviour, such as gift giving and charitable donations, promotes happiness (Dunn, Aknin et al. 2008).

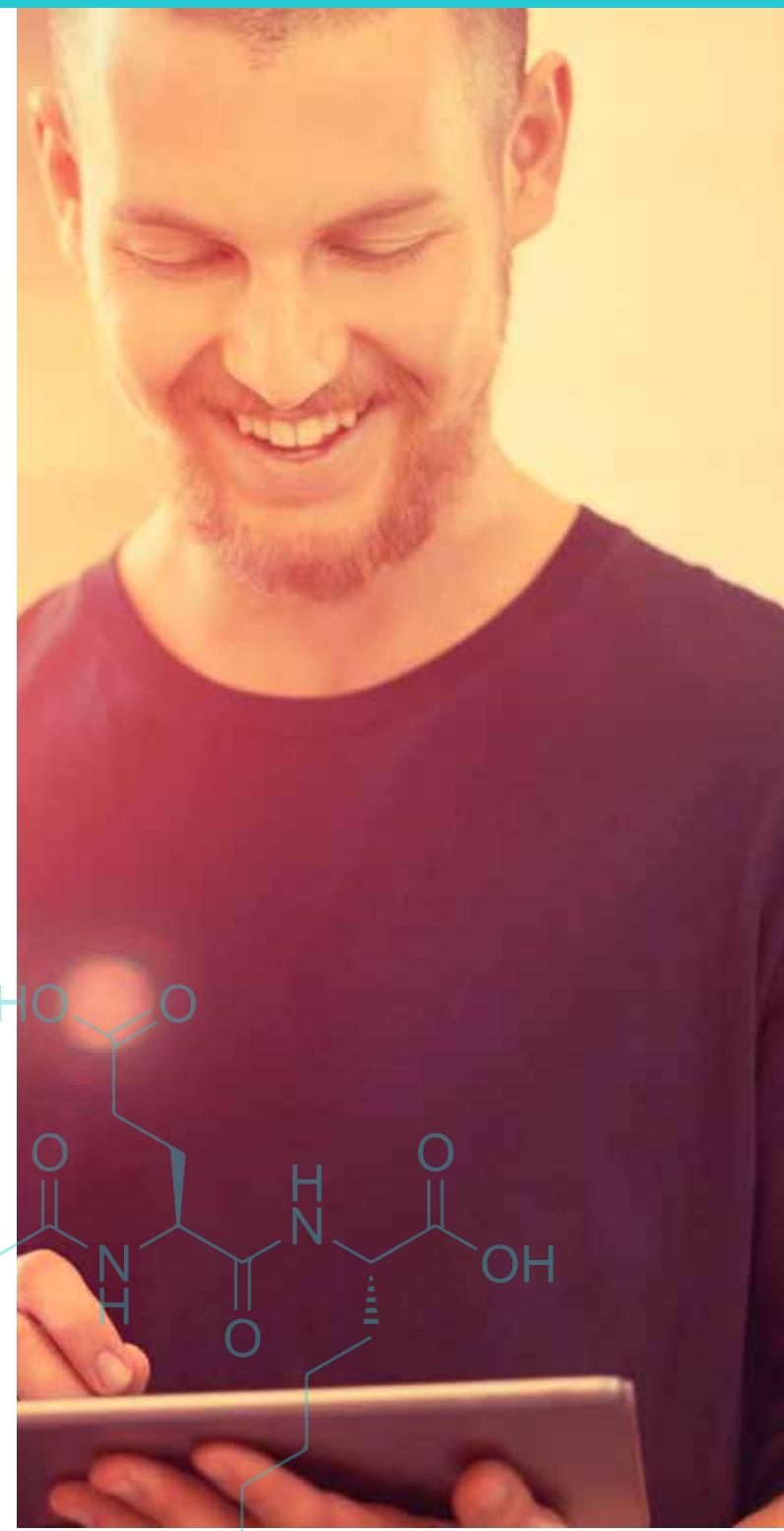
- Researchers asked a nationally representative sample of Americans to rate their general happiness and provide monthly estimates of personal and pro-social spending. Specifically, participants were asked to report their annual household income and general happiness level and to estimate how much they spent in a typical month on (1) bills/ expenses, (2) gifts for themselves, (3) gifts for others, and (4) donations to charity.
- Individuals who devoted more money to pro-social spending reported greater happiness, whereas personal spending was unrelated to happiness, even when controlling for income.
- This study also provided evidence that pro-social spending promotes more happiness than spending money on oneself (Dunn, Aknin et al. 2008).

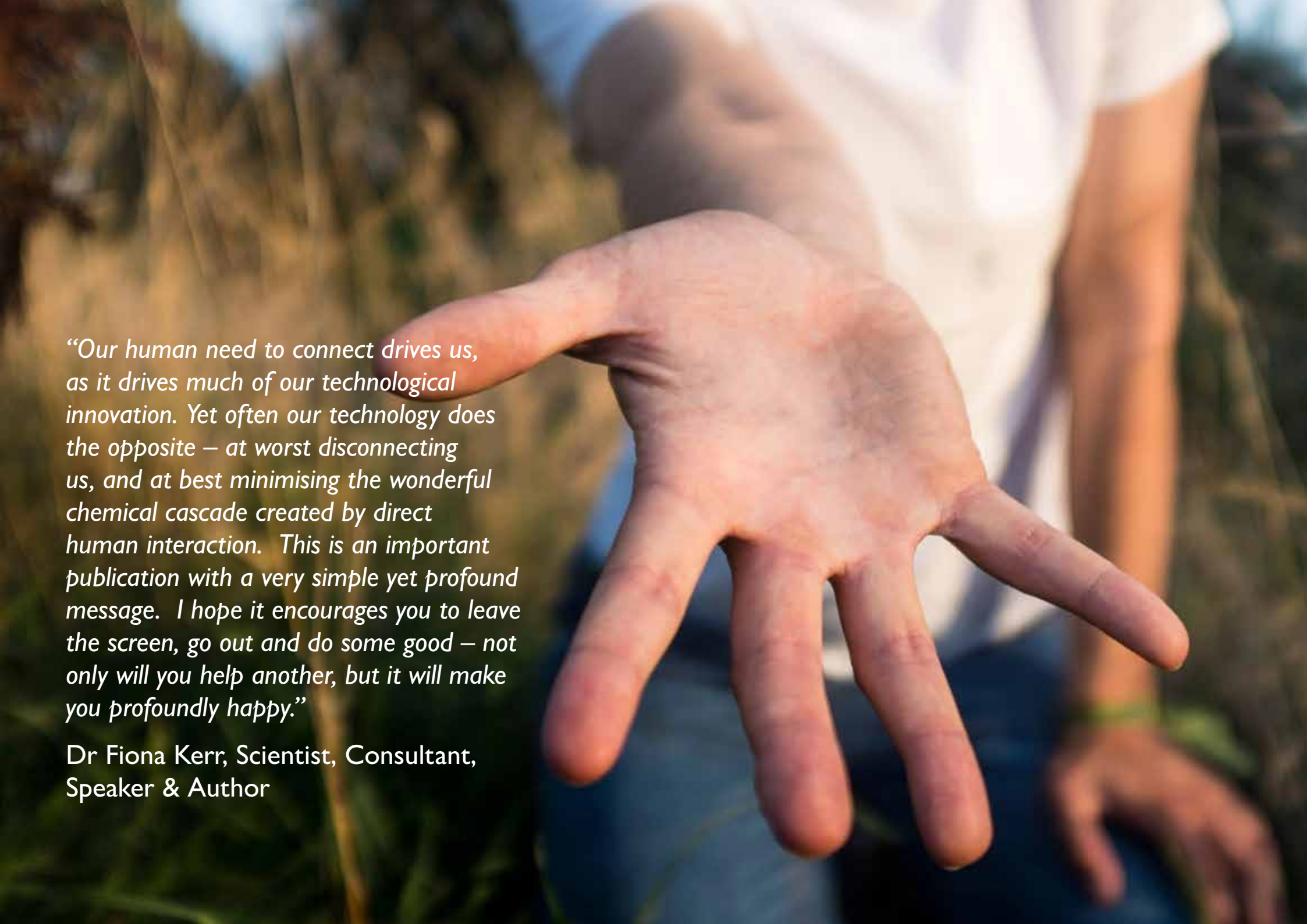
However it has also been shown that the relationship between happiness and altruism goes both ways:

- Wang and Graddy report that happy people are more emotionally capable to help others and have more optimistic personalities, both of which foster altruistic behaviour (Wang and Graddy 2008).
- Konow and Earley found that happier people give more because they are fuelled by their positive emotions (Konow and Earley 2007).

WORKPLACES, AND ALTRUISM

- Australia's own Dr Fiona Kerr has made significant progress into how we can better reinforce DoGooding in every day contexts.
- Workplaces with more optimistic leaders foster environments that improve the cognitive skills of employees from the top down (Kerr, 2017).
- Simple tasks such as smiling, making eye-contact and more friendly interactions in our everyday lives also has significant and positive cognitive effects (Kerr, 2017).



A close-up, shallow depth-of-field photograph of a person's hand reaching out towards the camera. The hand is in sharp focus, showing the texture of the skin and the spread of the fingers. The person is wearing a white t-shirt, which is also in focus. The background is a blurred natural setting with green foliage and a hint of a blue sky, suggesting an outdoor environment. The lighting is warm, possibly from the sun being low in the sky.

“Our human need to connect drives us, as it drives much of our technological innovation. Yet often our technology does the opposite – at worst disconnecting us, and at best minimising the wonderful chemical cascade created by direct human interaction. This is an important publication with a very simple yet profound message. I hope it encourages you to leave the screen, go out and do some good – not only will you help another, but it will make you profoundly happy.”

Dr Fiona Kerr, Scientist, Consultant,
Speaker & Author

Altruism and the World

The Charities Aid Foundation (CAF) World Giving Index is an annual study into global generosity. It is based primarily on data from Gallup's WorldView World Poll, an ongoing research study in 153 countries representing 95% of the world's population. The following key findings were taken directly from The World Giving Index 2017 (The Charities Aid Foundation, 2017).

The research measures giving time, money and willingness to help strangers, and is seen by sociologists as a marker of a cohesive society.

SUMMARY

- Giving amongst developed countries is down, with Africa being the only continent to increase.
- Myanmar is top most giving country and this is the 4th year in a row it has been at the top, this is primarily because up to 90% of their citizens are practising Buddhists.
- In 2010 Australia and NZ were jointly, the most 'giving' countries in the world with a top score of 57% and yet in 2017 we've slipped to No. 6 (Australia) and 4 (NZ).
- Australia's overall World Giving Index score has dropped from 60% to 56%.
- The most improved countries include the former Yugoslavia (Bosnia, Herzegovina and Macedonia) 8 African countries and 2 Latin American countries – all developing nations.
- The link between the giving and happiness is stronger than the link between giving and GDP. So happiness promotes giving not wealth.
- Globally the older we get the more we give.



The chart below shows the regional variation in the giving of money, time and helping a stranger, revealing that Australasia is most generous with money and helping a stranger, but less generous with time (although still higher than most other countries).

WHEN GIVING IS THOUGHT OF AS MORE THAN JUST MONEY, A NEW ORDER OF GLOBAL GENEROSITY EMERGES.

- The ranking of the countries in the World Giving Index underlines that the countries whose citizens ‘give’ the most are not necessarily the countries that might have been expected. Based on an average of their giving of money, volunteering and helping strangers, Myanmar clocked in at number 1, Indonesia number 2, and Kenya 3.

HELPING A STRANGER AND DEMOGRAPHICS

- Men are more likely to help a stranger than women, however equal levels were found in economies in the developed and the developing world.
- There has been a five-year increase in all age groups in helping a stranger, with a peak in 2016.

DONATING MONEY AND DEMOGRAPHICS

- The older we get the more likely we are to donate money, except for some developing counties.
- Men are slightly more likely to donate money than women, however previous years have reported women as more likely.

VOLUNTEERING AND DEMOGRAPHICS

- There has been a five-year increase in the percentage of the global population over 50+ volunteering from 18.9% to 20.2%.
- Men and women are just as likely to volunteer in developed economies, whilst in developing economies they are less likely.

The 2018 report can be found [here](#).

Table 1. Top 20 countries in the CAF World Giving Index with score and participation in giving behaviours.

	 CAF World Giving Index ranking	 CAF World Giving Index score (%)	 Helping a stranger (%)	 Donating money (%)	 Volunteering time (%)
Myanmar	1	65	53	91	51
Indonesia	2	60	47	79	55
Kenya	3	60	76	52	51
New Zealand	4	57	65	65	41
United States of America	5	56	73	56	41
Australia	6	56	66	63	40
Canada	7	54	67	61	35
Ireland	8	53	61	60	39
United Arab Emirates	9	51	71	55	27
Netherlands	10	51	51	64	36

It is well documented that people who practice Buddhism are generally happier and the CAF World Giving Index indicates strongly that they are the most generous.

Matthieu Ricard, Buddhist Monk, Photographer, Author and Humanitarian and often called 'the happiest man on the planet' talks here about altruism.



Summary of general research

Life satisfaction and physical health improve at a greater rate as a result of DoGooding (Van Willigen 2000).

- DoGooding activates the same brain regions and results in the same release of the chemical cocktail containing dopamine and oxytocin – the same as a sexual orgasm (Moll, Krueger et al. 2006; Harbaugh, Mayr et al. 2007; Tankersley, Stowe et al. 2007).
- DoGooding results in the release of the ‘pleasure neurotransmitter’ dopamine as well as the ‘love hormone’ oxytocin that leave you feeling more content and socially connected. This is known as the ‘Helper’s High’.
- Oxytocin (‘love hormone’) released by DoGooding results in increased generosity so DoGooding is self perpetuating (Zak, Stanton et al. 2007).
- DoGooding is associated with increased happiness (Dulin and Hill 2003; Meier and Stutzer 2008) and increased life satisfaction (Harlow and Cantor 1996; Dunn, Aknin et al. 2008; Meier and Stutzer 2008).
- DoGooding in the form of spending money on others makes you happier (Field, Hernandez-Reif et al. 1998; Dunn, Aknin et al. 2008; Aknin, Dunn et al. 2012).
- Happier people are more likely to ‘Do Good’ (Konow and Earley 2007; Wang and Graddy 2008).
- The link between the giving and happiness is stronger than the link between giving and GDP. So happiness promotes giving not wealth (World Giving Index, 2017)
- Doing good in turn makes people happier (Field, Hernandez-Reif et al. 1998; Dunn, Aknin et al. 2008; Aknin, Dunn et al. 2012)
- Simply recalling early acts of DoGooding can increase future acts of DoGooding (Aknin, Dunn et al. 2012).

- Elderly DoGooders have lower mortality risks, regardless of exercise, prior health and religion (Musick, Herzog et al. 1999; Oman, Thoresen et al. 1999; Luoh and Herzog 2002; Shmotkin, Blumstein et al. 2003; Lum and Lightfoot 2005).
- DoGooders are more physically active (Oman, Thoresen et al. 1999; Shmotkin, Blumstein et al. 2003; Harris and Thoresen 2005).
- Do Gooders have more life satisfaction, a greater sense of purpose and better physical health (Sullivan and Sullivan 1997; Van Willigen 2000; Thoits and Hewitt 2001).
- Life satisfaction and physical health improve at a greater rate as a result of DoGooding (Van Willigen 2000).

“DoGooding activates the same brain regions and results in the same release of the chemical cocktail containing dopamine and oxytocin – the same as a sexual orgasm.”

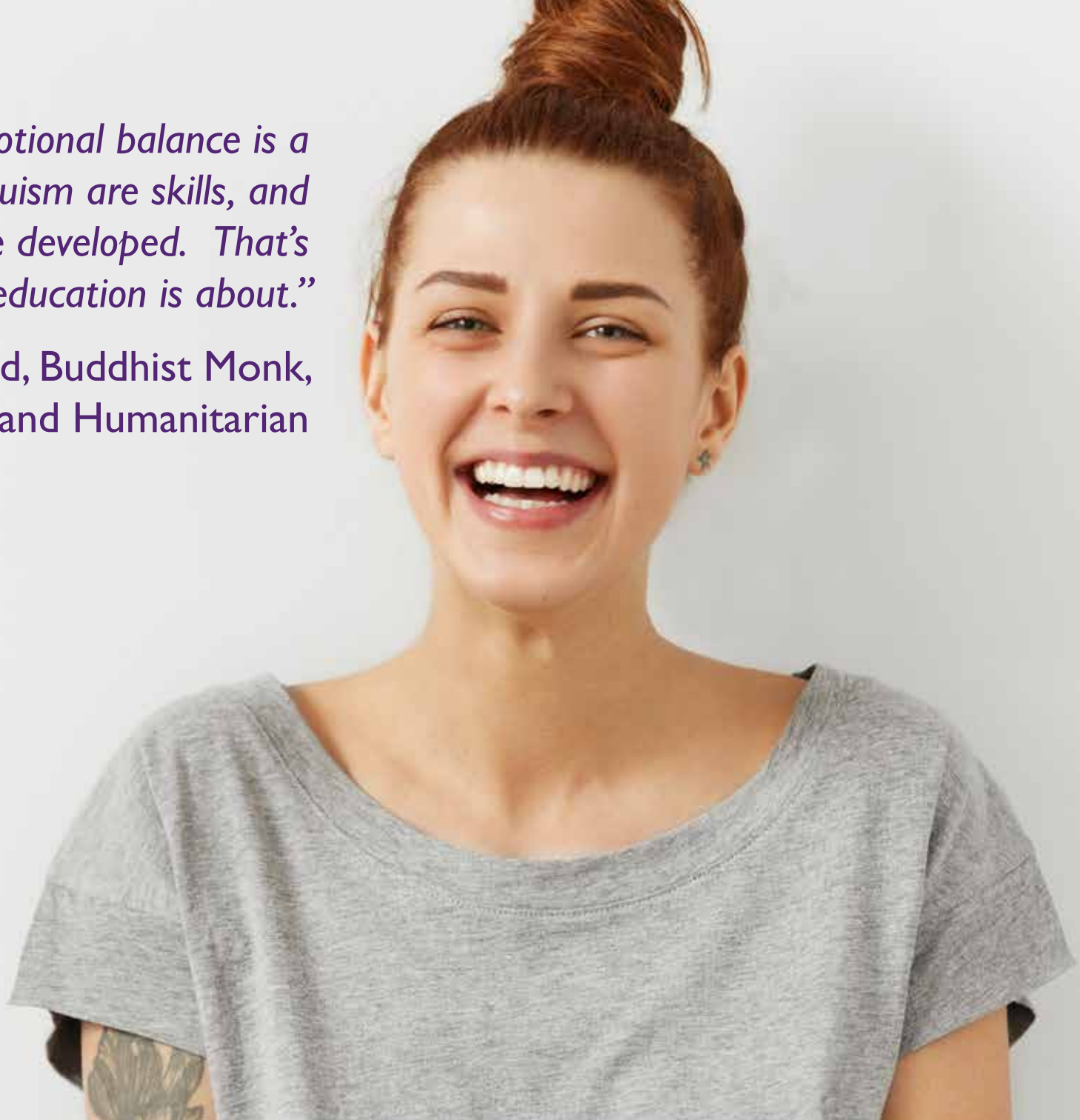


**View Cavill + Co's
humorous video
animation showing
Aussie Do-Gooder
Bruce go through
a day with various
things activating
both dopamine and
oxytocin.**



“Happiness is a skill, emotional balance is a skill, compassion and altruism are skills, and like any skill they need to be developed. That’s what education is about.”

Matthieu Ricard, Buddhist Monk,
Photographer, Author and Humanitarian



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*This publication is dedicated to my hubby Tyrone
Your kind heart has made me who I am*

Design by Ann Roberts

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