

# Being Value-Able:

an exploration of the benefits of  
conscious connection to values

Jacqueline Le Fèvre

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Jackie Le Fèvre ORCID ID <https://orcid.org/0000-0001-5567-9805>

## Declaration

I declare that this dissertation has been composed solely by myself and not submitted, in whole or in part, for any previous application for a degree.

Due acknowledgement has been made throughout the text to all materials used and references provided.

Parts of Chapter Four were published in 2023 in *Occupational Psychology Outlook* 2(1): 14-23 under the title *Does a conscious connection to personal values have values? A mixed methods exploration of individuals' lived experience* co authored with Dr Colleen Addicott and Dr Mark Slaski.

This research is my original work towards the degree of Doctor of Philosophy.

Signature: 

Date: 4 October 2023

## Abstract

Values have interested psychologists for decades. Research has shown impacts of shared values within organisations or teams, outcomes of mismatched values between employees and employers, and values contributing to well-being. Little is known, however, at the intraindividual level. What does consciously connected to values mean to individuals? What benefits, if any, do those individuals attribute to their values connection?

Through a sequential mixed methods exploratory approach, this research sought to understand whether the experience of individuals connecting to their personal values could be described. Psychology acknowledges that values are one aspect of being human. Values are usually unconscious: yet some individuals appear able to deliberately draw upon their values, while others do not. Raising the question what is conscious connection to values?

Study One investigated whether a purposive sample of working age adults found having a values profile useful, how they described feeling connected to their values and the effects of that connection. Study One had two qualitative elements: an online survey ( $N=108$ ) and interviews ( $N=19$ ). Using Reflexive Thematic Analysis a user-identified conceptual framework of Values Connection was developed comprised of: Know, Hold, and Live. Benefits attributed to connection were described as: Self-assurance, Sense Making and Way Finding. Utilities of connection were identified as: Relating, Deciding, Aligning and Self-regulating; and a theme of using values in 'tough times' emerged.

Studies Two, Three and Four tested the conceptual framework quantitatively. Items were developed from Study One and used alongside two established well-being items. A disciplined approach was taken to replication of the quantitative survey in order enable confidence in findings. Study Two was undertaken in Autumn 2020, a 'tough time'. The conceptual framework showed acceptable reliability and validity with significant positive links to well-being in a convenience/snowball population ( $n=552$ ). Replication was planned for 2021 which was expected to be less tough. As the third wave of Covid hit, Autumn 2021 was just as tough. A second convenience/snowball population ( $n=505$ ) completed the same survey and results of tests of difference enabled the populations to be combined for analysis ( $N=1057$ ). Items remained reliable and valid with significant relationships to well-being.

By Autumn 2022 the pandemic had eased. Study Three revisited a sample of earlier participants ( $n=160$ ) to investigate whether the conceptual framework functioned differently as a version of 'normal' returned to daily life: it remained reliable and valid. Through an online survey platform (Prolific), Study Four tested the conceptual framework with a separate population ( $n=273$ ) to those who had contributed to its development. All elements of the framework continued to behave similarly and tests of difference showed all populations could be combined to create a final data set ( $N=1488$ ).

Findings showed that Values Connection could be generalised as being comprised of Know, Hold and Live, with all three components being significant in relationships with the benefits of Self-assurance, Sense Making and Way Finding. Strength of Values Connection described up to 69% of the variance in benefits reported. Both Values Connection and the benefits supported higher well-being, showing some variation in contributions to Life Satisfaction and experience of things in life as Worthwhile.

Implication of the findings for application in working life are presented together with suggestions for future research. There is a pragmatic note of caution for organisations and practitioners about the risks that may be associated with not taking work on values seriously or failing to complete publicised values programmes. Finally, there is a note of hope that Values Connection may provide a currently underutilised route to support well-being at work, and that individuals being able to consciously harness their values can contribute to a sense of a life worth living.

## Acknowledgements

Three people have borne the brunt of my preoccupation and lack of presence whilst all this has been going on – to Hannah and Victoria, knowing you two phenomenal humans believed in me meant more than you can imagine, and to big Dave my heartfelt thanks and promise that we shall have more fun again very soon....and I guarantee you all I am never going to do another one of these.

My official team of supervisors are probably now as relieved as me that this is finally off all our desks. My thanks to Dr Colleen Addicott for her insight, patience and perseverance (especially when I was tempted to just stop), Dr Mark Slaski for his provocations giving me practice at defending my research before I knew how important that would become, and finally Andy Brogan of Easier Inc for keeping a firm eye on the ultimate prize of new knowledge for real world application to make work work better.

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Spending time in Hertfordshire has been a pleasure especially as St Albans is where my mum was born and grew up so it's practically a family tradition.

My dad is no longer with us but I know he would have been tickled to think a kid of his would be in with a shot at those three little letters – P-h-D – so this is dedicated to him: John David Le Fèvre a man who modelled expansive and socially responsible values in his work and love of life, from whom I learned that trying your best to do right by others is pretty much always a good way to spend your valuable time.

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## Chapter 1

### Introduction to The Research and The Researcher

#### 1.1 The Research

At the heart of my interest is a thesis that **conscious connection** to personal values brings **benefits** that can improve **working life**. This idea raises a number of questions.

How might conscious connection to personal values be defined? Is connecting to values something individuals report as beneficial? If benefits are reported, might there be a relationship with well-being? Could investigation into these areas provide practical insights into **how** (in the real world) conscious connection to values may improve life at work? These questions are at the centre of the design, administration and analysis of this doctoral research.

This dissertation is the story of my search for answers to the questions that concern me as a practitioner and those in my professional networks (Appendix A Figure 1.1). It starts by exploring literature across the landscape of values before moving to an overview of methodological considerations that shaped both design and methods for the research. Four studies are then reported, moving from qualitative to quantitative, over the course of three strange years that span the arrival of UK Covid-19 restrictions in March 2020 through a cost of living crisis to the first anniversary of the Russian invasion of Ukraine in February 2023. It ends considering what the results suggest and how those findings could shape and improve values practice, both in-house and in consultancy: doing so to benefit employees and employers, whilst supporting well-being, which is something that affects all of us.

#### 1.2 A Personal Preamble

My primary aim is to bring rigour to better understanding and describing the experience of individuals connecting to their values and any benefits they attribute to that connection. My hope is that understanding the nature of connecting to values will offer insights that have potential to improve life at work for many, not just a few.

For eighteen years the core of my work has concerned supporting individuals and organisations to surface and connect to values. When first introduced to a novel values approach people often express enthusiasm. Frequently they say they will explore their results further, wanting to be 'able' to use their values to make life better. Occasionally I have witnessed individuals shift dramatically once in possession of their personal profile. People have changed jobs, moved house, set up in business, settled long standing family feuds, even completely uprooted everything and left the country. Usually, however, the values

debrief or workshop we do together is a one-off event. As the participants and I part company, in general I do not know what happens next.

What I do know is that, at least sometimes, something good happens.

*For me, the values work was incredibly impactful. Truly understanding your own values, what drives you and understanding there are no "wrong" values is quite enlightening. This work directly influenced my decision to move into a different field of work and gave me the confidence to live more aligned to my values. This has reduced so much stress and frustration and has genuinely improved the quality of my life.*

Evaluation Feedback, GM Moving Programme (personal communication 2022)

*It really helped me understand why I have an almost visceral reaction to some situations, and why I sometimes hold onto things that jar... about people being 'dead to me'. I realised that one of my most difficult relationships at work was like a terminal illness, every action brought them closer to the grave! Once I understood why, it was so much easier to let go of my feelings of frustration (and dislike).*

Email from organisational workshop attendee (personal communication 2023)

My knowing, that sometimes something good happens, is not enough.

In my world the reality is that many people want or even need numbers to give them the confidence to embark upon a piece of values work. This may be an arcane view of what constitutes knowledge, but it is one that has been around for a long time and still persists. Many 'directors' and 'commissioners' would agree wholeheartedly with the sentiments of William Thomson. In his 1883 lecture at the Institution of Civil Engineers Thomson said:

*when you can measure what you are speaking about and express it in numbers you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the matter may be.*

(Thompson, 1891 pp. 80-81)

(Lord Kelvin well known for invention of the international system of absolute temperature)



### 1.3 Earlier Study

My first degree was a long time ago. Studying animal behaviour and evolutionary biology at the University of Sheffield, I found seeking to decipher the 'why' behind the 'what' an individual or a group did next fascinating. The challenge intrinsic to these studies, whether of whelks or whales, chimpanzees or chiffchaffs, was that there was no way to ask them to describe, after the event, what they had considered along the way to get to where they ended up. All we could ever do as researchers was hypothesise, watch and wonder.

Developing theory about behaviour sets out, as Staddon & Zanutto say, "to discover the simplest possible process" (1998, p.242) that explains the observed behaviour; to do this parsimony is key. They call for researchers to develop theories that are both simple and seek to provide useful explanations for behaviours.

Seeking to be of practical use whilst adopting as simple an approach as possible was appealing but also had its own merits. Cohen (1990) supports parsimonious investigation saying "we should be studying a few independent variables and even fewer dependent variables" (1990, p.1340). They suggest when variables are numerous, cross correlations produce so many relationships it is more difficult to discern the meaning of the results.

Nolan (1997) labels quantitative parsimony a "theoretical virtue" continuing "simplicity is fundamental, a principle to which the science of psychology should pay more than lip-service. Parsimony is not just a good thing, it may be the *only* thing." (1997, p.239). Parsimony does work: even single items have been shown to perform accurately in measuring some concepts. For example Abdel-Khalek (2006) reported highly significant and convergent validity for a single item measuring happiness.

Various arguments suggest that parsimonious hypotheses have greater explanatory power than complex theories (Epstein 1984, Baker 2020). In part this is because they can be flexible in the light of what the research reveals: "an ideal which is sought but whose locus is not fixed *a priori*" Beck (1943, p.627).

Parsimonious approaches have proven effective in measuring a range of constructs including: cognitive ability (Kahana et al 2002), personal growth initiative (Zahid et al 2023), Organisational Justice and Leader-Member Exchange (Shkoler et al 2021), in-competition emotions in athletes (Freemantle et al 2021) and assessing emotional states (Yaden & Haybron 2022).

As a pure scientist at heart, I wanted to do a piece of research that was solid and substantive whilst as straightforward as possible. I did not, however, want to take a classic hypothetico-deductive approach. One thing you learn when working with animals (and with humans) is that the forces at work below the level of what is visible are rich, diverse and frequently contain surprises. To start out with a specific (potentially inadvertently blinkered) Jacqueline Le Fevre 19049539

idea about how things might work carried a great risk of missing something pivotal. As a famous consulting detective observes

*It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.*

Sherlock Holmes, A Scandal in Bohemia (Conan Doyle 1892, p.7)

#### **1.4 My Values History and Motivations**

In late 2004 I was a client myself when the Minessence Group and their values inventory tool was recommended to me. I gave it a try. Finding the insights personally powerful I resolved to seek accreditation to share the approach with my clients.

Since becoming a values practitioner in 2005 I have explored values with individuals, groups, teams, departments, multi-agency partnerships and whole organisations. My experience now spans private and public sectors, social enterprises, co-operatives and charitable organisations; staff, trustees, volunteers and students. The number of individuals I have debriefed, and workshops delivered, runs into the thousands. Since becoming accredited to license others with the Minessence tool in 2007, I have continued to use the inventory in my own consulting, and supported others to use it in theirs.

In preparation for this PhD journey I revisited my values in February 2020. There are 128 values in the Minessence Values Framework. Of those 128, that 'Discovery & Insight' and 'Research/Original Knowledge' appeared in the upper end of my Top 10 list is probably not a surprise to anyone (Appendix A 1.2). An outsider might wonder, however, about the significance of 'Faith/Risk/Vision' as the highest of all: what kind of 'risk' could I possibly be taking by embarking upon a funded PhD?

Simply the risk that I was wrong. That the impression I had formed through my interactions with hundreds of clients was deeply flawed. That all the encouraging things said over the years, all the positive steps I believed I had seen people take holding their values to heart, was the product of their politeness coupled with my wishful thinking. That my interest in seeking out and codifying an empirical base of evidence for the power of values at the intra-individual level would prove my professional undoing. Yet the risk had to be run.

Another thread within the Top10 that made its presence felt throughout the research was the interplay between simplicity, creativity and practical application. I have been (deeply) reluctant to overcomplicate the research instruments I have developed. Constantly asking myself 'how could knowing this be useful?', 'to whom could it be useful?', and 'how can it be set out so that it can be readily understood and then used?'.

As a practitioner I know a major barrier to many organisations seriously considering undertaking values-based based work is perceived lack of evidence or ‘proof’ of its’ benefits. People ask “what difference can it make?”, sceptical that anything anyone says in reply is robust or the product of “proper” science. Hence the need for something rigorous and subject to scrutiny that might reveal knowledge infused with what Robson & McCartan describe as “justified believability and trustworthiness” (1995, p.9).

Finally to the presence of ‘Empathy’ and ‘Generosity’. I believed strongly at the outset, and even more so now, that I needed to be listening open minded and open hearted to what my peers, my clients and people in wider networks and walks of life had to say about their experience with values. I find myself of the same mind as Cupchik; “An empathic approach would be one in which an attempt is made to understand these phenomena holistically and from the perspective of the participants” (2001, p.10). This arcs back to the recognition that everything I had previously thought could be wrong. So, rather than fishing for what I hoped to find, my best chance of learning what was actually happening was to start by seeking to understand what ‘was’.

### **1.5 Values and Psychology**

A common definition of psychology centres on the scientific examination of mental processes and behaviour (Henriques & Michalski 2020). In the quest to better understand ourselves and others, Howard encourages us to avoid “an unduly narrow” path. Instead, recommending we seek “an understanding of human values” suggesting it “is crucial if we are to achieve a proper grasp of the nature of humans” (1985, p.264). That wider path of work to define, describe and generally pin down what values are and how they function has been visible in academic literature for over a century.

Possibly the first psychological model of values was the Philosophie der Werte by Professor Münsterberg advocating a shift in attention from solely facts and laws to ideals and free will. Reviews were harsh. Wiseman in the American Journal of Psychology was unconvinced “we may surely say that the age of such systems is past” (1908, p.409). Moore for the International Journal of Ethics went further denouncing the proposals as “purely arbitrary fictions, which there is nothing to recommend either in the book or out of it except the fact that he himself has apparently come somehow, in some fashion, to believe them.” (1909, p.501)

Interest in values did not stop with the sceptical reception for Münsterberg’s theory. In the years that followed the exploration of, and attempts to describe, what matters most to individuals, groups, organisations and societies attracted both researchers and theorists from a variety of fields around the world.

Today research finds that deliberately engaging with personal values - strengthening connection with what matters most - is positive (Sheldon & Elliot 1999, Honnka et al 2019). As values are tied to feelings (Cha & Edmonson 2006) in the workplace, connecting to one's personal values can improve engagement and relationships (Jayawickreme, Forgeard & Seligman 2012) while alignment between personal and organisational values supports agency (Hadar & Benish-Weisman 2019), personal responsibility (Uçanok 2009) and being at our best (Addicott 2016).

Measurable effects of values connection include improving academic performance (Chase et al 2013) and buffering individuals against physiological stress (Sherman et al 2009). The successful pursuit of values can be an important predictor of vitality and well-being (Elliot & Sheldon, 1997, Ferssizidis et al, 2010).

## **1.6 Values in the Real World**

My sense that interest has been steadily growing is borne out by analytics, Google shows a rise in searches for 'core values' in recent years (Appendix A Figure 1.3). In 2005 when introducing myself as a 'values specialist' the most common response was "is that even a thing?". Now prospective clients or conference delegates say "that's interesting, we've been saying we really need to do some work on that".

What once was a relatively oblique concern is entering the mainstream. Whether it is trying to understand how leaders affect culture (Ciulla & Cuilla 2020), seeking to strengthen recruitment practices (Klassen et al 2021), reduce turnover (Teo et al 2022), or develop an effective brand (Boukis & Christodoulides 2020, Iglesias et al 2020): exploration of values can be found across psychology, sociology and business literature.

As we shall see in Chapter 2 through a review of what is known about values and their functions, there are gaps in knowledge. How organisations can benefit from generating alignment between values in the workforce and the systems in which people work is relatively clear (Edwards & Cable 2009). That values have a role in productivity and job fit is generally accepted (Lee et al 2022). Paradoxically, precisely what is meant by the term 'values' varies greatly (Meglino & Ravlin 1998, Rohan 2000, Hitlin & Piliavin 2004). How individuals consciously experience connection with their values and what, if anything, they derive from that connection in the way of benefits is not clear.

### ***Why 'conscious connection'?***

Values are usually unconscious (Maslow 1943, Schwartz 2012). When we are unconscious of something we are unable to deliberately use it as a resource. For example you may have remarkable skills at building empathy which I know because I have witnessed

it time and time again. You may not know you have this skill. If you do not know, and consequently have no awareness of how you do what you do because you 'just do it', you have limited scope to instrumentally deploy that skill. Significant increases in competence are associated with consciousness (Dennett, 2001).

So how do we become conscious? Prinz (2005) answers "consciousness arises when intermediate level perception representations are made available to working memory via attention." (2005, p.388). Why bother make something conscious (bring attention to it), where it has previously functioned unconsciously? Consciousness activates additional processing areas of the brain increasing capacity to explore alternative interpretations and consider different options. As Baars et al (2003) explain, consciousness "helps to organise the evidence and generates testable hypotheses" (2003, p.671). Neurobiology studies (Skora et al 2022) suggest that consciousness is necessary for effective learning and decision making to take place.

In my work I have observed a range of responses of individuals to seeing their personal inventory profile for the first time. Bringing a representation of someone's values into the realm of the concrete makes it possible for attention to be paid to ideas which were previously abstract and unknown. Once values are 'known' individuals can and do act upon them, able to use them in evaluating options and making decisions.

Rokeach described a student who, upon receiving their values profile, felt it showed them to be "a hypocrite, pretending to be a liberal, when in fact I was quite self centred" (1973, p.302). Discomforted by this self-assessment the student switched courses from natural science to social science, volunteered in a ghetto working with teenagers and joined civil rights campaigns. About a year and a half later they completed a new profile which showed a significant shift, *equality* and *freedom* now held second and third place respectively in their values hierarchy: they no longer felt hypocritical.

### **Why 'benefits'?**

In experimental situations the process of connecting to personal values has shown positive impacts. Intervention studies evidence that connection can buffer against stress (Cresswell et al 2005) and anxiety (Li et al 2022), increase willingness to volunteer (Arieli et al 2014) even support low interest students in finding motivation (Erickson et al 2021) all of which is encouraging but narrow. What these enquiries have not done is start with the individual and explore with them their sense, within their context, of whether connecting to their values is making a difference and if so what sort of difference.

There appears to be no broader understanding of the range of ways in which values connection may be useful to an individual and how the benefits of that miscellany may show

up in a persons' life. That understanding could provide a more rounded picture of where, when and how in life connecting to values may add value.

### ***Why 'working life'?***

It is estimated by the World Health Organization (WHO) that almost 60% of the global population is in work. WHO believes that 'decent work' supports mental health. Decent work is described as: providing a living, a sense of confidence, purpose and achievement; opportunity for positive relationships and inclusion in a community. Not all work is decent work and there are consequences (World Health Organization, n.d.).

On 15 December 2022 The Financial Times asked "What if work is making us sick?" (O'Connor 2022). A month earlier the Health & Safety Executive published "Work-related stress, anxiety or depression statistics in Great Britain 2022". Drawing upon Labour Force Survey data published by the Office for National Statistics, the HSE highlighted work-related stress, depression, or anxiety was reported by 914,000 individuals in 2021/22 with an associated loss to employers of 17 million working days: a rise on pre-pandemic levels (Health and Safety Executive, 2022).

In their meta-analysis (n=79 studies) Nixon et al (2011) found that occupational stressors are related to physical symptoms. While their research distinguishes between chronic stressors such as organisational constraints and role conflict, and acute stressors such as interpersonal conflict they observe that both have significant relationships with overall health. The wake of the pandemic has added to concerns over both physical and mental ill health and new approaches in organisations to support employees with both are needed.

### ***Why now?***

Our lived experience of the world changed profoundly under the shadow of Covid19. The pandemic prompted significant disruption to the values of individuals (Bonetto et al 2021, Daniel et al, 2022). As Bojanowska et al observe "individually held values are flexible and adaptive systems that react to external circumstances such as global critical events." (2021, p.1). Values have an interdependent relationship with context. This is one of the things that makes trying to work with the specifics of values and their impacts such a complex endeavour.

Given the dynamism of values added to the complexity of the outside world, I am uncertain of the usefulness of trying to label any values a person may or may not hold at a given moment: even less convinced of the merit of seeking to judge whether those personal values are in any way more or less 'good' than others. To me what feels useful is to

investigate what arises from someone feeling connected to their values. I am not the first person to consider values this way. While researching being at one's best in work Addicott observed "A term not currently used but perhaps more helpful to consider is that of a connection. A connection allows for congruence in some areas, variance in others but always for some form of compatibility" (2016, p.49) later reporting that "a values connection plays a role in being at one's best" (2016, p.292).

Working with values is still far from mainstream. Surveying 726 organisations The Chartered Institute of Personnel and Development asked about the extent to which values/principles formed part of health and well-being activities. Only 33% said to a large extent while 26% said either a little or not at all (CIPD 2023). There is a sizeable opportunity here to do more and do better.

Dynamic though values are and problematic to pin down, there may yet be some golden threads that run through their nature that can signal ways to harness them better. Better for employers but more importantly, in my view, better for us as individual employees who have so far been somewhat passed over. Steps towards rebalancing that situation is something this research hopes to accomplish.

## **1.7 Conclusion**

In only two decades this century has seen profound political, societal, climate, economic and health crises as Komporozos-Athanasίου puts it "our era is on a hinge" (2022, p.1). The road ahead looks set to contain more uncertainties than individuals and organisations are comfortable with, amplifying existing challenges to mental health and general well-being (Humphrey et al 2022).

All that makes this is a good time to address the knowledge gap concerning the components of conscious connection to values and any benefits that may bring. Perhaps closing that gap will enable individuals to become more value-able. Perhaps strengthening capability to use values will help cultivate a deeper sense of what makes for a life worth living, improving experience of the world of work and supporting well-being.

In the next chapter literature is reviewed to describe where things stand at present in terms of how values are currently understood, and the nature of values in the modern workplace, before identifying gaps in knowledge that this research sought to address.

## Chapter 2

### Literature Review: what is known so far

#### 2.1 Introduction

In Chapter 1 a case for a deeper exploration of the nature of conscious connection to personal values was made. Gaps in current knowledge concerning values and how individuals may benefit from connecting to them were suggested to be examined in greater detail in this chapter. There are two strands to this integrative literature review. First there is consideration of current theories relating to values and second an exploration of research concerning what is understood about the dynamics of values. The goal of this review is to provide an overview of values literature chiefly from the last fifty years as a period which has seen increasing interest (Appendix B, Figure B2.1.) with a view to shaping the subsequent research (Ravitch & Riggan 2012). The review identifies issues, gaps in knowledge and suggests where additional research may close some of those gaps.

Starting broad the review presents descriptions of different conceptions of values and a variety of frameworks. A sense of the nature and functions of values at the level of the individual is provided predominantly through results of studies published since 1995 most of which use the Schwartz model (1987, 1992, 1994, 2012). Finally, research into values in working life is presented to signpost potential contributions to real world issues.

Research into values has been gathering momentum since the publication in 1973 of *The Nature of Human Values* by Milton Rokeach. Curiosity about “what men believe, why they believe and what difference it makes” led Rokeach to “the problem of values” (1973, p.IX). To this day Rokeach’s work is regarded as “seminal” in the field (Maio 2017 p.16) and has been extensively referenced by others (Appendix B, Figure B2.2).

Describing development of his theory Schwartz acknowledges adopting “conceptualisations of values offered by Rokeach (1973) and built upon his methodology” (1994 p.42). Schwartz’s theory of values (1987, 1992, 1994, 2012) is today the “most often used in the social sciences” due to “its integrational potential and the vast empirical support it has gained” Cieciuch et al (2016 p.503) (Appendix B Figures B2.3 and B2.4). Schwartz has been extensively used in psychological studies (Parke-Leduc et al 2015, Zacharopoulos et al 2021) and research, findings from more than 70 countries support the model (Hanel et al 2018).



## 2.2 What are Values?

Values are widely accepted as usually unconscious aspects of an individual (Maslow 1943, Hofstede et al 2010), core to personal identity (Hitlin 2003, Maio 2017) and drivers of behaviour (Skimina et al 2019, Sagiv & Roccas 2021). Researchers have described values as: motivational forces (Vernon & Allport 1931, Verplanken & Holland 2002, Boer & Fischer 2013), needs (Maslow 1943, Gouveia et al 2014), priorities that drive behaviour (Hall 2001, Schwartz 2011), goals (Leung et al 2007, Uçanok 2009, Yasuma et al 2020), “intimate credos” (Goleman 1998 p.57), the “essence of the individual” (Horley 2012, p.163), core of one’s personal identity (Sagiv et al 2017, Russo et al 2021), “meaning-universals” (Frankl 2011 p.118), beliefs/principles/ideas concerning what matters most in life (Rokeach 1973, Hebel 1998, Cheng & Fleischmann 2010, Hofstede et al 2010, Jonsen et al 2015, Maio 2017, Barrett et al 2019).

Reflecting on this variety Rohan suggests that “definitional inconsistency has been epidemic” hampering research as “the word values is open to abuse and overuse by non-psychologists and psychologists alike.” (2000, p.255). Hitlin & Piliavin echo this view extending their concern observing there is “little coherence between the different approaches used across the conceptualisation and measurement of values” (2004, p.360). Part of the problem comes from the location of values as a topic: it has no home. Maio gives some sense of the range of research listing from psychology: “personality, motivation, attitudes, intergroup processes, culture, occupational psychology, political psychology and moral judgement” (2017, p.x) and that is before the reader turns to management and business including leadership, sociology, anthropology, theology, philosophy and a variety of health focussed interests including counselling, therapy and psychoanalysis.

Little wonder there is no universal agreement on what the term ‘values’ means. Lack of consensus in psychology on meanings is not uncommon. Definitional variety exists in relation to behaviour (Henriques & Michalski 2020), employee engagement (Mills et al 2012), resilience (Raetze et al 2022), compassion (Addiss et al 2022), emotional intelligence (Meyer & Fletcher 2007), confidence (Archer & Yates 2017), culture (Mironenko & Sorokin, 2018) and coaching (Gormley & van Nieuwerburgh 2014). Variation can do damage. Muddled meanings generate confusion, and can cause harm, giving rise to inappropriate instruments, flawed workplace manager training, wasting time and money (Mills et al 2013).

For the purposes of this dissertation, and the studies it contains, the following conception of values is proposed: values are powerful ideas about what matters, some values are powerful enough to determine what it means to live true to self. Any idea, no matter how worthy, that does not have the power to move an individual or group to act is not

a value. Core or crucial values are those powerful ideas that when dishonoured or compromised cause dissatisfaction, even distress.

### **2.3 Approaches to Exploring Values**

Agreeing a common conception is only one of the challenges of values. Hitlin & Piliavin observe there is “little coherence” (2004, p.360) in how values are measured. A problem compounded by a lack of literature comparing values approaches (Hanel et al 2018). Many instruments built upon established models have poor reliability in terms of consistently predicting behaviour (Cieciuch et al 2014, Hanel et al 2018), vary significantly in construct validity (Reilly et al 2019) and are not without bias (Baron, 1997). As Meglino & Ravlin sum up “despite decades of research” overall “there appears to be no clear resolution to the value measurement controversy” (1998 p.361). Maio et al suggest that an increase in precision in how values are both ‘conceptualised’ and ‘operationalised’ in the exploration of organisational behaviour is also needed (2020, p.284).

#### **Schwartz**

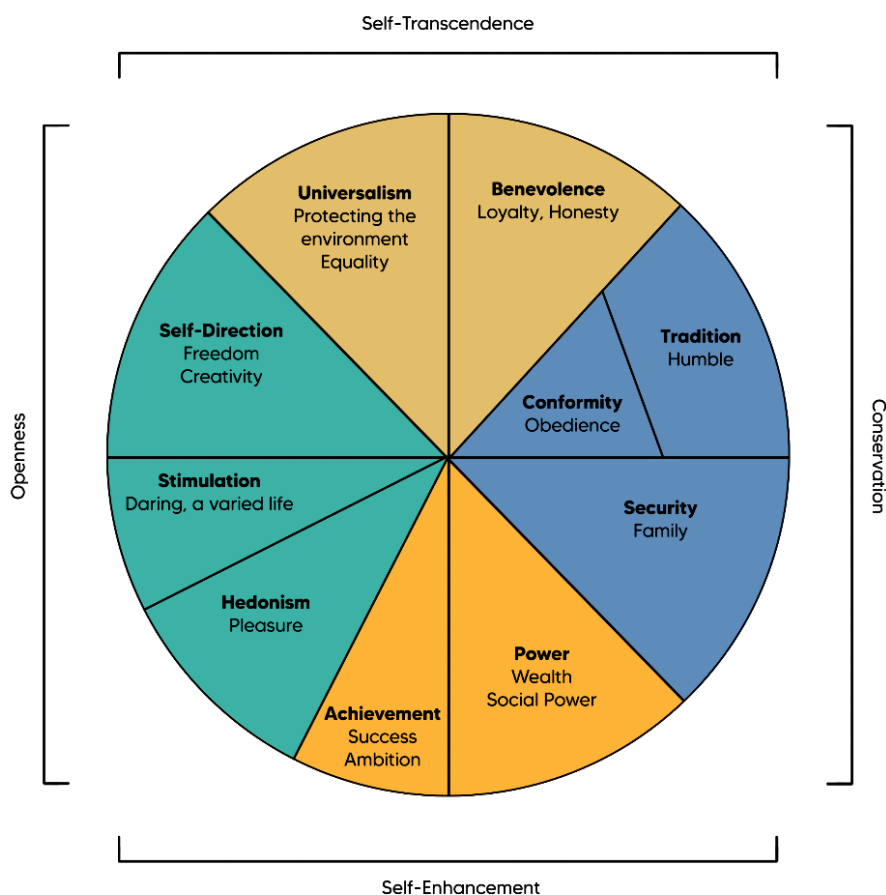
In research studies the most widely used approach is based on the Schwartz Quasi-circumplex model of values and often investigated using the Portrait Values Questionnaire (PVQ). The PVQ and its variants have been used in a range of areas. Recent examples include: values in couple relationships (Danioni et al 2023), values and involvement in online learning (Rodionov & Maklasova 2023), values and empathy in medical students (Ardenghi et al 2023), values and academic achievement in high school students (Vecchione & Schwartz 2022), values, guilt and shame (Janeczek & Cieciuch 2022), values in personnel selection (Anglim et al 2022), values and corporate social responsibility in the Czech Armed Forces (Mikulka et al 2020), values and delinquency (Bilsky et al 2020), values and arguments (Kiesel et al 2022) and links between values and students readiness to innovate (Buravleva & Bogomaz 2020).

What is now often referred to simply as the Schwartz Model, was introduced by Schwartz & Bilsky (1987) identifying the five most common features of values in the literature of the day. Drawing on earlier work by Allport, Maslow and Rokeach (Appendix B 2.1) (among others) they proposed that values are “a) concepts or beliefs, b) about desirable end states or behaviours, c) that transcend specific situations, d) guide selection or evaluation of behaviour and events, and e) are ordered by relative importance” (1987, p.551).

At first the model contained 10 types of values, differentiated by the type of motivational goals each one sought (Schwartz 1994) shown in Figure 2.5 Schwartz Quasi-circumplex model of values.

**Figure 2.5 Schwartz Quasi-circumplex Model of Values (1994)**

Figure redrawn from Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of social issues*, 50(4), pp.19-45.

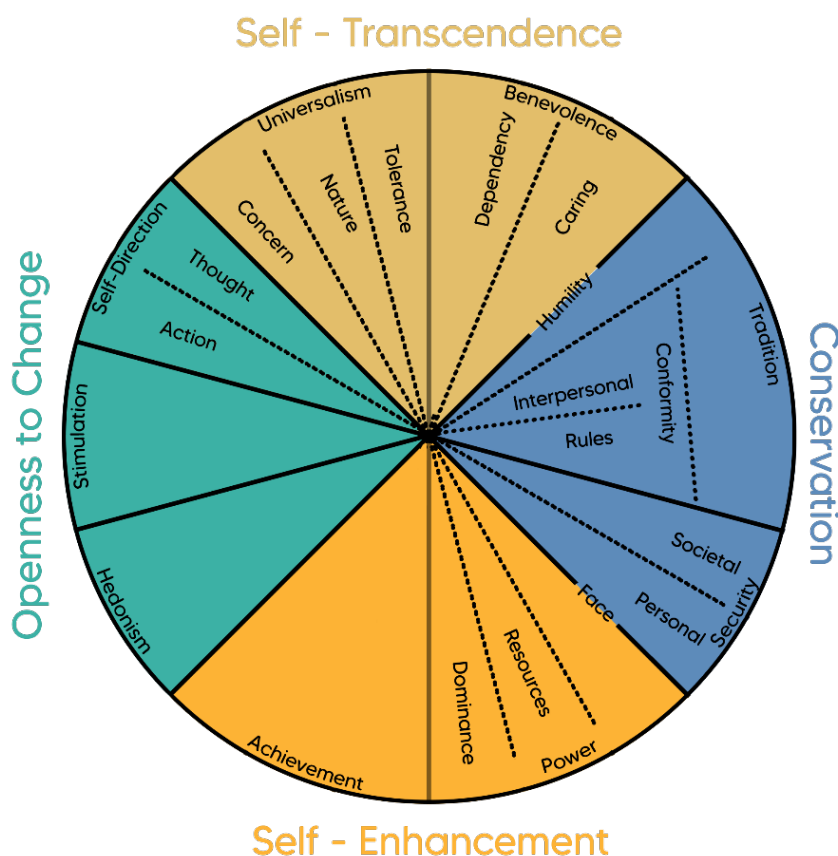


Reflecting on his values work in 2011 Schwartz described the first question that took him down this line of enquiry as “Do values make a difference?”. His view was that most psychologists during the early days of his work would have described values as “largely rhetoric, lip-service, after-the-fact justifications and explanations” (2011, p.309). Looking forward, Schwartz foresaw that values and well-being would emerge as a major direction of future research and highlighted that a related topic that warranted investigation, “the nature and intensity of negative emotions people feel if they violate their values” (2011, p.312).

Meanwhile work continued on the development of the model. In 2012 international collaboration between Schwartz and academics from 9 other institutions resulted in a refined model containing 19 values. These new values conformed to the five features set out in the earlier work and were ordered based on compatibility with neighbouring values and potential for conflict for diametrically positioned values (Schwartz et al 2012) shown in Figure 2.6.

**Figure 2.6 Refined Schwartz Quasi-circumplex Model of Values (2012)**

Figure redrawn from Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Versakalo, M., Lönnqvist, J.E.,... & Konty, M. (2012). Refining the theory of basic individual values. *Journal of personality and social psychology*, 103(4), 663.



Through the lens of Schwartz, values are not the same as other concepts. They are not part of personality for example. Vecchione (2023) explored relationships between Schwartz (2012) values and the Five-Factor Model. Some values correlated in ways that were anticipated such as Extraversion with Stimulation ( $r = .45, p < .003$ ), others did not such as Agreeableness with Benevolence-dependability ( $r = .17, p > .05$ ). Values are not the same as traits: Bardi et al (2014) distinguish between values and traits saying traits describe recurrent behaviours which values do not. They are also not the same as attitudes: as values are hierarchical and abstract whereas attitudes are more general (Schwartz 1994).

**Comparing different approaches**

Values common to existing models include those related to the self or personal identity (e.g. self esteem); values focussed on relationships with others (e.g. social,

friendship, belonging); those related to achieving goals (e.g. achievement or accomplishment); values in relation to fairness (e.g. equality, benevolence, universalism and a world at peace); and values relating to creativity (e.g. imaginative, intellectual, aesthetics).

Values related to religion appear several times in different forms. Schwartz (1992, 2021) references Tradition as relating to family and religion. Hall (2000) regards Worship as distinct from Tradition. Gouveia et al (2014) treats Religiosity as a social goal. Cheng & Fleishmann's (2010) meta inventory includes Spirituality as a key element. Table 2.1 shows a summary description of elements contained within eight commonly referenced models from the last ninety years.

**Table 2.1**  
**Values Models: Description and Elements**

<b>Authors</b>	<b>Description</b>	<b>Elements</b>
Vernon & Allport (1931)	Study of Values (SOV) is an ipsative psychological tool using Spranger's approach to values of six ideal types of people (Spranger 1928). Each type is characterised by their most important and general beliefs, ways of thinking and preferred patterns of living.	Theoretical: truth Economic: usefulness Aesthetic: harmony & beauty Social: love for people Political: power & leadership Religious: unity or moral excellence
Maslow (1943)	A list of basic needs, common to all mankind and are therefore shared values.  Needs are organised in a hierarchy. Any given behaviour can be motivated by more than one basic need.	Deficiency needs - Physiological; Safety; Love & belonging; Esteem;  Growth needs - Self-actualisation.  Growth needs have been expanded to include: Cognitive, Aesthetic and Transcendence needs.
Rokeach (1973)	Values survey designed to provide information about the stability and change at macro and micro levels	Terminal Values:  A comfortable life; Equality; An exciting life; Family Security; Freedom; Health; Inner Harmony; Mature Love; National Security; Pleasure; Salvation; Self-Respect; A sense of accomplishment; Social Recognition; True Friendship; Wisdom; A world at Peace; A world of Beauty.  Instrumental Values:  Ambitious; Broad-minded; Capable; Clean; Courageous; Forgiving; Helpful; Honest; Imaginative; Independent; Intellectual; Logical; Loving; Loyal; Obedient; Polite; Responsible; Self-controlled.

<p>Hall-Tonna Developed late 1970's early 1980's  (2000, 2001)</p>	<p>Hall-Tonna Inventory (H-TI) as a method of documenting outward signs of an inner reality.</p>	<p>125 values across eight clusters in four phases:  Surviving: self preservation and security  Belonging: connection and relationships  Self-initiating: independence and growth  Interdependence: wisdom and global concern</p>
<p>Schwartz (1987)   Refined by Schwartz et al (2012)</p>	<p>Values survey describing what is important to the individual in life using portrait items (often gender specific) for example:  It is important to him to be loyal to his friends. He wants to devote himself to people close to him  It is important to her to be rich. She wants to have a lot of money and expensive things.</p>	<p>10 values initially, increasing more recently to 19 values:  Universalism (Tolerance, Concern, Nature); Benevolence (Caring, Dependability); Self Direction (Thought, Action); Stimulation; Hedonism; Achievement; Power (Dominance, Resources); Face; Security (Societal, Personal); Tradition; Conformity (Interpersonal; Rules); Humility.</p>
<p>Locke (2000)</p>	<p>Circumplex Scales Of Interpersonal Values  To assess traits (values) associated with differing levels of agency and communion to study interpersonal phenomena</p>	<p>Eight sections or octants: Agentic; Agentic and Communal; Communal; Submissive and Communal; Submissive; Submissive and Separate; Separate; Agentic and Separate</p>
<p>Cheng &amp; Fleischmann (2010)</p>	<p>Meta-Inventory of Human Values selecting constructs which both met their definition of values and appeared in at least five of the inventories in their sample</p>	<p>Freedom; Helpfulness, Accomplishment, Honesty, Self- respect; Intelligence, Broad- mindedness; Creativity; Equality; Responsibility; Social order; Wealth; Competence; Justice; Security; Spirituality.</p>
<p>Gouveia et al (2014)</p>	<p>Functional theory of human values highlighting preferences for particular outcomes or behaviours.  Builds on Maslow's and similarities drawn with Schwartz's conceptualisations.</p>	<p>Personal goals Excitement values (emotion; pleasure; sexuality); Promotion values (power; prestige; and success);  Central goals Suprapersonal goals (beauty; knowledge; and maturity); Existence values (health; stability; and survival).  Social goals Interactive values: affection; belonging; and support Normative values (obedience; religiosity; and tradition).</p>

Several authors and reviewers of established values approaches highlight elements that are missing, underrepresented or need expanding (Albrecht et al 2020, Braithwaite & Law 1985, Gouveia et al 2014, Aavik et al 2017, Hanel et al 2018, Sharma 2021). Most notably underserved are the natural world, compassion, health and well-being. Gaps may be representative of changing and emerging social contexts, powerful ideas which matter greatly now but did not figure as significantly for people in the past.

In their systematic literature review of self-affirmation manipulations which included the use of values based approaches McQueen & Klein observed “value scales have only been developed for global values (aesthetics, politics, religion, social and theoretical) and some items may be antiquated and difficult for populations with low literacy or education” (2006, p.304) they conclude work is needed to extend to different cultures and to “real world” applications (2006, p.307).

Over time the presentation of values models has developed. Early frameworks were often a table or a list, more recent conceptions include circles or matrices. Schwartz’s (2012) refined version is circular, with four groups of elements: Self-enhancement, Openness to Change, Self Transcendence and Conservation. Taylor & Seager (2021) also argue that Maslow’s hierarchy is better presented in circular form. Presenting values this way suggests relationships and interaction between values elements which is more representative of a dynamic system.

Relationships between values, self and social context are not clearly captured in existing approaches (Hitlin & Piliavin 2004). Rokeach (1982) was frustrated by values approaches that failed to take account nuanced individual perspectives. Boer & Fischer assert it is not possible to understand how values relate to attitudes or behaviours without considering “the context in which individuals are interacting” (2013, p.1136). Interaction with context needs to be explored to improve existing approaches to values.

As early as 1989, Rokeach noted “what is still missing [from values literature] is the notion of value systems” (p.775). Hebel observes that “although value systems have often been referred to in passing, they have not been analysed in a systematic way” (1998, p.401). Rohan (2000) echoes the challenge for a systems approach.

In systems informed Positive Psychology Kern et al emphasise that “humans inter-dependently co-exist with themselves, others, and the environment” (2020, p.709). Parkes-Leduc et al (2015) also acknowledge individuals do not act simply on the priority they place on a single value but on the importance placed upon any given value in relation to other values which also matter.

Opportunity exists for future work to take a systems thinking approach to values. Such approaches have been successfully employed in other areas of psychology including:

understanding resilience in sport (Hill et al 2018), child development (Van Geert 2011) and improve measuring quality of life (Hagerty et al 2001).

## **2.4 Functions of Values**

Despite the problems of inconsistency in definition and measurement, values continue to interest researchers. Hitlin (2007) suggests being able to put values into practice helps us feel good about ourselves while Cresswell et al (2005) found that connecting to values protects subjects from stress.

Using existing conceptions studies report that experiencing alignment between our personal values and the values of our workplace supports attraction (Edwards & Cable 2009), agency (Hadar & Benish-Weisman 2019), personal responsibility (Uçanok 2009) and being at our best (Addicott 2016). Values also play a role in strategic thinking and decision making (Steptoe-Warren et al 2011), how entrepreneurs develop their management practices (Foncubierto-Rodriguez 2021), how mergers work out (Choudhary et al 2022), company reputation (Katsanis et al 2023), even in predicting action time in police officers (Tejeiro et al 2023).

Social attitudes can be shaped by values, influencing how different individuals interact with the issues and opportunities they encounter (Boer & Fischer 2013, Steg et al 2014) such as providing guidelines for setting personal goals (Gorges & Grund 2017). Values play a central role in the experience of meaning (Cha & Edmondson 2006). Sheldon and Houser-Marko (2001) found students with goals that matched their values were both better able to achieve and displayed strengthened self-determination towards subsequent challenges. Stauffer et al (2014) show reflection on a personal values inventory strengthens clients' adaptability: adaptability being the attitudes, behaviours, and competencies used by people to find work that is a good fit for them as individuals.

Priority self-enhancement values have been shown to significantly positively correlate to positive outcomes in informal caregiving including a lower sense of burden and depression: a finding which surprised the researcher who had anticipated the opposite (Zarzycki 2023).

Values affirmation can support identity in terms of experiencing life as meaningful and strengthening a sense of competence and control (Batory-Ginda, 2022). How couples divide up domestic responsibilities has been shown to correlate to personal values (Tartakovsky 2022). Certain values are even good for your love life, Self-transcendent values correlate with greater quality in the functioning of romantic relationships (van der Wal et al, 2023).



## 2.5 Stable vs Shifting

Personal values were regarded as “enduring” (Rokeach, 1973 p.5) or stable (Schwartz 1992) for decades. A different view has since emerged. Dent and Powley (2004) investigated whether any change in how people were thinking and writing about the world could be detected between 1957 and 1997. They identified shifts in values that correlated with changes in society suggestive of a dynamic relationship between the two. Since 1998 there have been internationally significant natural disasters, acts of terrorism, successive financial crises, calls for social change through movements such as #MeToo and Black Lives Matter and most recently the Covid-19 Global pandemic and war in Ukraine (Appendix B 2.1).

Events at local or even individual level can also affect values. Mamali & Dunn describe such experiences at the intersection of an individual and a challenging life situation as “crucial” saying they test “one’s beliefs, modes of thinking, emotions, values actions and ways of relating with others.” (2011, p.104). Covid was a very particular shared global experience. The pandemic impacted lived experience of the world in ways that both created a significant disruption to the values of individuals (Bonetto et al 2021, Daniel et al, 2022, Huang et al 2022) and worsened mental health and well-being (Pierce et al 2020, Slack & Priestley 2022).

Following a cohort of 20-28 year olds over an eight year period Vecchione et al concluded “As long as the environment does not change, value stability is reinforced” (2016, p.120) also observing the mean importance of achievement values declined while conservation, self-transcendence and power increased.

Ferriman et al report similar results in a 10 year longitudinal study comparing value priorities of male and female science graduates aged 25 to 35. They suggest a ‘maturation’ (2009, p.523) moving from a focus on education and gaining a career foothold to progression and making a mark. Over the same period many other values remained constant while individuals who had become parents showed more change.

In their systematic review of personal values change considered from the perspective of Schwartz’s Theory of Basic Human Values, Russo et al (2022) find strong evidence for the possibility of inducing voluntary changes in values at the individual level. The authors highlight a limitation of their review being that only a small number of studies (n=25) were found, proposing that this may be due to the long-standing view of values as “immutable abstract goals” (2022, p.711).

Longitudinal evidence for self-selection value change during transitional periods has been identified by Bardi et al (2014) using the Schwartz model. Three groups undertaking transitions: new recruits joining the police (N=81), university students in psychology (N=131)

and business ( $N=65$ ), and migrants moving from Poland to Britain ( $N=151$ ) were studied. During the study, European Social Survey (ESS) comparison data for the general population was used at three time points (T1, T2, T3)

Trainee police officers displayed significant values fit ( $p < .001$ ) with their chosen profession at the outset, held higher Conformity and Power values than the general public and did not show any change from T1 to T3 linked to socialisation. Psychology students valued Benevolence and Universalism values higher than business students who placed a greater priority on Power and Hedonism. No evidence of socialisation change was observed between T1 and T3 however when career intentions were included in the regression there were some shifts. Psychology students interested in high paying opportunities decreased in Benevolence values T1 to T3 ( $\beta = -.19, t = -2.37, p = .02$ ). Business students who expressed confidence about making money increased Power values T2 to T3 ( $\beta = .21, t = 4.63, p = .000009$ ). The authors suggest this is evidence of socialisation/desocialisation with respect to future intentions.

Polish migrants at T1 showed significantly greater prioritisation of Self-Direction and Stimulation than residents of Poland who held Security, Conformity and Tradition higher. Similarly to the first two studies the evidence supports value self-selection. Where study 3 diverges is at T3. Polish migrants showed values change in line with becoming more similar to British values levels from the ESS as the overall difference across all 10 values using  $F(10, 716)$  at T1 was 31.50,  $p = 1.27E-50, d = 3.1$ ; T2 lower 25.09,  $p = 6.51E-41, d = .26$  and at T3 lowest 13.72,  $p = 2.76E-22, d = .16$ . This suggests some overall values socialisation to the new life chosen by individuals who wanted to move. In summary there was consistent evidence for values self-selection during life transitions, however value socialisation was not consistent.

No single sense of the relative stability or changing nature of values has yet emerged. From their systematic literature review exploring changes within adults Schuster et al (2019) concluded that there is good evidence that some individuals experience moderate to high stability for extended periods of time. Within the 27 studies they considered, all of which used the Schwartz model, they did find exceptions to stability, exceptions which did not conform to changes they considered predictable during adulthood. Two study groups that displayed unpredicted change were early career soldiers following their first active tour of duty and new parents. Values change can link to individuals' personal circumstances (external factors) or the life they decide they want to build (internal drivers) (Foad et al 2021).

In summary, values may settle for periods of time for some individuals. For others, values can and do change, may change slowly or quickly, and change by a little or a lot.

## 2.6 Values and Demographic Characteristics

Evidence has described that values are factors in a number of aspects of human functioning, are linked to emotion, can be relatively stable and can change either in response to experiences or circumstances in life or through intention. The work of Rokeach, Schwartz and others suggests that there are universal features of values. At the same time researchers have been interested in the question of whether similarities or differences may be found in terms of values between different kinds of people.

Any comparisons between peoples using values requires careful consideration. That humans compare themselves with others is a fact of life (Buunk & Gibbons 2007), as Fiske says “comparison compels people, even as it stresses, depresses, and divides us” (2010, p.698). Individuals comparing themselves with others (and finding themselves wanting) has detrimental effects: increasing consumption (Langtry 2023) lowering mood (Aspinwall & Taylor 1993), undermining effective group work (Buunk & Gibbons (2006).

Importantly not all social comparisons intersect with prejudice the same way. Sexism and ageism share cross-cultural patterns while racism is variable (Fiske 2017). Work that draws attention to difference, even with the intention of reducing prejudice, can increase it (Araya & Ekehammar 2009).

Contemporary interest in characteristics of different generations in the workplace is high including topics such as: age and entrepreneurship (del Olmo Garcia et al 2023), Generation Z perceptions of organisational culture (Smith 2023), and affective commitment to work of Millennials and Generation X (Nguyen 2023). Inequalities in the workplace endure in relation to gender (Padavic et al 2019, Blithe & Elliott 2020, Fisher & Ryan 2021) and race (Bapuji et al 2020, Arifeen & Syed 2020, Gemelas et al 2021).

As prejudice and inclusion are persistent themes of concern this next section explores values and Age, Gender and Ethnicity. While understanding difference is an important function of research Hanel et al (2019) recommend that studies also draw attention to where diverse people share common ground. In their analysis of 168,000 data points across 22 psychological and social factors (including values) they found similarities between groups “generally far outweigh” differences (2019, p.560).

Values are universal features of what it is to be human. This universality makes it relevant to review what is known to describe where similarities may occur that could support inclusive values-based approaches, and to ensure considerations of difference that enable values programmes to be inclusive are not overlooked.

## **Age**

People change as they get older. A meta-analysis ( $N = 92$  studies) of personality traits and age showed increases in conscientiousness and emotional stability especially during young adulthood - 20-40 years – and in agreeableness in old age (Roberts et al, 2006). Personality change does not take place in isolation but interactively with other aspects of life. A longitudinal study of age-related change in American ( $N = 6,259$ ) and Japanese ( $N = 1,021$ ) adults identified values as a factor that interacts with personality (Chopik & Kitayama, 2018). Changes observed were not the same for both nationalities, Americans appeared to change more uniformly than their Japanese counterparts where idiosyncrasy was higher.

Vecchione, Schwartz et al studied stability of values in early adolescence (10-12 years) and found that some young people exhibited high order stability while others did not. As a whole the cohort showed shifts in the relative priority of values with an averaged Cohen's  $d$  for change of .14 over 2 years. The authors argue that although this value is “relatively modest” it is a measure of low interindividual differences in values and not a representation of the intraindividual variability which was “highly significant.” (2020, p.460)

The pattern of personal values prioritised by individuals at different stages of their work lives can shift substantially. Jin & Rounds found a notable pattern of change between “emerging adulthood” (18-22 years) and “middle adulthood” after which stability of values appeared to increase. (2012, p.336).

Not all individuals of the same age or generational hold the same values. Millennials ( $N=1823$ ), born between 1982 and 2004, across eight countries from four continents and both hemispheres were studied by Weber & Urick (2021). Using the Rokeach Value survey they showed marked values variation between groups, and for some values (social-moral) within groups. They suggest culturally situated influences on values were more significant than age. Weber & Urick conclude advising businesses to “resist focusing solely on labels that might over or under emphasize the workplace differences which foster an us-versus-them culture” (2021, p.129).

## **Gender**

Pioneering work by Vernon & Allport (1931) recorded significant differences between male ( $N=463$ ) and female ( $N=313$ ) undergraduates reporting “men are distinctly more *theoretical, economic* and *political*, the women more *aesthetic, social* and *religious*.” (1931, p.246). Beutel and Mooney Marini sampled 2,500-3,500 individuals from 125 public and private American high schools. Seniors in 4 different years from the mid-1970's to the early 1990's showed “important gender differences”

(1995, p.446). Specifically females prioritised well-being over materialism and competition whereas males were the reverse. Females also showed a stronger orientation towards finding purpose and meaning than males.

More recently looking across 70 countries ( $N= 77528$ ), Schwartz & Rubel (2005) found the sexes did not differ on tradition or conformity values. Where there were consistent differences: men valuing power more highly than women and women valuing benevolence and universalism more highly than men; the differences were small ( $d = .32$  [power]). Age explained more variance than sex. Using a different values framework, Thalymayer et al (2019) showed women higher on the Mature Values Index and Horizontal Collectivism while men were higher on Unmitigated Self-Interest and Vertical Individualism.

Variation in the values prioritised by cisgender and non-cisgender people emerged in a study of secondary and higher education students aged 18–30 ( $N=337$ ). With this group Jastrzębska & Błażek (2022) explored relationships between values (using Schwartz PVQ), self-concept clarity (SCC) and sense of coherence (SOC) through a series of self-report online questionnaires. Significant differences were found ( $p \leq .05$ ) for SCC, SOC and values of tradition, universalism and conservation between those individuals who identified as female or male and individuals who identified as transgender and/or non-binary. Cisgender individuals tended to be more certain of their sexuality and display greater SCC and SOC alongside higher weight upon tradition and conservation values than non-cisgender individuals who valued universalism more highly.

Using data from rounds 2 (2007) and 3 (2017) of the Norwegian NorLAG panel study, Blekesaune & Hansen (2021) investigated whether any gender differences in values at retirement could be observed in relation to life satisfaction. After controlling for age effects, males showed no significant reduction in life satisfaction compared to females who did report a significant drop. Within the sample males who prioritised self-enhancement and openness-to-change values were less satisfied than others whereas for females the opposite was found. Taking the regression analysis to a more granular level the researchers found variation within the self-enhancement quadrant for males who adjusted less well to retirement. Controlling for aging and physical health, the most significant negative values were hedonism ( $-0.16$ ,  $p < 0.01$  two-tailed), achievement ( $-0.15$ ,  $p < 0.05$  two-tailed) and self-direction ( $-0.15$ ,  $p < 0.05$  two-tailed). The authors conclude that even when women and men hold the same values (openness-to-change and self-enhancement) they adapt to retirement differently.

The evidence suggests that different genders can hold different values as their highest priorities under varying circumstances but does not suggest that any gender experiences life as free of the influence of values. It also highlights that even when everyone prioritises the same values they can subsequently behave differently. The interaction between values and gender is neither clear cut nor predictable.

### ***Ethnicity***

Care needs to be taken when considering categorising people's values by ethnicity. Kwon illustrates the complexities saying "Any discussion of "Asian values" is schematic in nature. In discussing the values of a group consisting of billions of individuals, it is necessary to make generalisations and to simplify the diversity of values that Asian individuals hold". Such generalisations "overlook the differences in the customs of the various Asian ethnic groups, which number over 25" furthermore this application of a schema can lead to "stereotyping" (1995, p.619).

Similarities between peoples are evident in a study comparing the experiences of a sample ( $N=67$ ) Chinese and Swiss parents who had lost a child. Xiu et al (2018) explored the role of values orientations in posttraumatic growth (PTG) and observed the same moderating effect of self-transcendence and conservation values on PTG cross-culturally. Both similarities and differences in values priorities emerged between people of colour and 'Anglos' in a study in Los Angeles (Gaines et al 1997). There were no racial/ethnic identity differences in terms of the prioritisation of individualistic values, however, people of colour put a higher priority on collective and family orientated values than Anglos. Over the same period Chopik & Kitayama (2018) reported values change with age was not the same for a sample of American and Japanese adults.

A study of values held by business studies students ( $N=543$ ) across a cluster of countries: Hong Kong, China, Malaysia and Singapore; revealed significant overlap in priorities between countries with some minor differences (Sootiens 2007). The author suggests that greater similarity between Singapore, Malaysia and Hong Kong in terms of societal/environmental values may have been contributed to by exposure to non-Chinese influences over a period of time. The Chinese group were distinct in placing a significantly higher priority on family values than any of the other groups.

Influences of neighbouring cultures can be powerful. Being the last former Soviet republic to declare independence in 1991 Kazakhstan is a relatively young country with a long and rich history. Situated between China, Russia, Uzbekistan and Kyrgyzstan it is home to a diverse population and many languages. Research to explore the values of modern Kazakhstanis undertaken by Adilova et al showed both significant common ground between

the generations and genders along with some differences. All ages and both genders placed similar weight upon preferred values of Benevolence/Care, Benevolence/Duty and Security compared to those associated with Power/Dominance and Power/Resources. Younger people placed a higher priority on Achievement than older people and women were higher on Universalism/Tolerance than men. The authors conclude in spite of the “deep transformation” of society in their country (2021, p.160) the traditional values of a collective culture remain present and widely held.

## **2.7 Values and Well-being**

Well-being is another term for which different definitions can be found both across disciplines and within psychology itself. The World Health Organisation says “well-being is a positive state...a resource for daily life....determined by social, economic and environmental conditions.....encompasses quality of life and the ability of people and societies to contribute to the world with a sense of meaning and purpose.” (World Health Organisation n.d.)

In 2012 Dodge et al regarded the question of how well-being should be defined as “unanswered” (p.222) and proposed well-being be thought of “as the balance point between an individual’s resource pool and the challenges faced” (p.230). In the same year Jayawickreme et al (2012) described research into well-being as “hampered by the multiplicity of approaches” (p.327) and two years on Henriques et al labelled the topic of well-being in psychology as “nebulous” at the same time as “perhaps the single most important concept in positive psychology”. (2014, p.7). Almost 20 years later psychological well-being literature was characterised by Park et al as a “landscape of confusion” (2023, p.11) and Carter et al (2023) agreed based on a lack of consensus and proliferation of different models.

Well-being is more than the absence of illness (VanderWeele et al 2020). It may be regarded as having two main aspects: eudemonic (affective) and hedonic (subjective); the first describing a sense of fulfilment in life and the second relating to more general happiness or satisfaction (Deci & Ryan 2008, Park et al 2023). Other labels incorporate additional terms such as employee well-being which Ilies et al (2015) relate to “quality” of work “psychological experiences” (p.827) or Emotional Well-being (EWB) which Park et al (2023) propose to “encompasses how positive an individual feels generally and about life overall” (2023, p.16).

Jayawickreme et al (2012) suggest well-being can be considered through systems thinking. They propose an engine approach to well-being as a set of inputs, throughputs and outputs: values being an example of an input; throughputs can include self-control and capabilities; while outputs range across meaning, relationships and achievement. In so

doing they encourage a pluralistic approach to understanding the engine including calling for better measurement of inputs such as values.

If well-being may be understood as arising from a flexible set of resources, it is not surprising that psychological inflexibility, namely “rigid attempts to control psychological reactions to discomfort at the expense of values-guided actions” Tavaholi et al (2019, p.1), is positively associated with worry and anxiety. Comparing groups of students and adults in 1994 from West Germany, East Germany and Israel, Schwartz et al (2000) found a relationship between values and two types of worry. Micro worries, concerns about the self and things in the personal world, correlated positively in all samples with Power ( $r = .25, p <.001$  one tailed) and Hedonism ( $r = .17, p <.001$  one tailed). Macro worries, concerns about others and issues the wider world, correlated negatively in all samples with Universalism ( $r = -.27, p <.001$  one tailed).

Different values inputs can relate to different well-being outputs. Ratchford et al (2023) found variation in the relationships between the different quadrants of the Schwartz model and reported levels of hedonic and eudemonic well-being. Self Transcendent values scored high against every dimension while other quadrants did not.

Values and well-being associations have also been found in explorations of other psychological theories. Barni & Danioni (2016) used the Schwartz PVQ with Italian students aged 14-19 year ( $N=594$ ) from across 15 public and private high schools. Results showed self-transcendent and conservative values explained variance 29% and 68% respectively in Sense of Coherence (SOC). The predictive modelling indicated significant contribution to all three dimensions of SOC: cognitive, instrumental and motivational leading them to conclude “Thanks to their associations with SOC, value preferences could be very useful tools for identifying adolescents in need of extra support and motivation for their health behavior.” (2016, p.49). In a recall study with adults in Japan ( $N=2601$ ) Yasmua et al (2020) found that a remembered strong sense of connection to personal values during adolescence was significantly and positively associated with Sense of Coherence in adulthood ( $p <.01$ ) and greater well-being.

Exploring intraindividual stability of values among young adults ( $N= 195$ ) Russo et al (2021) found that Self-Concept Clarity fully mediated the relationship between values and satisfaction of basic psychological needs. Their results suggest that when experiencing personal values as consistent individuals feel authentic and unique supporting mental coherence which in turn heightens a sense of basic needs being fulfilled. These findings are similar to other explorations of the impact of values incongruence (Chrystal et al 2019).

When the values input to the engine of well-being is disrupted it can have negative effects. University students aged 18-25 ( $N=115$ ) were found to have lower subjective well-



being correlated to less opportunity to live out their values than their peers (Danilenko & Isaturyan 2020). First year psychology students ( $N=158$ ) used the Schwartz PVQ-RR and the Satisfaction with Life Scale (Diener et al 1985) regression analysis showed the greater a perceived values gap the larger the harmful impact upon well-being ( $p = 0.02$ ,  $R^2 = 0.03$ ).

A diary study which captured 1434 observations over a nine day period from 184 adults mean age 26 years (Hanel et al 2023) reported similar results. Participants were drawn from the European Union, Turkey and India. Neither day of the week nor country showed significant moderating effects. The results showed values fulfilment and well-being can cut both ways. Experiencing value 'fulfilment' positively contributed to well-being and higher well-being contributed to experiencing values fulfilment the following day. The authors point to a limitation of this research being a lack of understanding of the underlying process from value fulfilment to behaviour.

Understanding how values and well-being interact is highly relevant for employees and employers given increasing realisation that conditions in the workplace can contribute to ill-health (Chapter 1.6)

## **2.8 Values and the World of Work**

While values-based approaches are not, as Hall (2001) cautioned "a new panacea for organizational renewal like many fads of the past" (2001, p.31), they are seen as constructive responses to diverse contemporary issues. Issues such as recruitment (Klassen et al 2021), creating meaningful recognition and reward systems (Rizzotti & DePalma 2021), driving contributions to sustainability by organisations (Frecè & Harder 2018), and seeking employee engagement in Corporate Social Responsibility initiatives (Cao & Lee 2023).

Understanding the nature of values provides insight into factors that contribute to workplace problems. A cohort of teachers ( $N=140$ ) tracked over a 2 year period displayed turnover of 32%. De Cooman et al (2009) found those individuals who left were the ones who displayed the weakest alignment between personal and organisational values – odds ratio .489 suggesting individuals with lower Person-Organisation (PO) fit were 2.045 times more likely to leave than high P-O fit.

Glaserová (2019) found similar results in a study of clinical and non-clinical staff ( $N=125$ ) in a Czech medical organisation where individuals aligned with the organisational values were least likely to hold intentions to leave. Clinical and non-clinical staff differed on the organisational values incongruences they found most frustrating. Clinicians were frustrated by perceived Universalism values gaps while non-clinicians were more frustrated by perceived gaps under Security and Power. Experiencing negative emotions at work does

impact intention to stay, Seaborn (2003) found 6% of employees who felt positive about their employer were open to leaving compared to 28% of employees who were unhappy.

How an employing organisation is seen by its workforce includes their perceptions of organisational politics (POPs). POPs are negatively related to job satisfaction and organisational commitment and have a moderate positive relationship to stress and intention to leave (Miller et al 2008). For academics, as for many other professions, stress has a negative impact on well-being (Bell et al 2012). Studying POPs across a range of academic institutions Zibenberg (2021) sought feedback from staff ( $N=376$ ), 80% of whom worked at universities in Israel. The more 'political' the perception of the institution the higher the reported stress levels. Interestingly, structural equation modelling revealed that staff who highly prioritised self-enhancement and openness to change values were significantly less impacted than colleagues who prioritised other values. This finding raises a question of whether vulnerability to moral injury is more highly correlated with transgressions against Universalism and Conservation values.

Concern is increasing about the occurrence of moral injury linked to perceptions of betrayal of leaders or colleagues (Shay 2014). Hall et al (2021) suggest moral injury arises from "dissonance between an individuals' sense of purpose, identity, beliefs and values" (2022, p.93). Moral injury is negatively associated with health. Being unable to form working relationships and work in alignment with personal values is damaging. Reviewing studies of frontline healthcare workers experiences in the US and China during the pandemic Hegarty et al (2022) found a prevalence of moral injury in between 20% and 46% of the population.

Moral injury is linked to burnout, psychological distress and lower well-being (Wang et al, 2021). Burnout is a problem in many fields: teaching (Pressley 2021), social work (Turley et al, 2022), policing (Lennie et al 2020), and medicine including nursing (Jun et al, 2021) and general practice (Shen et al, 2022). Understood as an occupational experience that results from chronic stress (Edú-Valsania et al, 2022), burnout can be contributed to by lack of value congruence (Dall'Ora et al, 2020). The findings of Schwartz et al (2000) on the interplay between types of values and worry perhaps provide some insight into how values dissonance may be contributing to the burnout recorded in professions focussed on serving the needs of others during a period of time when events in the outside world made the effective discharge of responsibilities even more difficult than usual.

Learning from the experience of Covid-19 there are calls for those in high pressure roles to have improved access to sources of psychological support. Such roles include health care workers (Busch et al, 2021), emergency responders (Ehman et al 2022) medical students (Paz et al, 2023) and mental health providers (Logan et al, 2023). It is suggested that support could enable better preparation for future acute situations and provide some

protection against burnout. In police officers in Poland ( $N=234$ ) job burnout was found to be negatively correlated with work values centred on Creativity, Challenge and Variety with a moderate effect size (Basinska & Dąderman 2019). From their comparative study of workers in Colombia ( $N=520$ ) and the US ( $N=170$ ) Cendales & Gómez (2019) recommend an important consideration in designing approaches to manage and limit the risk of stress is how individuals view work in relation to their personal values.

Where workplace experience of values is positive, benefits have been observed. Houston et al describe how when leaders behave in visible alignment with values shared by employees and seen as 'ethical', engagement is strengthened and 'deviant' behaviour moderated (2022, p.1). Increasingly employees care about the impact their organisation is having on the planet. Hickleton et al (2019) found conditions for high need satisfaction and engagement created where employees with highly eco-centric values were in organisations with clear operationalised environmental protection policies and practices.

When organisations profess a set of values however do not live up to them in the view of employees things do not go so well. In a 3 year study of employees at an advertising agency Cha & Edmondson (2006) found an initially highly engaged and strongly aligned workforce which later became very unhappy. They describe a number of features of situations when "values backfire" (2006, p.57). If organisational values are left too abstract then space is left for the making of many meanings by employees but which may not match the intent of the leadership. That dissonance heightens risk of "hypocrisy attribution" (2006, p.71) where leaders actions or explanations become regarded by followers as inconsistent with what had been inferred matters most. Viewing leaders as betrayers of values gives rise to disenchantment which in turn may erode trust more widely. The authors recommend organisations should be very clear about what they do and do not mean by values they espouse. They see a need for leaders to be proactive "sense givers" (2006, p.75) to support employees in understanding how values are being honoured in the actions they see and decisions which are taken. The sense that individuals make of what is happening in their workplace can have extensive effects.

How employees view the work they do has an impact on their well-being. A perception of doing useless work is strongly associated with low well-being (Soffia et al 2022) while experiences of meaningful work support well-being and other positive work outcomes (Allan, Owens et al, 2019). The experience of work as meaningful is supported by alignment between the individuals' sense of self and their job or career aspirations (Wong et al 2020).

For work to be meaningful employees need to regard it as of value and instances of meaningfulness are associated with the fulfilment of personal values in action (Allan, Batz-

Barbarich et al 2019). In their meta-analysis of 44 articles ( $N = 23,144$ ), Allan, Batz-Barbarich et al (2019) found meaningful work strongly correlated ( $r \geq .70, p < .005$ ) with engagement, job satisfaction and intention to stay and moderately correlated ( $r .47, p < .005$ ) with life satisfaction. They suggest in an unstable employment environment characterised by short term contracts and temporary work, how individuals characterise meaningful work influences what they choose to do and where they choose to do it.

Mixed effects upon how employees view work have resulted from evoking values when undertaken as a stand-alone intervention. Before undertaking a values affirmation experiment Guadalupe et al (2020) baselined measures of engagement, well-being, sense of self and organizational identification with employees ( $N=382$ ) at a services company in the Middle East. A random experimental group was selected to undertake an exercise selecting their values preferences from a list of ten. After reflecting on the values, and writing about why these values mattered most, all measures were repeated. Results suggested a small negative shift in terms of mean individual attachment to the organisation which did not reach statistical significance. Within the study population, however, different people responded in different ways. Factor analysis showed those with an established strong connection to their employer increased in engagement compared to the control group. Colleagues whose baseline was lower became more disengaged than the control group after undertaking the values exercise.

Herbst & Houmanfar (2009) sum up research into individual and organisational value congruence as 'robust' but with 'somewhat limited' applications (2009, p.47). They suggest more than simple values assessments and efforts at matching workers and roles are needed. Specifically, Herbst & Houmanfar encourage dialogue which enables individuals to "have the experience of realizing their personal and professional values" (2009, p.65), the importance of which is illustrated in the findings of Guadalupe et al (2020) who conclude that while care should be taken with approaches to values in organisations, that engaging with values does offer routes to designing workplaces where people can thrive.

## 2.9 Chapter Summary

In essence this review found no common definition of the term values: no single values model that functions well for every individual irrespective of context; and no particular values model that may be regarded as a complete representation of a landscape of human values.

Scope exists for values frameworks and instruments of measuring values to be improved and is encouraged by some values researchers: Gouveia et al suggest "the existence of parallel theories should not be frowned upon but encouraged, especially in

young scientific disciplines such as psychology” (2014, p.251). Better understanding of values is important work as Maslow wrote introducing the First Scientific Conference on New Knowledge in Human Values held in Massachusetts in October 1957

*the interregnum between old value systems that have not worked and new ones not yet born, an empty period which could be borne more patiently were it not for the great and unique dangers that beset mankind” (1958, p.vii).*

As values are dynamic in their relationship to context and experience it is conceivable there will always be a place for development work on values models: as society shifts so will what matters most thereby influencing the values held by its members.

Perhaps the key question for the short term does not concern which values are held as precious by an individual or a group at any given moment, especially as people do not tend to respond to values tools in the ways researchers expect them to (Hanel et al 2018, Hanel et al 2023). Focus may be better centred, as Braithwaite & Law (1985) suggest, on how prioritised values influence behaviour. As Hanel et al observe “measures of value importance, by themselves, offer limited insight into psychological bases of well-being” (2023, p.3). Understanding how people engage with their values in the face of daily challenges and in pursuit of desired outcomes could be useful to scientists and practitioners alike, making a contribution to closing the perceived gap between work and organisational psychology theory and practice (Bartlett & Francis-Smythe 2016).

A clearer sense of what connecting to personal values looks and feels like has potential to close another gap. Heblich et al could find no widely adopted scale or measure of “clarity about personal values” (2023, p.4) for their investigation of values and well-being. Clarity about values connection and the benefits that can bring may enable the development of a scale to help both employees and employers. By improving the focus of support for individuals to connect to their values, such as through the conversations called for by Herbst & Houmanfar (2009), managers and coaches could actively strengthen engagement, increase resources that buffer against stress and promote a greater sense of well-being.

In search of practical clarity this research poses the following questions: what is the nature of conscious connection to personal values? Is there a relationship between benefits of values connection and well-being? Finally, how can conscious connection to values improve working life? In the next chapter issues of researcher identity, ontology and epistemology are considered to guide the design and administration of a set of studies to answer those questions.

## Chapter 3

### Methodology and Methods: preparing to explore the unknown

#### 3.1 Introduction

This chapter starts with a brief recap of salient elements of Chapters 1 and 2. It then turns to a synopsis of Chapters 4, 5, 6 and 7 which cover the studies before examining the detail of research purpose, researcher identity, methodology and methods.

Broad personal aims of the researcher in undertaking this PhD were outlined as:

- to establish whether Values Connection was a phenomenon that could be described and not merely a practitioner perception;
- to bring rigour and scrutiny to description of components of real world lived experience of values rather than isolated observations from laboratory studies;
- and finally to undertake collection of trustworthy evidence of the value of Values Connection that was justifiable and believable. (Chapter 1, 1.4)

The thesis of the researcher was stated: **conscious connection** to personal values brings **benefits** that can improve **working life**. In response to the thesis preliminary questions of 'why conscious connection?' 'why benefits?' and 'why working life?' were considered (Chapter 1, 1.6).

Reviewing existing literature (Chapter 2) revealed gaps concerning how Values Connection could be described and whether there were benefits individuals associated with connection. This chapter explains the thinking underpinning designing studies to explore those gaps. An overarching exploratory sequential mixed methods design was undertaken across four separate data-collecting studies to inform potential applications.

Study One (Chapter 4) aimed to observe and evaluate the reported use of a personal values profile. Had these results shown that profiles were seldom if ever used, were only used by certain age groups or that only individuals who recently completed their profile were still engaged with the material then a redesign of all subsequent studies would have been required. Themes identified in this study gave rise to a conceptual framework describing what connection to values meant to a purposive population of participants and the benefits they attributed to that connection.

Studies Two and Three (Chapters 5 and 6) tested the proposed framework and links with well-being, using a questionnaire with new items aligned to the themes and established items relating to well-being. All items were interrogated for reliability and results showed relationships between Values Connection, attributed benefits and well-being. These studies

took place at the same point in the year over three years during the pandemic and soon afterwards to establish whether there was a Covid-specific element to the findings.

In Study Four (Chapter 7) as the framework showed reliability and validity in a convenience population, sampling was expanded to a UK representative group of adults unknown to the researcher or her networks. Results compared responses for those who had not previously explored values with those who had previously explored values. The results from all four studies are considered both individually and as a whole to inform proposed applications in Chapter 8. Finally the validity of the findings is examined in Chapter 9 alongside recognition of the limitations of the research and suggestions for future study. This dissertation closes with reflections from the researchers' perspective and comes to a conclusion about what the studies have evidenced.

In this chapter design considerations in terms of researcher identity, underpinning ontology and epistemology, choice of methods, sampling approach, ethical considerations, design of study instruments and the data analysis approach are described. For each study specific methods, procedure and detailed results are explained in the relevant chapter with a reflective discussion element highlighting the links between the studies.

### **3.2 Purpose of this Research**

This research asks the headline question how can conscious connection to values improve life at work?

Two subsidiary questions need to be addressed to answer that question:

1. What is the nature of conscious connection to personal values?
2. Is there a relationship between any benefits of connection and well-being?

Navigation of the methodological possibilities to alight on an approach to meet the researchers aims and answer these questions was a challenge. Salmon (1992) says "achieving a methodological approach which is consonant with one's own values and concerns typically involves the longest struggle in research work and the deepest kinds of engagement" (1992, p.77). Robson & McCartan suggest a 'scientific attitude' can help: entailing being systematic thus explicit about the approach taken to observations; and being sceptical demonstrated by being ready to be proved wrong. (2016, p15).

Alongside seeking new justifiable and believable knowledge this research set out to be useful. Useful by signposting operational considerations to harness the value of values relevant to three groups. The groups being: individuals in their working lives; managers and coaches in navigating their own work and supporting others to do likewise; planners and commissioners of workplace development in discerning where a values-based approach

may add value. To be useful in this way the research sought to be systematic, sceptical, and focussed on the real world.

### **3.3 Research Approach**

#### ***Early Considerations***

Chapter 2 highlighted absence of a common definition of values, what Values Connection is, or accepted way to measure connection to values (Meglino & Ravlin 1998, Rohan 2000, Hitlin & Pavin 2004, Heblich et al 2023). This research worked to build theory through proposing and testing a conceptual framework of Values Connection suitable for future empirical study. Flake & Fried describe work to identify and define constructs as “central to developing theory in psychology” (2020, p.456).

As the end goal (if conscious connection to values was found to be a phenomenon that could be described in terms of its components) was to develop a framework suitable for testing, two options were considered. First a top-down deductive approach drawing upon existing theory to form a proposition. Second bottom-up inductive work gathering insights from lived experience of individuals familiar with the ideas being explored. Babbie suggests “induction, or inductive reasoning, moves from the particular to the general, from a set of specific observations to the discovery of a pattern that represents some degree of order among all the given events” (2016, p.23).

Past experience of the researcher and the influence of their personal priority values upon the administration of studies and interpretation of results, was relevant to design considerations. Johnson (2009) is clear “Raw data, especially social science data, cannot be interpreted in the absence of values. Human beings cannot fully reason on or about “facts” without concurrently reasoning and relying on values.” (p.452).

#### ***Researcher Identity***

*All PhD enrolments require a change in our identity, questioning what we take for granted, and configuring a new meaning system around time and value.*

Brabazon, T., Quinton, J., & Hunter, N. (2022, p.47)

Describing how conceptual frameworks guide research, Ravitch & Riggan say consideration of both “who we are” and the position of the researcher “in relation to the research setting” is “critical” (2012, p.10). As both ‘client’ and ‘practitioner’ this researcher is embedded in the early study populations contributing to an identity of insider researcher: bringing both benefits and limitations. There is a ‘rich tradition’ (Smith, Flowers & Larkin, 2009, p.42) of qualitative research from this perspective.



Direct experience of the phenomenon being explored can facilitate the identification of nuanced or implicit features of themes “a stranger to the culture may miss clues that are clear to an ‘insider’.” (Berger 2015, p.228). Simply being part of the group does not necessarily make the researcher the same as other group members (Dwyer & Buckle 2009). In the eyes of those operating in other values traditions such as the Barrett Values practitioners or Point of Value licensees, as a member of Minessence the researcher was sometimes more outside than inside.

This duality required the insider remain conscious, that not everyone is the same and everyone could have had a completely unique experience of engaging with their values. Just because something was ‘true’ for the researcher it did not follow the same thing would be ‘true’ of or for others. Researcher identity tends to be fluid, seldom purely in or out. Potential benefits and pitfalls of this in/out continuum are considered in Table 3.1 with regard to different methods of engagement with study participants.

**Table 3.1**  
**Insider/Outsider Researcher Continuum and Engagement Methods**  
(adapted from Le Gallais 2008)

<b>Engagement</b>	<b>Position on Continuum</b>	<b>Potential Benefits</b>	<b>Potential Pitfalls</b>
Qualitative online survey	Mixed: peer to respondents who were also practitioners Known to and knowing respondents who had attended programmes or workshops Unknown to respondents who had been clients of other practitioners	Access to pool of respondents Potential for achieving good level of response drawing on existing good will Share conception of what was meant by ‘values’ and ‘a values profile’ Low risk of researcher bias	Social desirability bias in responding based on feeling that being positive was helping Only attracting responses from ‘fans’ rather than ‘critics’ which would produce incomplete and/or skewed data
Qualitative Interviews	Known to and knowing most as individuals who had taken part in one to one debriefs Few unknown but introduced by peer practitioners	Access to interested individuals Potential for swift establishment of trust to enable honest and candid accounts	Danger of over-familiarity Risk of researcher bias in analysis Vulnerable to not capturing the whole story as individuals may unconsciously not describe the whole story in the sense of assuming that certain things are ‘taken for granted’.

Quantitative convenience	Mixed: peer to respondents who were also practitioners Known to and knowing respondents who had attended programmes or workshops Unknown to respondents who had been clients of other practitioners. Unknown personally but possibly known by reputation to followers of social media accounts through which the invitation to participate was broadcast	Access to potentially large pool of participants Participation widened beyond individuals known to the researcher Insights being gathered from individuals from a variety of values 'traditions' – different tools, theoretical; models and forms of practice Minimal risk of researcher bias	Different conceptions of values within the responding population could give rise to variability in how questionnaire items were interpreted
Quantitative Purposive	Known by all as they had engaged in one or more previous activities Knowing some but not all respondents from practitioner work	Established line of communication with named individuals who were familiar with the research topic and approach Potentially enhanced consistency in how the survey was answered Minimal risk of researcher bias	Research fatigue, having seen the same question before at least once a risk that individuals would respond similarly to last time without thinking about their current experience
Quantitative Purchased	Unknown by and not knowing any individuals	Minimised social desirability bias Questions taken at 'face value' rather than risk of over thinking Minimal risk of researcher bias	Lack of connection to researcher/topic could decrease care taken over answering Risk of lack of shared comprehension of questions giving rise to variability in quality of responses

Keen to heed the warning from Easterby-Smith et al (2004) that individuals involved in research should “be prepared to confront ethical issues, and to be aware of his or her own values in this process” (2004, p.4), the researcher was mindful that the research may be affected by their personal values. To guard against imposition of the researchers' prior experience with values, and personal values preferences, a deliberately exploratory approach was developed (Finefter-Rosenbluh, 2017).

As a doctoral candidate who was also part of a community of values practice the researcher sought to accomplish two, potentially mutually exclusive, outcomes. To add to the body of knowledge around personal values; and through that, strengthen influence of values practitioners to persuade organisations to view workforce values programmes positively.

A prospect of failure in terms of the first outcome existed, which would have resulted from no pattern being found within the lived experiences of study participants. If no pattern existed fulfilling the second outcome would be impossible. Facing failure was daunting but had to be done because, as stated at the end of 3.2, this research focussed on the real world.

### ***Underpinning Ontology and Epistemology***

For the researcher the nature of reality contained three 'truths'. First, scepticism about the value of values was present among potential clients and commissioners. Second, empirical evidence to support claims about the merits of values-based approaches was patchy especially at the intraindividual level. Third, gaps in theory about how individuals experienced and interacted with their values constrained effective practical application of values in the workplace.

Where ontology is concerned with what exists (reality) the focus of epistemology is upon a sense of human knowledge: its' limitations, nature and justifications (Hathcoat et al 2019). As Crotty observes ontological and epistemological issues "tend to emerge together" (1998, p.10) rendering the identification of the actual starting point for designing this research a near impossibility.

Realism, which ontologically posits simply that something exists whether observers are conscious of it or not, points a researcher towards a position of detachment from the 'thing' being studied. As an insider-outsider and an individual with long standing personal involvement with values a truly objective perspective was unattainable. In addition, the **object** of interest 'conscious connection to values' only exists inside of the mind of the participants who experience it. The **object** of this research is an 'idea' of the researcher, thus the topic may not be treated as ontologically objective (Maul 2013). A more salient ontology, given the object of interest, is that of emergence described by Maul (2013) thus:

*when we speak of consciousness and its predicates (such as psychological attributes) existing, we do mean that they exist in space and time, but we are focusing on emergent phenomena of a conscious organism taken as a whole, which cannot be exhaustively explained at any less-complex level of focus. (p.759).*

In asking 'what is the nature of conscious connection to values? (3.2) the researcher holds an assumption that if such a thing exists it can be described. It is not, however, for the researcher to say what 'it' is solely or principally on the basis of their experience and observations. The place in which 'conscious connection to values' exists, is constructed, is

inside the lived experience of others. This brings us to epistemology. Enquiring about the nature of what 'is' requires consideration of: what constitutes knowledge; where answers to questions may be found: and how to arrive at the meaning of what is found.

Three epistemological positions are contrasted in Table 3.2 Positivistic, Pragmatic and Social Constructionist developed from Robson & McCartan (2016) and their reflections upon real world research.

**Table 3.2**  
**Comparison of Positivistic, Pragmatic and Social Constructionist Epistemological Positions**

'theme'	Positivistic Science (p21)	Pragmatic Approach (pp.28-29)	Social Constructionist (pp.24-25)
Nature of Knowledge	<p>The only knowledge available to science is facts - objective knowledge – which can be derived from direct experience or observation</p> <p>In science strict rules and procedures are used (making it different from the application of common sense) and quantitative data predominates</p>	<p>Knowledge is seen as both constructed and based on the reality of the world we experience and live in.</p> <p>The reality of, and influence of, the inner world of human experience in action is held in high regard.</p>	<p>Does not accept that there is an objective reality which can be known.</p> <p>There is no direct access the underlying nature of reality as there can be as many realities as there are participants plus researchers.</p> <p>Emphasizes the world of experience, what is felt and undergone by people.</p>
How to answer a question	<p>Hypotheses are tested against facts contained in scientific propositions.</p> <p>Science is centred on the development of universal causal laws.</p>	<p>Preference for common sense ways to solve problems, rejecting the traditional dualism eg rationalism vs empiricism</p> <p>Occupies space between the established philosophical paradigms of dogmatism and scepticism.</p>	<p>Rather than having a separate existence, social properties are constructed through interactions between people.</p> <p>Central aim or purpose of research is understanding how the social world is interpreted by those involved in it.</p>

<p>Source of meaning</p>	<p>Empirical regularities or constant conjunctions demonstrate cause.</p> <p>Explanations of events take the form of relationships to general or universal laws.</p> <p>Science is value free as it separates out facts from everything else.</p>	<p>An instrumental view is taken of theory: theories are true only to the degree that they work well; which is judged by how predictable and/or applicable the theory is in the real world.</p> <p>Truth changes over time. Meaning and knowledge should be regarded as tentative and of the time in which it was formed.</p>	<p>Meaning does not exist in its own right; it is constructed by human beings as they interact and engage in interpretation.</p> <p>Values of the researcher and others are assumed to exist and subjectivity is an integral part of the research.</p>
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While social constructionism forms the overarching epistemology of this research in practice it sometimes walks the pragmatists middle line, drawing on its neighbours as and when required. The researcher’s experience suggests for credibility with real world leaders and commissioners numbers are required. Whether rightly or wrongly, numbers inspire believability and trustworthiness so within this research a substantive quantitative component was required. A blending that Cupchik (2001) regards as a form of constructivist realism.

Baert (2005) proposes pragmatic approaches have a place in social sciences. He illustrates this comparing biological sciences and the fields of chemistry and physics where the latter can be reductionist and empirical but the former is often rather messy, complex, and not operating according to many observable rules or laws (unlike chemistry and physics).

Where Wilholt (2009) is wary of bias arising from values of the researcher Robson & McCartan (2016) counter “Pragmatists believe that values play a large role in conducting research and in drawing conclusions from studies, and they see no reason to be concerned about that influence.” (p.28). As a prior biological sciences graduate at arguably the messiest end of biology – animal behaviour (Whitehead 2016) – pragmatism is a good fit for this researcher.

Of the two approaches, deductive or inductive, to build a conceptual framework of conscious connection to values to test with different populations, inductive was chosen. (Reflections on why not choose deductive are in Chapter 9, 9.8.) This began gathering insights from individuals who could be regarded as having reasonable familiarity with the Jacqueline Le Fevre 19049539

ideas being explored (experts by lived experience). Inductive work on the research question had two main strengths. It combined an achievable degree of objectivity with alignment with the personal values of the researcher. In turn this alignment supported nuanced meaning making when reflecting upon the collected data.

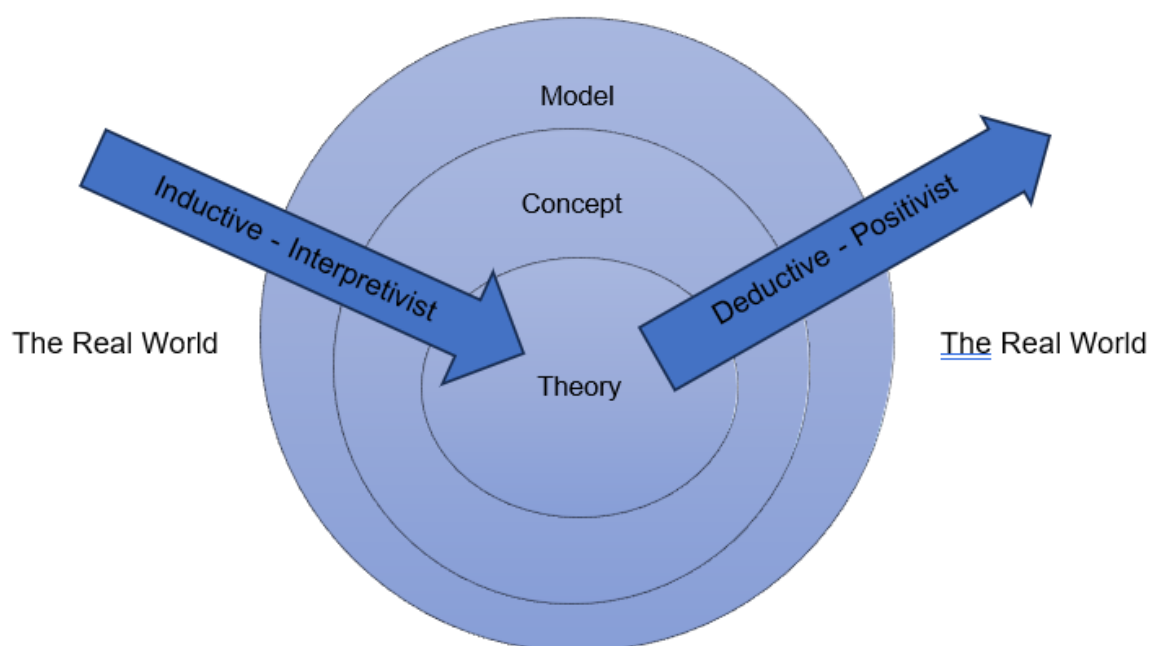
Induction starts with something specific and moves along lines of enquiry illuminated by each layer of new information or insight. At the same time the researcher is watching for relationships or interactions between the lines that may suggest the existence of a pattern. As Babbie says “discovery doesn’t necessarily tell you *why* the pattern exists – just that it does” (2016, p.23). Working in the fuzzy edged space of narrative and conversation is typical of social constructionism. As patterns appear they can be described, brought together and interpreted in the light of context and literature.

Maxwell (2012) sees conceptual frameworks as things which are built rather than uncovered with researcher as meaning-maker. A conceptual framework can serve as the core of a programme of research influencing questions posed, methodologies adopted and analysis applied to the data (Ngulube et al 2015). Inductive and deductive approaches are both applicable to building conceptual frameworks. The contrast between the approaches in Figure 3.1 illustrates different starting points.

**Figure 3.1**

***Relationships Between Theory and Research Inductive vs Deductive***

Adapted from Ngulube et al (2015, p.46)



Through inductive exploration of study participants experiences, this research intended to define attributes of conscious connection to values and benefits associated with connection to form a framework. Distilling those attributes to their essence was key as poorly defined constructs generate confusion and unreliable inferences from results (Flake & Fried 2020). Distilled attributes informed indicators to quantitatively explore the presence or absence of connection and benefits, and interrelationships within the framework. The meaning of patterns in the numbers was possible using the earlier insights from the words; in essence what Cupchik describes as “a reconciliation of positivism and constructivism” basically “by eliminating the arbitrary boundaries and assumptions that separate them.” (2001, p.2).

In effect this research started with words, moved to numbers and returned to the words in order to understand the numbers. One key challenge of approaching the research this way was keeping it simple.

### **Choosing Mixed Methods**

Use of multiple methods can increase confidence in research findings and add new knowledge through synthesis of results from different sources (Moran-Ellis et al 2007). Romm sees a purely quantitative approach as limited “ill-equipped on its own to come to grips with social meaning-making” (2013, p.655). Cupchik goes further and encourages the consideration of qualitative and quantitative as complementary

*the process is recursive and one approach feeds back into the other. While qualitative research is a rich source of data, it remains unclear as to how one arrives at firm conclusions. According to the principle of indeterminacy, it is impossible to determine the "true" or final meaning of any single event. Quantitative research, on the other hand, involves precision and can yield statistically significant effects, but their meaning and ecological validity are open to question. (2001, p.9)*

Goertz & Mahoney agree that drawing on both quantitative and qualitative has potential saying qualitative researchers could “benefit by thinking more about issues of measurement” while quantitative practice could “profit by considering more seriously issues concerning the defining characteristics of their concepts” (2012, p.214). The ‘defining characteristics’ of conscious connection to values, and any benefits associated with that connection in the experience of adults, is a gap in the literature (Chapter 2).

A sequential exploratory mixed methods approach was chosen to use the results of a qualitative study to design a quantitative survey. This sequencing was selected as when mixed methods is led by the qualitative element it can be particularly powerful for exploring the reality of lived experience (Mason 2006).

Qualitative enquiry enables the development of theory from the experience of real people yielding themes which shape hypotheses about how and/or why and/or when those experiences occur. Hypotheses can then be tested quantitatively using items derived from themes. Mixed methods is a challenging approach to research which, in the view of Bishop (2014), is suitable for a single researcher with time to invest in building their skills.

Reviewing 100 years of published articles from 3 psychology journals, Wendt & Wolfradt observed shifting discourses. They specifically highlight a decline in frequency of 'theoretical psychology' and increase in exploration of methodologies and implications or applications. Also they encourage 'pluralism' in methodologies suggesting that 'overcoming one's limitations requires triangulation' (2022, p.2338).

Restivo & Apostolidis also advocate mixed methods triangulation as a "meaningful research paradigm" in psychology (2019, p.392). A trigonometrical sense of triangulation is described by Kelle as "the best way to obtain valid explanations of social phenomena" when it combines elements of ethnography to investigate "structures of meanings" with quantitative survey (2005, p.115).

### ***Considerations in Research Design***

Various options were considered for the design of each research element. In experimental design selected elements of participants' situation or experience are deliberately varied to record the presence or absence of change and direction of any change recorded. By contrast non-experimental designs explore what may be found in a population independent of an experiment or intervention. A summary of different non-experimental designs Table 3.3 includes: descriptive, quasi-experimental or 'ex post facto', longitudinal, correlational and historical (adapted from Elkis-Abuhokk, 2015).



**Table 3.3**  
**Summary of Non-experimental Research Designs**  
 (Source: *Elkis-Abuhokk, 2015, p637*)

Design	Type	Purpose	Example Applications	Approach
Quasi-experimental/ Ex post facto	Comparison Or Causal	To investigate whether differences exist between groups and if so, to explore possible causes of differences	For situations where something has already taken place within a group or where experimentation may be unethical	Pre-test And/or Post-test
Descriptive	Relationship focus	To build generalised descriptions of problems or situations or attitudes	Useful when developing research into an area than has been under investigated in the past	Survey And/or Observations
Correlational	Associations between variables	To develop ability to predict performance of variables by comparing relationships between variables	Appropriate to gauge validity of new tools compared to established measures	Survey And/or Observations
Longitudinal	Observation of same subjects or similar groups over time or at different stages such as age or situation	To explore how, over time, changes occur in perceptions, situations, attitudes and/or behaviours	Useful in the identification and/or prediction of trends to inform future activities	Pre-test And/or Post-test Survey And/or Observations
Historical also known as <i>archival research</i>	Re-examination of existing data	To test research hypotheses through review and application of past information to present day	Provides access to evidence across different times and groups to increase understanding of issues and guide future work.	Collection and review of literature and/or artifacts

Three elements were selected for the design of the research.

First descriptive: this “systematically” explored something in the realm of lived experience relevant to the research question (Kumar 2011, p.10). Study 1 involved a concurrent online survey and one-to-one interviews both of which focussed primarily on qualitative data. The study was observational as distinct from experimental as no intervention was undertaken (Ranganathan & Aggarwal 2018).

Second: the design of Study 2, administered in 2020 and 2021, was correlational. A quantitative questionnaire explored reliability and validity of items developed from Study 1

describing the experience of being consciously connected to values and benefits attributed to connection. This study also explored correlation between the new items and well-being.

Third: the design of Study 3 in 2022 was *ex post facto*, in which the effect of a process or intervention has already occurred and so was not subject to the influence of the researcher (Salkind 2010). This study treated levels of Values Connection and benefits, as independent variables, and well-being as a dependent variable. It explored whether strength of connection and/or benefits explained any variation in well-being under different external conditions to those present during 2020 and 2021 – the Covid19 years. Participation in studies of this type is often via self-selection so particular care must be taken with internal validity before interpreting results. As an additional check on data quality, this study compared two populations of working age adults: a purposive sample of prior convenience/snowball respondents and an arm's length population accessed through Prolific, a fee-paying online survey platform.

Quasi-experimental study is common in field research and often used to evaluate interventions (Harris et al 2006) under conditions where it would be unethical to engage people in experiments. A true experimental design would have involved recruiting a population to undertake a baseline of subjective well-being before being randomly assigned to three groups:

- control - no intervention,
- 'values group' - supported to connect to personal values and derive associated benefits to see if well-being strengthened compared to the control,
- 'no values group' - placed in conditions which deliberately denied and thwarted any opportunity for individuals to live their values to see if well-being weakened compared to the control

### ***A Case for Replication***

From the outset this research sought to be believed and trusted (Chapter 1, 1.4). Sensitive to the existence of a replication crisis in psychology (Fraley & Vazire 2014, Hengartner 2018, Brachem et al 2022, Malich & Munafò 2022) opportunities to strengthen believability through testing findings more than once were welcomed.

Cumming suggests the most fundamental motivation for replication is to “reduce the chance that the initial result was just a fluke” (2013, p.120). More than one methodologist highlights a lack of replication studies and claims of conclusive findings from a single set of results reporting  $p < 0.05$  undermines believability of research (Ioannidis 2005). King, Rosopa & Minium advise

*When moving from the statistical conclusion to the research conclusion, on statistical (mathematical) grounds we can really only make conclusions about the specific population from which we drew our random sample. If wider generalization is desired, we must repeat the study in the wider population or reasonably show that there is no relevant difference between the population sampled and the wider population about which we wish to draw conclusions. (2018, p.222)*

Cohen agrees: “given the problems of statistical induction, we must finally rely, as have the older sciences, on replication.” (1994, p.1002). Moonesinghe et al describe replication as the ‘cornerstone’ of science (2007, p.218). Mülberger labels replication the “gold standard” for verification of findings (2022, p.131).

In the review of psychology studies published between 1860 and 1900 Mülberger suggests replication historically served four methodological purposes. Two purposes related to the work: “balancing out” impacts of confounding variables arising from change in external conditions; “testing out” whether results were stable with different populations and/or at different points in time. Other purposes concerned the researcher: replication to build proficiency with methods and gain “expertise”; finally replication enabling students to demonstrate proficiency and develop “professional identity” (2022, p.140).

Replication of a study can increase confidence in results among psychologists (van den Akker et al 2023) although the effect was small; belief in the theory under investigation was greater when larger numbers of statistically significant results were reported. Vazire et al (2022) see replication as worthwhile suggesting to build confidence in psychology research four validities should be attended to: construct, internal, external and statistical-conclusion validity. They urge researchers to develop clear and meaningful items for their constructs of interest from the outset. This echoes widespread concern about the negative impact of conceptual confusion in psychology research (Flake & Fried 2020).

Agreeing that there is a replication crisis, Yarkoni (2022) goes further suggesting acute concerns over generalizability. He is sceptical that moving the conventional threshold for statistical significance from  $p .05$  to  $p .005$  is an appropriate response. His recommendations include drawing conservative inferences from statistics in replicated studies, strengthening qualitative approaches for richer pictures and focussing on the practical utility of theories. Researchers should treat findings less as an attempt to state how it is thought the mind operates and more, Yarkoni says, as pragmatic estimations that “can help us intervene on the world in useful ways” (2022, p.13).

### **3.4 Research Methods**

#### ***Ethics***

Ethics approval for Study 1 and Study 2 was sought and granted: Protocol Number LMS/PGR/UH/04146. It was recognised that the pandemic created a certain set of conditions in the Autumn of 2020 which may have influenced responses to the survey which ran for 6 weeks.

Following a successful data collection period in 2020 approval was sought for a reissue of the same questionnaire over a like for like period from mid October to the start of December 2021. The modification/extension approval, received 11 October 2021, Protocol Number aLMS/PGR/UH/04146(2) also covered use of the survey until 12 December 2022 to provide a comparative data set. (Approvals Appendix C, 3.1 and 3.2).

#### ***Approach to Sampling***

*Other things being equal, the larger the sample size, the smaller the standard error of the mean and the greater the power of the test.*

King, Rosopa, & Minium (2018, p.214)

Several hundred individuals undertake an inventory of their values using the AVI with the researcher every year. These adults use the inventory voluntarily either through a workplace programme or independently such as preparing for interviews or working on personal branding. Established relationships with this population enabled recruitment of participants for Study One.

A convenience sample of prior clients of the researcher and practitioners within the Minessence network was recruited by direct email. By minimising variation in understanding of what was meant by 'values' and 'a values profile' reduced risk of Type 1 errors from individuals responding to questions thinking that a different profiling tool, such as personality or emotional intelligence, was equivalent to a values profile. The study population was therefore characterised by a common conception of values derived from shared experience of the AVI. Interviewees were recruited directly by the researcher from her clients to enable selection of a range of ages, professional backgrounds and lengths of involvement with Minessence. Homogeneous sampling can enable easier identification of effects especially when researching a new phenomenon (Shen et al 2011).

For Study 2 administered in 2020 and 2021 a larger convenience population drawn from the social media network of the researcher supplemented Minessence users. Adults with a prior interest and/or engagement with the topic of values was invited to take part in

the study through direct email, social media posts: LinkedIn, Twitter and Facebook. As the studies progressed the population widened to a snowball sample as participants chose to share the link with their own networks extending reach into Instagram, WhatsApp and SnapChat. No incentives were offered.

In 2022 the final two studies were undertaken. Study 3 involved a purposive sample of prior respondents. In 2020 and 2021 the questionnaire invited respondents to volunteer an email address if they would like to take part in future research. This group was revisited to compare how the items functioned for the original convenience population under a different set of external conditions i.e. lifting of Covid19 restrictions. Volunteers supplied 250 addresses in 2020 and 248 addresses; 114 were duplicates. The 2022 Revisit survey sent 384 email invitations to previous respondents.

To reach a 'cold' target audience for the second survey Study 4 used an online research platform. Prolific ([www.prolific.co](http://www.prolific.co)) with over 120,000 active participants and a 4.6/5 Trustpilot rating was selected. Payment for completion of questionnaires was offered. A sample of working age adults representative of the UK population was specified. Concerns have been expressed about the quality of data collected using paid-for web-based methods, however, a number of studies have shown results to be as reliable as student based samples and often more diverse (Buchanan & Scofield 2018).

Under powered psychology studies, those with small samples, carry an increased risk of failing to evidence true effects (Fraley & Vazire 2014). Increasing sample sizes and therefore the power of studies is seen as one way to improve the quality of research (Ioannidis 2005). Tabachnick & Fidell (2007) suggest for testing multiple correlations sample size should be  $N \geq 50 + 8m$  where  $m$  is the number of variables and for testing individual predictors  $N \geq 104 + m$ : where both tests are required to pick the larger sample size. This research used one dependent variable – well-being: and seven independent variables describing conscious connection to values and benefits attributed to connection – minimum sample size required was 120.

Schönbrodt & Perugini 2013 recommend for analysis to yield precise and stable correlation values within a 95% confidence interval large samples of  $n > 1000$ . Recognising this as an ambitious target they also suggest that more typically at  $n \geq 250$  an acceptable level of accuracy and confidence can be achieved.

Considering sample sizes for different forms of statistical analysis Bujang et al (2018) suggest that an appropriate sample for logistic regression is  $100 + (50 \times \text{number of independent variables})$ . This formula produced a sample size of 450. Study Two exceeded 450 in each year, however Studies 3 and 4 did not. Bujang et al report that small studies with samples of less than 100 'usually overestimate the effect size' (2018, p.123). Both Studies 3

and 4 exceeded 100: Study 3 n=160, Study 4 n=273 so while not satisfying the upper end of desirable sample size they all exceeded the Tabachnick & Fidell (2007) minimum of 120.

### ***Interviews Design***

Study One May to August 2020 had constrained data gathering choices. For much of that period social distancing was in place, meetings could only be held outside and in very small numbers. There was understandable fear about unwittingly catching and transmitting the Coronavirus so neither in-person focus groups nor one-to-one face to face conversations were options. Interviews had to be on Zoom with an associated reduction in opportunity to build rapport (Meijer et al 2021). All interviews were conducted by the researcher for three reasons. First to ensure any issue or concern arising from the conversation was handled by an interviewer with appropriate experience and skills to respond, or signpost if necessary. Second to support consistency of approach especially in terms of the introduction and positioning of the enquiry. Third to capitalise on trust and rapport which had previously been established.

Had restrictions not been in place it is unlikely that focus groups would have been employed as a data gathering technique as the researcher was seeking individual/personal experiences of connecting with values rather than any form of collective consensus or shared meaning.

### ***Online Questionnaires Design***

Using the internet to promote and provide access to a survey is a means of reaching populations with specific interests (Van Selm & Jankowski 2006) in this instance values enthusiasts. Although Sills & Song regard the internet as a “sensible means of achieving meaningful results” (2002, p.23) they caution that lack of generalizability and variability in responses rates limit usefulness as an indication of the ‘general population’ (2002, p.28).

Three key ethical considerations arise in relation to online questionnaires: establishing informed consent, ensuring privacy and confidentiality, and ensuring a right to withdraw and decline to answer/skip questions (Regmi et al 2016). Societally there could be another issue of respondents concern about internet security.

Informed consent was sought for Study One by providing a Participant Information Sheet (Appendix C, 3.3) Two options to participate were outlined, a short online survey or one-to-one interview. The information sheet covered the title and purpose of the study, how the study would be conducted, risks and benefits of taking part and approach to

confidentiality. Details also given of secure data storage, who to contact for further information and the Ethics Approval Protocol Number.

For prospective interviewees the participant information sheet was emailed in advance with a Participant Consent Form (Appendix C, 3.4) to be signed and returned before the interview. Survey participants granted consent by clicking on the arrow at the bottom of the first page of the survey which contained the Participant Information Sheet.

Confidentiality was ensured by supplying access to the online questionnaire through a Qualtrics link where respondents were invited to provide an anonymity code known only to themselves. They were advised that should they wish to discuss their answers with the researcher they could supply this code to the researcher to enable their responses to be located.

No names were collected however occupation and age was collected. This information was stored separately from the interview transcripts and questionnaire responses in password protected files on a password protected computer.

Interviews were recorded using a separate dictaphone device (as is usually used in face to face setting) to avoid any online recording that may not be secure. Transcripts were made promptly and the original recordings deleted. Transcripts were identifiable by a participant number and did not contain identifiable demographics. Any names mentioned during interviews or in survey responses were removed. Transcripts are to be held in password protected files on a password protected computer for up to five years and later destroyed securely in line with BPS recommendations.

### **Quantitative Questionnaire Design**

*Surveys provide a statistical basis for social knowledge*

Navarro-Rivera & Kosmin (2013, p.396)

Typically quantitative questionnaires are associated with a positivist approach collecting numbers related to a reality that can be counted. A more pragmatic use of quantitative data takes elements of lived experience described qualitatively by one population to explore interaction between those elements and test hypotheses with a different or larger population. When applying quantitative methods within an overarching social constructionist approach attention must still be paid to positivist concerns of reliability and validity for results to have credibility. This reconciliation of the different types of knowledge and ways of knowing about things is at the heart of mixed methods. For the pragmatist that reconciliation involves seeing knowledge as something that can be both constructed and grounded (Bishop 2014).

### **3.5 The Studies**

#### ***Chapter 4: Study One***

A short quantitative component was placed at the start of the first online survey which was predominantly qualitative. This element was to capture age, frequency of use of the values profile and length of time since completing the values inventory tool. This element was to observe and evaluate the reported use of the values profile. Had these results shown that profiles were seldom if ever used, were only used by certain age groups or that only individuals who had just completed their profile were still engaged with the material then a redesign of all subsequent studies would have been required.

#### ***Chapters 5 and 6: Studies Two and Three***

Themes from the qualitative analysis in Study One enabled development of a proposed conceptual framework of conscious connection to values and benefits. Items to represent themes were incorporated into an online survey to be tested quantitatively (Appendix C, 3.5). To minimise the burden upon participants, all volunteers, the questionnaire was short to encourage completion.

A single item was chosen for each of the three components to comprise a Values Connection scale. Reliability and validity can be acceptable to good for single items when compared with more detailed scales as shown by studies on quality of life (de Boer et al, 2004), happiness (Abdel-Khalek 2006), and job satisfaction (Wanous et al, 1997; Nagy 2002). Short valid measures can have benefits over longer instruments including being easier for respondents and saving time (Nagy 2002).

As the benefits of Self-assurance, Sense Making and Way Finding were broader in scope than connection to values two items were developed as single items to explore complex psychological attributes can carry measurement errors (Gliem & Gliem 2003). To this base two items used by the Office for National Statistics (ONS) were added (Office for National Statistics n.d.) to encompass hedonic and eudemonic well-being. These items have shown consistently high correlations with broader well-being measures (Cheung & Lucas, 2014; Helliwell et al, 2016; VanderWeele et al, 2020).

Components of life satisfaction have shown greater stability than mood or emotion over time and making life satisfaction a reliable item to explore emotional well-being (Eid & Diener 2004). Table 3.4 shows the three variables under investigation, Values Connection, benefits and well-being with their corresponding questionnaire items.



**Table 3.4**  
**Questionnaire Items for Values Connection, Benefits and Well-being**

<b>Values Connection</b>	Know	<i>I feel clear about my personal values</i>
	Hold	<i>I have core values I hold fast to in my life</i>
	Live	<i>I have the opportunity to put my values in to practice regularly</i>
<b>Benefits</b>	Self-	<i>I know myself well</i>
	assurance	<i>I am confident in my decisions</i>
	Sense	<i>My values help me make sense of things</i>
	Making	<i>My values help me understand why I behave the way I do</i>
	Way	<i>I have a strong sense of purpose</i>
<b>Well-being</b>	Finding	<i>My values help me find my way</i>
	Hedonic	<i>Overall, how satisfied are you with life as a whole these days?</i>
	Eudemonic	<i>Overall, to what extent do you feel the things you do in your life are worthwhile?</i>

To describe the study population three demographic questions were asked. In recognition that engagement with values can vary over the life course (Chapter 2, 2.6) Age was included to support the identification of similarities and/or differences between age groups with relevance to future real world application. Literature concerning values and ethnicity, and values and gender, suggested while differences can be found there is substantial similarity between groups (Chapter 2, 2.6). Ethnicity and gender questions were included more in the hope of evidencing similarity than seeking difference. Given contemporary social issues these questions also served as important signals to participants that the experiences of diverse individuals were welcome and of interest.

Demographic information such as employment status, disability or life limiting illness education level, or relationships status was not sought. The study aims and hypotheses related to the conceptual framework, not assumptions regarding levels of Values Connection, benefits or well-being in different groups. Speculative inclusion of variables in questionnaires is not recommended as it can reduce quality of analysis and generate misleading results (Flake & Fried 2020).

Even in short questionnaires sequencing of items matters. Responses to one kind of question can affect the next sometimes referred to as a carryover effect (Tourangeau et al, 1989; Navarro-Rivivera & Kosmin, 2013). Dillman et al (2014) recommend the following: begin with items most likely to have relevance to everyone, group related questions together, place any more sensitive or possibly objectionable items towards the end.

Demographics was placed first as straightforward to answer, relevant to everyone but also not essential to answer as response options included 'prefer to self describe' with a dialogue box and 'prefer not to say'. Next the two well-being items in the same order used in the ONS Quality of Life Survey. This placement was to enable respondents to consider life as a whole before reflecting upon the nature of values and benefits.

Dillman et al warn about "*assimilation effect*" (2014, p.234) whereby respondents answers become more similar to one another influenced by topic overlap. In an example some respondents were asked to describe their marriage and then asked about 'how things are these days'; for others the item order was reversed. The first set of respondents reported much greater general happiness than the second. The inference being when people first thought about being happily married it carried over into judgement about general happiness. Assimilation effects can also arise from physical proximity of items on the screen. For these reasons the well-being questions were shown as one set on one screen and the values and benefits items followed shown in two sets across two subsequent screens.

All items were positively worded and only contained one object. Only positively worded items were used. Simple items, rather than a mixture of positive and negative and/or double negative worded item, have been found to be more discriminatory than long or complex worded items (Rodebaugh et al 2004, Simms & Watson 2007, Navarro-Rivivera & Kosmin 2013). Inclusion of reverse worded items alongside positively worded items can be problematic reducing reliability and introducing measurement errors (Dalal & Carter 2014). Negatively worded single items can inflate means and not be treated by respondents as true opposites (Alexandrov 2010). Shorter questionnaires can convey more information than longer questionnaires (Rodebaugh et al 2004).

Three relevant design effects for this research come from Christian, Parsons & Dillman (2009) examination of scalar question in web surveys. Response time is shortened when options are presented along a labelled scale, versus a text box where participants type a number corresponding to a position in a words-based range. No significant difference in effect between using an ascending scale (starting low on the left and rising to high on the right) or a descending scale which does the opposite. How people 'read' a question is influenced by visual presentation items and the mechanism of response. Christian et al recommend researchers, wishing to use items from other instruments to comparing results between studies, "attempt to maintain the visual qualities of previous questions as well as the question wording" (2009, p.421).

A Likert-type scale scored from 0 to 10 is used by the ONS for the well-being question items. The optimum number of response options to use is debatable. Reviewing psychometric precision and criterion validity for scales with differing numbers of response

options, Simms et al recommend scale developers 'strongly consider' (2019, p.564) a minimum of six or seven options for adequate differentiation to support precision. They found no advantage to either odd or even numbered scales. Alongside finding that a 'Don't Know' option did not improve reliability, Alwin & Krosnick (1991) observed attitude questions with fewer response options tended to be less reliable.

The 0-10 scale to match the ONS well-being items structure was carried over for values and benefits items. This minimised risk of confusion for respondents by not requiring a switch such as 0-10 to 1-6. Consistency in design of self-complete questionnaires helps respondents navigate by minimising cognitive demand supporting quality of data collected (Mullin et al 2000).

Questionnaire items gathered ordinal data using a Likert-type response format. Likert proposed that distances between numbers is treated an interval-level measure (Harpe 2015) making medians rather than means appropriate in analysis. Pragmatically the 0-10 is not suitable for treatment as a calibrated scale, as 10 is not necessarily twice 5: numbers have their own meanings for respondents. This scale served to plot responses on an ordinal line from low to high – data was not assumed to be precise intervals as how people counted along the scale was unknown (Cavanagh & Romanoski 2006)

### ***Chapter 7: Study Four***

Values Connection, benefits and well-being and demographics items were unchanged. In Studies Two and Three the working assumption was that respondents had an existing interest in values. Some had used values profiling tools, some had engaged in workshops or developmental activities centred on values reflection, some were values practitioners with experience of a range of methodologies and models.

For the Prolific population it was not assumed all individuals responding would be new to values given rising general interest (Appendix A, Figure A1.2). A single instance of undertaking a computer based values exercise can affect values change in individuals for months following the activity, even when individuals neither retained a copy of their results nor revisited their profiles (Rokeach 1975). This made it necessary to establish if Prolific individuals recalled ever having engaged with their values.

The Studies Two and Three questionnaire (Appendix C, 3.5) was the base for Study Four with three question types added: employment to describe demographics of respondents; attention checks to support quality of data; and prior values engagement (Appendix C, 3.6).

Threats to validity of scales from attention check items have been investigated (Kung 2018) and items were found to strengthen the collection of quality data. Mechanisms to

identify and remove careless or insufficient effort respondents have also been shown to improve the quality of data (Curran 2016).

### **3.6 Key Considerations in Data Analysis**

Effective replication (3.3) is more than a simple repeat of a study. To instil confidence replications need sufficient power which requires appropriate sample sizes (3.4). Data suitable for analysis of reliability and validity (3.5) must be gathered. Once gathered suitable techniques need to be applied to data, observing rules arising from underpinning assumptions about the distribution of data within the population. For credibility results cannot rest solely on  $p < .05$ , effect size also matters (3.5) to show if statistically significant differences have impacts large enough to be of practical significance for the research question posed. These design concerns form this next section.

#### ***Reliability***

How a quantitative test performs on repeated administrations gives insight into the extent to which it is likely to be free from errors and therefore reliable. Testing and retesting enables examination of reliability. Two indications of reliability are sought: one concerns relationships between variables that comprise the construct under investigation and the other explores internal consistency, often measured using Cronbach's  $\alpha$  (Palant 2020). Alpha shows an index of measurement error using the formula  $\alpha \times \alpha = ?$ ;  $1.0 - ? = ME$

There are alternatives to Cronbach's  $\alpha$ : its nearest rival being  $\omega$ . Doval et al (2023) recommend ideally for  $\alpha$  responses should be on a continuous scale and normally distributed. They observe when kurtosis values are positive or cases skewed towards higher values reliability may be underestimated, however, those biases are reduced when cases are numerous  $\geq 1000$ . Across Studies Two, Three and Four continuous scales were used and sample sizes all exceeded 150, the final combined data set was 1488 making Cronbach's  $\alpha$  the chosen approach to internal consistency.

An acceptable Cronbach's  $\alpha$  in one administration does not signal the survey will be reliable with all populations (Streiner 2003). Analysis of combined responses to items in an instrument produces the value for  $\alpha$  which means reliability is a product of scores rather than items. The number of items in a scale can impact  $\alpha$ . More than 20 items can give rise to acceptable values even when items are potentially measuring different constructs. To develop items to explore a new construct, sensitivity of  $\alpha$  to survey length is a consideration.

As estimate of reliability increases, the fraction of the test score attributable to error decreases. Measurement error relates to the results for the cohort rather than any individual. Measuring alpha each time a test is administered is important and calculating alpha for each

concept in a test rather than solely for the whole test is recommended (Tavakol & Dennick 2011). To interpret the level of  $\alpha$  of an instrument Streiner (2003) recommends .70 as sufficient for initial stages of development and .80 for a basic research tool (p103). A high  $\alpha > 0.90$  may suggest redundancies in which case shortening of a test may be indicated.

To build confidence in the 'meaning' of the Cronbach's this research took a parsimonious approach to developing questionnaire items and  $\alpha$  was recalculated each time the quantitative survey was replicated.

### ***Construct Validity***

Validity may be considered as the accuracy with which a study answers the question it is designed to address (Sullivan 2011). Regarding construct validity as 'imperative' (1955, p.201) within approaches to methodology in psychology Cronbach & Meehl have suggestions about its use. Treating a construct as a "postulated attribute of people assumed to be reflected in test performance" (1955, p.178) they say constructs vary in how definite the researcher can be at any given point as the construct definition comes from a number of interactions between different components.

In Cronbach's opinion "the correlationist is utterly antagonistic to a doctrine of "the one best way"" (1957, p.678). He describes the correlationalist as "a mere observer of a play where Nature pulls a thousand strings, but his multivariate methods make him equally an expert, an expert in figuring out where to look for the hidden strings." (1957, p.675).

To effectively report results of construct validity Cronbach & Meehl recommend the researcher is clear about three things: "(a) what interpretation is proposed, (b) how adequately the writer believes this interpretation is substantiated, and (c) what evidence and reasoning lead him to this belief" (1955, p.196). To address these recommendations each study set out clear aims and linked hypotheses to support consideration of construct validity. Validity was key to this research which sought robust development of items to describe a new construct not present in the literature.

### ***Approach to Correlation***

To test items describing Values Connection and benefits attributed to connection the relationships between items needed to be described. Correlation analysis enables both strength of relationship and direction of relationship between variables to be quantified. Before undertaking statistical analyses Cavanagh & Romanoski (2006) recommend raw scores are tested visually for linear relationships). Raw scores (if linear) can be used for regressions provided there are no missing cases as monotonicity holds when data is complete (Cavanagh & Romanoski 2006).

For Studies Two, Three and Four, following removal of missing cases in each dataset, simple scatterplots were created for Values Connection against benefits, Values Connection against well-being and benefits against well-being. Plots showed positive linear relationships of varying strengths. Initial relationships were calculated using Pearson Moment correlations.

Across the convenience quantitative populations Studies Two and Three all data was non-parametrically distributed, while for Prolific results were mixed. This was expected given the convenience sampling method employed: all participants were either directly known to the researcher, her peers or members of social media circles interested in human values. Levels of skewness and kurtosis indicated the use of Spearman's *rho* correlations for finer grained relationships between framework components.

Statisticians opinions vary on reporting the value of a Pearson product-moment correlation coefficient *r*. Obilor & Amadi (2018) recommend coefficients below .40 are treated as low, .40 to .60 as moderate and above .60 as high while Cohen (2013) says when *r* is treated as an indication of effect size of a correlation that *r* .1 may be treated as small (but not 'too small' 2013 p79), medium as *r* .3, and large as *r* .5. Cohen also states that while *r*, is conventionally underpinned by assumptions of normal distribution and homoscedasticity, in the case of large sample sizes neither significance nor power estimates will be seriously affected. He continues that descriptive use of  $r^2$  does not depend upon parametric distribution. For the purposes of this dissertation magnitude of correlations is treated as .1 small, .3 medium and large  $\geq .5$  as recommended by Cohen (2013).

Had no significant correlations been present it would not have been appropriate to undertake more complex regression analysis and either a redesign of questionnaire items would have been required or designing completely different studies.

### **Effect Size**

Opinions are divided on the subject of effect sizes. While King et al suggest there is some consensus that "small, medium and large" refers to "values of *d* of .2, .5 and .8 respectively." (2018, p.221), echoed by Furnham & Treglown (2021); Pek & Flora (2018) question whether Cohen's *d* guidelines on small, medium and large effects are generalizable given their origins in late 1980's clinical and social psychology disciplines. Meta reviews of psychology studies (Hemphill 2003) show that fewer than 3% of psychology studies met the threshold of  $r \geq .50$  suggesting that as it is so infrequently observed a lower value may be appropriate in some circumstances.

As an expression of a number of standard deviations (SD), Cohen's *d*, should be thought about as a form of ratio (Cumming 2013) in the context of the SD of the sample. If a

group of respondents are very similar to one another (small SD) a large  $d$  may point to a very slight improvement compared to most of the group: by contrast in a widely varying group (large SD) even a small  $d$  may be noteworthy.

Based on their meta-analytic review Gignac & Szodoria (2016) recommend a revision to  $r=0.10$  as relatively small,  $r=0.20$  as typical, and  $r=0.30$  as relatively large. Meanwhile Funder & Ozer (2019) say: provided effect size has been reliably estimated which they regard as critical and not always the case;  $r=.05$  is very small and  $r=.10$  is small in terms of a single event, however, may prove of greater consequence over a longer period. For an effect size to be regarded as useful in the short and long term, they recommend  $r=.20$  is medium and  $r=.30$  is large, but caution that  $r=.40$  or greater may be a substantial overestimation and unlikely to be true in a large sample or replication. By contrast Sawilowsky reports meta-studies finding results with effect sizes greater than 1 prompting him to propose “ $d(.01)$  = very small,  $d(.2)$  = small,  $d(.5)$  = medium,  $d(.8)$  = large,  $d(1.2)$  = very large, and  $d(2.0)$  = huge” (2009, p.599).

This research into conscious connection to values and benefits was exploratory and sought to build theory by articulating and investigating a construct for which measures do not currently exist. A pragmatic choice was made to adopt the conventional view of effect size for ease of comparison with a rich history in conceptual development within psychology. This decision carried a risk of discounting small effects that could prove useful over the longer term: effects which may have been more prominent using a more contemporary reappraisal of effect size. As an early career researcher, however, it was appropriate for any claims made from results to be considered and moderate.

### ***Standard Multiple Regression***

Palant (2020) cautions “Don’t use multiple regression as a fishing expedition” (p.153). Multiple regression should be employed for a specific conceptual or theoretical reason. Conceptually the qualitative reflexive thematic analysis showed that Values Connection was comprised of three elements and three components of benefits were attributed by individuals to their experience of feeling connected to their values.

Linear relationships were evidenced through review of scatterplots making the data suitable for regression. To test the conceptual framework quantitatively standard multiple regression was used to determine the extent to which independent variables might explain variation in the dependent variable. Gomila (2021) recommends using linear regression to describe potential causal effects of variables upon outcomes.

Regression techniques are particularly useful when a researcher is interested in real-world questions that are not easily turned into laboratory experiments. They are also suitable

when variables, both dependent and independent, are correlated with one another to varying degrees (Tabachnick & Fidell 2007).

### ***Forward Conditional Binary Logistic Regression***

Being interested in real world application for the results of Studies Two, Three and Four prompted use of Forward Conditional Binary Logistic Regression to model the predictive potential of the independent variables of Values Connection and its benefits. Logistic regression analysis explores relationships between an outcome expressed by a categorical variable and other variables that may predict levels of outcome observed (Pallant 2020). In logistic regression non-linear relationships between variables and a criterion expressed as a simple 0 or 1 are modelled with all variables entered at the same time, rather than sequentially as in step wise regression. King (2008) suggests this is helpful, “as with adolescents, variables often behave very differently when acting in concert!” (p.377).

Logistic regression enables the potential of models to predict variations to be observed and is suitable for non-parametric data (Cramer & Howitt 2004, Tabachnick & Fidell 2007). It can test and describe relationships between a categorical outcome variable in this case well-being, and a number of other categorical or continuous predictor variables, in this study Values Connection and components of benefits (Peng et al 2002).

The direction of relationships between variables is indicated by the coefficient  $\beta$ . The Odds Ratio quantifies the likelihood of the variables in the combination identified by the regression placing an individual either higher or lower in terms of the dependent variable being considered. When the Odds Ratio is more than 1 the independent variable makes a positive change in the categorical variable: it is more likely than not that an individual will found on the higher side of the cut off used to create the 0 and 1 categories of dependent variable. An Odds Ratio of less than 1 signals that a positive change in the categorical variable with that variable is less likely. An Odds Ratio of 1 or 0 indicates no relationship between independent and dependent variables.

Effect size of an Odds Ratio is calculated using the formula  $(OR-1)*100$  (Tabachnick & Fidell, 2006). Raykov & Marcoulides (1999) suggest parsimonious (simpler) models may warrant more trust than complicated ones having survived higher risk of rejection by the formula.

To increase confidence in results models arising from binary logistic regression analysis should be tested with a different sample population to that from which the model was created (Rana et al 2010) which motivated the sampling of a different population through Prolific for Study Four.



### **Data Analysis**

SPSS version 27 and GraphPad were used to analyse data from the studies. Reliability was examined using Cronbach's Alpha. Hypothesised relationships between Values Connection, benefits and well-being factors were explored using correlations, standard multiple linear regression, and forward conditional binary logistic regression.

Detailed descriptions of steps taken are within individual chapters about studies (Chapters 4, 5, 6 and 7). Chapter 9 (9.8) contains reflections on the methodological basis for rejection of: deductive theory building, autoethnography and interpretive phenomenological analysis.

### **3.7 Chapter Summary**

Use of sequential mixed methods exploratory research for this PhD intended to find the best of both worlds rather than be confined by the limits of just one. As Romm explains

*Quantitative and qualitative research (with their associated standards of judging quality research) are seen as capable of co-existing within a mixed-method approach, whereas mono-method quantitative research is seen as ill-equipped on its own to come to grips with social meaning-making. (2013, p.655)*

Taking a pragmatic and parsimonious approach to exploring Values Connection and benefits by starting with the lived experience of working age adults the researcher sought to escape “*the ivory tower*” to “deal with the problems affecting people’s lives directly” Robson & McCartan (2016, p.4). This research intended to serve practitioners and individuals, aligning with Baert’s suggestion that pragmatically “knowledge, rather than mirroring an outer world, is about *making a difference*” (2005, p.201).

In the next chapter Study One which gave rise to the conceptual framework of Values Connection and benefits is presented. Throughout the subsequent results chapters an ever-present note of caution is sounded. These were strange times in which to explore individual lived experience and values both of which are intimately interrelated with context. Through the disciplined application of replication and consideration of reliability and validity the researcher hoped to minimise potentially confounding influences and deliver findings which might justifiably be believed.

## Chapter 4

### The Value of Values Connection: learning from lived experiences

*The more they revealed their lack of integrity by denying all such promises, the easier I found it to hold my ground – and the easier I found it to hold my ground, the stronger I became.*

Jane Hawkins (2014, p.470)

#### 4.1 Introduction

Anecdotally, the researcher has observed people who engage with a values tool and have a subsequent sense of connection to their values, both feel differently about things and do things differently (Chapter 1, 1.2). What is meant by connected to personal values or being values-based is not clear in the literature. Currently there is no widely adopted scale or measure of “clarity about personal values” Hebllich et al (2023, p.4). Studies (Chapter 2, 2.8) observe the nature of values in work and in life without specifying the features of Values Connection itself. How connection is experienced by individuals, what it is comprised of, and whether individuals attribute any benefits to that connection (as distinct from impacts researchers record in their observations) is absent.

Values are understood to be various things by different theorists and the variety of tools in use across psychology, business and therapy compound the fogginess of this topic (Chapter 2.2). From her practitioner experience the researcher suggests ‘values are powerful ideas about what matters, some values are powerful enough to determine what it means to live true to self’. Design considerations for the research were described in Chapter 3 (3.4 and 3.5). The position of the researcher as a practitioner places the focus of the research firmly upon producing insights of use in the real world. To do this a sequential mixed methods exploratory approach was chosen led by a qualitative enquiry regarded as particularly powerful design for exploring the reality of lived experience (Mason 2006). This chapter sets out that first qualitative study.

Depending on practitioner preference, a variety of techniques are used to generate values profiles for individuals. These include questionnaires: both normative and ipsative (forced choice); lists of stand-alone words from which an arbitrary number such as 5 or 7 or 10 are chosen sometimes with an additional step of placing the words into a rank order; and elicitation where, either working with a coach/facilitator or, while reflecting alone, the individual records a list of words or phrases that represent what is most important in their life

(Barrett et al 2019). Different methods produce different results. Elicitation produces values in familiar forms of words. Surveys by contrast introduce one or more ideas an individual may not previously have put into words and yet feel an affinity with when they see them. Such variation in methods of exploring values presented a potential source of error for this study.

Given these issues to minimise errors arising from sampling, this study engaged a population with a common conception of values, derived from all having used 'A Values Inventory' (AVI). The AVI is an ipsative instrument, rather than a psychometric test, which facilitates reflection on personal values. The Minessence Values Framework, which underpins the AVI and contains 128 values, was developed by Paul Chippendale of Minessence Group in 1988 (Minessence Group, n.d.). As the AVI first came into use in 1988 at the time of the study there were individuals in the population who had been familiar with the tool and its outputs for 32 years.

This study asked the question: is engaging with the AVI experienced as useful by individuals and do those individuals attribute any benefits to that engagement?

## **4.2 Aims**

1. To test the hypothesis that a personal values profile is useful
2. To describe individuals' experience of feeling connected to their values
3. To explore patterns of benefits attributed by individuals to connection with their values

## **4.3 Method**

### ***Design***

A predominantly qualitative exploration of individual experiences following use of the AVI and receiving a personal values profile.

In 1959 Kirkpatrick put forward a training evaluation framework with four levels which remains useful in industry and social sciences to this day (Alsalamah & Callinan 2021). Levels 1, 3 and 4 of Kirkpatrick's framework are: 1 - experience or reaction to the training, 3 -behaviour change and 4 - outcomes or results. These levels were all relevant to explore whether a values profile makes a noticeable difference, and if so, how that difference is described or experienced. This provided an established tested structure for this study. Level 2 concerns 'learning' and was less relevant as the values inventory process was not designed to impart new technical knowledge or build specific skills.

To observe and evaluate the reported use of a values profile, quantitative questions formed the first part of an online questionnaire (example values profile Appendix A, 1.1). If  
Jacqueline Le Fevre 19049539

usefulness was reported, the questionnaire continued with open qualitative questions about the nature of usefulness. Subsequent semi-structured one-to-one interviews used the qualitative questions as prompts. Interviews captured a richer picture of reported experiences, particularly whether individuals felt or noticed anything they attributed, partially or wholly, to deliberately engaging with their values.

### **Materials**

The initial online questionnaire started with three quantitative questions:

How long ago did you undertake an inventory of your values?

To what extent have you used your values information since receiving your profile report?

How old are you?

These questions were to establish:

- any recency effect such as are only people who had completed their profile in the last year were still actively engaged with it – it is possible that once any initial enthusiasm, perhaps born of novelty, wanes then the profile has no lasting utility
- any life stage effect, such as only people over a certain age use their profiles frequently, which could suggest any reported utility of the profile is not universal.

Answers to three open qualitative questions were recorded as free text.:

1. How did you find the process and experience of undertaking an inventory of your values using the online tool?
2. How have you used your values information (if at all) since receiving your profile report?
3. What difference (if any) do you feel having an inventory of your values has made?

Finally individuals were invited to leave their email address if they were willing to take part in future studies. For the semi-structured interviews the three qualitative questions were used as the key prompts with one addition: what would you say values are?

### **Participants**

Online study participants ( $N= 108$ ) were recruited directly through email to clients of the researcher, and indirectly through her network of Minessence practitioners. Participation was anonymous and voluntary, no incentives were offered.

Participants ranged in age from 20 to 71 years ( $M = 46.36$ ,  $SD 12.38$ ) additional detail (Appendix D, Table D4.1). Respondents differed in terms of their history with the values tool: some had only recently been introduced to the AVI, while others had used it several years or even decades ago.

Interviewees were past clients of the researcher or Minessence practitioners: 5 males and 14 females aged from 20 to 67 years. Interviewees length of engagement with the tool ranged from less than a year to over 10 years.

### ***Procedure***

Online survey was administered May to August 2020. Interviews were conducted in June and July 2020. Participants reached the online questionnaire via a link from the Qualtrics platform. The survey took no more than 15 minutes to complete. The survey closed with debrief information and researcher's contact details.

Volunteer interviewees were emailed a copy of the information sheet and asked to provide consent digitally. Once consent was obtained a time and date for the interview was agreed. Interviews took place via video conferencing platform Zoom. Before the interview commenced, participants were reminded about the nature of the research and consent to continue was confirmed. Participants were informed interviews would be audio recorded for the purpose of transcription and specific verbal consent for this was obtained prior to commencing.

Interviews lasted between twenty minutes and one hour. Once the interviews were complete, participants were thanked for their time and provided with a verbal debrief, describing how the information gathered would be used and next steps of the research. Transcripts were made promptly and the original recordings deleted.

Emergent themes and draft items for inclusion in a conceptual framework of conscious connection to values and benefits were developed by the researcher. To sense check the emergent themes and items the researcher recruited an informal advisory group of individuals with experience in values practice. This group numbered 15 individuals from 5 countries and a number of values traditions for example: Hall-Tonna, Minessence and Schwartz. The group included consultants, coaches, university lecturers, chief executives and authors (full list Appendix D, Table D4.2).

### ***Descriptives***

Analysis of quantitative responses to: Age, When and Frequency showed all Kurtosis values and two Skewness values were <1 see Appendix D, Table D4.3. For simplicity the data is treated as normally distributed.

## 4.4 Results

### ***Data Analysis***

Braun & Clarke's approach to Reflexive Theme Analysis (RTA) was chosen to analyse the narratives (Braun & Clarke 2013). RTA comprises six steps: familiarisation with the data; coding; searching for themes; reviewing themes; defining and naming themes; writing up. Even though a homogenous, purposive population was recruited for this study, a broad range of individuals within that group was sought to support working towards theoretical saturation and be able to build a user led landscape of impacts attributed to conscious connection with values.

### ***Quantitative Elements***

Three quantitative questions were analysed using SPSS. A significant ( $p < 0.0005$ ) Pearson correlation  $r = .480$  was found between age and how long ago an individual undertook an inventory of their values which may be explained, at least in part, as the older an individual the greater the chance that they undertook an inventory longer ago than someone who has only just entered the workforce.

### ***Qualitative Elements***

Braun & Clark (2014) suggest Thematic Analysis (TA) is suitable with data gathered through interviews/qualitative surveys with small/moderate numbers sufficient to identify patterns whilst maintaining a focus on individuals experiences.

In Reflexive TA (RTA) the researcher is active in the research process and in constructing knowledge from the data – less a reveal of 'facts' (2014, p.45) and more a creation from insight which aligned with the status of an insider researcher.

In RTA a sample size between 15 and 30 interviews is common (2014, p.55) a sample size which offers a breadth of insight. RTA is regarded as a suitable qualitative approach in applied settings such as an investigation of practice (Braun & Clarke 2014).

In RTA, themes are drawn out of coding narrative rather than applying a set of codes as a framework of predetermined criteria. This enables nuanced layers of meaning to be created as data is visited and revisited. Braun & Clarke recommend that RTA is suitable when a researcher seeks to identify, describe and interpret "patterns in data" (2021, p.43).

**Aim 1: to test the hypothesis that a personal values profile is useful.**

Frequency of use was normally distributed across the range: daily (1), frequently (2), sometimes (3), rarely (4) and never (5): 90% of respondents reported using their profile at least sometimes, mean frequency of use was 2.36. Results of cross tabulation in Appendix D Table D4.4. No relationship was found between either age and frequency of use ( $r = 0.038$   $p = .67$ ) or frequency of use and how recently a profile had been completed ( $r = 0.093$   $p = .338$ ).

A one-way ANOVA was performed to compare the effect of recency of use of the inventory tool and the frequency of use of the values information generated. This revealed that there was no significant difference in frequency of use between time periods of: 1 year or less, 2-4 years, 5-7 years, 8-10 years and over 10 years ( $F(3,104) = [.328]$ ,  $p = 0.805$ ).

Levene's Test for Homogeneity of Variances showed assumption of homogeneity of variance assumption not violated –  $p = 0.143$  and no significant differences found in the means between groups ANOVA ( $p \geq .764$ ). Hypothesis 1 that a values profile is useful was accepted.

**Aims 2 and 3: to describe the experience of feeling connected to values and patterns of benefits attributed by individuals to connection with their values.**

Answers varied from just one or two words to several sentences. Of 108 respondents 12 did not supply relevant comments. For example in response to “how have you used your values profile information?” one commented “to know it’s an available tool”, another simply “Yes”, others gave no comment. The individual who ‘never’ used their profile did not respond to these questions. Some individuals answered one or two questions but not the other(s). Non-respondents included all ages and categories of frequency of use and recency of inventory completion.

Respondents were kept as a single group for analysis as no relationships had been found between age and frequency of use, or frequency of use and recency of inventory completion.

Data from the remaining 96 individuals was analysed using Braun & Clarke's six recursive stages of theme analysis (2021): familiarisation; coding; generating initial themes; reviewing and developing themes; refining, defining, and naming themes; and writing up.

Common themes were created (Table 4.5) to describe being consciously connected to values as:

- Seeing things better: having clarity, being able to see, being able to **know**
- **Hold**ing on to what matters most: encouraged to honour values, not be diverted by others, feel more control
- Bringing values to **life**: able to move forward, congruent with what trying to achieve

**Table 4.5**  
**Themes from Online Questionnaire Related to the Sense of Values Connection**

Online Questionnaire Theme	Number of respondents	% of study population	Comments
<b>KNOW:</b> seeing things better	78	81	<i>“be clear about who I am” P36</i> <i>“Ahhh that’s why” P38</i> <i>“finally ‘getting’ myself” P52</i> <i>“painted a picture of me I had not considered before” P104</i>
<b>HOLD:</b> holding on to what matters most	55	57	<i>“helping me follow my true north” P11</i> <i>“don’t let myself get pulled into other people’s value priorities” P57</i> <i>“been able to control my feelings and emotions easier” P88</i> <i>“I am confident in my decisions, banishing imposter syndrome and growing in the right direction” P107</i>
<b>LIVE:</b> bringing values to life	32	33	<i>“try to practice my values in my life daily” P6</i> <i>“take decisions in keeping with my values” P17</i> <i>“values alignment with daily tasks has provided enthusiasm, motivation and energy” P74</i>

Longer interview narratives echoed the sense of conscious connection from the survey:

- ‘know’ - clarity about the values that matter most
- ‘hold’ - attachment to and honouring crucial values (especially when torn)
- ‘live’ – deliberately using values for life decisions and actions

Themes were labelled by the researcher as Know, Hold and Live. Members of the researchers informal advisory group of values practitioners gave feedback on proposed themes and labels. Comments indicated that the results resonated with others experience and that the simple vocabulary of Know, Hold, Live was preferred to alternatives such as Clarity, Honour and Practice.



Interviewees elaborated three themes of benefits, each with two sub themes, (Table 4.6) attributed to being consciously connected to their values:

- Greater sense of **self assurance**
- Greater ability to **make sense** of things and find meaning
- Greater capacity to **find a way** forward and proceed with purpose

**Table 4.6**  
**Themes and Sub Themes of Benefits of Values Connection**

Theme	Sub themes	Occurrences	In over half of interviews?	Example quotes
Self-Assurance	Know myself	47	yes	<i>"I used them to find myself" P109</i> <i>"these actually are my DNA my values" P114</i>
- a sense of being on solid ground	Confident in decisions	20	yes	<i>"I was much more confident in how I approach clients" P112</i> <i>"now I feel as though I can feel confident in my decisions" P120</i>
Sense Making	Make sense	52	yes	<i>"if you truly understand who you are and why you feel the way you do then it all makes more sense" P115</i> <i>"helped me make sense of the world" P111</i>
- being able to figure out what things mean to someone like me	Understand behaviour	31	yes	<i>"made me able to understand why I react like that" P123</i> <i>"now I can understand why I lose energy or gain energy" P114</i>
Way Finding	Being purposeful	11	no	<i>"doing important work that aligned with my values" P111</i> <i>"think about what I want to do and how I want to do things" P113</i>
- noticing or creating options and being able to exercise choice	Find my way	51	yes	<i>"helped to direct and shape where I have gone with my life" P113</i> <i>"thinking about big decisions which affect how my life will be" P110</i>

Provisional theme labels Self Awareness, Meaning and Purpose were assigned by the researcher. In feedback from the informal advisory group concerns were expressed about the initial labels both having very broad meanings in the wider world, also Meaning

and Purpose being popular across social media and organisational websites. This mirrored the researchers' concern that although not 'wrong' the provisional labels did not sufficiently convey the insights in the data. From a fresh phase of immersion in the narratives, and word frequency analysis of online survey responses (Appendix D, Figures D4.1 and D4.2), the researcher assigned the labels Self-assurance, Sense Making and Way Finding. Feedback from advisors was that these terms gave the benefits a more concrete feel and aligned better with conversations they experienced with their clients.

Alongside benefits of Values Connection, survey respondents were asked about how they used the insight gained through having a values profile. Of the 108 respondents 85 gave at least one example. Coding the narratives provided four main themes: relating, deciding, aligning and self-regulating examples shown in Table 4.7. Full list of comments in Appendix D. Table D4.8

Some individuals referenced more than one application for their insights and some respondents did not specify any. Many people did not mention the situation in which they used their values but those that did referenced work, home, career planning, setting up in business and staff recruitment.

**Table 4.7**  
**Themes and Sub Themes of Applications of Values Connection**

Theme	Sub theme	Instances	Example quotes
Relating – which included finding meaningful bridges between ideas of self, self in context, self and others, own and others reactions to events	Connecting with self/others	27	<i>shared with my staff team so they get some insights into my values and working style P29</i>  <i>more aware of my own values, what other people's values are and how these interact P32</i>
	Understanding/ appreciating	10	<i>made me more understanding of the positions of others P20</i>  <i>In simple terms, it makes it possible to be my best me, so I can do my best. P94</i>
Deciding – both the identification or creation of options and process for selecting between options	Decision making	25	<i>in my decision making, to aid my understanding – something to keep you being you P13</i>  <i>supports me in my decision making P93</i>
	Choice/choosing	8	<i>I used it to change my career path – took me on another path and has enhanced all my experiences P53</i>  <i>more insight into where my energies are going and am able to make productive choices P66</i>
Aligning – this was about a sense of positional adjustment, often to find greater harmony with reality	Alignment of self/goals	20	<i>aligned how I work and what I focus on in my work to better align with my values P62</i>  <i>creating my own comms consultancy using my values at the heart of that P108</i>
	Congruence/ coherence	12	<i>helped me gain an understanding of how to describe me P68</i>  <i>helps me to think of ways to construct/organise my world that is more energising and fulfilling P109</i>
Self-regulating – almost along the lines of feeling better able to make space for emotion to be felt but not be (as) hurtful	Grasp of emotions/ own responses	13	<i>allowing myself to open my mind up to how I want to feel and what I can actually do to implement that P43</i>  <i>I have been able to control my feelings and emotions easier P87</i>
	Self kindness	5	<i>I am more forgiving of my own reactions P11</i>  <i>to be more free from judgement of others P85</i>

From repeated immersion in the narratives it became clear that two particular aspects of lived experience, whether as part of work or home life, were being reported by individuals. These features neither the online survey nor the interview had asked about directly. This experience echoed Maxwell's observations of conceptual frameworks as constructed not found, being the product of "tacking" (2012, p.3) back and forth between

different elements to determine their implications for one another. Maxwell specifically highlighted that themes and sub themes can emerge that were not deliberately sought but spontaneously offered.

Emergent themes were grouped by the researcher as answers to the unspoken questions: ‘**when** do/did you use your values?’ and ‘how did/do you **feel**?’.

Descriptions of ‘when’ varied from short comments to specific statements describing a context for example:

*During the current Covid-19 situation I think I have referred back to them more than I would have otherwise as I don’t see people face to face P105*

Shorter questionnaire comments referencing feelings that prompted individuals to turn their attention back to their values profile including:

- *“disconnected” P14*
- *“overwhelmed” P58*
- *“struggling” P108*
- *“life feels tough” P64*
- *“trying to wrestle with big questions, understand emotional dilemmas” P65.*

This realisation that something important had been missed prompted the researcher to recode the interview transcripts. Within the sub theme ‘Find my way’ ten of the nineteen interviewees, spoke specifically about finding their way using values under difficult conditions. Full list of tough times quotes from interviewees in Appendix D4.1. A range of comments about tough times from the online survey are shown in Table 4.9.

It was noticeable that although challenges presented by adapting to life under Covid-19 restrictions were mentioned this was not the dominant context; most comments addressed life more broadly.

**Table 4.9**  
**Example Quotes About ‘tough times’**

Quote	Participant number
<i>I was in a bit of a sticky place with work, wasn't quite happy – well it was more than that, I was miserable</i>	12
<i>it let me look at my fears and insecurities and how values can help me get to grips with those things</i>	109
<i>if you feel like you have got a war going on between your head and your heart</i>	110
<i>when trying to tackle something that feels like an uphill struggle</i>	117
<i>when there have been challenges and working particularly in managing a team</i>	126

Prior research, Xiu et al has linked values and “mental struggle” (2018, p.266) they found bereaved parents with high self transcendence values experienced a positive association between Sense of Coherence and Post-Traumatic Growth. As trauma often challenges an individual’s sense of how the world does and should work, Xui et al (2018) suggest capacity to look outside of the way things have been (conservation values) towards how things could be (openness to change) is helpful.

Looking across the online survey and interviews it became apparent that in addition to feelings related to struggle, there were also positive expressions:

- *I feel more comfy in my own skin P11*
- *It is something to keep you being you....we all get caught up in the frantic nature of life often feeling disconnected or unhappy but don't know why P12*
- *I am far happier that I will now.... P35*
- *there is a lot less weight on my shoulders from trying to spread myself too thin P43*
- *Life feels somewhat easier, perhaps because I understand myself better and why I think or behave in certain ways, but also because I try to align my life and business to play to my strongest, most meaningful values P62*
- *made me feel better P86.*

It was surprising but encouraging to find individuals describing experiences that supported their general well-being. Even though a relationship between values and well-being has been identified by research (Georgellis et al, 2009) this had not been expected in response to the questions posed.

It was only by revisiting and reviewing the online survey comments and interview transcripts on multiple occasions that the researcher was able to see past direct answers to stated questions and notice additional patterns within the narratives. Braun & Clarke describe the relationship between researcher and data as 'reflective and thoughtful' (2019, p.594). These emergent findings of 'tough times' and well-being are examples of insights derived through reflexive thematic analysis in practice.

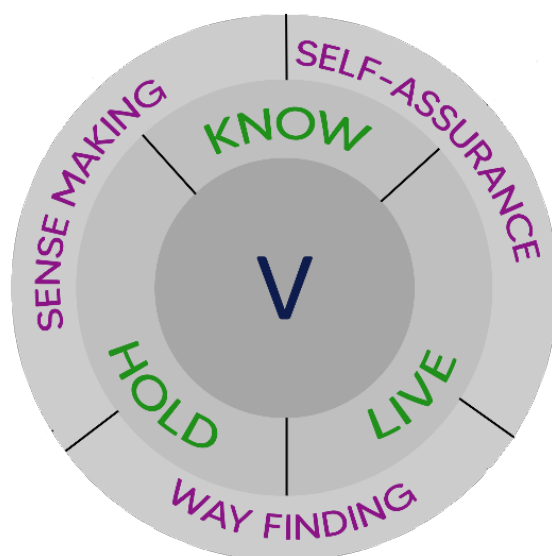
#### 4.5 Chapter Summary

This study described individuals benefitting from their experience of connecting to values. The impacts of connection they describe chime with previous research on connecting to values namely: strengthened sense of agency (Reid 2023), greater confidence in challenging situations and increased awareness of best self (Hadar & Benish-Weisman 2019, Addicott 2016) and stronger emotional self-regulation (Fujita & Han, 2009).

This study adds to knowledge by drawing on the data to provide clarity around what it means to connect to personal values describing three elements of connection: Know, Hold and Live. Directly related to their sense of connection to personal values, participants in the study report a heightened sense of Self-assurance, Sense Making and Way Finding. The consistency of the nature of Values Connection and the attributed benefits forms the basis for a user-informed conceptual framework of Values Connection and benefits shown in Figure 4.3. This framework may have the potential to improve access to the value of values in everyday life.

**Figure 4.3**

***Proposed User-informed Conceptual Framework of Values Connection and Benefits***



Developing conceptual frameworks in psychology is seen as important work. Wicker suggests “a single new insight can go a long way” (1985, p.1101) encouraging researchers working on such frameworks to “scrutinize the meanings of key concepts” (1985, p.1094). This study has brought scrutiny to what is meant by ‘connection to values’ through reflecting upon survey feedback and one to one interviews.

That the usefulness of a values profile over time showed no significant recency effect suggests profiles can have utility in and beyond the short term. The study proposed a conceptual framework containing three elements of Values Connection and benefits that can arise from connection. Furthermore the study provided grounded examples of the utility of Values Connection through identification of practical applications of connection namely: relating, deciding, aligning and self-regulating. In so doing this study provided insights are relevant to coaching practice based on the AVI tool to support individuals in making and sustaining positive changes in their lives and improving performance (Green et al 2006, Gormley & van Nieuwerburgh 2014, Archer & Yates 2017). Initial reactions to disseminations of results of Study One (Appendix D Figure D4.4 and Figure D4.5) suggested that while findings were of interest to researchers and practitioners, they raised more questions.

This study did not evidence reliability or validity of the framework nor indicate whether the conceptual framework had utility beyond the small world of Minessence. The next stage in this sequential mixed methods exploration tested the framework quantitatively with a wider audience.

If reliable and valid, the framework could provide coaches, managers and practitioners from diverse traditions with a pathway to bring values more alive in the workplace. Importantly, given organisational concern with return on investment for interventions (Dadd & Hinton 2022), it could also provide evidence-based starting point for the design of metrics to capture the impact of such work. If reliable and valid the framework could pave the way for future research into the relationship between the elements of Values Connection and associated benefits. Specifically, whether either or both of these phenomena, in part or as a whole, also contributed to well-being.

## Chapter 5

### Testing The Conceptual Values Connection Framework: Life Under Covid

#### 5.1 Introduction

Informed by the anecdotal experience of the researcher as a practitioner (Chapter 1, 1.1) and what the literature says about the functions of values (Chapter 2, 2.4) this study tested a proposed conceptual framework of Values Connection and benefits. Derived from reflexive thematic analysis of participants descriptions of having and using a personal values profile (Chapter 4, Table 4.5) elements labelled Know, Hold and Live were created to describe Values Connection. Benefits attributed to connection were labelled Self-Assurance, Sense Making and Way Finding (Chapter 4, Table 4.6) and uses of Values Connection were identified as relating, deciding, aligning and self-regulating (Chapter 4, Table 4.7). Drawn together these insights enabled the proposal of a conceptual framework of Values Connection and benefits (Figure 4.3 p.72)

In Chapter 4 some individuals mentioned being better able to feel or find greater contentment with different aspects of their lives following connection with their values. This raised the possibility that, if reliable and valid, the elements of the proposed conceptual framework may have a relationship with well-being. Individuals' values have been shown to link to many positive outcomes including greater well-being. Interplay between personal values and well-being has been found in a range of studies (Lekes et al 2012, Grumet & Fitzpatrick 2016). Indeed, Hebl et al describe clarity concerning personal values as "crucial for health, well-being, and effectiveness" (2023, p.9). To test the proposed framework and links to well-being, access to many more people from a wider circle than just Minesence was needed.

October and November 2020 was beset by local lockdowns and 'firebreaks'. In 2021 those same months newspaper front pages warned 'daily Covid cases could hit 100,000' The Times 21 October, and Britain 'sleepwalking into a winter of Covid chaos' The Guardian 23 October (Appendix E, 5.1). Under these conditions an online questionnaire offered ease of reach to potential participants and an opportunity to capitalise upon the professional and personal networks of the researcher. Nayak & Narayan (2019) suggest computer administered surveys have advantages over in person, and pen and paper, methods namely lower social desirability bias and being more enjoyable to complete.

This chapter describes a quantitative exploration of the proposed framework through an online survey containing Values Connection, benefits and well-being questionnaire items.



Three research questions were addressed:

- are items describing connection and benefits developed by the researcher reliable and valid?
- do relationships exist between the elements within the proposed framework?
- is there a link between the proposed framework and well-being?

## 5.2 Aims

The study had three aims:

- to test the reliability and validity of the items developed in Study 1 to explore Values Connection and benefits that comprise the proposed conceptual framework
- to explore relationships between Values Connection as described by Know/Hold/Live and the benefits labelled Self-assurance, Sense Making and Way Finding
- to evaluate the framework for relationships between Values Connection, benefits and well-being

## 5.3 Hypotheses

From the aims four hypotheses were formulated:

- *Hypothesis 1:* There is a significant positive relationship between Values Connection and benefits
- *Hypothesis 2:* There is a significant positive relationship between Values Connection and well-being
- *Hypothesis 3:* There is a significant positive relationship between benefits and well-being
- *Hypothesis 4:* Both Values Connection and benefits will contribute to well-being.

## 5.4 Method

### *Design*

Question items exploring the nature of Values Connection and potential benefits of connection with values were developed by the researcher from the framework in the first survey and in-depth interviews. Items were sense-checked with an advisory group. One item was chosen for each of the three components to comprise a Values Connection scale. For the benefits of Self-assurance, Sense Making and Way Finding two question items were developed. Two well-being items used by Office for National Statistics surveys were added (Office for National Statistics n.d.) Detail on scale, items and sequencing in Chapter 3 (3.4.)

Two conditions were necessary to test the conceptual framework. First reliable and valid items that captured data suitable for quantitative analysis with sufficiently granular responses to observe and interrogate the significance of any relationships between key themes. Second a study population beyond a cohort of adults all familiar with the AVI tool.

Not widening the population carried a risk that any findings may only be interpreted as an artifact of the AVI and/or the process in which those individuals had engaged. To generate insights of increased salience for the topic of values, and therefore of greater utility to practitioners, this study needed to reach further and wider. Ethics approval granted Protocol Number LMS/PGR/UH/04146 and modification/extension approval granted Protocol Number aLMS/PGR/UH/04146(2) (Appendix C, 3.1 and 3.2).

### **Participants**

A convenience/snowball sample of adults with prior interest in/or engagement with the topic of values recruited through direct email, social media posts. LinkedIn, Twitter and Facebook in the period around World Values Day and networking with the UK Values Alliance used to reach diverse values practitioners and through them, past and current clients. No incentives were offered. Study population demographics shown in Table 5.1

**Table 5.1**  
**Demographics for Study Population by Year of Participation**

Category		2020 Data Set		2021 Data Set	
N		552		505	
		Frequency	%	Frequency	%
Gender	Female	402	72.8%	351	69.5%
	Male	145	26.3%	148	29.3%
	Non-binary	4	0.7%	2	0.4%
	Prefer not to say/self describe	1	0.2%	4	0.8%
Age	18-30	89	16.1%	39	7.7%
	31-45	143	25.9%	137	27.1%
	46-60	273	49.5%	237	46.9%
	61-75	47	8.5%	92	18.2%
Ethnicity	Asian	14	2.5%	19	3.8%
	Black	5	0.9%	4	0.8%
	Mixed or Multiple	19	3.3%	23	4.6%
	White	500	90.6%	439	86.9%
	Prefer to not to say/self-describe	15	2.7%	20	4%

For 2020 of the 614 individuals who started the survey, 552 adults of working age answered all questions, a completion rate of 90%. In 2021, 505 adults of working age completed the survey, 87% of the 580 individuals who started to respond.

### Materials

Items developed from Study One for this survey are shown in Table 5.2.

**Table 5.2**  
**Questionnaire Items for Values Connection and Benefits**

<b>Values Connection</b>	Know	<i>I feel clear about my personal values</i>
	Hold	<i>I have core values I hold fast to in my life</i>
	Live	<i>I have the opportunity to put my values in to practice regularly</i>
<b>Benefits</b>	Self-assurance	<i>I know myself well</i>
		<i>I am confident in my decisions</i>
	Sense Making	<i>My values help me make sense of things</i>
		<i>My values help me understand why I behave the way I do</i>
	Way Finding	<i>I have a strong sense of purpose</i>
		<i>My values help me find my way</i>

To explore well-being two existing items were chosen:

- Overall, how satisfied are you with life as a whole these days?
- Overall, to what extent do you feel the things you do in your life are worthwhile?

The complete measurement questionnaire is in Appendix C (3.5)

### Procedure

Participants received a link to the questionnaire hosted on Qualtrics, an online survey platform. Informed consent gained as described in Chapter 3, 3.4.

The questionnaire contained 21 questions and was expected to take less than 15 minutes. The questionnaire ended with an online debrief thanking participants for their participation and describing use and storage of their data. Participants were invited to volunteer an email address for future research. In accordance with GDPR emails were stored securely on a password protected computer.

## 5.5 Results

### *Descriptives*

As was anticipated a population of values enthusiasts generated data that was both skewed towards higher connection to values and reported benefits, and peaked rather than flat or evenly distributed. Skewness and Kurtosis values for the key themes in each year were all >1 except well-being in 2021 which had a Skewness value of -.87 (Appendix E, Table E5.3). At  $n=1057$  the data set was large enough for neither skewness nor kurtosis values to substantially affect analysis using parametric tests (Palant 2020) making both parametric and non-parametric analyses options.

The original intention was to test the conceptual framework with a quantitative questionnaire in October/November 2020 and replicate a year later under different external conditions. A replication under different conditions was to examine whether any reliability and validity shown in 2020 was an artifact of individuals connecting to their values during the pandemic. It transpired autumn/winter 2021 was also a period of heightened threat from a new variation of the Covid19 virus and reimposed social restrictions (Appendix E, 5.1).

As external conditions were more similar in 2020 and 2021 than dissimilar the datasets were examined for suitability for combined analysis using tests of difference (Appendix E, Tables E5.4 and E5.5).

Levene's test for Equality of Variances all greater than .05 (.415 Values Connection, .644 Benefits, .929 Well-being) so equal variances assumed. Effect sizes of differences calculated as eta squared where  $N$  is the total number of cases.

$$\text{Eta}^2 = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

An independent samples  $t$ -test compared responses for 2020 ( $N=552$ ) and 2021 ( $N=505$ ). There were no significant differences in Sense Making and Way Finding scores ( $p > .05$  two tailed) between the years. There were significant differences between years for Values Connection, Self-assurance and well-being ( $p < .05$  two tailed). Effect sizes were small, partial eta squared  $\leq .043$ . Well-being showed the most significant result, 4.3% of the variance was explained by year, 2020 was higher ( $M = 15.96$ ) than 2021 ( $M = 14.70$ ). Similar results were found with a Mann-Whitney  $U$  Test.

Differences were not of practical significance to the research question which enabled combination of the 2020 and 2021 data to create  $N=1057$ . Combined data remained non-parametric (Appendix E, Table E5.6).

**Reliability and Validity of New Items**

Reliability of the scales was determined through calculation of Cronbach’s alpha, (rationale for  $\alpha$  Chapter 3, 3.5). Each scale used same format scoring 0 = strongly disagree to 10 = strongly agree. Results for Values Connection (3 items), benefits (6 items) and well-being (2 items) for each year and the combined years Table 5.7.

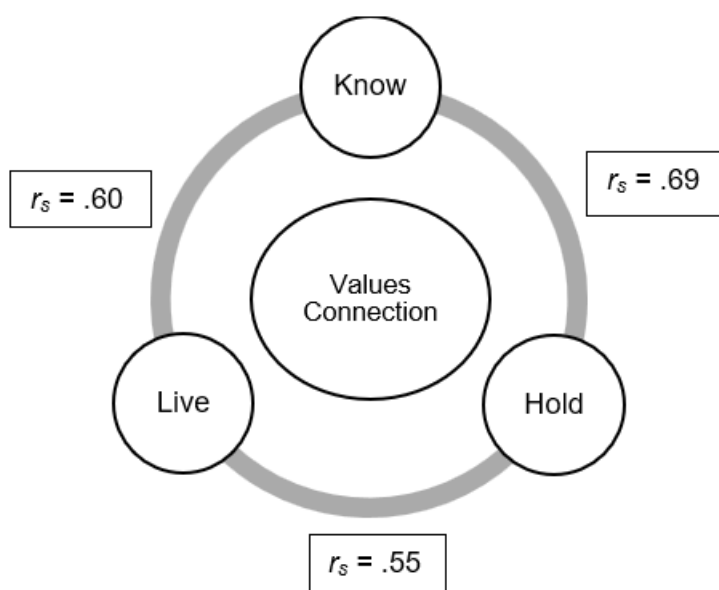
**Table 5.7**  
**Summary of Cronbach’s Alpha for Scales by Years and Combined**

	Values Connection	Benefits	Well-being
2020	.842	.799	.784
2021	.842	.795	.785
2020 and 2021	.845	.798	.801

Cronbach’s alpha indicates the extent to which how the population responds to a set of scales within a single administration is consistent (Helms et al 2006). A result of .7 may be regarded as acceptable and a result of .8 as good (Gliem & Gliem 2003).

To explore validity of items the strength and direction of relationships between Know, Hold and Live for the combined data a Spearman Rank Order Correlation ( $r_{s}$ ) was calculated, recognising data was non-parametric. Strong positive correlations  $p < .0005$  (two tailed) can be seen between all components Figure 5.1.

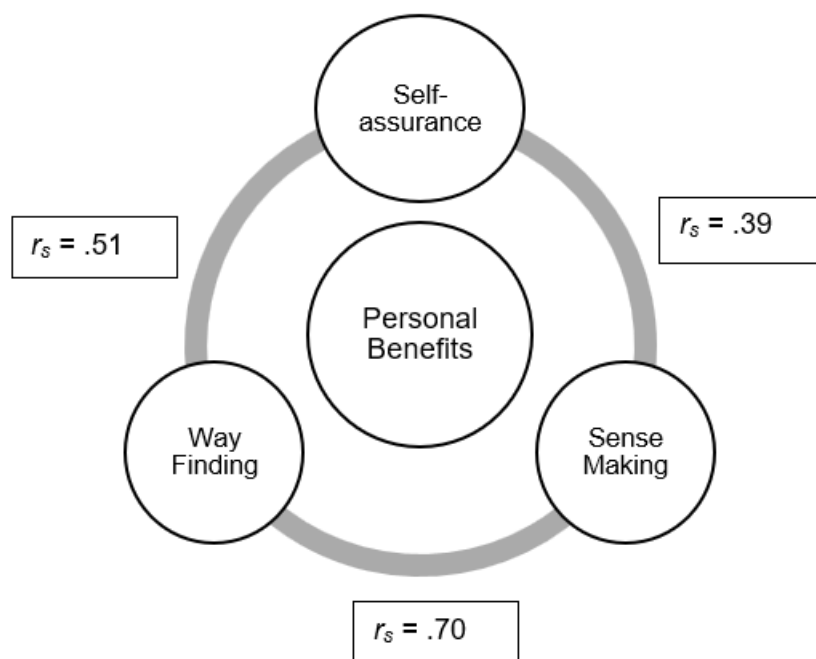
**Figure 5.1**  
**Relationships Between Know, Hold and Live**



The same calculation for the strength and direction of the relationship between Self-assurance, Sense Making and Way Finding is shown in Figure 5.2.

**Figure 5.2**

***Relationships Between Self-assurance, Sense Making and Way Finding***



All relationships were positive, significant  $p < .0005$  (two tailed) and either moderate or strong. While Hauke & Kossowski (p93, 2011) caution against overinterpretation of  $r_s$  values as an absolute indication of association between variables, the presence of monotonic associations in both sets of components suggests that the scales are valid for the current purposes of this study.

Having demonstrated sufficient validity and reliability the hypothesised relationships between Values Connection, benefits and well-being were explored using correlations, standard multiple linear regression, and binary logistic forward conditional regression.

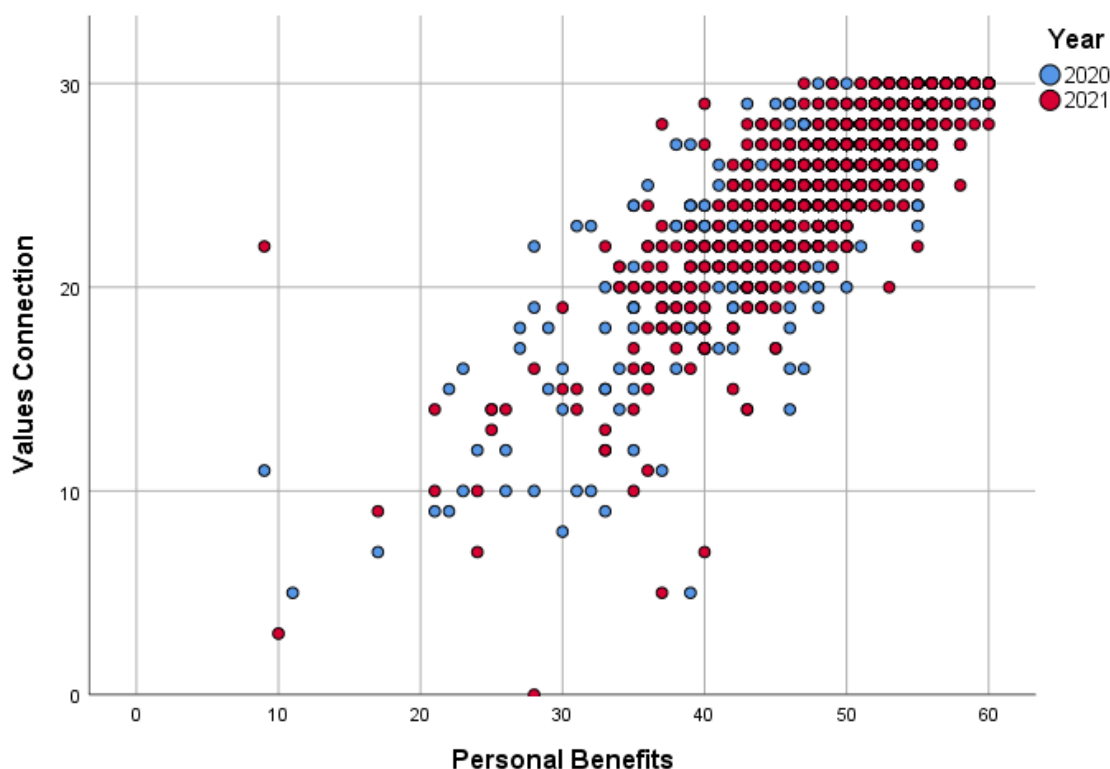
***Exploring Relationships Through Correlations***

*Hypothesis 1:* There is a significant positive relationship between Values Connection and benefits

First a visual check of the relationship between Values Connection and benefits was investigated through a grouped simple scatterplot Figure 5.3. The shape of the data suggested a linear, rather than curvilinear, relationship. A linear relationship is suitable for analysis using a Pearson correlation coefficient. (Palant 2020).

**Figure 5.3**

**Grouped simple scatterplot of Values Connection by Personal Benefits by Year**



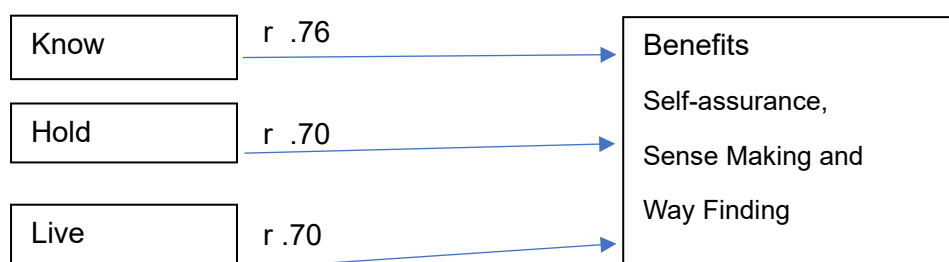
Distribution appears to show the same strong positive correlation for each year. Both years have a small number of outliers and responses cover a similar range.

A bivariate Pearson product moment correlation coefficient showed a strong positive relationship between the two variables,  $r = .82$ ,  $N = 1057$ ,  $p = <.0005$  (two tailed). High levels of Values Connection were associated with high levels of reported benefits. Values Connection level may explain up to 67% of variance in benefits ( $R^2 = 0.674$ ).

To explore the relationship between Know, Hold and Live and benefits a bivariate Pearson product moment correlation was calculated. Each element of Values Connection showed a strong positive correlation displayed in Figure 5.4,  $N = 1057$ , and all results were significant  $p = <.0005$  (two tailed).

**Figure 5.4**

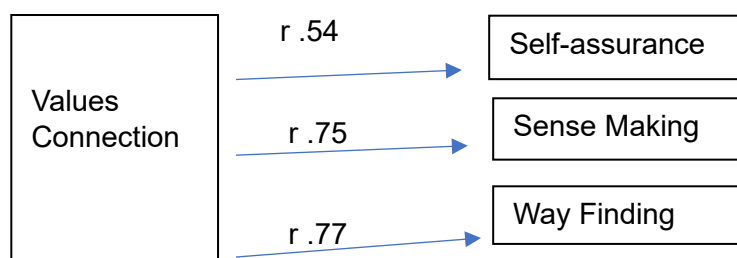
***Relationships Between Know, Hold and Live and Benefits***



Relationships between Values Connection and each of the sub-themes within benefits: Self-assurance, Sense Making and Way Finding was explored using a Pearson product moment correlation coefficient. Strong positive correlations were present between Values Connection and each of the three sub-themes Figure 5.5,  $N=1057$ , all results were significant  $p<.0005$  (two tailed).

**Figure 5.5**

***Relationships Between Values Connection and Self-assurance, Sense Making and Way Finding***



The presence of strong positive relationships both between elements of Values Connection and benefits, and between components of benefits and Values Connection as a whole means the first hypothesis: there is a significant positive relationship between Values Connection and benefits was accepted.

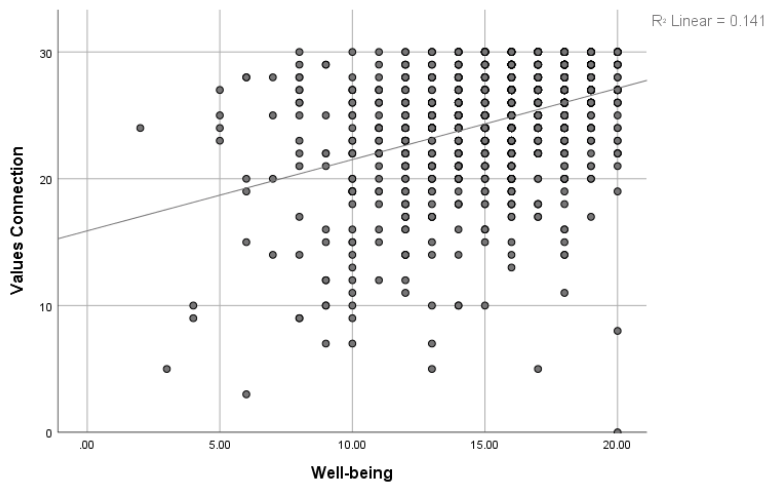
*Hypothesis 2:* There is a significant positive relationship between Values Connection and well-being

A simple scatterplot Figure 5.6 shows a significant linear, rather than curvilinear, positive relationship between Values Connection and well-being making the data suitable for preliminary analysis using a Pearson correlation.



**Figure 5.6**

**Simple Scatterplot of Relationship Between Values Connection and Well-being**



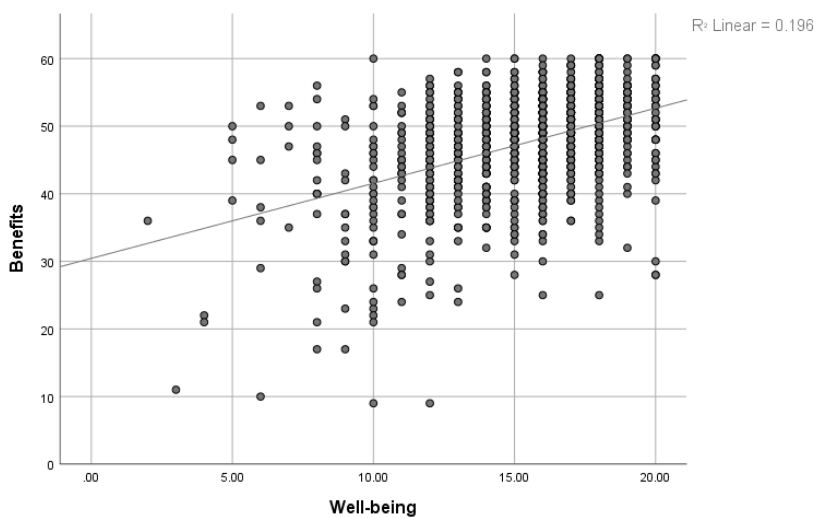
The coefficient of determination  $R^2 = 0.141$  suggests strength of Values Connection may explain up to 14% of the variance in well-being. Results are not tightly clustered around the Fit Line suggesting there is variation in the strength of relationship for different individuals. Based on the relationship evident in the graph the second hypothesis, there is a significant positive relationship between Values Connection and well-being, was accepted.

*Hypothesis 3:* There is a significant positive relationship between benefits and well-being

A simple scatter plot Figure 5.7 shows relationship between benefits and well-being.

**Figure 5.7**

**Simple Scatterplot of Relationship Between Benefits and Well-being**



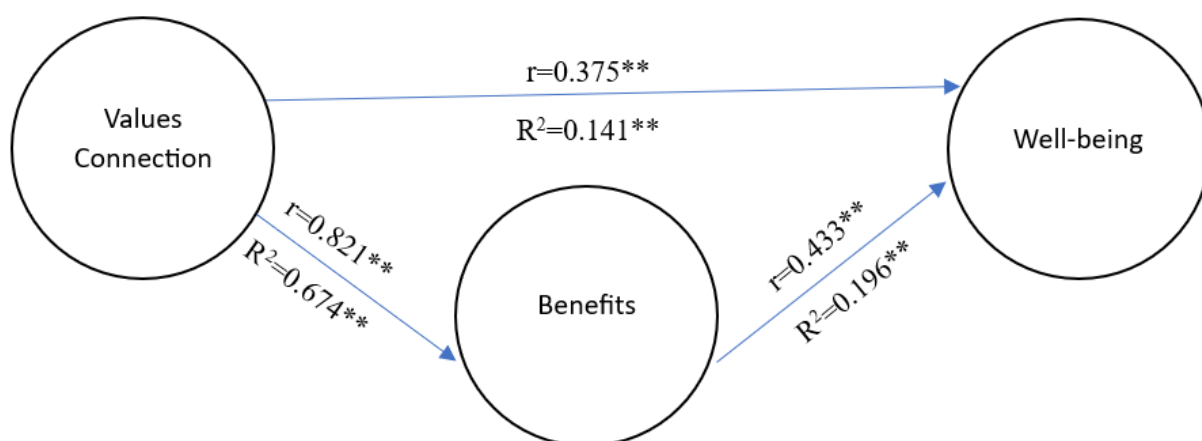
Although  $R^2 = 0.196$  is weak it is greater than between Values Connection and well-being. Results are more tightly clustered around the Fit Line than in Figure 5.6 suggesting less variation in the strength of relationship for different individuals. Based on the relationship evident in the graph the third hypothesis, there is a significant positive relationship between benefits and well-being was accepted.

*Hypothesis 4:* Both Values Connection and benefits will contribute to well-being.

Relationships between Values Connection, benefits and well-being shown in Figure 5.8 which presents the Pearson correlations ( $r$ ) and coefficients of determination ( $R^2$ ).

**Figure 5.8**

**Values Connection, Benefits and Well-being Relationships Summary  $n=1057$**



*Note:* \*\* correlations significant to  $p < .0005$

The relationship between Values Connection and well-being is different to the relationship between benefits and well-being. Each make a positive contribution to wellbeing, Values Connection 14% and benefits 20%, so the hypothesis of both Values Connection and benefits will contribute to well-being was accepted.

To further investigate the relationships, particularly unique contributions made by individual components, two regressions were undertaken: a standard multiple regression and a forward conditional binary logistic regression.

### **Exploring Relationships Through Regressions**

#### **Standard Multiple Regression.**

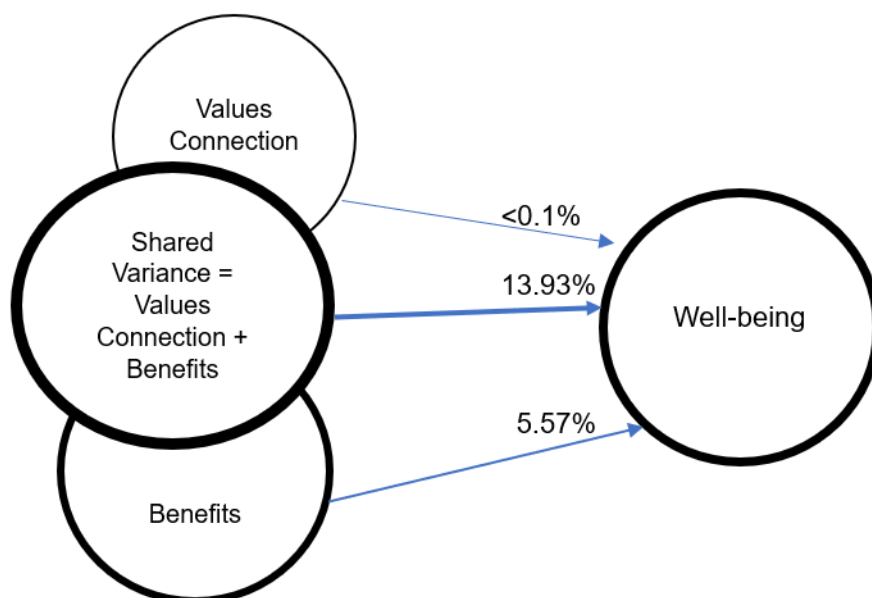
A standard multiple regression was chosen to answer two questions. How well do Values Connection and benefits predict well-being? Is either Values Connection or benefits a better predictor of well-being?

Multicollinearity was acceptable as one correlation was  $> .7$  (Values Connection to benefits  $.821$ ) remainder  $< .7$ . Tolerance results  $> .10$  and  $VIF < 10$  (Palant 2020).

The model summary adjusted R square explained 19.5% of variance in well-being by relationship with Values Connection and benefits. Of the two scales only benefits made a significant unique contribution  $p < .0005$ . The Part Correlation result for benefits was  $.236$ , suggesting that 5.6% of the total variance was due uniquely to benefits. The remaining 13.9% contribution was explained by shared variance between Values Connection and potentially other characteristics of the population: age, gender and ethnicity Figure 5.9.

**Figure 5.9**

**Model Showing Unique and Shared Contribution of Values Connection and Benefits to Variance in Well-being**



Benefits has three components: Self-assurance, Sense Making and Way Finding. To explore the unique contribute of each components to the variance in well-being a further standard multiple regression was undertaken entering each one as a separate variable.

No violations of assumptions concerning multicollinearity were present. The model summary adjusted R square showed 27.1% of variance in well-being explained by relationship with Values Connection and Benefits when entered as components of Self-assurance, Sense Making and Way Finding. The semi partial correlations (*sr*) for each component are shown in Table 5.8

**Table 5.8**  
**Table of Semi-partial Correlations for Components and Contribution to Well-being**

Component	<i>sr</i>	% of variance in well-being explained	<i>p</i>
Values Connection	.046	0.2	.078
Self-assurance	.147	2.2	<.0005
Sense Making	-.141	2	<.0005
Way Finding	.275	7.6	<.0005

Each benefits component made a significant,  $p < .0005$ , unique contribution to well-being, however, the *sr* value for Sense Making was negative.

#### **Forward Conditional Binary Logistic Regression**

Results from the standard multiple regression suggested reported well-being levels had significant unique and shared relationships with Values Connection and the benefits components of Self-assurance, Sense making and Way Finding.

For a deeper understanding of the predictive potential of the conceptual framework forward conditional binary logistic regression was chosen as suitable for non-parametric data (Cramer & Howitt 2004, Tabachnick & Fidell 2007).

To undertake this analysis responses to the items comprising well-being were transformed into 4 sets of dichotomous variables. Lower well-being was indicated by 0 corresponding to a score up to a selected cut off value of well-being and 1 indicated higher well-being, corresponding to a score above the selected cut off value of well-being.

Cut off values were set with reference to the median well-being scores of the combined 2020 and 2021 cohorts,  $N = 1057$ . A fourth cut off was created from the mean reported by the Office for National Statistics (ONS) for quarter three of 2021/22 to enable results for this cohort of convenience/snowball respondents to be contrasted with a more general population. Table 5.9 shows the cut off values in ascending order.

**Table 5.9**  
**Median Cut Off Values**

<b>Set</b>	<b>0</b>	<b>1</b>
Percentile 25	14	14.1
ONS* mean	15	15.1
Percentile 50	16	16
Percentile 75	18	18.1

*Note:* ONS\* mean (Office for National Statistics n.d.)

### **Models for Percentile 25.**

Results for the null model at Step 0 without including any of the predictor variables provided a baseline against which subsequent models including the predictor variables could be compared. In the baseline SPSS correctly predicted how many cases would be seen up to or above the cut off value in 66.2% of cases. Of the predictor variables not in the equation neither Ethnicity or Gender were significant  $p > .05$ , while Age, Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .0005$ .

Analysis produced four models. Each model showed an increased accuracy of prediction over the baseline correctly classifying between 71.1% and 73.3% of cases. Values Connection ( $p = .012$ ) showed an Odds Ratio of 1.07 (95% C.I. 1.02-1.13).

Way Finding was the strongest single predictor of experiencing higher well-being than the median cut off value, Odds Ratios of between 1.22 and 1.32. Using the smallest and the largest Exp B results provided a range of effect sizes (formula Chapter 3, 3.5). For respondents with higher Way Finding the odds of reporting higher well-being were up to 1.32 times (32%) greater than those with lower Way Finding. Appendix E Table E5.10 shows results for all the variables in the equation.

Age was significant at Step 0, however, was not selected for inclusion in any of the models suggesting that Values Connection and Self-assurance, Sense Making and Way Finding all made a significant contribution. Results for the Hosmer-Lemeshow (H-L) test, an inferential goodness-of-fit test, for each of the four models was not significant ( $p > .05$ ) suggesting the data fits the models well (Peng et al 2002). Peng et al (2002, p.6) recommend treating the Cox & Snell R Square and Nagelkerke R Square results as supplemental to the H-L test. Palant (2020) suggests these results are useful to differentiate between multiple models to aid identification of which model better predicts the outcome. Appendix E Table E5.11 shows all three inferential tests by model.

### **Models for ONS mean.**

In common with the 25 Percentile, the ONS mean cut off value produced four models. At Step 0 in the null model 55.5% cases were correctly predicted and each of the four subsequent models improved prediction to between 64.1% and 68.5% of cases.

Of the predictor variables not entered into the equation neither Ethnicity or Gender were significant  $p > .05$ , while Age, Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p \leq .006$ . Way Finding ( $p < .0005$ ) was the strongest single predictor of experiencing a level of well-being above the ONS cut off value, Odds Ratios of between 1.20 and 1.33 indicating likelihood of higher well-being between 20% and 33% greater than below the cut off level. Appendix E Table E5.12 shows results for all the variables in the four models. Values Connection ( $p = .006$ ) showed an Odds Ratio of 1.08 (95% C.I. 1.02 to 1.14).

Age was significant at Step 0, however, was not selected for inclusion in any of the models suggesting that Values Connection and Self-assurance, Sense Making and Way Finding all made a significant contribution. Goodness-of-fit shown by H-L test results suggests a good fit between the data and the models supported by the Cox & Snell R Square and Nagelkerke R Square calculations. Appendix E Table E5.13 summarises these results.

### **Models for Percentile 50.**

Unlike the two previous calculations the 50 percentile cut off value produced five models. At Step 0 in the null model 60.8% cases were correctly predicted and each of the five subsequent models improved prediction to between 66.4% and 66.9% of cases.

Of the predictor variables not entered into the equation neither Ethnicity or Gender were significant  $p > .05$ , while Age, Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .0005$ . The strongest single predictor of experiencing well-being above the 50 percentile cut off value was Way Finding which showed Odds Ratios of between 1.37 and 1.52 (37%-52% increased extent of higher well-being).

The fifth model showed a weaker prediction result than model four and for ease of comparison with previous percentiles Appendix E Table E5.14 shows results for all the variables in the first four models.

Values Connection was significant at Step 0, however, was not selected for inclusion in any of the models suggesting that Self-assurance, Sense Making, Way Finding and Age only for 31-45 year olds ( $p = .048$ ,  $\beta$  1.65) all made a significant contribution. Goodness-of-fit shown by H-L test results suggests a good fit between the data and the models supported

by the Cox & Snell R Square and Nagelkerke R Square calculations. Appendix E Table E5.15 summarises these results.

### **Models for Percentile 75.**

Analysis produced three models. At Step 0 in the null model 88.7% cases were correctly predicted and the three subsequent models exhibited the same percentage correct predictions. In common with the three previous percentiles neither Ethnicity or Gender were significant  $p \Rightarrow .05$  and Age was not significant  $p \Rightarrow .05$ . All of Values Connection, Self-assurance, Sense Making and Way Finding were significant  $p < .0005$ .

Way Finding was the strongest single predictor of experiencing a level of Well-being above the 75 percentile cut off value with Odds Ratios of between 1.20 and 1.34 equating a likelihood of between 20% and 34% greater than below the cut off point. Results for variables comprising the three models in Appendix E, Table E5.16.

Values Connection was significant at Step 0, however, was not selected for inclusion in any of the models suggesting that Self-assurance, Sense Making and Way Finding all made a significant contribution. Goodness-of-fit shown by H-L test results suggests a good fit between the data and the models supported by the Cox & Snell R Square and Nagelkerke R Square calculations. Summary in Appendix E Table E5.17.

### **Summary of Forward Conditional Binary Logistic Models.**

Table 5.18 shows when Values Connection, Self-assurance, Sense Making and Way Finding contribute to models of the likelihood of participants reporting better well-being.

All models correctly classified at least as many cases as the null model at Step 0. The range of correct classifications was 64.1% - 88.7%.

**Table 5.8**  
**Summary of Variables Entered and Used in Models for Each Percentile**

Percentile	Model	Age	Gender	Ethnicity	Values Connection	Self-assurance	Sense Making	Way Finding
<b>25</b>	1							√
	2					√		√
	3					√	√	√
	4				√	√	√	√
<b>ONS</b>	1							√
	2					√		√
	3					√	√	√
	4				√	√	√	√
<b>50</b>	1							√
	2						√	√
	3					√	√	√
	4	√				√	√	√
<b>75</b>	1							√
	2					√		√
	3					√	√	√

Way Finding appeared in every model. Higher Way Finding, Self-assurance and Values Connection was associated with an increased likelihood of greater wellbeing, whilst  $\beta$  values for Sense Making, where significant, were negative and may act to reduce likelihood of greater well-being.

Sense Making was investigated arguably at a time when the alien nature of the external world was in particularly sharp relief. The Odds Ratios (Exp B) values for Sense Making were all less than 1 (Appendix E, Tables E5.10, E5.12, E5.14 and E5.16) and the 95% CI intervals lower and upper were also all less than 1 so it did not reach into a positive contribution in any case.

To understand this negative impact the effect size of Odds Ratio's were calculated. Using the smallest and the largest Sense Making Exp B results provided a range of effect sizes. At the smallest value  $(.830-1) \times 100 = -17\%$ ; for every increase in Sense Making an individual maybe 17% less likely to report higher well-being. At the highest value  $(.888-1) \times 100 = -11.2\%$ ; an individual may be 11% less likely to report higher well-being for every increase in Sense Making.



## 5.6 Chapter Summary

Reflexive Thematic Analysis (Chapter 4) informed a new conceptual framework (Figure 4.3, p72) containing relationships between values connection and a range of benefits. Wicker recommends researchers seeking to develop such frameworks must “specify relationships among concepts” (1985, p.1094) which this study has sought to do through a range of tests.

Functioning of the components of Values Connection described as Know, Hold and Live, and benefits identified as Self Assurance, Sense Making and Way Finding was the first test. Did the components exhibit interrelationships within a wider audience than Minessence users from whose experience the components were surfaced? Results suggest relationships were present in more general convenience population, furthermore, that as strength of connection rises so does the experience of benefits.

Items within the framework evidenced reliability and validity all  $\alpha \geq .784$ . Correlations between the components of the framework were present displaying moderate or strong relationships all significant to  $p < .0005$  (two tailed). A variety of regression approaches explored relationships between framework components and well-being. Regression suggested up to 25% of the variance in well-being levels reported by individuals may be explained by the strength of Values Connection and experienced benefits.

To have found these significant relationships in a larger convenience population than contributed to Study One is encouraging. The overarching external context in which this study was situated was one of difficulty and constraint (Appendix E, 5.1) and may be considered as ‘tough times’. A sub theme from the qualitative interviews was individuals reporting their values to be of particular use when feeling uncertain or facing difficulty (Chapter 4 Table 4.9).

Pragmatically this raised two questions. Were the results of this study significant because of the challenging times people were living through? And/or was significance present due to the established interest in personal values of the study population arising from the way they were recruited through personal and social networks. Ravitch & Riggan encourage developers of conceptual frameworks to be influenced on “design and direction” of study and be guided by the data as it emerges (2012, p.4).

Two next steps were deemed appropriate. First step: repetition of this study with a sample of participants from 2020 and 2021 at a future point when external conditions were at least different and hopefully less challenging than those during the pandemic. This could evidence whether under different conditions, items in the conceptual framework remained reliable and valid also whether the relationships between Values Connection, benefits and

well-being were still present. King recommends replication of studies to strengthen the “generalizability” of sample results (2008, p.381).

Second step: administration of the survey to a comparison group who could be treated as closer to an ‘ordinary’ population of working age adults, specifically who have no prior relationship with either the researcher or her community of values ‘enthusiasts’. Rana et al (2010) suggest testing any models developed using binary logistic regression with a different sample population to the one from which the model was identified.

Participants not recruited through personal ties could be less likely to report scores impacted by social desirability bias and/or a desire to be ‘helpful’. If the items in the conceptual framework remained reliable and valid with this group, and relationships continued to be seen between components of the framework then it would be reasonable to suggest that the findings may have general applicability.

For the next study the research questions posed were:

- are the items still reliable and valid?
- are the relationships between Values Connection, benefits and well-being observed in this study still evident?
- if still evident, are there any significant increases or decreases in levels reported by individuals under a different set of external conditions?

## **Chapter 6**

### **As The Pandemic Clears: a comparison with the Covid years**

#### **6.1 Introduction**

Pandemic life was not generally regarded as 'normal'. In Chapter 4 the 2020 qualitative study heard individuals report that connecting to their values, and the benefits they attributed to that connection was helpful, particularly when things 'were tough'. From that study a conceptual framework was developed describing Know, Hold, Live as Values Connection, and Self-assurance, Sense Making and Way Finding as benefits linked to connection. In Chapter 5 the conceptual framework was explored quantitatively. Items comprising the Values Connection and benefits scales were found to be reliable and valid. The components of the framework showed significant positive relationships with well-being. A repeat of the 2020 quantitative study in 2021 yielded similar findings.

All responses to the online survey reported in Chapter 5 were collected in October and November of 2020 and 2021, strange days when everyone was experiencing challenges for which there was no road map or tried and tested best way forward. Things were generally tough. Could this have created the relationships between items or at least influenced the levels of their significance? Were the results in Chapter 5 in part, or in total, present because of what people were living through?

This chapter describes a repeat of the 2020/21 surveys during late 2022 with a purposive sample of prior participants, replication being a beneficial step to build confidence in results and enhance generalisability to other populations (Chapter 3, 3.3) This repetition explored under more 'normal' conditions, i.e. not in the midst of a global pandemic, whether the relationships between items were similar to Study Two. In addition this chapter gives more detailed consideration to well-being. Specifically whether any variation in how individual survey items related to the two aspects of well-being was present, and if so, whether that variation was similar across both Studies.

Various descriptions of well-being are present in research literature (Chapter 2, 2.7). Among them Park et al (2023) propose that Emotional Well-being has two facets: emotions in everyday experience and reflective judgement of life satisfaction, alongside personal meaning and being able to pursue goals. Under that scope, items developed for Values Connection and benefits used in this exploration may have exhibited different relationships with the well-being items, which explored life satisfaction as a whole and feeling things in life are worthwhile.

In summary when this study was designed it had been anticipated that external conditions would have changed and become less challenging, than those during the pandemic. The study examined whether under different external conditions: the conceptual framework remained reliable and valid within the convenience population previously sampled; and whether the relationships between Values Connection, benefits and well-being observed under Covid also remained.

## 6.2 Aims

The study had three aims:

- to test whether the level of reliability and validity of scale items changed in 2022 compared to 2020/21;
- to determine if relationships between Values Connection, benefits and well-being reported in Chapter 5 were still present one year on from the third wave of Coronavirus;
- to compare levels of Values Connection, benefits and well-being reported with the results reported in Chapter 5.

## 6.3 Hypotheses

From these aims 3 hypotheses were formulated:

- *Hypothesis 1:* The significant positive relationships between Values Connection, benefits and well-being present in 2020/21 will be present in 2022;
- *Hypothesis 2:* The reported levels of Values Connection, benefits and well-being will be similar for 2020/21 and 2022 Revisit populations;
- *Hypothesis 3:* The forward conditional binary logistic regression model compositions for higher well-being in 2022 will be similar to 2020/21.

## 6.4 Method

### ***Design***

Structure of online questionnaire unchanged from Chapter 5 to collect comparative data (Appendix C, 3.5). Recruitment of participants from prior respondents in 2020 and/or 2021 minimised risk of variation in results arising from introduction of new individuals into the study population. Hypotheses 2 and 3 concerned the pattern of responses to items in the framework under a different set of external conditions to the surveys in 2020/21.

Ethics approvals Protocol Number LMS/PGR/UH/04146 and Protocol Number aLMS/PGR/UH/04146(2) (Appendix C, 3.1 and 3.2).

### **Participants**

Email invitations sent to 384 previous survey respondents. Twelve emails were undeliverable. The 372 delivered emails generated 160 completed questionnaires, a completion rate of 43%. Demographics for the study population are shown in Table 6.1.

**Table 6.1**  
**Demographics for Study Three Population**

Demographic information		2022 Data Set	
N		160	
		Frequency	%
Gender	Female	107	66.9%
	Male	49	30.6%
	Non-binary	1	0.6%
	Prefer not to say/self describe	3	1.9%
Age	18-30	8	5%
	31-45	29	18.1%
	46-60	86	53.8%
	61-75	37	23.1%
Ethnicity	Asian	6	3.8%
	Mixed or Multiple	7	4.4%
	White	143	89.4%
	Prefer to not to say/self-describe	4	2.5%

### **Materials**

The email contained a cover note briefly describing the study (Appendix F, 6.1). No changes were made to the 2020/21 measurement questionnaire (Appendix C, 3.5).

## **Procedure**

Individual survey links to participant information sheet and questionnaire on Qualtrics were emailed to named individuals. There was no general call for participants. No payment was offered. Time to complete the questionnaire ranged from 1 minute to 24 minutes, 102 participants completed in 2-10 minutes. At the end of the survey respondents were invited to volunteer their email addresses to be notified about published results, 68 emails registered.

## **6.5 Results**

### **Descriptives**

The 2022 study population was smaller than 2020/2021 as only recruited through targeted individual emails. A good response rate was received of 43%, Nayak & Narayan (2019) suggest email attracts an average response rate of 30%.

The distribution of results, similarly to 2020/21, was non-parametric as indicated by the Skewness and Kurtosis scores all >1 shown in Appendix F Table F6.2. Standard Error for both Skewness and Kurtosis is greater in 2022 data than 2020/21 (Appendix E Table E5.6) suggesting means are more dispersed in this group. This indicates the mean is less reliable than the median as an accurate representation of the true population.

### **Reliability and Validity of Questionnaire Items**

For scale reliability Cronbach's alpha was calculated to compare results with Study Two. Each scale showed an improvement in 2022 shown in Table 6.3

**Table 6.3**  
**Summary of Cronbach's Alpha for Scales by Data Set**

	<b>Values Connection</b>	<b>Benefits</b>	<b>Well-being</b>
2022	.856	.815	.810
Study 2: 2020 and 2021	.845	.798	.801

A visual check of relationships across all datasets was through grouped simple scatterplots. The study populations of 2020 and 2021 are shown in red and green respectively (n=1057) and study population of 2022 shown in blue (n=160) appear to follow similar distributions showing a positive linear relationship with a significant skew towards the top right-hand corner of the plot, Figures 6.1, 6.2, 6.3

Figure 6.1

**Grouped Simple Scatterplot of Values Connection and Benefits**

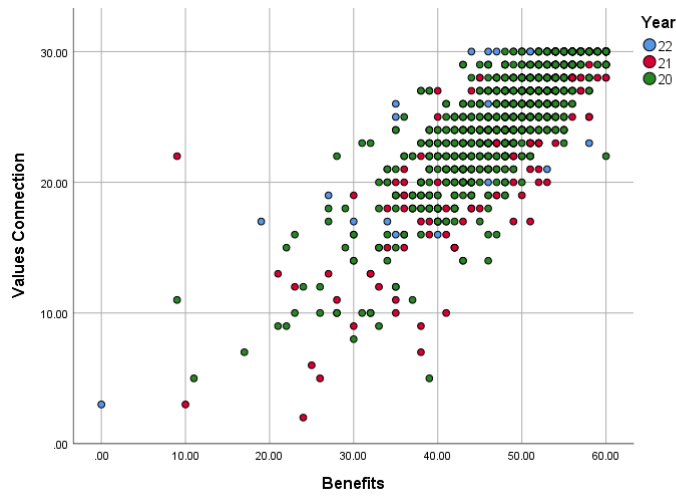


Figure 6.2

**Grouped Simple Scatterplot of Values Connection and Well-being**

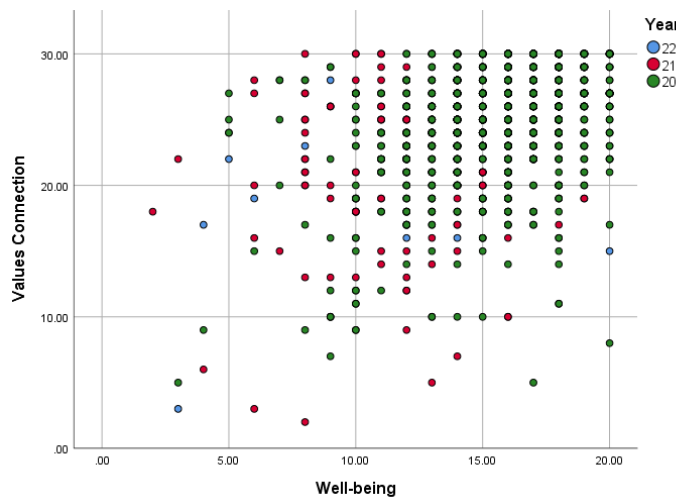
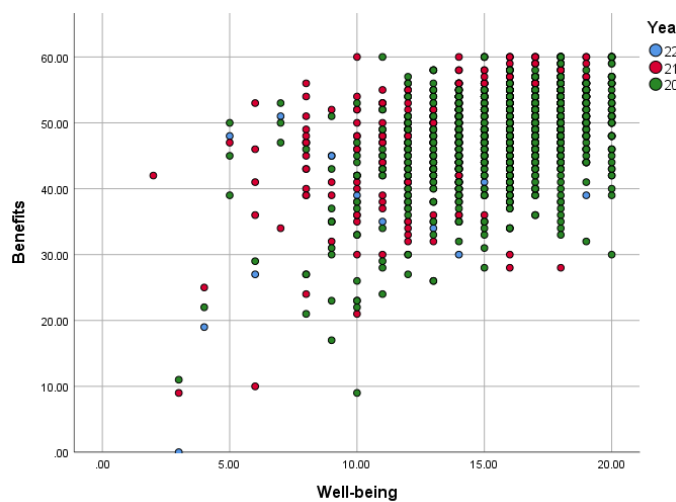


Figure 6.3

**Grouped Simple Scatterplot of Benefits and Well-being**



The relationship between Values Connection and benefits appears to form a more distinct line than the relationships between well-being and the other two scales. Results for 2022 may also be more tightly clustered than for 2020/21 with fewer outliers visible. Due to a smaller number of responses in 2022, comprising 15% of the combined 2020 and 2021 data, the visual appearance may be a product of the variation in population sizes rather than an indication of difference in the data.

As the distribution appears to be linear a bivariate Pearson product moment correlation was calculated for the relationship between Know, Hold and Live and combined benefits. Each element of Values Connection showed a strong positive relationship displayed in Table 6.4

**Table 6.4**  
**Pearson Moment Correlations Between Values Connection and Benefits by Set**

Scale Items	Benefits		Values Know		Values Hold		Values Live	
	20/21	22	20/21	22	20/21	22	20/21	22
Data set								
Benefits	-							
Values Know	.76	.75	-	-				
Values Hold	.70	.70	.72	.77	-	-		
Values Live	.70	.66	.67	.64	.58	.65	-	-

*Note:* 2020/21  $n = 1057$ , 2022  $n = 160$  All correlations significant at  $p < .0005$  (two tailed).

Given the linear relationship in the scatterplot a bivariate Pearson product moment correlation coefficient was suitable to explore the relationship between Values Connection and each of the benefits components: Self-assurance, Sense Making and Way Finding. Table 6.5 shows a strong positive relationship between Values Connection and every component in 2022 compared to 2020/21.



**Table 6.5**  
**Pearson Moment Correlations Between Values Connection and Self-assurance, Sense Making and Way Finding by Data Set**

Scale Components	Values Connection		Self-assurance		Sense Making		Way Finding	
	20/21	22	20/21	22	20/21	22	20/21	22
Data set	20/21	22	20/21	22	20/21	22	20/21	22
Values Connection	-	-						
Self-assurance	.54	.54	-	-				
Sense Making	.75	.73	.43	.50	-	-		
Way Finding	.77	.74	.56	.58	.71	.70	-	-

Note: 2020/21 n = 1057, 2022n = 160 All correlations significant at  $p < .0005$  (two tailed).

Well-being and Values Connection, and well-being and benefits scatterplots show a less clear linear relationships than Values Connection and benefits. Pearson's  $r$  can be a robust way of exploring non-parametric data (Bishara & Hittner 2012), however, for clearly skewed and/or kurtotic results it can increase Type 1 errors which can lead to the rejection of a null hypothesis which should be accepted (Cohen 2013).

### **Exploring Relationships Through Correlations**

*Hypothesis 1:* The significant positive relationships between Values Connection, personal benefits and well-being present in 2020/21 will be present in 2022

A Spearman Rank Order Correlation ( $\rho$ ) shown in Table 6.6 investigated the strength and direction of relationships between questionnaire components for each scale namely:

- for Values Connection – Know, Hold and Live
- for Benefits – Self-assurance, Sense Making and Way Finding

There was a moderate or strong positive correlation between each pair in Table 6.6  $p < .0005$  (two tailed).

**Table 6.6**  
**Comparison of  $r_s$  Values for 2022 Data and 2020/21 Combined Data**

Components	2020/21 combined	2022
Know- Hold	.69	.77
Hold - Live	.55	.60
Live - Know	.60	.59
Self-assurance – Sense Making	.39	.37
Sense Making – Way Finding	.70	.64
Way Finding – Self-assurance	.51	.43

Relationships changed between 2020/21 and 2022, however, differences were small and varied: Know-Hold increased by .08; Way-Finding-Self-assurance decreased by .08. Strength of correlations remained the same except for Way Finding – Self-assurance which weakened slightly from strong to moderate from 2020/21 to 2022.

To explore relationships for each well-being survey item with the scales of Values Connection and benefits and their component elements, Spearman's  $\rho$  correlations were used, shown in Table 6.7. Reporting at this level of detail responds to the recommendation from Park et al (2023) to be specific about aspects of well-being under research.

**Table 6.7**  
**Spearman's  $\rho$  Correlations for Life Satisfaction and Life Worthwhile with Values Connection, Benefits and Their Components**

Scales and Components	“how <b>satisfied</b> are you with life as a whole these days”		“to what extent do you feel the things you do in your life are <b>worthwhile</b> ”	
	2020/21	2022	2020/21	2022
Scale: Values Connection (K, H, L)	.26	.23	.39	.38
Component: Know (K)	.21	.16	.31	.31
Component: Hold (H)	.18	.19	.28	.28
Component: Live (L)	.27	.22	.40	.37
Scale: Benefits (SA, SM, WF)	.31	.40	.40	.45
Component: Self-assurance (SA)	.31	.41	.32	.38
Component: Sense Making (SM)	.16	.27	.25	.23
Component: Way Finding (WF)	.32	.34	.46	.50

Note: All correlations significant at  $p < 0.005$  level (2-tailed).

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Relationships of  $r_s < .30$  small (s),  $r_s = .30-.49$  medium (m),  $r_s .50-1$  large (l) (Cohen 2013). All correlations follow the same pattern of small or medium across both data sets except for Way Finding where a small increase in 2022 takes it from medium to large.

Table 6.7 shows at the level of components

- 6/16 medium relationships with 'life satisfaction' and the remainder (10/16) are small
- for 'worthwhile' 11/16 relationships are medium, one is large and the remainder (4/6) are small
- Way Finding and Self-assurance exhibit medium or large relationships with both well-being items
- Sense Making has the weakest relationships overall across both data sets

In terms of the scales as a whole: Values Connection showed similar relationships with the well-being items for each study; benefits showed a shift between 2020/21 and 2022 in strength of relationship with 'satisfaction' from small to medium, and a strengthening of relationship with 'worthwhile' from  $r_s .40$  to  $.45$ .

Correlation shows both strength of relationship between two variables and direction of relationships. All correlations are positive indicating that as one variable increases so does the other. The strength of the relationship is indicated by the number, the nearer it is to 1 the more closely the variables move together within the population.

For normally distributed data containing responses from two independent samples a Fisher r-to-z transformation could be used to assess the significance of the differences between correlations shown in Table 6.7. As this data is neither parametric nor the samples independent this test is not suitable.

As an alternative to explore what may be giving rise to the variation in relationships seen in Table 6.7 the median, mean and Standard Deviation for each component in each population is shown in Table 6.8.

For Revisit there was a decline in median levels of well-being for both 'satisfaction' and 'worthwhile' from 2020. Medians for both Values Connection: Hold and benefit: Self-assurance did not change suggesting the variance in strength of correlation seen in Table 6.7 for these components was mainly influenced by the change in well-being responses. For other components variation in strength of correlations appeared to arise from a combination of change in well-being responses and a change in responses to individual items within the scales.

**Table 6.8**  
**Comparison of Medians, Means and Standard Deviation for Well-being Items and Scale Components in 2020, 2021 and 2022**

<b>Well-being</b>		<b>2020</b>	<b>2021</b>	<b>Combined 2020/21</b>	<b>2022</b>
Life Satisfaction	Median	8	7	8	7
	Mean	7.70	7.11	7.42	7.22
	SD	1.642	1.581	1.639	1.512
Life Worthwhile	Median	9	8	8	8
	Mean	8.26	7.58	7.93	7.72
	SD	1.620	1.641	1.664	1.850
<b>Values Connection</b>					
Know	Median	8	9	9	9
	Mean	8.15	8.33	8.24	8.56
	SD	1.742	1.703	1.725	1.541
Hold	Median	9	9	9	9
	Mean	8.38	8.48	8.43	8.68
	SD	1.511	1.579	1.544	1.277
Live	Median	8	8	8	9
	Mean	7.73	8.00	7.86	8.27
	SD	1.889	1.877	1.887	1.747
<b>Benefits</b>					
Self-assurance	Median	16	16	16	16
	Mean	15.34	15.78	15.55	16.08
	SD	2.657	2.586	2.631	2.575
Sense Making	Median	16	17	16	18
	Mean	16.08	16.29	16.18	16.86
	SD	3.015	3.181	3.096	2.963
Way Finding	Median	16	16	16	16.5
	Mean	15.60	15.95	15.77	16.10
	SD	3.284	3.128	3.213	3.389

In summary strength of relationships between the two well-being items and both Values Connection and benefits shows variation. Stronger relationships are seen between all components of Values Connection and 'worthwhile', which concerns psychological or eudemonic well-being, than with 'satisfaction' which concerns hedonic well-being.

As a whole the benefits scale was more strongly related to 'worthwhile'. At the level of individual components Way Finding showed the only consistent difference being more strongly related to 'worthwhile' in each data set.

Taking the results of the scatterplots and correlations together the hypothesis that the relationships present in the 2020/21 data are similar in the 2022 data was accepted.

### **Testing For Difference Between 2020/21 and 2022**

*Hypothesis 2:* The reported levels of Values Connection, benefits and well-being will be similar for 2020/21 and Revisit populations

Parametric tests are more powerful than non-parametric tests. When the distribution of data violates assumptions that underpin parametric tests, however, the results shown by analysis can be unreliable (Pappas & DePuy, 2004). The 2022 data exhibits higher degrees of skewness and kurtosis than 2020/21 and is a smaller sample size,  $n = 160$  compared to  $n = 1057$  thus a t-test would not be appropriate to explore this hypothesis (Kaur & Kumar, 2015).

A Mann-Whitney  $U$  Test was used to compare reported levels of the three variables in question. The test revealed no significant difference in the level of well-being of 2020/21 (Md = 16,  $n = 1057$ ) and 2022 (Md = 16,  $n = 160$ ),  $U = 91101$ ,  $z = 1.59$ ,  $p = .11$ ,  $r = .05$ .

Values Connection for Revisit was significantly higher: 2020/21 (Md = 25,  $n=1057$ ) and 2022 (Md = 26,  $n = 160$ ),  $U = 71735$ ,  $z = -3.11$ ,  $p = .002$ ,  $r = .09$ : mean rank in 2020/21 = 596.87 and in 2022 = 689.16.

Benefits was also significantly higher in 2022 Revisit: 2020/21 (Md = 49,  $n=1057$ ) and 2022 (Md = 50,  $n = 160$ ),  $U = 74967$ ,  $z = -2.32$ ,  $p = .020$ ,  $r = .07$ : mean rank in 2020/21 = 599.92 and in 2022 = 668.96.

The hypothesis that the reported levels of Values Connection, benefits and well-being will be similar for 2020/21 and Revisit populations was accepted for levels of well-being.

The hypothesis was rejected for levels of Values Connection and benefits which are significantly higher in 2022 than in 2020/21. The Mann-Whitney  $U$  Test showed small effect sizes, explaining < 10% of the difference observed.

### **Exploring Relationships Through Forward Conditional Binary Logistic Regression**

In Study 2 the dataset was over nine times larger than in 2022:  $n = 1057$  compared to  $n = 160$ . The former dataset exhibited lower Skewness and Kurtosis values than the 2022 dataset and its size prompted an exploration of relationships within the framework using a standard multiple regression. Those calculations have not been repeated as they do not relate to the research questions for this study in addition to the 2022 data being non-parametric.

*Hypothesis 3:* The forward conditional binary logistic regression model compositions for higher well-being in 2022 will be similar to 2020/21.

In preparation for this regression the well-being responses were transformed into 4 sets where 0 indicated lower well-being shown by a score up to a level treated as a cut off point and 1 indicated higher wellbeing shown by a score above the cut off threshold. Three thresholds were determined by the median value of well-being of the Revisit population and a fourth using the Office for National Statistics (ONS) mean for quarter 3 of 2022/23 for comparison with a general population. The 0 and 1 respective thresholds applied are shown in Table 6.9

**Table 6.9**  
**Median Cut Off Values**

Set	0	1
Percentile 25	13.25	13.26
ONS* mean	15	15.1
Percentile 50	16	16
Percentile 75	17	17.1

*Note:* \*ONS mean (Office for National Statistics n.d.)

The median for percentile 50 was the same as for the 2020/21 population. In 2022 percentile 25 was .75 lower and percentile 75 is 1 lower than 2020/21. The ONS mean was the same for both study periods.

### **Models for Percentile 25.**

At Step 0 the baseline predictor model correctly predicted 75% of cases. Of the predictor variables entered Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .002$  while Age, Gender and Ethnicity were not significant  $p > .05$ .

Two models were produced by the regression each of which increased accuracy of prediction over the baseline correctly: Model 1 correctly classified 78.6% of cases, rising to 79.2% of cases in Model 2. As in 2020/21 Way Finding was the strongest single predictor higher well-being with Odds Ratios of 1.42 and 1.32.

Hosmer and Lemeshow Test results show  $p > .05$  so the models may be regarded as having a positive level of goodness-of-fit. Model 2 with a larger Cox & Snell R Square and larger Nagelkerke R Square than model 1 is the better predictor of a higher level of Well-being. Appendix F Tables F6.10 and F6.11 show the results by variable and the inferential test results for each of the models.

### **Models for ONS Mean.**

Both Percentile 25 and the ONS Mean cut off thresholds yielded 2 models. At Step 0 the baseline model accurately classified 52.5% of cases. Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .003$ . Age, Gender and Ethnicity were not significant  $p > .05$ . In each model the accuracy of prediction increased: 64.2% for Model 1 and 71.9% for Model 2. The single strongest predictor variable was Way Finding with Odds Ratios of 1.390 and 1.286.

Hosmer and Lemeshow Test results are  $p > .05$  thus the models may be regarded as having a positive level of goodness-of-fit. Model 2 with a larger Cox & Snell R Square and larger Nagelkerke R Square than model 1 is the better predictor of a higher level of well-being. Appendix F Tables F6.12 and F6.13 show the results by variable and the inferential test results for each of the models.

### **Models for Percentile 50.**

Two models resulted from the analysis. Baseline model at Step 0 accurately predicted 68.8% of cases. Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .015$ . Age, Gender and Ethnicity were not significant  $p > .05$ .

In both models produced by the regression accuracy of prediction correct cases increased over the baseline: Model 1 correctly classified 72.5% of cases, rising to 75.6% of cases in Model 2. As in 2020/21 Way Finding was the strongest single predictor of reporting higher well-being with Odds Ratios of 1.359 and 1.264.

Hosmer and Lemeshow Test results show  $p > .05$  therefore the models may be regarded as having a positive level of goodness-of-fit. Model 2 with a larger Cox & Snell R Square and larger Nagelkerke R Square than model 1 is the better predictor of a higher level of well-being. Appendix F Tables F6.14 and F6.15 show the results by variable and the inferential test results for each of the models.

### **Models for Percentile 75.**

One model resulted from the analysis. At Step 0 the baseline correctly predicted 81.3% of cases. Two variables Self-assurance and Way Finding were significant  $p < .008$ , all other variables including Values Connection and Sense Making were not significant  $p > .07$ . Step 1 model contained Self-assurance and showed no change to the percentage of correctly classified cases.

Hosmer and Lemeshow Test results show  $p > .05$  suggesting the model has a positive level of goodness-of-fit. Both the Cox & Snell R Square and Nagelkerke R Square values are the lowest for this model across all of the 2022 regressions suggesting that this is

the weakest model found. Appendix F Tables F6.16 and F6.17 show the results by variable and the inferential test results for the model.

### ***Comparison of 2022 Models with 2020/21 Models***

A set of forward conditional binary logistic regressions were performed to ascertain whether Values Connection, Self-assurance, Sense Making and Way Finding contributed to the likelihood that some respondents reported better well-being than others. Categorical variables of Age, Gender and Ethnicity were entered at Step 0 together with ordinal variables Values Connection and the components of benefits. Four cut off values were used.

For 2022 analysis yielded 7 models compared to 15 models for 2020/21 data. All models correctly classified at least as many cases as the null model at Step 0. The range of correct classifications of cases across all models for 2022 was 64.2% - 81.3% compared to 64.1% - 88.7% for 2020/21.

Although the range of correctly classified cases was similar in both periods the 2022 data produced fewer models than the 2020/21 data. The 2022 data set showed a narrower range of contributing components with only Way Finding and Self-assurance associated with an increased likelihood of greater well-being. In 2020/21 the framework components of Sense Making (SM) and Values Connection were included in some models.

Both Way Finding (WF) and Self-assurance (SA) made a significant contribution to higher well-being in over half of the 22 models for the combined study periods. Table 6.18 summarises models for each data set, showing contributing variables and percentage of correctly classified cases.



**Table 6.18**

**Summary of variables entered and used in models for each percentile by data set with percentage of correctly classified cases**

Dataset	Percentile	Model	Age	Gender	Ethnicity	Values Connection	SA	SM	WF	% Cases correctly classified		
2022	25	1							√	78.6		
		2					√		√	79.2		
	Revisit	ONS	1							√	64.2	
			2					√		√	71.9	
		50	1							√	72.5	
			2						√	√	75.6	
	75	1							√	81.3		
	2020/ 2021	25	1								√	71.1
			2						√		√	72.1
		ONS	3						√	√	√	73.2
			4					√	√	√	√	72.6
			50	1								√
2										√	√	65.8
3								√	√	√	67.7	
4							√	√	√	√	68.5	
75		1								√	66.4	
		2							√	√	66.9	
		3						√	√	√	67.1	
		4	√					√	√	√	67.9	
75		1								√	88.7	
		2							√	√	88.7	
		3						√	√	√	88.7	
Number of models containing variable (N=22)			1	0	0	2	14	8	21			

*Note:* √ indicates variable included in the model

*Note:* SA Self-assurance, SM Sense Making, WF Way Finding

The hypothesis that forward conditional binary logistic regression model compositions for higher well-being in 2022 will be similar to 2020/21 was accepted with regard to Way Finding and Self-assurance but rejected with regard to Sense Making and Values Connection.

## 6.6 Chapter Summary

Values Connection and benefits scale items remained reliable and valid under different external conditions (Cronbach's alpha  $>.8$ ). The strong relationship between Values Connection and benefits identified in 2020/21 also remained (Tables 6.4 and 6.5.) The relationships between scale components and life satisfaction (hedonic well-being) and feeling that things are worthwhile (eudemonic well-being) were all significant and showed variation. Way Finding followed by Self-assurance exhibited the strongest relationships with both aspects of well-being (Table 6.7). Correlations between survey items and the two components of well-being suggest a stronger relationship between eudemonic well-being and Values Connection and benefits, than between those scales and hedonic well-being.

All participants in this study - Revisit - had previously contributed to Study Two (2020/21). Their first engagement with survey items was under the atypical, uncertain cloud of the pandemic. Mann-Whitney U Tests showed while there was no significant difference in overall well-being between the datasets, Revisit exhibited significantly higher levels of Values Connection ( $p = .002$ ) and benefits ( $p = .020$ ).

Relationships between Values Connection and the benefits of Self-assurance, Sense Making and Way Finding were first identified through qualitative Study One in Chapter 4 and tested quantitatively in Study 2 Chapter 5. This study indicates those relationships were not principally an artifact of individuals drawing upon their values while living through tough times: which in turn suggests that Values Connection can have utility for individuals irrespective of the nature of external conditions.

There are visible similarities and differences in the models created through forward conditional binary logistic regression. In both datasets models at the extremes, the 25 percentile and 75 percentile, showed the highest percentages of correct classification of cases (Table 6.18). In both datasets, Way Finding followed by Self-assurance is most often included in models; 21/22 and 14/22 models respectively.

Less than half as many models resulted from the analysis for 2022 than for 2020/21, all contained Self-assurance at the first step. This may be related to these individuals being more experienced or proficient in accessing the benefits associated with connecting to their values. Revisit participants had already contributed to at least one of the two surveys in Study Two (or both), some also participated in one or both of survey and interviews in Study One. This length of involvement demonstrated a sustained interest in values. As these individuals made repeated contributions to this research, it is perhaps not surprising that the strength of Values Connection does not serve to differentiate between those at lower or higher well-being levels.

In the 2020/21 dataset Values Connection appears at Step 4 in just 2 models, other components make larger unique contributions to higher well-being. It is interesting that both models where Values Connection contributes to higher well-being are the 25 percentile and ONS mean. In those instances, where the cut off threshold is at the lower end of well-being, the odds of reporting higher well-being are greater for those individuals who report a stronger connection to their values. This pattern may indicate support for well-being mainly arises through the benefits experienced by individuals which are in turn related to strength of Values Connection. It also suggests for groups or individuals at the lower end of the well-being continuum that paying attention to supporting Values Connection may be important to unlock subsequent benefits.

Although the ominous cloud of Covid had lifted, war in Ukraine, rising inflation and interest rates, energy concerns, attention upon inequalities in society and the climate crisis mean significant external threats to life as 'normal' remain. The idea of a steady state or an easier time was still distant. Irrespective of the extent of uncertainty in which we live, the findings of this study suggest activity to strengthen Way Finding and Self-assurance, through enabling Values Connection could be a useful addition to psychological support.

There are significant limitations to the findings so far. They emerged through studying a population of working age adults who had previously engaged with a values activity or who had a prior interest in values. This meant everything shown by Studies One, Two and Three could only reliably be observed in relation to people who are 'warm' to the idea of personal values.

To generalise the findings to other populations, the conceptual framework of Values Connection and benefits needed to be tested with individuals not known to the researcher or her peers and networks (Chapter 3, 3.3).

To this end the next chapter describes the results from administration of the quantitative survey to a 'cold' representative sample of UK working age adults. The data gathered aimed to address the research questions:

- in a UK representative sample population unknown to the researcher and her networks are the items used to describe the conceptual framework reliable and valid?
- are the relationships between Values Connection, benefits and well-being similar to those exhibited by the 2022 Revisit population?
- how do levels of Values Connection, benefits and well-being observed compare with the results reported for previous study populations?

## **Chapter 7**

### **A Question of Ubiquity: beyond the realm of values enthusiasts**

#### **7.1 Introduction**

Consecutive years using the same survey instrument with a convenience population both under pandemic conditions (2020/21) and post-Covid (2022) suggested three things. First: the conceptual framework of Values Connection and linked benefits resulting from qualitative Study One was reliable and valid. Second: relationships between framework components were more than a response to adverse external events, possibly illustrating a deliberate way of approaching life. Third: that approaching living in this way appears to provide significant support for well-being.

To strengthen the “justified believability” (Robson & McCartan 2016, p.9) of findings, the conceptual framework and relationships with hedonic and eudemonic well-being needed to be tested with a study population unknown to the researcher or her networks. To accomplish that test a ‘cold’ audience was accessed through the survey platform Prolific.

This chapter describes testing the conceptual framework of Values Connection and benefits with Prolific participants selected to be representative of the UK working population. The results of that test are compared to the convenience and Revisit populations from Studies Two and Three.

#### **7.2 Aims**

The study had four aims:

- to test whether in a UK representative sample population unknown to the researcher and her networks the items used to describe the conceptual framework were reliable and valid
- to determine if relationships between Values Connection, benefits and well-being in a UK representative sample were similar to Revisit
- to compare levels of Values Connection, benefits and well-being with previous study populations
- to consider what the contrast of results under Covid with results post-Covid for different populations suggested for the usefulness of Values Connection in the workplace

### 7.3 Hypotheses

From the aims five hypotheses were formulated:

- *Hypothesis 1:* That significant differences in Values Connection, benefits and well-being will be present between Prolific respondents who have previously engaged with values and those who have not engaged
- *Hypothesis 2:* Similar significant positive relationships between Values Connection, benefits and well-being will be present in the UK representative Prolific population compared to the previous populations;
- *Hypothesis 3:* There will be significant differences in levels of Values Connection, components of benefits and well-being between Prolific and Revisit;
- *Hypothesis 4:* There will be significant differences between hedonic and eudemonic well-being levels in 2022 populations, 2020 and 2021 study populations and the ONS Quality of Life in the UK means for the same periods;
- *Hypothesis 5:* Forward conditional binary logistic regression for the Prolific population will produce similar model compositions linked to higher well-being as the Revisit and 2020/21 study populations.

### 7.4 Method

#### *Design*

Sampling through Prolific to provide a 'cold' audience comparison to the 'warm' study populations in Studies Two and Three. As the Prolific pool may contain individuals with prior personal or professional engagement with values two questions were added to the survey. The first asked whether the respondent recalled having used a values tool and the second whether the respondent recalled having spent time exploring values (Appendix C, 3.6).

All questionnaire items relating to Values Connection, benefits and well-being were unchanged. Items for attention checks and employment status were added, as well as prior engagement with values questions. Payment was given for completion of questionnaires.

A test run was conducted with 10 participants. Initial estimated completion time was 5 minutes and payment offered was 85 pence which equated to an hourly rate of £10.20. At the time of the survey, December 2022, the National Living Wage for adults aged 23 years or over was £9.50 per hour. Median completion time of the test run was 2 minutes 52 seconds making the effective hourly rate of pay £17.79. Using this information payment was adjusted for the main distribution to 70 pence, an hourly rate of £10.50 based on an anticipated completion time of 4 minutes. For the main survey median completion time was 2 minutes 24 seconds equating to an hourly rate of £17.50.

### Participants

For the test run an equal gender split of working age adults was sought. For the main distribution a UK representative sample of working age adults was specified. Consent was requested at the start of the survey, any individual who did not consent was redirected to Prolific and advised to withdraw from the study. Anonymity of participants was ensured as they joined the survey using their unique Prolific ID.

All test run participants passed both attention checks. In the main distribution 380 individuals started the survey, of whom 263 passed both attention checks. Demographics for the study population  $N = 273$  are shown in Table 7.1

**Table 7.1**  
**Demographics for Prolific Study Population**

Demographic information		Prolific Data Set	
Category	N	273	
		Frequency	%
Gender	Female	134	49.3%
	Male	136	49.8%
	Non-binary	2	0.7%
	Prefer not to say/self describe	1	0.4%
Age	18-30	54	19.9%
	31-45	81	29.7%
	46-60	77	28.3%
	61-75	60	22%
Ethnicity	Asian	19	7%
	Black	6	2.2%
	Mixed or Multiple	7	2.6%
	White	235	86.4%
	Prefer to not to say/self-describe	6	2.2%
Work	Full time	189	69.2%
	Part time	84	30.8%
	Employed	215	78.8%
	Self Employed	34	12.5%
	Freelance/Casual	23	8.4%
	Other	1	.4%

At the time of the 2021 census 80.7% of working age people in England and Wales were from white backgrounds, 10.1% Asian, 4.4% Black, 2.5% mixed and 2.3% from 'other' ethnic groups (Office for National Statistics 2023). Treating working age as 16-64 years, a Commons Library Research Briefing reported that Spring 2023 in the UK saw 72.1% of women and 79.4% of men in employment (House of Commons Library, 2023). Data from the OECD (2023) shows 54% of individuals aged 24 and under are employed which is a lower

percentage than other age groups as many individuals are still in education or training. Individuals aged 25-54 make up the bulk of the UK workforce, 85% of age group are employed, while for 55-64 year olds 65% are employed. The Prolific demographic appears to be broadly in line with population data from other sources.

### **Materials**

The survey was reached through a bespoke hyperlink supplied to potential participants by Prolific with a brief description of the aim of the study purpose of the research, the Ethics approval, the estimated time to complete and the payment available for successful completion (Appendix C, 3.3). The questionnaire contained 21 questions (Appendix C, 3.6) was hosted on the Qualtrics online survey platform (Appendix G, 7.1).

### **Procedure**

An introduction to the research was emailed to eligible participants via the Prolific platform (Appendix C, 3.7). Periodic emails were received by the researcher from Prolific with links to review submissions and approve for payment. The test run sought 10 participants, the main distribution sought 300 participants.

In recommending study populations of  $\geq 1000$  Schönbrodt & Perugini (2013) recognise this is an ambitious target and suggest more typically if  $N$  is around 250 an acceptable level of accuracy and confidence is achievable. A target of 300 participants gave scope to remove entries of poor quality/failed attention tests and still reach 250.

When the requested number of participants had been received the survey was closed. No personal details of potential respondents were accessible to the researcher. Responses to the survey were downloaded from Prolific reviewed and records showing failed attention check questions were removed.

## **7.5 Results**

### **Descriptives**

Sampling through Prolific provided a 'cold' audience comparison to the 'warm' study populations in Studies Two and Three. Recognising the Prolific pool may contain individuals with personal or professional exposure to the topic of values two questions were added to gauge the extent and outline nature of prior experience. Results for prior engagement with values is shown in Appendix G Table G7.2. Fourteen individuals recalled both using a tool and taking time to explore their values, 3 had only used a tool and 61 had only spent time.

The final dataset contained 273 adults of working age who correctly answered the attention check questions and provided responses to all other questions. This group was representative of the general UK population based on Prolific screening criteria.

Before exploration of any significant differences between these two groups the Prolific responses were analysed as a single set to determine the distribution of responses. Appendix G Table G7.3 shows that only Sense Making was skewed for the Prolific population. Kurtosis was present with Values Connection, benefits and the scale components of Benefits scores of >1. Well-being was normally distributed. Standard Error for both Skewness and Kurtosis was smaller in Prolific than Revisit (Appendix F Table F6.2.) suggesting the means were less dispersed in this group indicating they are more reliable than the medians.

While the Prolific population did appear to be more ‘normal’ in its responses than the previous populations it was not wholly parametric.

An independent samples *t*-test compared responses for the prior values engagement group (n=28) and the no prior values engagement group (n=195). No significant differences were found in well-being and Self-assurance scores ( $p > .05$  two tailed) between the two groups. There were significant differences between groups for Values Connection, Sense Making and Way Finding ( $p < .05$  two tailed) as shown in Appendix G Table G7.4. Effect sizes were small, partial eta squared  $\leq .018$ .

The Prolific population was therefore treated as a single dataset for the remaining analyses.

### ***Reliability and Validity of Questionnaire Items***

For scale reliability Cronbach’s alpha was calculated and compared to results for the 2020/2021 and Revisit datasets. Each scale showed good internal consistency for all datasets shown in Table 7.5 as  $\alpha \geq .798$  (Chapter 3, 3.6).

***Table 7.5***  
***Summary of Cronbach’s Alpha for Scales by Data Set***

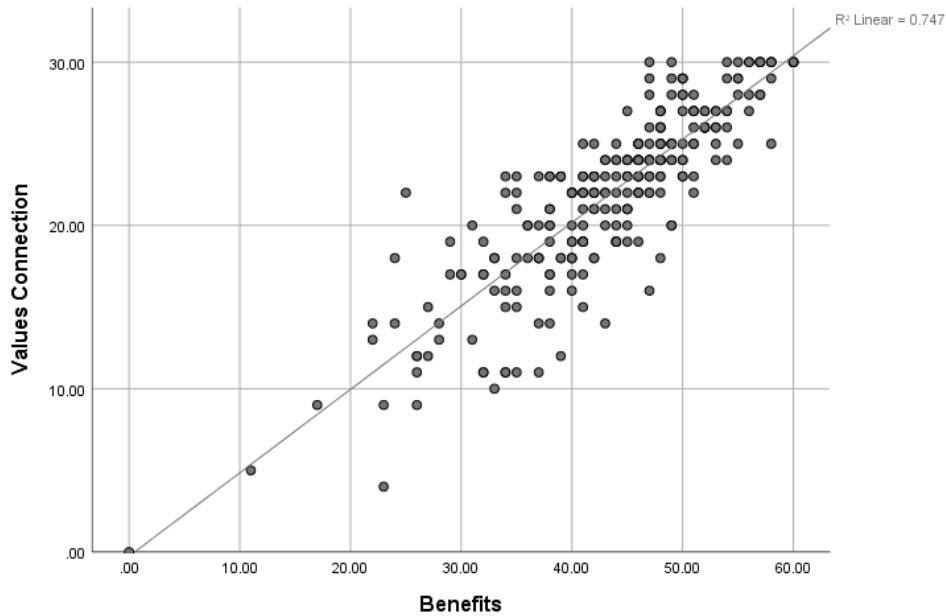
	Values Connection	Benefits	Well-being
Prolific – Study Four	.849	.863	.875
Revisit – Study Three	.856	.815	.810
2020 and 2021 – Study Two	.845	.798	.801



A series of simple scatterplots show the relationships between the scales. Figure 7.1 shows similar a significant linear relationship between Values Connection and benefits as in Study Two (Figure 5.3). Distribution of responses for each of these scales against the well-being scale Figures 7.2 and 7.3 appeared more dispersed than for previous populations.

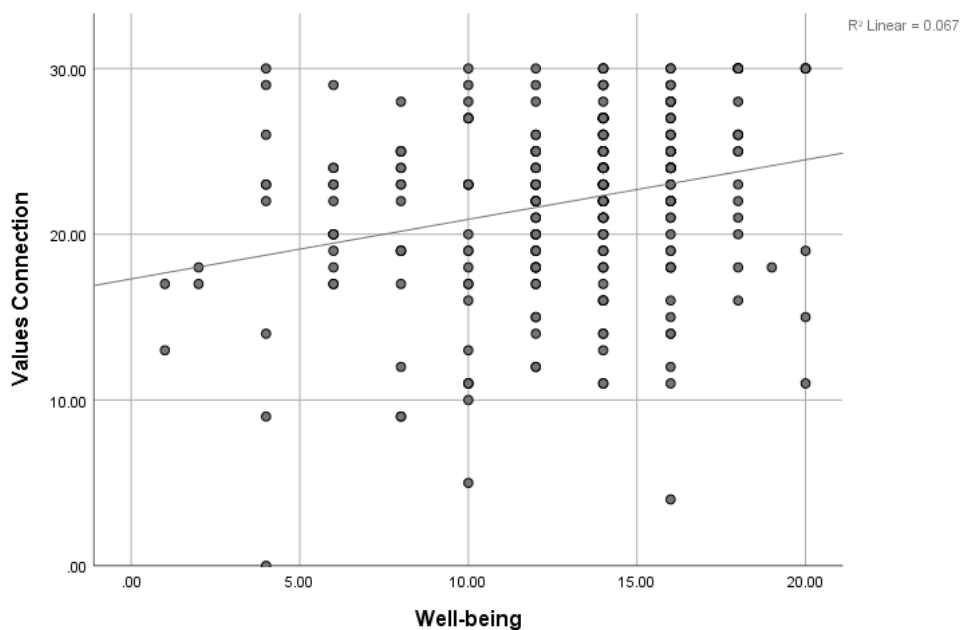
**Figure 7.1**

***Prolific Simple Scatterplot of Values Connection and Benefits***



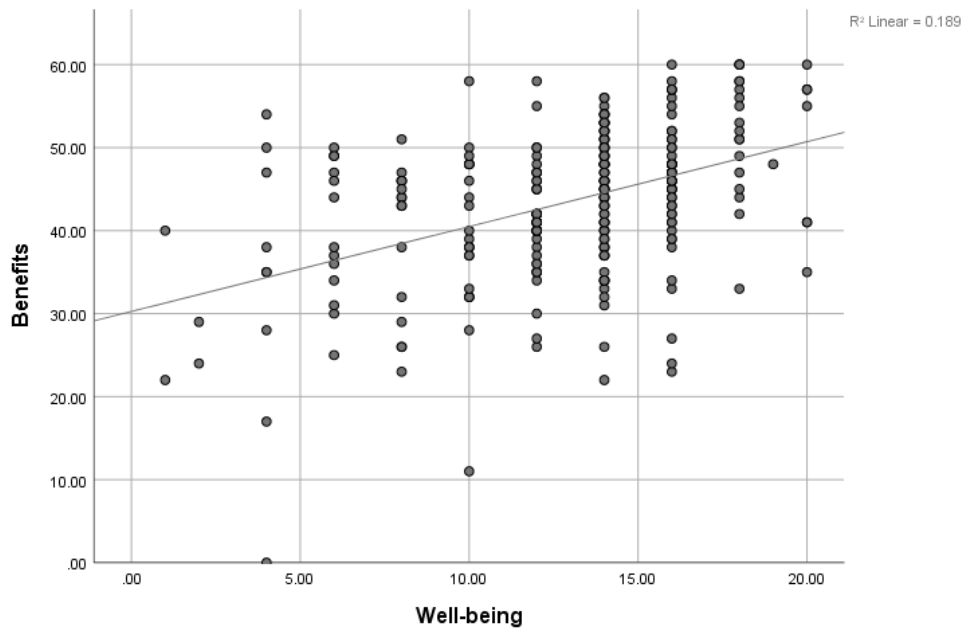
**Figure 7.2**

***Prolific Simple Scatterplot of Values Connection and Well-being***



**Figure 7.3**

***Prolific Simple Scatterplot of Benefits and Well-being***



All scatterplots showed linear monotonic positive relationships between the variables: as one variable rises so does the other. The strongest relationship was between Values Connection and benefits ( $R^2$  linear 0.747), the weakest between Values Connection and well-being ( $R^2$  linear 0.067) similar to Studies Two and Three.

Pearson Moment Correlations were calculated for each item of Values Connection with the benefits scale shown in Table 7.6. Magnitude of correlations are treated as .1 small, .3 medium and large  $\geq .5$  (Chapter 3, 3.4).

**Table 7.6**

***Pearson Moment Correlations Between Values Connection Items and Benefits Scale by Data Set***

Scale Items	1			2			3			4		
Data set	20/21	22R	22P	20/21	22R	22P	20/21	22R	22P	20/21	22R	22P
1. Benefits	-	-	-	-	-	-	-	-	-	-	-	-
2. Values Know	.76	.75	.77	-	-	-	-	-	-	-	-	-
3. Values Hold	.70	.70	.79	.72	.77	.74	-	-	-	-	-	-
4. Values Live	.70	.66	.71	.67	.64	.61	.58	.65	.65	-	-	-

Note: 20/21  $n = 1057$ , 22R Revisit  $n = 160$ , 22P Prolific  $n = 273$

Note: All correlations significant at  $p < .0005$  (two tailed).

Comparison of results for Values Connection items and benefits across all datasets shows significant relationships of similar strengths: all are high. Comparison of the benefits scale components of Self-assurance, Sense Making and Way Finding with Values Connection for all datasets also showed significant relationships of similar strengths as displayed in Table 7.7.

**Table 7.7**  
**Pearson Moment Correlations Between Values Connection Scale and Self-assurance, Sense Making and Way Finding by Data Set**

Scale Components	1			2			3			4		
Data set	20/21	22R	22P	20/21	22R	22P	20/21	22R	22P	20/21	22R	22P
1. Values Connection	-	-										
2. Self-assurance	.54	.54	.67	-	-	-						
3. Sense Making	.75	.73	.82	.43	.50	.58	-	-				
4. Way Finding	.77	.74	.79	.56	.58	.66	.71	.70	.79	-	-	-

Note: 20/21 n = 1057, 22R Revisit n = 160, 22P Prolific n = 273

Note: All correlations significant at  $p < .0005$  (two tailed).

All correlations are strong except Sense-making in 202/21 which was moderate. In Chapter 6 variation in strength of relationship between scale components and the two well-being items was observed.

To establish whether similar variation was also present in Prolific Spearman's  $\rho$  correlations were calculated shown in Table 7.8 to investigate the strength and direction of relationships between questionnaire components for each scale namely:

- for Values Connection – Know, Hold and Live
- for benefits – Self-assurance, Sense Making and Way Finding

There was a moderate or strong positive correlation between each pair in Table 7.8  $p < .005$  (two tailed).

**Table 7.8**  
**Comparison of  $r_s$  Values for Prolific, Revisit and 2020/21 Combined Datasets**

Components	2020-2021 combined	Revisit	Prolific
Know- Hold	.69	.77	.73
Hold - Live	.55	.60	.64
Live - Know	.60	.59	.61
Self-assurance – Sense Making	.39	.37	.58
Sense Making – Way Finding	.70	.64	.77
Way Finding – Self-assurance	.51	.43	.61

Sufficient reliability and validity concerning the hypothesised relationships between Values Connection, benefits and well-being factors having been demonstrated a variety of statistical tests namely t-tests, correlations and binary logistic forward conditional regression were undertaken.

Results for Revisit were not normally distributed (Chapter 6, Table 6.2), and results for the 2020 and 2021 populations were also non-parametric (Appendix E, Table E5.3).

*Hypothesis 1:* That significant differences in Values Connection, benefits and well-being will be present between Prolific respondents who have previously engaged with values and those who have not engaged.

Seventy eight individuals recalled prior engagement with values. Of those 14 recalled using a tool and spending time on values, 3 only recalled a tool, 61 had only spent time.

An independent samples *t*-test was conducted to compare prior engagement Yes with the No/Unsure group (Appendix G, Table G7.4).

There were no significant differences in Well-being for Yes ( $M=12.90$ ,  $SD = 4.05$ ) and No/Unsure ( $M=13.01$ ,  $SD=3.79$ ;  $t(271) = -.22$ ,  $p = .83$ , two-tailed). The magnitude of the differences in the means (mean difference =  $-.11$ , 95% CI [ $-1.13$ ,  $.91$ ]) was very small (eta squared =  $.000$ ). There were also no significant differences in Self-assurance for Yes ( $M=15.01$ ,  $SD = 3.11$ ) and No/Unsure ( $M=15.02$ ,  $SD=3.00$ ;  $t(271) = -.01$ ,  $p = .99$ , two-tailed). The magnitude of the differences in the means (mean difference =  $-.01$ , 95% CI [ $-.81$ ,  $.79$ ]) was very small (eta squared =  $.000$ ).

There were significant differences between Yes and No/Unsure for Values Connection, Sense Making and Way Finding with Yes having higher levels. For Values Connection Yes ( $M=23.03$ ,  $SD = 5.03$ ) and No/Unsure ( $M=21.52$ ,  $SD=5.39$ ;  $t(271) = 2.12$ ,  $p = .035$  two-tailed).

The magnitude of the differences in the means (mean difference = 1.50, 95% CI [.11, 2.90]) was very small (eta squared = .016). For Sense Making Yes (M=15.28, SD = 3.36) and No/Unsure (M=14.32, SD=3.38;  $t(271) = 2.12, p = .035$  two-tailed). The magnitude of the differences in the means (mean difference = .96, 95% CI [.07, 1.85]) was very small (eta squared = .016). For Way Finding Yes (M=14.64, SD = 3.73) and No/Unsure (M=13.55, SD=3.60;  $t(271) = 2.23, p = .026$  two-tailed). The magnitude of the differences in the means (mean difference = 1.09, 95% CI [.13, 2.05]) was very small (eta squared = .018).

The hypothesis that significant differences in Values Connection, benefits and well-being will be present between Prolific respondents who have previously engaged with values and those who have not engaged was accepted.

Due to effect sizes, the differences were not of practical significance for the research questions. The Prolific population was treated as a single dataset for analysis from this point.

### ***Exploring Relationships Through Correlations***

*Hypothesis 2:* Similar significant positive relationships between Values Connection, benefits and well-being will be present in the UK representative Prolific population compared to the two previous populations

A series of simple scatterplots showed the relationships between the scales. Figure 7.1 showed similar a significant linear relationship between Values Connection and benefits as for the populations in Study Two (Figure 5.3). The distribution of responses for each of these scales against the well-being scale (Figures 7.2 and 7.3), appeared more dispersed than for populations in Studies Two and Three (Figures 5.6 and 5.7, 6.2 and 6.3).

All scatterplots showed linear monotonic positive relationships between the variables: as one variable rises so does the other. The strongest relationship was between Values Connection and benefits ( $R^2$  linear 0.747), the weakest between Values Connection and well-being ( $R^2$  linear 0.067). This was similar to Studies Two and Three.

In Chapter 6 variation in strength of relationship between scale components and the two well-being items was observed. To establish whether similar variation was also present in the Prolific population Spearman's *rho* correlations were calculated Table 7.9

**Table 7.9**  
**Spearman's rho Correlations for Life Satisfaction and Life Worthwhile with Values Connection, Benefits and Their Elements**

Scales and Components	"how <b>satisfied</b> are you with life as a whole these days"				"to what extent do you feel the things you do in your life are <b>worthwhile</b> "			
	2020/21	Revisit	Prolific	ALL	2020/21	Revisit	Prolific	ALL
Scale: Values Connection (K,H,L)	.26	.23	.26	.30	.39	.38	.46	.44
Component: Know (K)	.21	.16	.25	.25	.31	.31	.41	.35
Component: Hold (H)	.18	.19	.22	.23	.28	.28	.40	.35
Component: Live (L)	.27	.22	.24	.30	.40	.37	.41	.43
Scale: Benefits (SA,SM,WF)	.31	.40	.40	.35	.40	.45	.58	.47
Component: Self-assurance (SA)	.31	.41	.42	.34	.32	.38	.51	.37
Component: Sense Making (SM)	.16	.27	.28	.22	.25	.23	.45	.32
Component: Way Finding (WF)	.32	.34	.40	.36	.46	.50	.60	.52

*Note:* All correlations significant at  $p < 0.005$  level (2-tailed).

All relationships were positive and remained significant ( $p < .005$ ). Overall relationships with 'worthwhile' were stronger than with 'satisfaction', as described in Chapter 6. All the relationships with scale components were slightly higher in Prolific than other populations. Correlations between items and scales with both well-being items were weaker than between the scales.

To explore the source of the variation in relationships, Table 7.9, the median, mean and Standard Deviation for each component in each population was compared shown in Table 7.10

**Table 7.10**

**Comparison of Medians, Means and Standard Deviation for Well-being Items and Scale Components in 2020, 2021, Revisit and Prolific**

<b>Well-being</b>		<b>2020</b>	<b>2021</b>	<b>Revisit</b>	<b>Prolific</b>
Life Satisfaction	Median	8	7	7	7
	Mean	7.70	7.11	7.22	6.48
	SD	1.642	1.581	1.512	1.939
Life Worthwhile	Median	9	8	8	7
	Mean	8.26	7.58	7.72	6.92
	SD	1.620	1.641	1.850	1.998
<b>Values Connection</b>					
Know	Median	8	9	9	8
	Mean	8.15	8.33	8.56	7.78
	SD	1.742	1.703	1.541	1.830
Hold	Median	9	9	9	8
	Mean	8.38	8.48	8.68	7.54
	SD	1.511	1.579	1.277	1.940
Live	Median	8	8	9	7
	Mean	7.73	8.00	8.27	6.64
	SD	1.889	1.877	1.747	2.279
<b>Benefits</b>					
Self-assurance	Median	16	16	16	15
	Mean	15.34	15.78	16.08	15.02
	SD	2.657	2.586	2.575	3.029
Sense Making	Median	16	17	18	15
	Mean	16.08	16.29	16.86	14.60
	SD	3.015	3.181	2.963	3.395
Way Finding	Median	16	16	16.5	14
	Mean	15.60	15.95	16.10	13.87
	SD	3.284	3.128	3.389	3.663

For Prolific the median levels of well-being 'satisfaction' was the same as for Revisit however the mean is lower and the standard deviation is greater. For 'worthwhile' the Prolific median and mean is lower than for Revisit. This pattern continues for every other component with the Prolific population showing lower means with wider standard deviations. These results suggest variance in strength of correlation seen in Table 7.9 was mainly influenced by responses to the scale components.

In summary although there was variation in the strength of relationships between the two well-being items and both Values Connection and benefits, the hypothesis that the relationships present in the data from previous study populations are present in the Prolific data was accepted.

### Comparing Prolific and Revisit groups

*Hypothesis 3:* There will be significant differences in levels of Values Connection, components of benefits and well-being between Prolific and Revisit.

As the Prolific data was closer to parametric than Revisit difference between the groups was explored in two ways. A t-test for Equality of Means showed significant differences exist between the groups, in every case  $p < .0005$  (two tailed) Table 7.11 The largest difference is in Values Connection (Revisit M =25.50, SD 4.01: Prolific M =21.95, SD 5.32,  $t(429) 7.80$ ). For Way Finding (Revisit M =16.10, SD 3.39: Prolific M =13.86, SD 3.68,  $t(429) 6.29$ ), Sense Making (Revisit M =16.86, SD 2.96: Prolific M =15.02, SD 3.04,  $t(429) 6.11$ ) and well-being (Revisit M =14.94, SD 3.10: Prolific M =12.91, SD 3.83,  $t(429) 5.99$ ) Finally Self-assurance (Revisit M =16.08, SD 2.57: Prolific M =14.59, SD 3.41,  $t(429) 5.12$ )

**Table 7.11**  
**t-test Comparison of Prolific with Revisit Sample**

Component	Prolific			Revisit			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Values Connection	270	21.95	5.32	160	25.50	4.01	3.55	2.66, 4.45	430	7.80	<.0005	.125
Self-assurance	270	14.59	3.41	160	16.08	2.57	1.49	.92, 2.06	430	5.12	<.0005	.058
Sense Making	270	15.02	3.04	160	16.86	2.96	1.83	1.24, 2.42	430	6.11	<.0005	.080
Way Finding	270	13.86	3.68	160	16.10	3.39	2.24	1.54, 2.95	430	6.29	<.0005	.085
Well-being	270	12.91	3.83	160	14.94	3.10	2.02	1.36, 2.69	430	5.99	<.0005	.077

Levene's Test for Equality of Variances results for Values Connection, Self-Assurance and well-being all  $<.05$ , equal variances not assumed except for Sense Making and Way Finding.

Differences between groups are significant for every aspect under investigation. For every dimension Revisit reports higher scores than Prolific. The largest effect explained by group membership was 13% in variance in Values Connection. For Way Finding, Sense Making and well-being 8% of the variance was explained by group membership. Finally Self-assurance group membership explained 6% of variance. All eta effects were moderate except for Self-assurance which was small (Palant 2020).



Prolific showed lower means for every scale and a larger standard deviation suggesting results were less clustered than for Revisit.

As descriptives for Revisit showed Skewness and Kurtosis values of  $>1$  (Appendix F, Table F6.2) difference between the two 2022 populations was explored using the Mann-Whitney  $U$  Test details in Appendix G Document G7.1.

Each Mann-Whitney  $U$  Test showed a significant difference between the two groups concurring with the t-test results showing Revisit to be higher than Prolific. Medium effect sizes  $r > .3$  were seen for Values Connection, Sense Making and Way Finding, the effect sizes for well-being and Self-assurance were small  $r > .1$ .

The hypothesis that there will be significant differences in levels of Values Connection, the components of benefits and well-being between Prolific and Revisit was accepted for all scales and components. Revisit was significantly higher on all measures.

### **Comparing Components of Well-being Between Study Populations and Published Office for National Statistics UK Population Data**

*Hypothesis 4:* There will be significant differences between hedonic and eudemonic well-being levels in 2022 populations, 2020 and 2021 study populations and the ONS Quality of Life in the UK means for the same periods.

A response scale of 0-10 was used both well-being items. This enabled comparison with the Office for National Statistics (ONS) Quality of Life Surveys conducted with UK representative samples. A summary of means and medians for the four study populations and Quarter 3 means for ONS Quality of Life Survey is shown in Table 7.12

**Table 7.12**  
**Means and Medians for Study Populations 2020, 2021, Revisit and Prolific**

Population	ONS Q3 Life Satisfaction Mean	Mean Life Satisfaction	Median Life Satisfaction	ONS Q3 Life Worthwhile Mean	Mean Life Worthwhile	Median Life Worthwhile
2020	7.34	7.70	8	7.69	8.26	9
2021	7.55	7.11	7	7.79	7.58	8
Revisit	7.46	7.22	7	7.78	7.72	8
Prolific	7.46	6.48	7	7.78	6.92	7

To test the hypothesis ONS data published for the third quarter 2020, 2021 and 2022 was compared to the means for Life Satisfaction and Life Worthwhile for each of the four study populations using a *t*-test.

In 2020 means for each component were significantly higher in the snowball sample than the ONS data: Life Satisfaction  $p < .0014$  and Life Worthwhile  $p < .0001$ . In 2021 there was no significant difference between the study population and ONS for Life Worthwhile  $p = .093$  but mean Life Satisfaction remained higher for the study population  $p < .0006$ .

In 2022 no significant difference for either component was found between Revisit and the ONS data: Life Satisfaction  $p = .390$  and Life Worthwhile  $p = .771$ . Significant differences were seen between Prolific and ONS. Both Life Satisfaction and Life Worthwhile were higher in the ONS population than in the Prolific population  $p < .0001$ . All results are shown in Appendix G Table G7.13.

These results needed to be treated with caution for two reasons. Data for 2020, 2021 and 2022 Revisit populations was non-parametric. Medians in 2020 were higher than means suggesting that the difference between the study group and the ONS population may be greater than the *t*-test indicated.

A second reason for caution was based on respondents age range. All four study populations included working age adults aged 18 to 75. The ONS data contained individuals aged between 16 and 90+ years of age. In Quarter 3 of 2020 mean ONS Life Satisfaction was 7.34. At the extremes of the age range the results were higher than the mean for example: 16-19 years 7.84, 75-79 years 7.88, 80-84 years 7.80.

The hypothesis that there will be significant differences between hedonic and eudemonic well-being levels in 2022 populations, 2020 and 2021 study populations and the ONS Quality of Life in the UK means for the same periods was partially accepted.

In 2020 there were significant differences for both components. Over the course of the following 24 months the differences diminished. Revisit showed no difference to ONS data while Prolific showed significantly lower levels for both well-being components. Eta squared results suggest effect sizes were very small  $< .01$ .

### ***Exploring Relationships Through Forward Conditional Binary Logistic Regression.***

In Chapters 5 and 6 the benefit components of Way Finding and Self-assurance emerged as the most significant contributing variables to higher well-being across every model resulting from forward conditional binary logistic regression analysis. For Prolific an additional variable was included in the first step, that of prior engagement with values. An independent samples *t*-test showed in a significant difference in Values Connection between

members of those in the Prolific population who reported prior engagement with values and those who did not (Appendix G, Table G7.4).

*Hypothesis 5:* Forward conditional binary logistic regression for the Prolific population will produce similar model compositions linked to higher well-being as the Revisit and 2020/21 study populations.

In preparation for this regression the well-being responses were transformed into 4 sets where 0 (lower well-being) indicated a score up to a level treated as a cut off point and 1 (higher well-being) indicated a score above the cut off threshold. Three thresholds were determined by the median value of Well-being of the Prolific population and a fourth using the Office for National Statistics (ONS) mean for quarter 3 of 2022/23. The Prolific thresholds applied are shown in Table 7.14

**Table 7.14**  
**Prolific Median Cut Off Values**

<b>Set</b>	<b>0</b>	<b>1</b>
Percentile 25	12	12.1
Percentile 50	14	14.1
ONS* mean	15	15.1
Percentile 75	16	16.1

Note: \*mean for ONS (Office for National Statistics n.d.)

All percentiles are lower than Revisit. The ONS mean is the same for all studies.

#### **Models for Percentile 25.**

At Step 0 the baseline predictor model correctly predicted 60% of cases. Of the predictor variables entered Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p < .0005$ , Age was significant  $p = .018$  (as a combined figure across all three categories, no single category was significant in its own right), while Gender, Ethnicity and Prior Values Engagement were not significant  $p > .05$ .

Four models were produced by the regression each of which increased accuracy of prediction over the baseline correctly. Model 4 showed the strongest prediction of 70%. As in 2020/21 Way Finding was the strongest single predictor higher well-being with Odds Ratios of 1.31 and 1.19 (31%-19% difference).

Hosmer and Lemeshow Test results for Models 1, 2 and 4 show  $p > .05$  so the models may be regarded as having a positive level of goodness-of-fit: Model 3  $p = .019$ . Model 4 with the largest Cox & Snell R Square and larger Nagelkerke R Square is the better

Jacqueline Le Fevre 19049539

predictor of a higher level of Well-being. Appendix G Tables G7.15 and G7.16 show the results by variable and the inferential test results for each of the models.

#### **Models for Percentile 50.**

One model resulted from the analysis. Baseline model at Step 0 accurately predicted 70.4% of cases. Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p \leq .009$ . Age, Gender, Ethnicity and Prior Values Connection were not significant  $p > .05$ .

Accuracy of prediction correct cases increased over the baseline to 72.2%. Self-assurance was the strongest single predictor of reporting higher well-being with an Odds Ratio of 1.39 (39% higher).

Hosmer and Lemeshow Test results show  $p > .05$  therefore the model may be regarded as having a positive level of goodness-of-fit. Appendix G Tables G7.17 and G7.18 show the results by variable and the inferential test results for the model.

#### **Models for ONS Mean.**

At Step 0 the baseline model accurately classified 70.4% of cases. Values Connection, Self-assurance, Sense Making and Way Finding were all significant  $p \leq .009$ . Age, Gender, Ethnicity and Prior Values Connection were not significant  $p > .05$ . One model resulted from the analysis in which accuracy of prediction increased to 72.2%. The single strongest predictor variable was Self-assurance with an Odds Ratios of 1.390.

Hosmer and Lemeshow Test result shows  $p > .05$  thus the model may be regarded as having a positive level of goodness-of-fit. Appendix G Tables G7.19 and G7.20 show the results by variable and the inferential test results for the model.

#### **Models for Percentile 75.**

Three models resulted from the analysis. At Step 0 the baseline correctly predicted 90.4% of cases. Four variables Values Connection, Self-assurance, Sense Making and Way Finding were significant  $p \leq .008$ , all other variables were not significant  $p > .3$ . The single strongest predictor variable was Way Finding which appears in all three models with Odds Ratios of 1.51 to 1.80 (51%-80% increase in likelihood of higher well-being for stronger Way Finding).

For Prolific Values Connection was significant,  $p = .053$  in Model 2 and  $p = .006$  in Model 3 and showed  $\beta$  values of  $-.143$  in Model 2 and  $-.234$  in Model 3. This means Values Connection was a predictor of reduced likelihood of reporting higher well-being, the Odds Ratios for Values Connection were  $.867$  in Model 2 and  $.791$  in Model 3, effect size  $-13\%$

and -21% respectively. Unlike Sense Making where the 95% C.I. Odds Ratio did not tip into having a positive effect, in Model 2 Values Connection exhibited a C.I. of .750 to 1.002, suggesting a very small positive impact for some individuals (0.2%).

All models showed the same percentage of correctly classified cases.

Hosmer and Lemeshow Test results show  $p \Rightarrow .05$  suggesting the models may be regarded as having a positive level of goodness-of-fit. The largest Cox & Snell R Square and Nagelkerke R Square values were for Model 3 suggesting it is the better predictor of a higher level of Well-being. Appendix G Tables G7.21 and G7.22 show the results by variable and the inferential test results for the models.

### ***Forward Conditional Binary Logistic Regressions Summary 2020/21/22***

A set of forward conditional binary logistic regressions explored whether Values Connection, Self-assurance, Sense Making and Way Finding contributed to the likelihood that some respondents reported better well-being than others.

Categorical variables of Age, Gender and Ethnicity were entered at Step 0 together with ordinal variables Values Connection and the components of personal benefits. For Prolific an additional categorical variable of Prior Values Engagement was also added at Step 0. Four cut off values were used comprised of 3 percentiles – 25, 50 and 75 – and the ONS mean for the Quality of Life survey for the relevant Quarter 3.

Analysis yielded 9 models compared to 7 models for Revisit and 15 models for 2020/21 data. All models correctly classified at least as many cases as the null model at Step 0. The range of correct classifications of cases across all models for Prolific was 67% - 90.4% compared to Revisit 64.2% - 81.3% and 64.1% - 88.7% for 2020/21. The range of correctly classified cases was similar in all periods.

Both Way Finding and Self-assurance made a significant contribution to higher well-being in over half of the 31 models for the combined study periods. Table 7.23 summarises models for each data set, showing contributing variables and percentage of correctly classified cases.

**Table 7.23**

**Summary of Variables Entered and Used in Models for Each Percentile by Data Set; Prolific, Revisit, 2020/21, With Percentage of Correctly Classified Cases**

Dataset	Percentile	Model	Age	Gender	Ethnicity	Prior Values Engagement	Values Connection	SA	SM	WF	% Cases correctly classified	
Prolific	25	1								√	67.8	
		2						√		√	68.1	
		3	√					√		√	67.0	
		4	√					√		√	70.0	
	50	1						√			72.2	
	ONS	1						√			72.2	
	75	1									√	90.4
		2						√			√	90.4
		3						√	√		√	90.4
	Revisit	25	1								√	78.6
2								√		√	79.2	
ONS		1								√	64.2	
		2							√		√	71.9
50		1								√	72.5	
		2							√		√	75.6
75		1						√			81.3	
2020/ 2021		25	1								√	71.1
	2							√		√	72.1	
	3								√	√	√	73.2
	4							√	√	√	√	72.6
	ONS	1									√	64.1
		2							√		√	65.8
		3							√	√	√	67.7
		4						√	√	√	√	68.5
	50	1									√	66.4
		2								√	√	66.9
		3							√	√	√	67.1
		4	√						√	√	√	67.9
	75	1									√	88.7
		2							√		√	88.7
		3							√	√	√	88.7
	Number of models containing variable (n=31)			3	0	0	0	4	20	8	28	

*Note:* √ denotes variable included in model

For this part of the study the hypothesis was that forward conditional binary logistic regression for the Prolific population will produce similar model compositions linked to higher well-being as the Revisit and 2020/21 study populations.

The hypothesis was accepted with regard to the Revisit population in terms of Way Finding and Self-assurance but rejected with regard to the 2020/21 study population as Sense Making was absent in 2022 also Values Connection was predominantly negative whereas in 2020/21 it was positive.

### **Considering all the Populations Together.**

Looking across the four data sets, 2020, 2021, Revisit and Prolific there are similarities and dissimilarities. Where there are statistically significant differences between the populations as whole datasets, the effect sizes of differences tend to be small or very small. The inclusion of Age as a variable in three of the models in Table 7.23, however was noteworthy. It suggested a need to consider more closely interaction between the scales for Values Connection, benefits and well-being, and the categorical variables of Age, Gender and Ethnicity.

### **Exploring Difference Between Categorical Variables and Scales.**

As the data was non-parametric (Appendix G Table G7.24) Kruskal-Wallis tests were undertaken on the combined data of  $n=1488$  for the three demographical categorical variables. Full results ordered by Age, Gender and Ethnicity and calculated for Values Connection, benefits and well-being scales are in Appendix G, 7.2 together with calculations of effect size.

For ethnicity no significant results were shown in any category  $p \geq .062$ . Effect sizes were Values Connection and Ethnicity  $E^2 = 0.0007$  (.8% of variance), benefits and Ethnicity  $E^2 = 0.0022$ , (.2% of variance) and, well-being and Ethnicity  $E^2 = 0.0036$ , (.4% of variance).

For both Values Connection and benefits the null hypothesis of no significant difference for relationship with Gender was retained: Values Connection  $p < .076$ ,  $E^2 = 0.0046$  accounting for 0.05% of variance,  $p < .0136$ ,  $E^2 = 0.0037$  accounting for 0.04% of variance. Result for well-being and Gender was significant  $p < .037$ , however,  $E^2 = 0.0057$  accounted for 0.6% of variance based on Gender which was too small to be of practical impact for this research question.

Significant differences were found between categories of Age and every independent variable. The greatest impacts of age difference are between the youngest, 18-30, and every other group rising as age difference increases. Given the strong monotonic relationship between Values Connection and benefits (Figure 7.1) it was not surprising to see effect sizes for benefits follow same pattern as for Values Connection namely: greatest impacts of age difference are seen between the youngest, 18-30 and every other group rising as age difference increases.

These results are summarised in Tables 7.25 and 7.26.

**Table 7.25*****Epsilon-squared and Percentage Variance Results for Comparison of Values Connection Between Categories of Age***

<b>Age groups compared</b>	<b><math>E^2</math></b>	<b>% Variance explained</b>
18-30/31-45	0.1376	14%
18-30/46-60	0.2084	21%
18-30/61-75	0.2444	24%
31-45/46-60	0.0708	7%
31-45/60-75	0.1068	11%

**Table 7.26*****Epsilon-squared and Percentage Variance Results for Comparison of Benefits Between Categories of Age***

<b>Age groups compared</b>	<b><math>E^2</math></b>	<b>% Variance explained</b>
18-30/31-45	0.1220	12%
18-30/46-60	0.1897	19%
18-30/61-75	0.2570	26%
31-45/46-60	0.0678	7%
31-45/60-75	0.1350	14%
46-60/61-75	0.0673	7%

For well-being and Age  $E^2 = 0.000672$  accounting for 0.07% of variance based on age. Although  $p < .0005$  was significant, the effect size was very, very small.

Forward conditional binary logistic regression showed a pattern of contributing variables at different levels of well-being: 25, 50 and 75 percentiles and the ONS mean well-being level. Way Finding and Self-assurance emerged as the most significant unique contributors to higher well-being, however at some levels in some populations Sense Making and Values Connection were also important Table 7.23.

This research had the goal of providing evidence based, reliable, actionable insights to individual employees and those who exert influence over the nature of working life for others including practitioners, coaches and managers. To achieve this goal two additional insights were needed. First a deeper understanding of the relative strength of the unique contribution of each of variable in the conceptual framework to well-being. Second an indication of the contributions made by those variables to Life Satisfaction and Life



Worthwhile. When combined these insights could enable the provision of context relevant information for real world application.

### Correlations in the Combined Population.

All data sets combined provide a study population of n=1488. Data remains non-parametric with skewness of between -1.01 and -1.33 with the exception of Life Satisfaction -.945. All variables show Kurtosis over 1, see Appendix G Table G7.24.

Figure 7.4

*Grouped Simple Scatterplot of Values Connection by Benefits Combined*

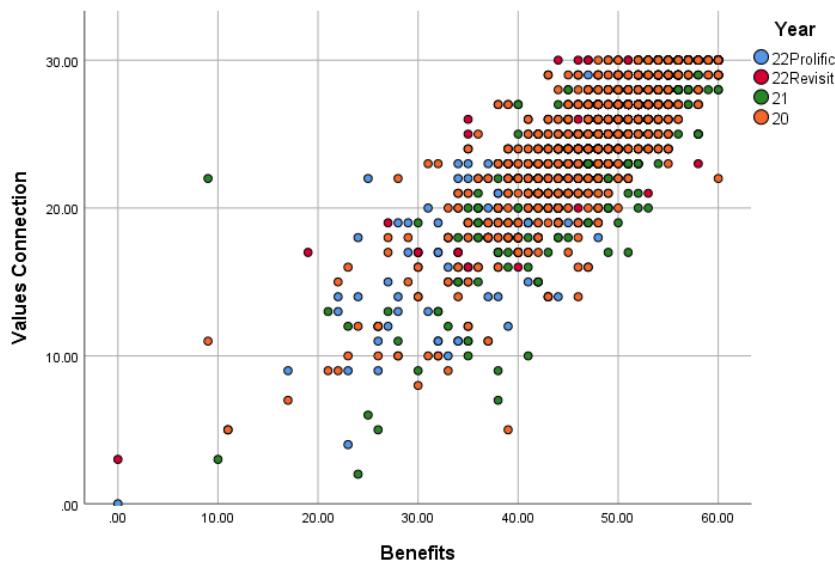
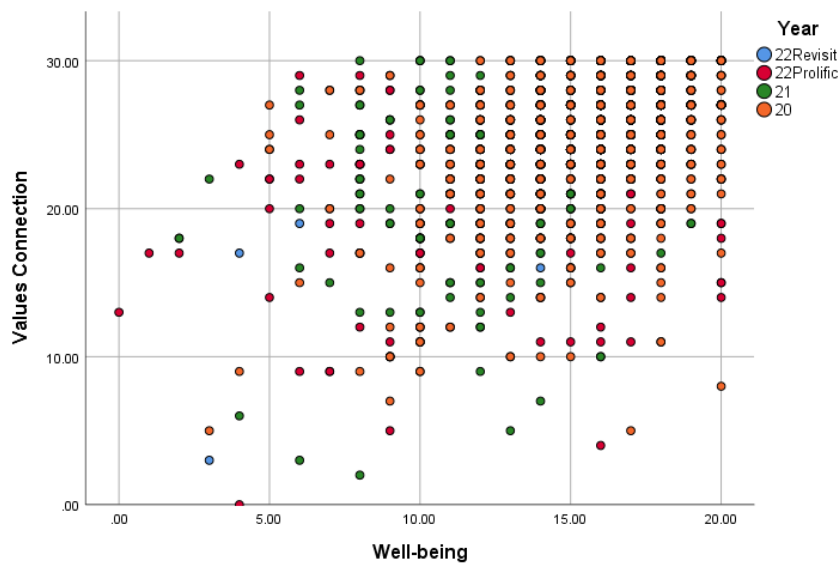


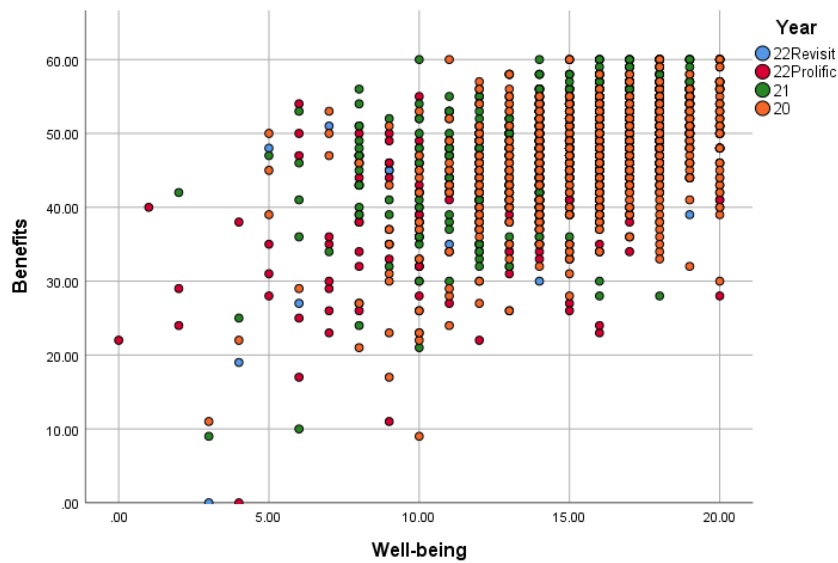
Figure 7.5

*Grouped Simple Scatterplot of Values Connection by Well-being Combined*



**Figure 7.6**

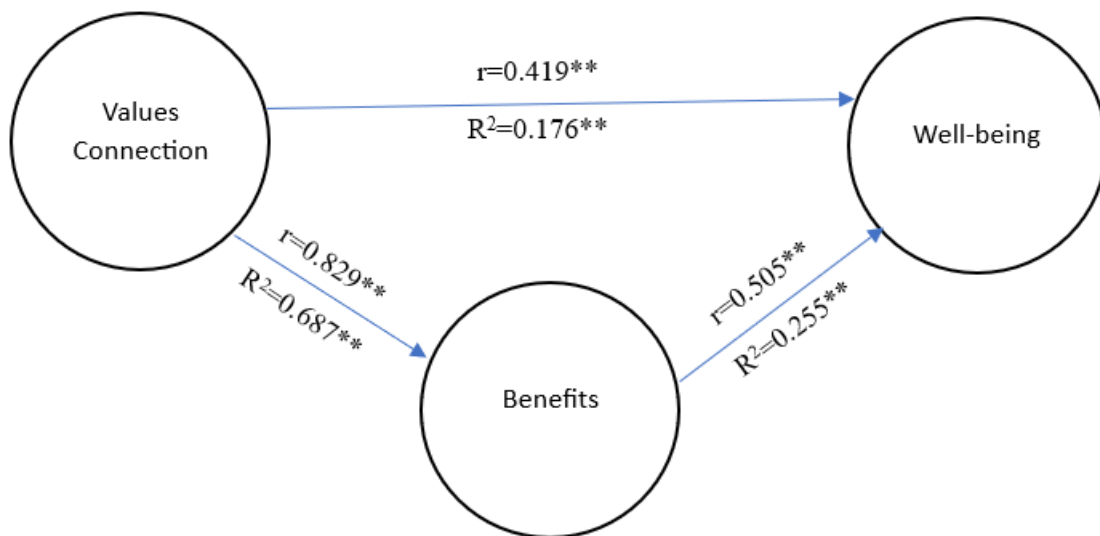
**Grouped Simple Scatterplot of Benefits by Well-being Combined**



Grouped simple scatterplots show very similar patterns in the data across all populations, positive linear relationships between variables evident in each. Every cohort has outliers. Prolific distribution in Figure 7.4 Values Connection by benefits looks somewhat more dispersed than the other populations. This fits with *SD* results in Table 7.10 where every element for Prolific is higher than all other populations. As linear relationships present for Values Connection, Benefits and Well-being in all years Pearson moment correlations ( $r$ ) and coefficients of determination ( $R^2$ ) were calculated shown in Figure 7.7

**Figure 7.7**

**Values Connection, Benefits and Well-being Relationships Summary N=1488**



Note: \*\*correlation significant at the  $p < .0005$  level (2-tailed).

Compared to Figure 5.9 Chapter 5, both Values Connection and benefits continue to exhibit significant positive relationships of similar strengths with well-being: Values Connection to benefits was high, benefits to well-being was high and Values Connection to well-being was moderate (Cohen 2013). This result aligns with Schönbrodt & Perugini 2013 who suggest that precise and stable correlation values within a 95% confidence interval are more likely from large samples of  $n > 1000$ .

Forward conditional logistic regression results (Table 7.23) suggested two main dynamics. First that Values Connection makes a significant unique contribution to well-being in few cases: a positive contribution for the 2020/21 convenience population at the lower two levels of 25 percentile and ONS mean and a predominantly negative contribution for Prolific in the 75 percentile. Second that the component of benefits that makes most frequent unique contributions to higher well-being is Way Finding followed by Self-assurance.

### **Combined Population Standard Multiple Regression.**

A standard multiple regression was chosen to answer two questions.

- How well do Values Connection, Self-assurance, Sense Making and Way Finding predict well-being?
- Do differences exist between the interaction between those components and the two elements of well-being in the survey: Life Satisfaction and Life Worthwhile?

For multiple regression is important that the relationships between the independent variables and the outcome variable are linear (Leech et al 2003) as evidenced by the scatterplots Figures 7.4, 7.5 and 7.6.

In each of the three models: Total well-being (Life Satisfaction + Life Worthwhile), Life Satisfaction and Life Worthwhile the independent variables showed three correlations  $> .7$  and three correlations  $< .7$ . Tolerance results were all  $> .10$  and  $VIF$  all  $< 10$ . When bivariate correlation is  $\geq .90$  it is approaching singularity and can cause statistical problems. The highest bivariate result in this analysis was Values Connection-Sense Making  $r .781$  Table 7.28. Multicollinearity was acceptable (Tabachnick & Fidell, 2006).

A check for outliers was undertaken reviewing the Mahalanobis distance values. Treating 18.47 as the critical threshold, 40/1488 cases or 2.7% population were identified as outliers which is acceptable (based on 4 variables Palant, 2020). The maximum Cook's Distance was .022.

**Table 7.28**  
**Pearson Correlations Among Variables Across the Three Models**

Variables	Maximum	Mean	SD	1	2	3	4	5	6
1 Total Well-being	20	14.94	3.27	-	-	-			
2 Life Satisfaction	10	7.22	1.73	-	-	-			
3 Life Worthwhile	10	7.72	1.80	-	-	-			
4 Values Connection	30	24.03	4.79	.42	.32	.45	-		
5 Self-assurance	20	15.51	2.72	.44	.38	.44	.57	-	
6 Sense Making	20	16.11	3.13	.32	.25	.35	.78	.50	-
7 Way Finding	20	15.48	3.35	.54	.41	.58	.78	.60	.75

All correlations  $p < .0005$ . Correlations vary in strength from low (Sense Making to Satisfaction) to high (Values Connection to Sense Making and Way Finding).

Values Connection shows the highest *SD* however it also has the highest potential maximum score which creates more scope for variation than for any of the other variables. Proportionally the variation in Values Connection is of a similar order to other variables (for example  $3 \times 1.73$  *SD* for Life Satisfaction = 5.22).

Summary of models created shown in Table 7.29 For all models  $df_1 = 4$ ,  $df_2 = 1483$  and  $p < .0005$ . Independent variables Values Connection, Self-assurance, Sense Making and Way Finding.

**Table 7.29**  
**Models for Total Well-being, Life Satisfaction and Life Worthwhile**

Dependent Variable	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change
Total Well-being	.575	.331	.329	2.679	.331	183.577
Life Satisfaction	.457	.209	.207	1.543	.209	97.925
Life Worthwhile	.611	.373	.371	1.429	.373	220.332

A greater contribution is being made by the combined variables to Life Worthwhile than Life Satisfaction. To explore the observed variation in the models the unique contribution made to the variance in the dependent variable by each component is shown in Table 7.30

**Table 7.30**  
**Independent Variables Unique Contributions By Model**

Model	Independent Variable	Unstandardised Coefficients		Standardised Coefficients Beta	t	p	Collinearity Statistics		
		B	SE B				Zero-order	Partial	Part
Total	(Constant)	5.876	.445		13.194	.000			
Well-being	Values Connection	.045	.027	.066	1.680	.093	.419	.044	.036
	Self-assurance	.236	.033	.196	7.225	.000	.444	.184	.153
	Sense Making	-.237	.038	-.227	-6.246	.000	.324	-.160	-.133
	Way Finding	.526	.037	.539	14.271	.000	.538	.303	.303
Life Satisfaction	(Constant)	3.249	.256		12.668	.000			
	Values Connection	.014	.015	.040	.932	.352	.322	.024	.022
	Self-assurance	.140	.019	.219	7.434	.000	.382	.190	.172
	Sense Making	-.099	.022	-.178	-4.511	.000	.246	-.116	-.104
	Way Finding	.197	.021	.381	9.273	.000	.410	.234	.214
Life Worthwhile	(Constant)	2.628	.238		11.065	.000			
	Values Connection	.031	.014	.082	2.165	.031	.452	.056	.045
	Self-assurance	.096	.017	.145	5.510	.000	.439	.142	.113
	Sense Making	-.139	.202	-.242	-6.870	.000	.351	-.176	-.141
	Way Finding	3.29	.020	.612	16.753	.000	.583	.399	.345

These results suggest the relationship between the conceptual framework components and eudemonic well-being (Worthwhile) is stronger than with hedonic well-being (Satisfaction) potentially explaining 37% of the variance in the former compared with 21% of the variance in the latter.

Way Finding made the largest positive unique contributions to both elements of well-being Life Satisfaction (24%) and Life Worthwhile (35%). Self-assurance made significant positive unique contributions to Life Satisfaction (17%) and Life Worthwhile (11%). This pattern corresponds to the results of the forward conditional binary logistic regression in Table 7.23. Values Connection made less significant positive unique contributions to Life Satisfaction (2%) and Life Worthwhile (5%). Sense Making had a significant unique impact on both Life Satisfaction (10%) and Life Worthwhile (14%) however it was negative as seen in Studies Two and Three.

## 7.7 Chapter Summary

The proposed conceptual framework of Values Connection and components comprising benefits appeared to be both reliable and valid in earlier chapters showing stable relationships with well-being in three 'warm' convenience populations from different years (Studies Two and Three). This chapter opened asking whether this would be the case in a 'cold' unrelated population. For all three scales reliability remained at Cronbach's  $\alpha > .8$  (Table 7.5). Spearman's  $\rho$  correlations show the same pattern of relationships between components for Prolific as for previous populations all  $\geq .58$  (Table 7.9).

Variation in the strength of relationship between Life Satisfaction and Life Worthwhile and scale components was observed in Study Three (Table 6.7). Analysis showed positive, significant ( $p < .005$ ) relationships between Values Connection, benefits components and both well-being items in Prolific similar to previous years (Table 7.9).

Both a t-test and Mann-Whitney  $U$  Test showed significant differences between the Prolific and Revisit populations on every measure under investigation. Eta squared for Values Connection suggested 13% of variance observed was explained by group membership (Table 7.11): Revisit mean 25.50 (SD 4.01) Prolific mean 21.95 (SD 5.32) (maximum 30). Well-being, Way Finding and Sense Making all showed 8% variance related to group membership, Self-assurance 6%, with Revisit higher in every case.

Comparing the well-being levels of study populations with general data from the ONS Quality of Life Survey (Table 7.13) showed some variation. In the first year of the pandemic the study population reported slightly higher levels of Life Satisfaction ( $p < .0014$ ) and Life Worthwhile ( $p < .0001$ ) than the ONS. By the second year there was no significant difference on Life Worthwhile but Life Satisfaction remained higher ( $p < .0006$ ) than ONS. By 2022 no significant differences were present between Revisit and ONS. Comparing Prolific to ONS, however, showed Life Satisfaction and Life Worthwhile were higher in the ONS population ( $p < .0001$ ).

Consensus between all the datasets is seen in Table 7.23 showing Way Finding and Self-assurance making the most frequent significant unique contributions to higher well-being. Bandura (2006) proposes four elements of agency: intentionality, forethought, self-reactiveness and self-reflectiveness. There is some complementarity between the first two elements of agency and the Way Finding survey items whilst the second two align with the survey items for Self-assurance namely: I know myself well; I am confident in my decisions. A 13 year longitudinal study by Vella-Brodrick et al considered agency as a "perceived capacity to influence one's life" (2022, p.1) reporting a "reciprocally causal association over time" (2022, p.7) between agency and well-being. Their findings show that earlier agency as

significantly predictive of later well-being underlining an argument for sustained engagement with values initiatives.

For Studies Two and Three the limitations of only having quantitative survey results from convenience populations was recognised. The contrast between convenience and Prolific suggests two things: the proposed conceptual framework sustained reliability and validity across different years and with different populations; framework components exhibit consistent significant relationships with well-being expressed by Life Satisfaction and Life Worthwhile; findings which may be generalised to other working age populations.

Of the four aims for this chapter the final one signals where to go next: to consider what the results under Covid compared with results post-Covid for different populations suggest for the usefulness of Values Connection in the workplace. The next chapter explores the implications of the results for workplaces and proposes applications for these insights to help improve working life.

## Chapter 8

### Implications and Applications: putting new knowledge to work

*More than any other concept, it [values] is an intervening variable that shows promise of being able to unify the apparently diverse interests of all the sciences concerned with human behaviour*

Rokeach (1973 p3)

#### 8.1 Introduction

Given the role of the researcher in the real world (Chapter 1) this research needed to build justifiable and believable evidence for the value of Values Connection. The literature reviewed in Chapter 2 established an evidence base for the nature, functions and impacts of values while observing that values are dynamic and can change. Gaps in knowledge were highlighted. These concerned the mobilising elements of Values Connection and, descriptions of how an individual might benefit in the workplace from having a conscious connection to their values.

Over the course of 18 years of professional practice the researcher had witnessed a variety of consequences of people connecting to their values through use of the Minessence AVI tool. This study was born of a desire to explore those observations to understand their components and test whether this was just a Minessence thing or something more generalisable.

In Chapter 3 the examination of ontological and epistemological considerations led the researcher to choose a sequential mixed methods exploratory approach beginning with qualitative. Research in psychology is vulnerable to low credibility arising from lack of replications (Chapter 3, 3.3) also from *p* hacking that stems from poor research design and *ad hoc* approaches to analysis of results (Wicherts et al, 2016). As a consequence the researcher based Study One (Chapter 4) on a clear set of aims (4.2) and took a deliberately parsimonious approach to the identification of items (Table 3.4). In subsequent quantitative studies (Chapters 5, 6 and 7) the items and methods of analysis were kept the same, and well-being was the dependent variable throughout. The hope was that a disciplined approach would produce credible new knowledge that could be useful.

In this chapter attention focusses on 6 elements of new knowledge. Specifically, it addresses the implications and applications of that knowledge for real life workplaces. Direct messages for professionals whether in-house or consultancy suggest where a conscious connection to values could add value.



## 8.2 Values Connection is a Thing

From over 100 surveys and 19 interviews the opening qualitative study in Chapter 4 inductively constructed a conceptual model of Values Connection and associated benefits (Figure 4.3 p72)

Survey items created from the narratives proved to be reliable and valid in successive administrations in convenience populations living under Covid Chapter 5, Table 5.7. By the autumn of 2022 the pandemic had receded (at least in the opinion of the media) and the framework was tested twice more. Encouragingly the items remained reliable and valid Chapter 7, Table 7.5, and could be justifiably generalised.

### So what's the **message**?

That if you seek Values Connection, either for yourself or for others be they clients or colleagues then simply raising awareness is not enough. Values Connection is comprised of Know, Hold and Live, all three elements matter. Team discussions, one-to-one conversations about what matters most are a good start but without translation into what it means to be able to hold and stand by those powerful ideas then use them in how the work is done is to leave the task unfinished. What we know from Prolific is that of the three elements the weakest in a general population is 'Live' (Chapter 7, Table 7.10). Using a scale of 0-10 for 'Live' Prolific exhibited  $M 6.64 SD 2.279$  compared to Revisit  $M 8.27 SD 1.747$ . This suggests not was Revisit more strongly connected to living values with a mean that was higher than Prolific by 1.63 but also the consistency of connection to 'Live' in Revisit was greater shown by the  $SD$  being lower than Prolific by lower by .532.

Care needs to be taken with the word 'values'. Chapter 2, 2.2 illustrated the range of descriptions of values in the academic literature. Not everyone will understand the same thing by values and the landscape of activities and tools (2.3) which purport to connect people to values is murky. That murkiness places an additional responsibility on coaches and consultants to choose well if recommending an intervention to clients, not everything that is badged a 'values tool' actually draws upon robust values theory.

Starting with a mutually understood conception of what values are (and are not) will help provide a good foundation for developing connection. This researcher suggests: values are powerful ideas about what matters and some values are powerful enough to determine what it means to live true to self. Any idea, no matter how worthy, that does not have the power to move an individual or group to act is not a value. Crucial values are those powerful ideas that if dishonoured or compromised cause dissatisfaction, even distress.

### 8.3 Values Connection Brings Benefits

Eighteen years of consulting experience anchored on working with values had convinced the researcher that good things were catalysed by conscious connection to values (1.2) also various studies showed links to well-being, protection from stress and strengthened agency (2.4). What was not clear from the literature and could not accurately be 'labelled' from *ad hoc* observations, was how the outcomes of connection felt to people. Were there patterns in the lived experiences of those who had taken part in something deliberate to surface their values? Study One said yes: the outcomes were greater Self-assurance, Sense Making and Way Finding capabilities.

Study Two tested new items to describe these benefits of connection and found them to be reliable and valid in a wider population than the one that created them Table 5.7. What was exciting was discovering through the quantitative surveys in 2020 and 2021 that Values Connection (described as Know, Hold, Live) and the three benefits had a strong positive monotonic relationship ( $r .82, p < .0005$  (two tailed)): as one rose so did the other. These results needed to be treated with caution as one of the things the qualitative folk had said in Study One was that values were particularly useful 'in tough times'.

Those days under successive waves of Coronavirus were tough: new variants, lockdowns, firebreaks, social distancing, small bubbles and cancelled Christmases. Weddings postponed (repeatedly), graduations deferred, funerals unattended, goodbyes unsaid, new babies greeted virtually over Zoom: life was anything but normal (Appendix E, 5.1).

Even if the items had only proven reliable and valid at that time we would have learned something useful. That Values Connection and the benefits it brings can help when other things threaten to overwhelm us. In quarter 3 of 2020 the convenience sample of values enthusiasts ( $N = 552$ ) reported significantly higher levels of life satisfaction and life worthwhile than in the general population surveyed by the Office for National Statistics ( $p < .0014$  and  $p < .0001$  respectively) Chapter 7, Table 7.13.

Replicating the quantitative survey in 2022 with a revisit of previous survey completers and a 'cold' arms length population purchased from Prolific showed the items remained reliable and valid. Also that positive lock step relationship between benefits and Values Connection was still present Chapter 7, Tables 7.6 and 7.7. This meant the findings were generalisable and applied both when times were very tough and a bit less tough.

So what's the **message**?

Strength of Values Connection unlocks 69% variance in benefits which is a strong positive correlation. These reliable and valid items provide an evidence based starting point for metrics to capture return on investment for values projects. We can use these items to baseline and track against which is helpful to organisations trying to decide where to spend previous time and money. More importantly we can answer the employees question “what’s in it for me?” and say increased self-assurance, greater capacity to make sense of things, and most importantly of all, a stronger sense of being able to find your own way.

Finding the conceptual framework reliable and valid both in tough and less tough times suggests there is never a ‘bad’ time to undertake Values Connection work. That respondents say Values Connection is particularly useful in tough times highlights potential applications of this work when an organisation knows it is about to go into something challenging. Mergers, acquisitions, restructures and relocations all have the potential to be destabilising for employees. These are typically times of heightened emotions (Zahoor et al 2022) when what matters to both majority and minority groups influences the shape of the final outcome (Thelisson & Meier 2022).

From the literature (Chapter 2, 2.5) we learned that our relationship with our personal values is not necessarily fixed. Significant life transitions including becoming a parent, starting a new job, or moving to another country can induce a reordering of priorities. Research has also shown that significant external events, such as a global pandemic, can disrupt patterns of priorities (Bonetto et al 2021, Daniel et al, 2022, Huang et al 2022). What this means in practice is that coaches and managers can identify points in time when revisiting personal values may be advantageous even in a workforce which has previously engaged with values activities.

#### **8.4 Values Connection and Associated Benefits are Useful in Different Ways**

That small quantitative element at the start of the first survey in Study One revealed that 90% of people used their values profiles more than once. Moreover, it made no difference to frequency of use how old someone was or how long ago they undertook their values inventory (Chapter 4, 4.4). This suggests engaging with a values tool can have long term benefits from a single intervention. Different uses of values emerged from the narratives in Chapter 4, Table 4.7, namely relating, deciding, aligning and self-regulating.

In the world of work even sole traders need to have effective relationships with others: customers, suppliers, banks, His Majesty’s Revenue & Customs. Being able to build meaningful bridges between ourselves and others, and the contexts we move through is vital. Relatedness is one of the basic needs in Self Determination Theory (Deci & Ryan

2008) and when met has been shown cross-culturally to have a positive impact on happiness and life satisfaction (Martela et al 2023).

Every day we all choices to make. Then we have to handle the consequences of those decisions. Values are active in decision making (Chapter 2, 2.4). Study One told us when people use their values deliberately in making decisions they feel more confident about what they choose and are able to align themselves to the option that feels like the best fit (Tables 4.5 and 4.6). Interestingly when folk do their deciding that way (using values) if/when things do not go according to plan they can regulate their emotions better and be kinder to themselves.

What is clear from the narratives is that our values are not reserved to be lived out purely in big, life defining moments but also in a multiplicity of everyday actions and attitudes, a finding also present in other research (Skimina et al, 2019).

So what's the **message**?

Ask Google Scholar to search for VUCA – standing for Volatile, Uncertain, Complex and Ambiguous – and you get about 39,500 results in 0.05 seconds. Slim the search down to only results since 2023 and there are still over 4000 things to read. First coined in 1965 in military circles, the term describes an operating environment for individuals and organisations where typically change is rapid and there can be a sense that it is impossible to predict where things will go next (Woltés & Fernández-Mesa, 2023).

Covid restrictions wrought big changes in how, where and when many people did their jobs. Although flexible working existed pre-pandemic, it is more prominent now along with working from home (WFH), hybrid, remote forms of employment and a shift from notions of work-life balance to work-life integration (Kumar et al, 2023). A number of challenges come with that territory. Managers require ways to help employees feel connected to the organisation, build and maintain relationships with colleagues, increase capacity to function independently off-site but still in alignment with the purpose of the business. All that and ideally support individuals to handle whatever may come at them while they sit at their kitchen table or settle down at a desk in the corner of their bedroom.

Insights shared by participants in Study One, suggest that connection to values can autonomously be successfully applied to work: specifically, in relating, deciding, aligning and self-regulating. All these capacities play a positive role in sustaining performance irrespective of where a person may be working at any given moment in time. What matters is the depth of Values Connection, and similarly to 8.2, just raising awareness of values through some isolated affirmation exercise or random focus group is not going to cut it.

## 8.5 Values Connection and Associated Benefits Support Well-being

Well-being is complex and is impacted by a range of factors (Oskrochi et al 2018). There are established links between values and well-being (Chapter 2, 2.7) such as buffering individuals from stress (Cresswell & Jaremka 2009). The early weeks and months of living under Covid corresponded to reduced well-being for some individuals (Bojanowska et al 2021). This was a time when Daniel et al (2022) found 'worry' related to general uncertainty, as well as health, profoundly impacted upon the values of individuals.

In Study One well-being was not a variable that was enquired about and yet it came up anyway (Chapter 4, 4.4). Links to well-being needed to be explored. To do this, question items used by the Office for National Statistics (ONS) were added to the quantitative survey to test the conceptual framework of Values Connection and benefits.

In Study Two regression of the 2020/21 convenience population ( $N=1055$ ) suggested Values Connection made a 14% contribution to variance in well-being and benefits a 20% contribution (Chapter 5, Figure 5.9). Post pandemic the same regression, this time with all study populations combined ( $N=1488$ ), showed Values Connection contributing 18% and benefits contributing 26% to variance in well-being (Chapter 7, Figure 7.7).

Although very encouraging these results did not tell us anything about the dynamics of what could be happening between the variables. Forward conditional binary logistic regression was used to determine whether specific aspects of the conceptual framework were making larger, or smaller, differences to well-being. Way Finding, followed by Self-assurance emerged as the most powerful predictors of individuals reporting higher well-being (Chapter 7, Table 7.23).

Values Connection by itself did not come through in most of the 31 models produced. The 4 exceptions were for the convenience population of 2020/21 where it seems to nudge people at the lower levels of well-being (25 percentile and ONS mean) into a higher band and for Prolific it characterised those at the highest level of well-being (75 percentile) although it was negative (Appendix G, Tables G7.21 and G7.22) with a small effect.

Overall the regressions show similar results to structural equation modelling (SEM) work by Heblich et al (2023). Their theoretical casual model of effective, healthy self regulation includes well-being components of positive affect, satisfaction with life, meaning in life and subjective vitality. Through SEM they found statistically significant relationships between personal values clarity and all thirteen other elements. They conclude having clarity about personal values is 'essential' (2023, p.10) for healthy functioning.

At a time when external conditions were uncertain and challenging Chapter 7 evidenced a significant contribution to well-being by Values Connection and benefits. This suggests that Values Connection and benefits could support resilience which is significant in

protecting against burn-out and psychological harm (Mubarak et al 2022) and a potential topic for future research.

### So what's the **message**?

When Values Connection comprised of Know, Hold and Live is present results suggest up to 69% more of the benefits of Self-assurance, Sense Making and Way Finding are accessible (Chapter 7 Figure 7.7). At every level of well-being, whether in the bottom 25 percent of a population or in the top 25 percent, the benefits of Values Connection: Way Finding and Self-assurance make a measurable difference to how satisfied people feel with life and the extent to which things are experienced as worthwhile. These impacts are seen across all ages, genders and ethnicities so have universal potential.

Examining the interaction between Values Connection and benefits with life satisfaction and life worthwhile showed some differences (Tables 7.29 and 7.30). The contribution to variance in eudemonic well-being – ‘the things I do are worthwhile’ – was 37% compared to 21% for hedonic well-being – ‘how satisfied I am with life as a whole’. There is link between meaningful work and well-being (Chapter 2, 2.8). As meaningful work is experienced through actions that fulfil personal values (Allan, Batz-Barbarich et al 2019) the strength of the relationship between Values Connection, benefits and eudemonic well-being underlines the workplace relevance of Values Connection activities.

## **8.6 There Are Risks**

In Chapter 2 interplay between values and negative emotions was shown in relation to work (2.8). Negative emotions can substantially increase employee intention to leave (Seaborn 2003). The damaging effects of perceived breaches in the psychological contract between the individual and the organisation are not, however, inevitable. De Clercq et al (2020) found less reduction in job satisfaction among employees with higher levels of self-regulation and confidence about doing their work. Links have been made between values and moral injury (Dall'Ora et al 2020), perceptions of organisational politics (Zibenberg 2021) and organisational attachment (Guadalupe et al 2020).

What had not been anticipated in the regression analyses of the benefits of Values Connection was Sense Making consistently exhibiting a negative relationship with well-being (Chapter 5, Table 5.8). Sense Making is the only benefit that does not make a positive contribution to models predicting higher well-being (Chapter 7, Table 7.23). Returning to Study One, individuals' descriptions of experiences of using their values illustrates what may be happening (Appendix D, Table D4.8) for example:

*Reflecting on career and what feels right for me - my values have always been there at my core but I struggled to articulate them. Having a clear description helps me to short-circuit why things feel right or wrong - because it aligns or clashes with my values P28*

*Helps bring some peace in knowing the why of things that happen (at all scales) but some deep frustration (by throwing issues into clear relief) in not being able to do more to influence the trajectory of events at larger scales P36*

This provides insight into Sense Making as a double-edged sword: it may make things feel better, it may make things feel worse. Is it possible that when Sense Making prompts noticeable dissatisfaction it may be an antecedent of resolve to make things better? Examples of value driven action could include the student of Milton Rokeach in Chapter 1, 1.6., or these comments from Chapter 4:

*enabled me to recognise why I may be low in mood or feeling off key and look to my values to identify what I can actively change to build a greater sense of well-being P59*

*has helped me to manage my stress and anxiety levels, helping me to quickly realise any triggers and implement effective strategies that enable me to bring my priority values in to focus again P71*

Sense Making as an independent variable had a negative impact upon well-being in each of the four quantitative surveys. This finding underlines the importance of cultivating Self-assurance and Way Finding capabilities to support well-being in any organisational values programmes. It may be that solely giving consideration to establishing connection with values risks undermining well-being. If values connected individuals are not afforded opportunity to develop Self-assurance and exercise Way Finding in their work, they may be unable to 'Live' their values which could cause unhappiness.

Some studies have recorded the presence of negative emotions in association with values. An intervention to support behaviour analysts to develop skills in effective supervisory relationship building produced some surprising results. Hess et al (2022) running a values and committed action exercise had not expected participants to be sad, even tearful as a response.

In a different study Janeczek & Ciecuch (2022) studied shame and guilt in relation to personality metatraits and values in young adults aged 18-35 (N=236). Vulnerability to shame was predicted by Conformity and Self-Enhancement values while guilt was predicted

by Self-Transcendence values (concerning welfare of others and the natural world). Personality metatraits were significant for guilt until values were added in a stepwise regression when metatraits became insignificant. The authors suggest shame may prompt action to protect the self from ridicule or judgement while guilt may stimulate reflection on impacts for other lives and potentially a desire to undertake conciliatory action which also fits with the story of the student from Chapter 1, 1.6.

Sense Making was not alone in showing a negative impact in the Forward Conditional Binary Logistic Regressions. Values Connection was included in the models for higher well-being in Study Two (Tables 5.10 and 5.12). In the convenience population of 2020/21 at the two lower thresholds, 25 percentile and ONS mean Values Connection made a positive contribution with an effect size of up to 14%. In the Prolific population, however, it was a different story. In the 75 percentile model Values Connection made a significant unique contribution (Table 7.23) but had a negative effect of -13% to -21%. The scale of Values Connection in Prolific is significantly different to that in the convenience populations. In Table 7.10 Prolific respondents report the lowest Hold and Live levels of any group and although the median for Know was the same as for the 2020 population (8) the mean was lower ( $M 7.78$  Prolific,  $M 8.15$  2020). This suggests that Values Connection supports well-being when all three components – Know, Hold and Live – are well developed and experienced, however, not being able to hold on to or have values as present in everyday actions and decisions is not helpful.

### So what's the **message**?

If as a coach, a manager or a practitioner you decide to go down the values road with people then be ready for some bumps along the way. The gains are worth having 69% stronger benefits and up to 25% better well-being, but in the process of getting there some individuals may feel less happy sometimes. This is not necessarily a bad thing. When (if) people are uncomfortable with some aspect of work at the level of their values they may be unable to articulate or locate the root or source(s) of unhappiness. Ordinarily when that is the case opportunities to air and resolve tensions are limited. Values Connection brings insight which could make the Sense Making capability although 'negative' in terms of immediate impact actually 'positive' for the individual and/or manager. This insight may open up conversational routes to move towards improvement.

Values bear fruit for employees and employers when the organisation is genuinely committed, does the work properly and sustains the focus over time. Sense Making with no scope to develop capabilities in Self-assurance and Way Finding may cause harm.



Furthermore, getting to know personal values without opportunity to hold and live them can undermine well-being. In the absence of autonomy to chart a course to a way of being and doing that aligns to what matters to them, individuals may disengage, look elsewhere for work or even become unwell.

Another consideration is that more job seeking individuals are making choices about what they want to do, and where they want to do it, through values. Values-based recruitment practices are on the rise (Ritchie et al 2018, Edwards et al 2022). Any organisation that is not doing this or doing it badly at present is potentially disadvantaged in the labour market. Individuals with a heightened sense of what matters to them are using it to make sense of their situation and how they feel about that situation. If they do not like the conclusion they come to they may vote with their feet.

Poor fit between an organisation and employees' values, when employee trust is low that the organisation lives up to what it claims to value, increases intention to leave (Ramos et al 2022). People do leave roles if misalignment is too great and/or they become disenchanted with professed core values being no more than a bunch of 'words on the wall'. Lack of alignment between personal values and managers and/or organisational values has a negative effect of change readiness and can reduce effectiveness (Långstedt & Manninen 2021). What the combined results from Chapters 4 and 7 suggest is that any organisation or manager seen as simply 'going through the motions' in terms of values is unlikely to be tolerated in the long term.

## **8.7 Opportunity to Develop Values Connection and Realise Associated Benefits Exists**

Often organisations embark on values work operating on two false assumptions. First, that everyone knows what is meant by 'values', which the literature review (Chapter 2, 2.2) indicates is unlikely. Second, that everyone already knows their own values, however, values tend to be unconscious (Chapter 1, 1.5) which makes this unlikely too.

Exactly how unlikely is difficult to say. More than 70% of Prolific respondents could not recall ever having engaged with their values (Table 7.2). The 29% who did recall engaging with their values showed a significant difference in Values Connection ( $p < .05$ ) however, the effect of that difference was only 1.6%. When it came to the forward conditional logistic regressions (Table 7.23) Prior engagement with values was not selected for inclusion as a contributor to higher well-being suggesting it was not having a material effect.

In Table 7.11 comparing Revisit to Prolific, Revisit had significantly higher Values Connection ( $p < .0005$ ), 13% higher. It wasn't just Values Connection where Prolific differed from Revisit. Well-being, Way Finding and Sense Making all showed 8% variance related to group membership, Self-assurance 6%, with Revisit higher in every case. In Figure 7.7 the

strength of Values Connection explained 69% of the variance in benefits and 18% of the variance in well-being. This means we would expect a population with stronger Values Connection to be higher in benefits and well-being than a less connected population and this is what the data found.

While these effect sizes are not especially notable in themselves, the consistency of the effects is important. That Revisit is higher than Prolific on everything being measured and that the single largest result is strength of Values Connection is interesting from a practitioner perspective. A 13% strengthening is worth having as Study One suggests connection paves the way for Self-assurance, Sense Making and Way Finding to develop and echoes other research describing how first connecting to values promotes subsequent agentic capacity (Reid 2023).

If Values Connection was a natural phenomenon, in the sense that everyone just 'has' it, then we should not be able to see big differences between the average level of Values Connection between different groups of people at the same time or between the same groups of people at different times. The data, however, says there are differences.

We have already seen a 13% difference between Revisit and Prolific so what about Revisit and everybody else? In Table 6.8 Revisit is compared with the pandemic years of 2020 and 2021. Broken down into the three components, we see between 2020 and 2021 there was an increase in 'Know' the median going from 8/10 to 9/10, various studies have shown people were prompted to reflect upon what really mattered to them at that time (Bonetto et al 2021, Daniel et al 2022). There was no change through the 3 years in how strongly those populations held on to their values but 'Live' did change: once pandemic restrictions were lifted it increased Revisit reporting a higher median of 9/10.

### So what's the **message**?

Coaches, managers, practitioners and commissioners cannot safely assume that everyone knows what we are talking about when we say 'values' and even if they say they do, the likelihood that it is a shared conception (Rohan 2000) is low. So always check what everyone thinks they are talking about before designing an intervention.

When some form of common conception is arrived at, write it down, share it and refer back to it in work on values. This will be particularly useful when new recruits join the team or organisation so they can be supported to understand what 'we' mean when we say 'values'.

Values Connection can be built. The convenience population showed strengthening in Values Connection and in benefits (Table 7.10) over 3 years furthermore the significant gap between them and Prolific points to an opportunity to do something impactful.

Finding that a population which remains interested in values reports levels of benefits and support for well-being over and above that reported by individuals not engaged with values also matters (Table 7.10). This supports a case for sustaining effort on organisational values initiatives. This is not a topic to be treated as any kind of 'one hit wonder' or just something novel to randomly tack on to an ad hoc team building event or staff away day. All of us would do well to remember that values are emotionally rich ideas and any engagement with them is likely to evoke feelings.

In all of this we need to pay attention to Sense Making with its persistent capacity to have an undermining influence upon well-being. This underlines that to harness the value of values in any workplace intervention it is important to go further than simple awareness raising or stand alone activities to connect to values.

Poorly thought through or executed activity carries a risk of negative impacts of a size that may do damage if not balanced out by the gains from Way Finding and Self-assurance which appear to come later.

## **8.8 Chapter Summary**

In Chapter 1, 1.4, the researcher declared a desire to 'seek out and codify an empirical base of evidence for the power of values at the intraindividual level': through rigour and scrutiny to achieve a level of "justified believability and trustworthiness" (Robson & McCarton 1995, p9). Internal reliability and validity were overtly considered throughout the studies and criteria satisfied (7.5). The application of parsimony and careful replications enabled the gathering of substantial data that supports the six elements of new knowledge described in this chapter (8.2-8.7).

Being specific about how this new knowledge may be useful is important. Leaders, managers and supervisors have many demands upon their time. Harnessing values to strengthen a sense of what makes for work worth doing (a life worth living) for everyone needs to be not 'yet another thing to do' but a fresh way of doing what is already being done.

In their 2023 report on health and well-being The Chartered Institute of Personnel and Development investigated key challenges facing organisations over the next year: number one barrier, "lack of line manager skills/confidence to support well-being" (p.10). To be useful to those managers the suggestions in this dissertation about making the most of values need to be practical.

Arguably over and above practicality, the suggestions need to be trusted and believed. In the absence of trust and belief adoption will remain a distant dream.

To encourage trust and belief, to robustly generalise findings and recommendations for other populations, there is a final bridge to cross: a bridge comprised of different forms of validity. If, in addition to internal validity, the data demonstrates external validity, statistical-conclusion validity and, possibly most importantly of all, construct validity then it may be positioned as believable and trustworthy. Drawing this dissertation to a close the final chapter explores validities, considers limitations, shares reflections from the perspective of the researcher and reaches a conclusion.

## Chapter 9

### A Question of Validity: a discussion of results

*A productive theory is one that balances abstract ideas against the particularity of relevant events.*

Cupchik (2001, p.5)

#### 9.1 Introduction

Given the role of the researcher in the real world (Chapter 1) this research sought justifiable and believable evidence for the components and value of Values Connection. Literature reviewed in Chapter 2 established an evidence base for the nature, functions and impacts of values while observing that values are dynamic and can change. Gaps in knowledge were highlighted. These concerned the mobilising elements of Values Connection and, descriptions of how an individual might benefit in the workplace from having a conscious connection to their values.

During 18 years of professional practice the researcher had witnessed a variety of consequences of people connecting to their values through the Minessence AVI tool. This research was born of a desire to explore those observations: to understand their components, and test whether this was just a Minessence thing or something generalisable.

In Chapter 3 the examination of ontological and epistemological considerations led the researcher to choose a sequential mixed methods exploratory approach beginning with qualitative. Research in psychology is vulnerable to low credibility. This arises from lack of replications (Chapter 3, 3.3) and from *p* hacking stemming from poor research design and *ad hoc* approaches to analysis of results (Wicherts et al 2016). As a consequence the researcher based Study One on clear aims (4.2) taking a deliberately parsimonious approach to the creation of survey items (Table 3.4). In subsequent quantitative studies (Chapters 5, 6 and 7) question items and methods of analysis were held constant, and well-being was the dependent variable throughout.

Four types of validity are recommended to build confidence in psychological research: internal, external, statistical-conclusion and construct validity (Fabrigar et al 2020, Vazire et al 2022). This chapter considers the findings of the studies in the light of those validities before describing the limitations of this research and potential avenues for future research. It continues with some reflections on the research process, choices made and roads not taken, closing with a conclusion that returns to the opening thesis.

## 9.2 Internal Validity

A number of threats to internal validity can arise including variation: in characteristics among the study population; of location of study such as whether undertaken as part of a mandatory work task or an optional personal task; derived from using more than one instrument or method in a study or using an instrument which places a significant drain (is too demanding) upon respondents (Baldwin 2018).

Responding to those threats required specific research methods. A single instrument was used in both the qualitative study (Chapter 4) and the quantitative studies (Chapters 5, 6 and 7). Both qualitative elements: survey and interviews; drew upon the same population of Minessence AVI users. For the quantitative surveys the first three drew on convenience/snowball audiences recruited through the same mechanisms. The location of the surveys was the same; direct access for individuals outside of the work context. The final quantitative survey was different in that it purchased a study population from Prolific. This was to triangulate results for the logistic regression by testing models with a different audience to the one in which the models were first observed.

Each of the newly created scale items to describe conscious connection to values and benefits attributed to connection consisted of 2 or more items. Cronbach's  $\alpha$  was chosen (Chapter 3, 3.5) as the measure of internal reliability of the scales. Even though data gathered was not normally distributed  $\alpha$  was chosen as: response scales used were continuous; positive kurtosis and skewness towards higher values made underestimation (as opposed to overestimation) of reliability a possibility helping to guard against overclaiming from results.

Reliability can be influenced by characteristics of the population being sampled and can vary between populations (Henson 2019). This feature of  $\alpha$  strengthened the case for replication of the quantitative questionnaire with different groups at different times. Sufficient reliability for a basic research tool is recommended by Streiner (2003) to be .80 or above while .70 is acceptable for initial development. The highest  $\alpha$  for the new scales was .863 for benefits with Prolific and the lowest  $\alpha$  .798 for benefits with 2020/21 (Table 7.5).

Test and retest of correlations between independent variables showed consistent relationships ( $r \geq .43$ ,  $p < .0005$  (two tailed)) for all four quantitative populations (Tables 7.6 and 7.7) supporting internal validity.

A focus on parsimony at every step sought to minimise the risk of confounding variables clouding results.

### 9.3 External Validity

Confining sampling to past users of the Minessence AVI was recognised as unlikely to yield results suitable for generalisation to other populations. To test and retest the conceptual framework quantitatively a broader population was recruited than the one from which the conceptual framework was developed. Initially a convenience/snowball sample from the personal and professional networks of the researcher and finally a 'cold' arm's length population from Prolific: a group of people unknown to the researcher.

Literature reviewed in Chapter 2 provided insights in terms of impacts previously documented from values exercises and real world problems which Values Connection may be suitable to address (2.7 and 2.8). Findings from the studies align with observations made in the literature which give an indication of ecological validity. For example that lower well-being was associated with weaker Values Connection and benefits was similar to results for the Diener et al (1985) study showing students perceiving a gap between their values and opportunity to experience their values reported lower subjective well-being (Chapter 2, 2.7).

### 9.4 Statistical-conclusion Validity

Problems arise in terms of statistical-conclusion validity when studies are under-powered and  $p$  values close to .05 are treated as sufficient for significance: small sample sizes increase likelihood of extreme estimates of effect size (Fabrigar et al 2020). All studies drew upon large enough sample sizes (Chapter 3, 3.4) to exceed the Tabachnick & Fidell (2007) recommended minimum of 120 observations for studies with 8 variables. Shen et al caution against researchers drawing firm conclusions from a single study and encourage 'constructive replication' (2011, p.1061).

Following replication of studies both parametric and non-parametric tests of difference were used to determine whether datasets could be combined to give regression analyses greater power (Chapter 7, 7.6). Although some significant differences were found, the effect size of the differences was very small. This enabled results from 2020, 2021, Revisit and Prolific to be combined for the final correlations Figure 7.7 and standard multiple regression Tables 7.29 and 7.30 ( $N = 1488$ ). These calculations showed the variables of Self-assurance, Sense Making and Way Finding making significant unique contributions to well-being, Life Satisfaction and Life Worthwhile ( $p < .0005$ ) and Values Connection contributing to Life Worthwhile ( $p = .031$ ). Results from Studies Two, Three and Four appear to have statistical-conclusion validity.

## 9.5 Construct Validity

Cronbach & Meehl say a common situation in which construct validity is explored is one where there is no established measure of the “quality” (1955, p.176) under investigation. Chapter 2, 2.3, showed there is no current scale of Values Connection nor any intraindividual model of benefits derived from connection to values. A construct emerges as valid when components interact in ways that produce relationships that are anticipated. High correlations and high stability were found in the replications of the quantitative survey across the three study years (Tables 7.6 and 7.7). Thus the proposition that the conceptual framework of Values Connection and benefits has construct validity is supported (Fabrigar et al 2020).

An additional construct validity consideration is whether relationships may be seen with other constructs within the literature (Palant 2020). Three established psychological theories are considered as candidates to support construct validity for the Values Connection and Benefits framework: Sense of Coherence (Antonovsky 1985); Self Concept Clarity (Campbell 1990); and Hope Theory (Snyder 1994).

### ***Sense of Coherence***

Sense of Coherence (SOC) is a salutogenic theory (vs a pathogenic theory) which regards SOC as a health-related resource inside the individual. SOC has been linked to other psychological theories of effective functioning for example SOC correlates positively with self-efficacy in 16-19 year olds and measures similar phenomena according to Kröniger-Jungaberle & Grevenstein (2013)

Antonovsky describes SOC as a “feeling of confidence that (1) the stimuli from one’s internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement” (1985, p.276). The first: Comprehensibility is the cognitive element of SOC which exists when it is felt possible by the individual to **make sense** of what they are experiencing. The second: Manageability is regarded as instrumental or behavioural and concerns **having confidence** to approach and solve problems. Finally: Meaningfulness is motivational or emotional; individuals feeling they have influence over their lives and can be active in the processes that **shape their future** (Meyer, 2011). (emphasis placed by the researcher).

Combined these three elements form a way of looking at life and the challenges it brings which strengthens the capacity of an individual to use their internal resources to maintain well-being. Operationalised the resources accessed through SOC reduce uncertainty, enable experiences and outcomes to be anticipated (making them easier to



manage) and “trust in the world” can be developed (Meyer, 2011, p.57). Figure 9.1 illustrates how the cognitive, instrumental and emotional components of SOC could map to the conceptual framework of Values Connection and benefits which Studies Two, Three and Four have shown to be reliable and generalisable.

**Figure 9.1**

***Integration of Conceptual Values Connection and Benefits Framework With the Three Elements of Sense of Coherence***



SOC tends to increase with age as does strength of connection to values and benefits experienced (Tables 7.25 and 7.26). Whether this is simply a feature of healthy people surviving longer or that having a strong SOC supporting individuals in staying well is not clear although Eriksson & Lindstrom (2005) suggest the latter. They view SOC as a reliable, valid and cross culturally applicable instrument measuring how people manage stressful situations and stay well which chimes with the finding of Values Connection being particularly useful in “tough times”.

Previous research has established links between SOC, values and well-being (Barni & Danioni 2016, Yasmua et al 2020), SOC, values and post traumatic growth (Xiu et al 2018) and interrelationships between personal values, SOC and Self Concept Clarity (Jastrzębska & Błażek 2022).

### **Self-Concept Clarity**

Described by Campbell (1990) the 'self' has components both of knowledge and evaluation. The first is focussed on what an individual believes about themselves in terms of attributes coupled with the extent to which these beliefs are clear and defined with confidence. The second concerns how the individual feels about that self they believe themselves to be, "a global personal judgement of worthiness" (1990, p.539). Thomas et al suggest that Self Concept Clarity (SCC) is less "Who am I?" and more "How sure am I of who I am?" (2022, p.477).

Personal values are core to identity (Sagiv et al 2017, Russo et al 2021) but frequently unconscious (Maslow 1943, Schwartz 2012). Perhaps the clearer an individual feels about their values, the more they may feel they know themselves and, the more confidence they may feel in that self.

In Study One, Tables 4.5 and 4.6 respondents to the online qualitative survey wrote about the experience of undertaking an inventory of their values commenting:

- *finally 'getting' myself*
- *be clear about who I am*
- *used them to find myself*
- *helping me follow my true north*
- *it makes it possible to be my best me*

Using reflexive thematic analysis a range of themes were developed. Four applications of Values Connection were identified (Table 4.7). Nine survey items were created to describe the conceptual framework of Values Connection and benefits (Table 5.2). Through a series of replication studies with different populations the survey items proved reliable, valid and interrelated (Tables 7.5, 7.6, 7.7 and 7.8).

Potential connections between survey items and applications of Values Connection are plotted in Table 9.1 against the 12 items in the SCC scale (Campbell et al 1996) to show hypothetical links.

There are no proxies among the Values Connection and benefits scale items and applications for two of the SCC items. There is one Values Connection item "I have the opportunity to put my values in to practice regularly" that has no equivalent in the SCC scale.

**Table 9.1****Comparison Between Self Concept Clarity Scale Items and Both Items and Applications of Values Connection and Benefits**

No	SCC Scale Items	Conceptual framework items (I) and applications (A) of Values Connection
1	My beliefs about myself often conflict with one another	Aligning (A) Self-regulating (A)
2	On one day I might have one opinion of myself and on another day I might have a different opinion	I know myself well (I)
3	I spend a lot of time wondering about what kind of person I really am	I feel clear about my personal values (I) I know myself well (I) My values help me understand why I behave the way I do (I)
4	Sometimes I feel that I am not really the person that I appear to be	Aligning (A)
5	When I think about the kind of person I have been in the past, I'm not sure what I was really like	
6	I seldom experience conflict between different aspects of my personality	My values help me make sense of things (I) Aligning (A) Self regulating (A)
7	Sometimes I think I know other people better than I know myself	Relating (A)
8	My beliefs about myself seem to change very frequently	I have a strong sense of purpose (I) I have core values I hold fast to in my life (I)
9	If I were asked to describe my personality, my description might end up being different from one day to another day	I know myself well (I)
10	Even if I wanted to, I don't think I would tell someone what I'm really like	
11	In general, I have a clear sense of who I am and what I am	I know myself well (I)
12	It is often hard for me to make up my mind about things because I don't really know what I want	I am confident in my decisions (I) My values help me find my way (I) Deciding (A)

Clearly SCC and the conceptual framework of Values Connection and benefits are not identical. That said some connections between personal values and SCC have already been evidenced. In young adults SCC was demonstrated to fully mediate the relationship between values and satisfaction of basic psychological needs (Russo et al 2021). Strong SCC also has an impact on how people behave in relation to the values that they hold.

Across two experiments individuals who believed they held a minority opinion showed increases in self-concept clarity particularly where their opinion aligned with their personal values (Rios Morrison & Wheeler, 2010). Those group members who believed themselves to be in the minority had a clearer self-definition the more their attitudes represented their core values. Researchers say the confidence to speak up is significant in organisational contexts: for example in relation to whistle blowing, and enabling minority opinions to be heard which helps reduce decision making biases and increases creativity (Nemeth 1986).

Campbell et al close their paper on measuring SCC saying their data is “mute with respect to the causal relations between clarity and its correlates” and they hope future studies will “elucidate clarity’s etiology” (1996, p.154). Data from Studies One, Two, Three and Four point towards consciously connecting to values as one route to stronger SCC. The degree of complementarity between the two concepts suggests the dynamics between them could provide a worthwhile topic for future research.

### ***Hope Theory***

Hope has been found to be a reliable predictor of well-being variables including Life Satisfaction (Wroblewski & Snyder 2005, Bailey et al 2007).

Two items comprised the Way Finding component of the benefits scale: I have a strong sense of purpose; my values help me find my way (Table 4.5). This characterisation of Way Finding shares features with Hope Theory (Snyder 2002) where hope is described as a state of motivation drawn from “an interactively derived sense of successful (a) agency (goal directed energy), and b) pathways (planning to meet goals)” (p.250). The first is an expression of determination to do something (will power) while the second is thinking that a path ahead is out there somewhere (way power) combined these elements of hope generate a sense that positive outcomes can be created by the individual (Davidson et al 2012).

Two items also comprise the Self-assurance component of the benefits scale: I am confident in my decisions; I know myself well. Exploring the two aspects of hope with middle-aged men ( $n = 141$ ) and middle-aged women ( $n = 206$ ) Chang (2003) found agentic thinking had strong direct mediation effects upon both life satisfaction and problem solving.

From the conceptual framework of Values Connection and benefits Way Finding and Self-assurance together were consistently the most significant predictors of higher well-being in logistic regressions (Table 7.23). Similarly in Hope Theory both pathways and agency are necessary, neither by itself sustains motivation over the long term, Snyder et al describe them as ‘additive, reciprocal and positively related but not synonymous’ (2003, p.123).

## 9.6 Limitations

In this section each study is considered in the sequence in which they were undertaken. Some limitations reoccur, particularly those centred on approaches to sampling and questionnaire design alongside the risk of the confounding influences of social desirability bias and external variables.

### **Chapter 4 - Study One**

Many of the participants in Study One were previous clients of the researcher or clients of colleague Minessence practitioners. A limitation arising from this homogeneity is that responses may have been subject to social desirability bias. **Social desirability bias** may take one or both forms of: self deception in terms of selecting a 'better' score than reflected reality; and other deception where the participant seeks to make a good impression on the researcher (Nederhof 1985). Even when social desirability bias is found it does not necessarily have a strong enough effect to be of practical significance for example Caputo (2017) showed a 0.235 effect size for social desirability bias on life satisfaction items – even if there was some element of social desirability bias in this research it would be unlikely to wholly account for the relationships seen.

The survey attracted a 'warm' audience of people who had worked with practitioners in the Minessence Group. This may have predisposed them to respond to the survey in positive terms creating a biased data set. It was less likely that individuals who had used the inventory but did not use it would take part. Within the survey population, however, some individuals did respond 'rarely' and one 'never' in response to 'how often do you use your profile?' and the data collected was normally distributed.

**Purposive homogenous sampling** potentially limited applicability of findings to other populations/tools used. As all participants had accessed the same values inventory tool and profile the reported sense of connection and benefits of that connection may be a product of this tool and its output. Further study was needed to explore whether these elements of connection and suggested benefits are present in other populations who have used a wider variety of Values Connection processes and instruments.

Finally, the frequency intervals used in the **survey design** were subjective: one person's 'sometimes' could be another person's 'frequently' even when both occasions are each one month apart. Different interpretations of frequently were not, however, relevant to this research question, which concerned perception of how often a profile is used. This study sought to report what people felt that they did. Exploration to be able to 'prescribe' or advise on optimal frequency of use could be a topic for future research.

## **Chapter 5 – Study Two**

Personal values play an important role in how we perceive and understand our experiences and the wider world (Van den Heuvel et al 2009). For much of the study period Coronavirus and its impacts dominated the news (Appendix E, 5.1). Consumption of news during this period had a detrimental impact on stress and satisfaction with life (Jain 2021) while research prior to the pandemic showed that exposure to positive news stories supported lower anxiety and higher well-being (Baden et al 2019). A limitation of this study was being unable to assess the extent to which either the negative Sense Making result as a whole, or the size of the negative effect, may have been a product of **external conditions** ie a consequence of the kind of life experience individuals were endeavouring to make sense of at the time of the study.

**Questionnaire design** did not include collection of additional demographic details such as job status, prior education level, or relationship status. Thus, the analysis of additional factors that may have influenced reported well-being levels is sparse. Had these additional details been collected it may have been possible to better explain the observed variance in well-being variance. Additional variables in future could explore whether Values Connection and associated benefits could offer greater or lesser utility for people living in different circumstances which are known to impact well-being levels (Oskrochi et al 2018).

The study population exhibited a higher well-being median than the mean for the ONS general UK population. It is possible that the strength of conscious Values Connection and linked benefits in the study group was a factor in that result. Gebauer et al (2008) have, however, shown correlations between individuals who are helpful motivated by pro-social values and higher life satisfaction compared to unhelpful individuals or those helping in response to external pressure. No incentives were offered for participation in this study, thus it is appropriate to question whether the act of voluntarily helping with the research individuals may have made some contribution to (**biased**) how satisfied individuals felt with things in their lives.

**Design** of the study did not require people to identify themselves so it was not possible to identify individuals who participated in each year. Had individuals been tracked through the study a paired t-test could have been undertaken on their responses. This analysis may have been able to describe whether there was a significant shift in individual participants Values Connection, benefits and/or well-being during the two years under Covid.

This data cannot be certain about whether Values Connection comes first functioning as a precursor to experiencing the benefits although this sequence is what the qualitative results in Study One inferred. A future intervention study with a control group could offer one route to answer this question.

The positive skew of all results, particularly those relating to well-being, may have been influenced by the online administration of the survey. Individuals facing digital exclusion and/or with low levels of literacy were less likely to have taken part. The fact that current approaches to exploring values are based on vocabulary is a further limitation of the field as a whole, and potentially a source of inequality of access which should be addressed.

### **Chapter 6 – Study Three**

Participation during 2020 and 2021 was anonymous so it was not possible to pair responses given by individuals in the different years. Had this data been collected there would have been opportunity to undertake a paired samples t-test to track change at the level of the individual, however, this was not part of the research questions for this study.

In 2020 and 2021 the study population was a convenience sample which grew into a snowball sample. In 2022 only participants from those previous years took part. Results may therefore contain a greater degree of **bias** either towards the researcher due to personal relationships or linked to greater interest in the topic of research than the population in 2020/21.

Observations on the differences between datasets for the regression models are tentative due to the **convenience/purposive sampling** of the study populations and variation in sample sizes (Chapter 3, 3.4). This study used the models as an indication of the pattern of variables making a significant unique contribution to higher well-being. This study did not seek to identify a prescription of variables from which a specific level of well-being which may be expected. As such forward conditional binary logistic regression was appropriate for the research questions, however, claims based on those results need to be cautious.

### **Chapter 7 – Study Four**

A sample of less than 450 was not ideal for robust forward conditional logistic regression modelling. While 273 valid responses provided an indication of similarities and dissimilarities between data sets for ‘warm’ populations compared to a ‘cold’ Prolific population a larger study would be needed to improve the reliability of the findings.

The **questionnaire design** attempt to differentiate within Prolific between, individuals who had previously engaged with personal values activity and those that had not, was vulnerable to errors. First: the recollection of the individual could be faulty and they report they have or have not engaged with their values when the opposite is true. Second: the individual accurately recalled having engaged with something however what they regard as a ‘values tool’ or a ‘values activity’ may have been something else given the inconsistencies

in the field described in Chapter 2 (2.3) such as the VIA (Values in Action) which is actually a personality instrument.

To make sense of interactions between the independent variables narratives from Study One were revisited (frequently) as was appropriate in a mixed methods exploratory study. A deeper understanding of Values Connection during the pandemic years, and how things changed once the cloud Covid appeared to have passed, could have been achieved if additional interviews had taken place with the 2022 purposive population. This would have added an explanatory element to the mixed methods approach which, had time allowed, would likely have enriched the findings.

The Forward Conditional Binary Logistic Regressions provided important insights to guide advice to practitioners and employers concerning support for well-being from Values Connection and the components of benefits. What cannot currently be predicted is the proportion of variance in well-being that may reliably be attributed to each element. Structural Equation Modelling (SEM) has potential to provide answers to those questions. To undertake SEM a minimum of 3 questionnaire items per component are required and in this study **questionnaire** Self-assurance, Sense Making and Way Finding are each only comprised of two items. Scope to develop additional items in future merits consideration.

## 9.7 Future Research

As the internal reliability and validity of the questionnaire items was established across different populations and at different points in time they have potential for development in a number of directions.

There is a gap in the literature for a scale to measure Values Connection and benefits. To develop a scale a broader range of items would need to be tested in concert with the items created through this research. A future study could expand these items by inclusion of items from existing valid and reliable scales such as the General Self-efficacy Scale (Luszczynska 2010), Meaning Making Scale (Van den Heuvel 2009), and Proactive Personality Scale (Seibert 1999). Alternatively additional items could be developed and tested drawing upon the narratives from Study One or by reopening dialogue with a sample of previous study participants to gather additional material.

Once there is a scale with a minimum of 3 items per element, this creates opportunity to apply Structural Equation Modelling to data collected. SEM has the capacity to determine the direction and strength of relationships between variables, and more precisely predict the pathways of contribution to well-being. Analysis at greater level of granularity could enable better targeted advice for coaches and managers interested in engaging with values in their work.



Construct validity considerations identified three potential theories: Sense of Coherence, Self-Concept Clarity and Hope Theory with which the framework of Values Connection and benefits align. A general survey combining valid questions items from each of these alongside the items developed from this research could provide an indication of predictive validity in relation to these theories. For example when Values Connection and linked benefits is strong are SOC, SCC and/or Hope also high: the hypothesis being that positive monotonic relationships would be present.

As prototype measures of Values Connection and benefits, the framework items could be used in intervention studies either to compare/contrast different methods of individuals connecting with their values and/or to assess impact of values activities over time within a learning or working situation.

Understanding how Values Connection was experienced by individuals and what benefits, if any, individuals ascribed to their sense of connection with their values was the sole focus of this research. Personal values do not exist in a vacuum. Our values have a dynamic relationship with lived experience and events in the outside world which includes interaction with other people. From Study One, Table 4.7, we learned some individuals use their own values as a way of seeking to understand the values of others and to improve relationships with others. Using the conceptual framework it would be interesting to explore at team or whole organisation level, what impact Values Connection activities might show in comparison to a team or organisation where no equivalent work was undertaken. Such an intervention would be particularly timely if the organisation was either in the process of rolling out a core values initiative and/or was about to undertake a change programme. Even if there was no significant difference in performance *per se*, if Values Connection and its benefits supported well-being within the group or organisation through their transition over and above well-being levels reported by a comparison population, that would be useful insight.

Finally, reviewing methods of connecting to values was not a feature of this research. The literature review (Chapter 2, 2.3) however, highlighted there is work to be done on this topic. Having shown that Values Connection is a thing which brings benefits, research is needed to compare different methods of connecting to see if all are equally effective at enabling connection. The field of values tools is dominated by approaches that use vocabulary. Many people in the working age population do not have high levels of functional literacy and it could be argued that to only use words to explore values in organisations contributes to inequality. Research to develop new methods which are more accessible to more people is long overdue.

## 9.8 Researcher Reflections

*My biggest struggle is with 'enoughness'. What is enough reading? What is enough data? what is enough analysis?*

Reflective Journal Entry November 2022

Journalling is described by Deggs & Hernandez as a way to make the researchers "experiences, opinions, thoughts and feelings visible" (2018, p.2554). Future usefulness of a reflections journal outlining the research process and decisions taken was a strong recommendation of my first supervisor. It is those notes (alongside scribbles in the margins of diaries and notebooks, sometimes on the back of till receipts) that are drawn upon for this next section.

It seems from listening to and talking with other doctoral students, that the PhD which folk end up undertaking is different to the one they thought they were doing at the start. The same thing is true for me. In June 2020 a note sent to a peer in the UK Values Alliance read:

*My research essentially has two strands - what impacts/benefits do users of values instruments report from their new found conscious connection with their personal priorities (and do any of those impacts relate/dovetail with well-being) - what is the most effective way of accessing and making sense of those insights (because without effective access the user doesn't get to hold anything actionable).*

*As you can imagine there is a lot to do in terms of reviewing values literature and the places where values show up in well-being literature so that's a big chunk of what I will be doing over the next six months.*

*Actually feel very fortunate to have the time to look at this in these times where fundamental questions of 'what is it that really really matters most' are so raw.*

That note was pasted into the reflective journal with a footnote a little later

*Turns out there is another question that needs to be answered before those [the questions above] can be addressed – what do I (we) mean when we say 'conscious connection to values' – in fact it seems a lot of time has to go into evidencing and spelling out the 'blinking obvious'.*

Reflective Journal Entry July 2020

An interesting aspect of reflective practice highlighted by Deggs & Hernandez (2018) concerns positionality of the researcher: inside or outside, participant or observer, objective

or subjective. Where the researcher stands in relation to research itself could be regarded as positional.

*I am not especially interested in 'research' for its own sake. I am drawn to application and utility, likewise I am not a fan of lightweight fads/fashions in practice just because we can and some bloke (it is almost always a bloke) said it is the answer to all the woes of leaders and managers..... so I am and always have been a hybrid practical scientist.*

Reflective Journal Entry June 2022

Consequences of some of the reflective choices made have been given in the limitations section. These included not developing and testing a wider range and large number of items which, with hindsight, might have been a good thing to do as it could have paved the way for development of a 'Values Connection and Benefits Scale'. That said increasing volumes and varieties of items equally may have resulted in less clarity: greater numbers of statistically significant but practically weak relationships between items could have muddied what was experienced by people.

Parsimony was a deliberate preference (Chapter 1, 1.3) for Study Two in 2020 (Chapter 5). In truth that exercise was highly exploratory and I did not expect it to return the levels of reliability, validity and relationships that it did. This questionnaire was originally seen as a first pass at exploring what might be worth developing further for a 'proper' study later. When the results came in that required a fresh decision, almost a gamble: stick or twist?

In a PhD covering just 3 years what Kazman terms the "Holy Grail of reproducibility" (2017, p.28) is not within reach of many psychology students. Having landed upon a questionnaire with reliable and valid items after just 8 months put the Holy Grail in touching distance which then ruled other things out.

### ***Deductive Theory Building***

Given the length of my experience in the field of values profiling, and personal engagement with the tool upon which the first study focussed, building a conceptual framework from the top down to test was an option. Wariness of personal bias (Easterby-Smith et al 2004, Wilholt 2009) prompted me to choose inductive.

Had a deductive approach been chosen the questionnaire items would have been different. Comparing these items I would have written with the actual items used illustrates the real danger for an insider researcher. For example:

- My values help me solve problems **not** 'my values help me find my way'
- My values help me manage my motivation **not** 'my values help me understand why I behave the way I do'
- It is easier to keep going at difficult things when the task aligns with my values **not** 'I have a strong sense of purpose'

*Given that I have been actively using the AVI and its profile outputs since Dec 2004 my own life is my biggest experiment so I could have built a quant survey from that. I could have created a theory about what conscious connection involved and then written a bunch items to see if what other people experienced was the same as me. The way I phrase how it works for me, however, is different to what the people have said.*

*If it was just down to me I would have said conscious connection involves a solid sense of those values which are 'real' for me and values which I understand sufficiently to be able to use/deploy when I feel I need them..... I appreciate that this is 'knowing' and 'living' but differently stated .....*

*Whether these would have worked in the same way with other people we will never know but I suspect they would not – I am too far down my particular rabbit hole to be able to intuit what it is like to be closer to the surface so that is what the qual gave me..... a way to see it all with fresh eyes (relatively) untainted by my values habits and traditions after 18 years of using it personally.*

Reflective Journal Entry March 2023

Being so close to the topic could have created a situation in which important first and second order experiences of connecting to values were bypassed in favour of jumping feet first into applications. Bluntly I believe these studies would not have found what they found if a deductive approach had been used.

### **Autoethnography**

*I passionately do not want to be a snake oil sales person, so I do not want to peddle values without there being good reason/an evidence base for it*

Researcher Reflective Journal Entry April 2020

One approach I considered for the research was autoethnography. Using my personal values profiles I had experience of making both tiny tweaks and major adjustments in my life to feel more aligned with my priority values. I had gained a sense that those

changes gave rise to positive outcomes. With sixteen years of direct experience I could be regarded as a longitudinal study, rather than just a snapshot, making one option for the research autoethnography. Systematically describing and analysing personal experience is a route to increasing understanding of experience at the level of society (Ellis et al 2011). This would have been an idiographic approach providing a full explanation for a specific case. Autoethnography can be problematic, however, if authors blur the edges between 'real' and 'imaginary' experiences in the sharing of their story (Denshire 2014).

This research intended to provide values practitioners with solid evidence of the merits of their field with reference to potential impacts for populations of employees. That intention meant that an approach of a more nomothetic nature, capable of providing a generalised understanding from an exploration of many cases, was better as it would carry more weight in the outside world. Hence autoethnography was rejected as unable to satisfy my aims (Chapter 3, 3.1). A method of investigation with a lower likelihood of attracting criticism and greater chance of justifiable believability was needed.

### ***Interpretive Phenomenological Analysis***

Both Interpretive Phenomenological Analysis (IPA) and Thematic Analysis (TA) Braun & Clark (2014) suggest are suitable with data gathered through interviews/qualitative surveys. IPA focusses on people's experiences and understandings of a phenomena (such as undertaking a values inventory and receiving a personal values profile).

In IPA researchers seek a purposive homogeneous sample of individuals for whom the research question is meaningful (being aware of how the people may vary from one another and how that variation can be contained in the study) the sample size suggested is 3-6 participants (Larkin et al 2021). While mulling over potential sample sizes I reflected:

*So what we learn from this is everyone has an opinion. Sometimes the opinion is really useful as it points to something I thought was self evident but clearly was not, sometimes the opinion is interesting as it is a different way of constructing/framing the point which then makes me think of something fresh.....sometimes it is just plain confusing.....*

Researcher Reflective Journal Entry April 2020

For IPA Larkin et al (2021) say the primary research question and the interview questions that follow need not be theory driven. While 'insider' status is not necessary (2021, p.42) it is not viewed as a problem as it enables the researcher to understand participants responses by drawing upon firsthand experience. If an insider, the researcher needs to

guard against allowing personal preconceptions to limit or channel the reports from participants and keep enquiry as open as possible.

Study One sought to undertake an exploratory approach focussed on individual meaning and sense-making of a particular experience or context thus IPA aims could have been

- explore how people who have used the values inventory describe that experience and their subsequent engagement (if any) with their personal values profile
- describe the common features of conscious connection to values as described by people who have used the AVI.

For Study One, however, a larger sample size was preferable to encompass of wide variety of ages, occupations, stages of life and lengths of exposure to the AVI tool and a host of different opinions. It was hoped that more voices of greater diversity held greater potential to ensure variation within the population would be noticed and recorded. Hence the decision to select TA.

### **Overclaiming: My Single Biggest Fear**

*There is an inherent problem with any 'club' (aka uni research) which is it can't be that good if I can get in....not exactly imposter syndrome as I have no doubt that I can and do do good stuff and that I do things properly but I want the bar to be really high for the sake of the folk downstream who may then take action off the bat of the information they have been fed.*

*For years I worked in the voluntary and community sector. I witnessed money raised through shaking tins in high streets and pensioners (writing in spidery biro on tissue thin paper) sending their Christmas state pension bonus to the charity to help feed the birds...only for it to (in effect) be pocketed by unscrupulous consultants peddling bad science wrapped in expensive slick design.*

*It is just plain wrong on any and every level to waste the precious time/money/opportunity of individuals and employing organisations on a whim or a hunch.*

*So I just want to be able to be sure – to openly say what the limitations were and have taken steps to address those limitations even if that means running the risk of everything I think I have found being discredited – I would rather do that than 'sell' anything that is shallow or shady (in case you are wondering I clearly hear the voices of my Workmanship/Craft and Personal Authority priority values in those sentiments*

*– these two are so significant for me they definitely qualify as ‘mattering so much that they determine what it means to live true to self’).*

*All organisations but especially those which exist to serve the citizenry and life on earth deserve access to thought through and evidence-based interventions that actually deliver improvement which can be sustained with intention and effort – as distinct from convenient, expeditious off-the-shelf experiences that have either no lasting positive impact or actually do damage.*

Reflective Journal Entry November 2022

If at any stage any reader of this dissertation asks themselves ‘why did she persist in basically repeating the same study over and over and over again?’ that last passage is your answer.

### ***Final Reflective Thought***

In the beginning (1.4) I declared I was running a significant risk undertaking this research: the risk “that I was wrong”. Wrong about values and the positive impacts I believed they could have on life in general and working life in particular; wrong about the universality of Values Connection as something with potential for all employees irrespective of age, gender or ethnicity; wrong enough to be professionally utterly undone, yet the risk still had to be run.

Finally the data has spoken and the data says:

- Conscious connection to values is a thing: a thing that can be described and measured
- Connection to values brings benefits: they too can be described and measured
- Connection to values and the benefits that flow from connection are useful to people in different ways
- Values Connection and related benefits support well-being
- There are, however, risks associated with values work we should consider
- Opportunity to build Values Connection and realise the value of values exists

I am relieved beyond measure not to be at this point finding myself professionally undone. It all feels to me like work that was worth doing (even though it was on the scary side from time to time).

## 9.9 Conclusion

*Connecting through shared values can powerfully support a change agenda, and this can be driven by highly motivated staff with the courage to speak up.*

Audhali et al (2021, p.1427)

Truthfully through this work, I have in part been seeking to honour my environmental roots. I am driven by a belief that: if we do not get better at supporting people to access their individual humanity, we cannot reasonably expect them to be more humane towards one another in general. Treating employees primarily (or exclusively) as a 'resource' is not healthy for any of us. If we are wholly focussed on what the system can extract from people, why would we be surprised if those people then treat the system, other humans and ultimately the planet as things to be exploited rather than stewarded? It is as Maio suggests

*If we leave values unexamined, we may fail to come to grips with the directions in which we are heading, even while the values continue to play a vital role in binding us to our groups and culture (2016, p.289).*

To me, it makes no sense to fail to make the most of the value our values have to offer us.

Values are a feature of what it is to be human so, at least in theory, could be equally accessible to all. There are few internal resources of humans that are quite so universal. In working life people vary in terms of intelligence, resilience, creativity, and any number of other capabilities or capacities, yet everyone has an internal framework of priority values that can be consciously connected to.

This dissertation opened with my thesis that **conscious connection** to personal values brings **benefits** that can improve **working life**. Let me close by declaring that I believe here is evidence that there is value in Values Connection which can be harnessed for benefits that support well-being which improves life at work. The more value-able people become the more value their values may offer them.

If we want to harness the value of values it will require starting with a shared conception then supporting individuals to know, hold and live their own values. Doing that properly and seeing it through into the long term will strengthen self-assurance, sense making and way finding equipping more people to experience their work as worthwhile.

If we do that, I feel certain more good things will happen more often.



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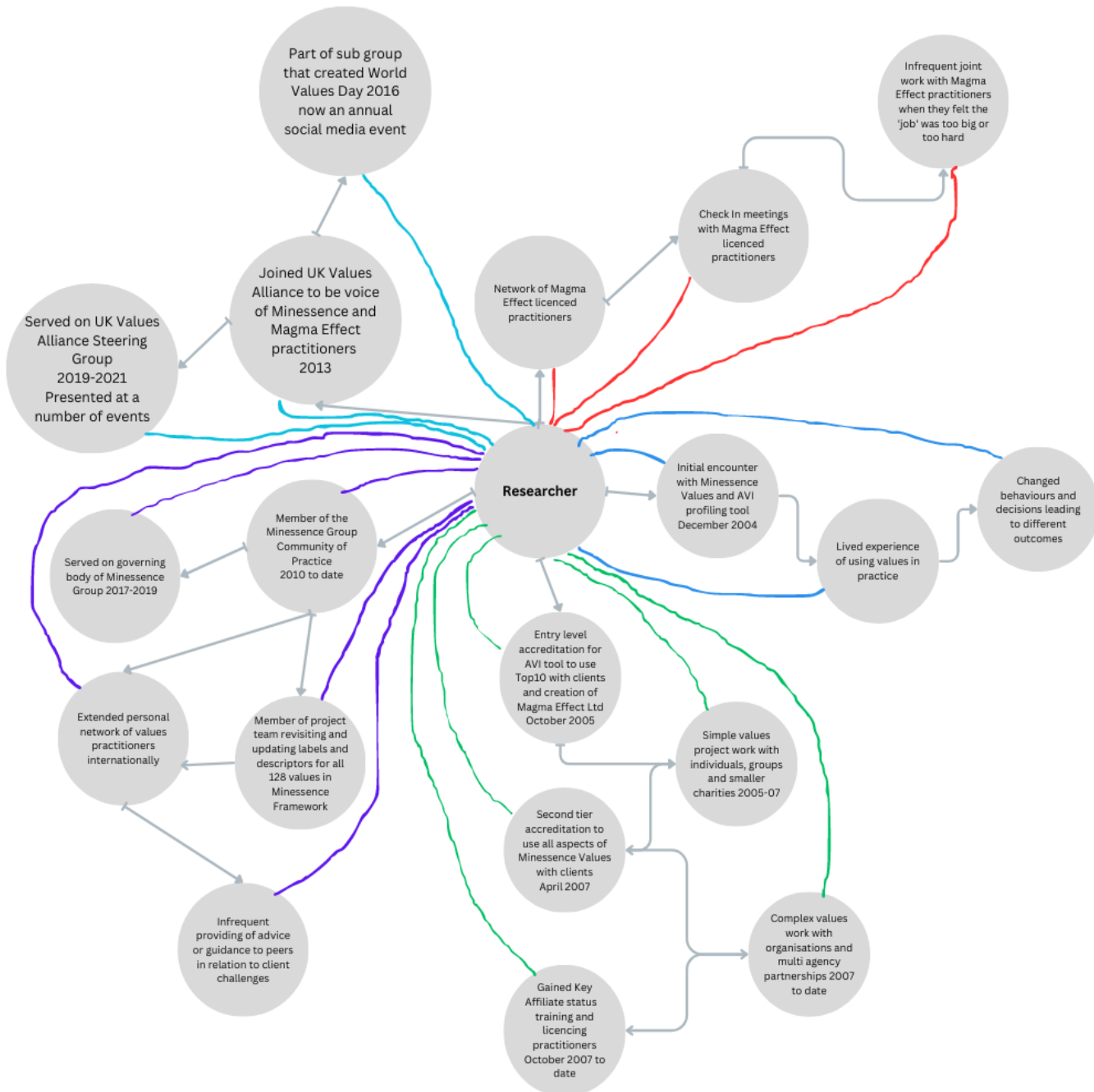
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## Appendix A

Figure A1.1

**Researchers Involvement in Values Field**



Note: colours showing networks and sources of 'feedback'

**Purple** peer to peer connections with Minessence Group

**Turquoise** peer to peer connections with UK Values Alliance and World Values Day

**Red** professional establishment of own network of licensed practitioners

**Blue** direct personal experience of consciously engaging with values

**Green** developmental journey through levels of accreditation with Minessence Group

**A1.1**

**Researchers Top 10 Values from A Values Inventory (AVI)**

<h2 style="margin: 0;">Top 10 Values - Jackie Le Fevre</h2> <p style="margin: 0;">13 February 2020</p>	
Your Top 10 values are listed (in priority order) below.	
	<b>Faith/Risk/Vision (100)</b> - To commit to a vision, cause, or to champion a way of life, even if it means significant personal risk.
	<b>Discovery &amp; Insight (94)</b> - Experiencing moments of intuitive insight leading to increased understanding.
	<b>Minessence (88)</b> - To miniaturise and simplify complex ideas or technology into concrete and practical applications for the purpose of creatively enhancing society.
	<b>Research/Original Knowledge (81)</b> - The systematic investigation and contemplation of truths and principles that lie behind our experience of reality to create and communicate original insights.
	<b>Generosity (75)</b> - To unconditionally share your resources, talents and skills as a way of serving others.
	<b>Transformative Communication (69)</b> - The desire to communicate transformative insights which change the way people view the world and live
	<b>Creativity (62)</b> - Transforming ideas and images into concrete form.
	<b>Decision/Initiation (56)</b> - Taking personal responsibility for setting direction and initiating action.
	<b>Empathy (50)</b> - To deeply relate with others in such a way that they feel understood.
	<b>Family/Belonging (44)</b> - Having a place or sense of home. To be devoted to people you consider family and to experience belonging and acceptance.

**LEGEND:**

**Control Values** are associated with organizing the world around you so as to get things done.

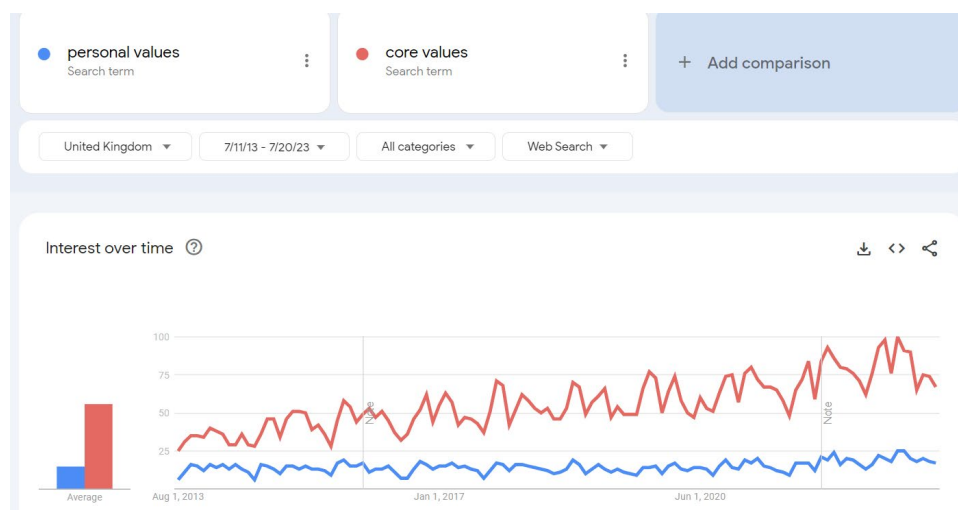
**Relational Values** are associated with relating to others so as to function effectively in relationships, teams, organizations, society and eco-systems.

**Developmental Values** are associated with creating that which has not existed before. They are values of change, evolution and transformation.

## Figure A1.2

### Screenshot of Google Trends

Chart shows the last 10 years results from Google Trends on searches for 'personal values' (blue) and 'core values' (red).



Accessed 20 July 2023 <https://trends.google.com/trends/explore?date=2013-07-11%202023-07-20&geo=GB&q=personal%20values,core%20values&hl=en>

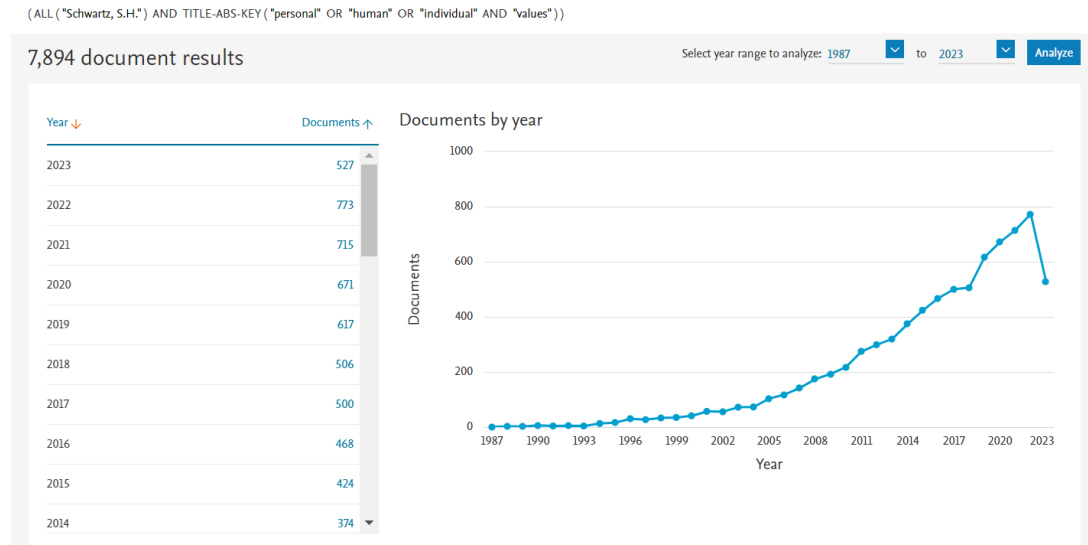




**Figure B2.3**

**Screenshot of SCOPUS Results for Values-Related Documents Published Containing 'Schwartz, S.H.' Since 1987**

Accessed 21 August 2023



**Figure B2.4**

**Screenshot of ConnectedPapers.com Map of Publications Connected to Toward a universal psychological structure of human values, Since 1987**

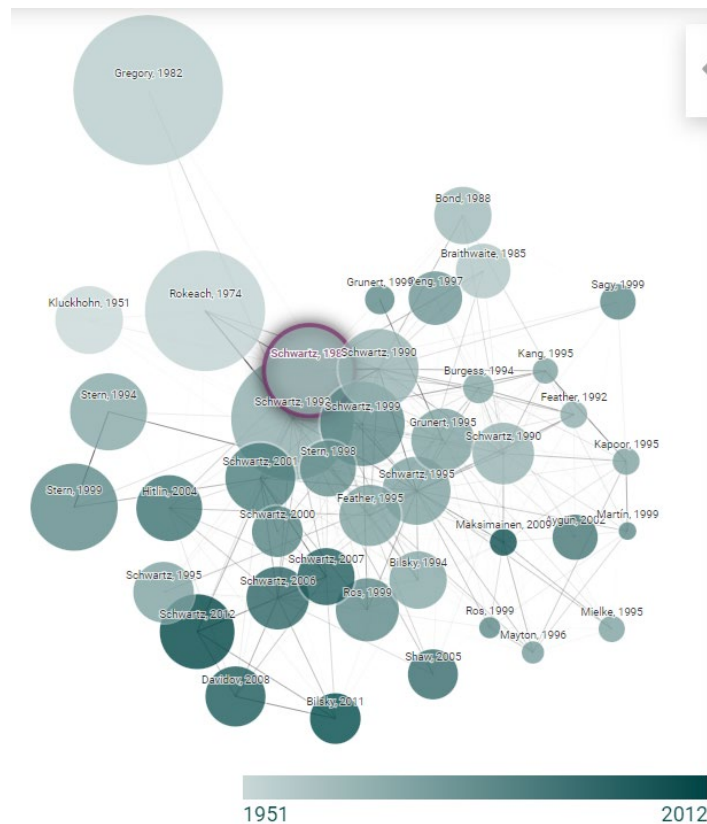


Figure produced on [www.connectedpapers.com](http://www.connectedpapers.com) on 21<sup>st</sup> August 2023

## **B2.1 Examples of globally significant ‘threatening’ events**

- 2001 – September 11<sup>th</sup> terrorist attacks on mainland USA – 2,996 victims died
- 2004 – March 11<sup>th</sup> Madrid train bombings – around 2,000 people injured and 193 died  
December 26<sup>th</sup> Tsunami in Indian Ocean – 230,000 lives lost
- 2005 – July 7<sup>th</sup> bombings in London – more than 700 people injured and 52 killed  
August Hurricane Katrina in USA – 1,200 lives lost, damage around \$106 billion
- 2006 – July 11<sup>th</sup> bombings in Mumbai – around 1,000 people killed or injured
- 2007 – Global financial crisis began
- 2009 – Swine flu pandemic
- 2010 – January 12<sup>th</sup> earthquake in Haiti - 3 million people affected, deaths over 100,000
- 2011 – March 11<sup>th</sup> earthquake in Japan triggers tsunami - 19,747 people died, 6,242 injured and 2,556 missing – damage to nuclear power plant caused meltdown of 3 reactors
- 2013 - #BlackLivesMatter formed in responses to acquittal of Trayvon Martin’s murderer. In May 2020 the murder of George Floyd in police custody amplified awareness of the movement.
- 2014 – worst Ebola epidemic in West Africa – more than 11,000 people died
- 2015 – November 13<sup>th</sup> terrorist attacks in Paris – 130 people killed and 416 injured
- 2017 - #metoo hashtag goes viral heightening public awareness of sexual violence
- 2019 – wildfires cause significant destruction in Brazil and Australia

...and that was all before COVID-19, war in Ukraine, devastating flooding in Pakistan and a cost of living crisis.....

## Appendix C

### C3.1

#### Ethics Approval Notification



### HEALTH, SCIENCE, ENGINEERING AND TECHNOLOGY ECDA ETHICS APPROVAL NOTIFICATION

**TO** Jackie Le Fevre  
**CC** Dr Colleen Addicott  
**FROM** Dr Simon Trainis, Health, Science, Engineering & Technology ECDA Chair.  
**DATE** 29/04/2020

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Protocol number: **LMS/PGR/UH/04146**

Title of study: Exploration of the relationship between wellbeing and a conscious connection with personal values

Your application for ethics approval has been accepted and approved with the following conditions by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

**no additional workers named**

#### **General conditions of approval:**

Ethics approval has been granted subject to the standard conditions below:

**Permissions:** Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

**External communications:** Ensure you quote the UH protocol number and the name of the approving Committee on all paperwork, including recruitment advertisements/online requests, for this study.

**Invasive procedures:** If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and copies of your completed

consent paperwork to this ECDA once your study is complete.

**Submission:** Students must include this Approval Notification with their submission.

**Validity:**

This approval is

valid: From:

29/04/2020 To:

31/01/2021

**Please note:**

**Failure to comply with the conditions of approval will be considered a breach of protocol and may result in disciplinary action which could include academic penalties.**

Additional documentation requested as a condition of this approval protocol may be submitted via your supervisor to the Ethics Clerks as it becomes available. All documentation relating to this study, including the information/documents noted in the conditions above, must be available for your supervisor at the time of submitting your work so that they are able to confirm that you have complied with this protocol.

**Should you amend any aspect of your research or wish to apply for an extension to your study you will need your supervisor's approval (if you are a student) and must complete and submit form EC2.**

Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1A may need to be completed prior to the study being undertaken.

**Failure to report adverse circumstance/s may be considered misconduct.**

Should adverse circumstances arise during this study such as physical reaction/harm, mental/emotional harm, intrusion of privacy or breach of confidentiality this must be reported to the approving Committee immediately.

## C3.2

### Ethics Modification Approval Notification



HEALTH, SCIENCE, ENGINEERING AND TECHNOLOGY ECDA

## ETHICS APPROVAL NOTIFICATION

**TO** Jackie Le Fevre  
**CC** Dr Mark Slaski  
**FROM** Dr Rosemary Godbold, Health, Science, Engineering & Technology ECDA Vice Chair  
**DATE** 11/10/2021

---

Protocol number: **aLMS/PGR/UH/04146(2)**

Title of study: Exploration of the relationship between wellbeing and a conscious connection with personal values.

Your application to modify and extend the existing protocol as detailed below has been accepted and approved by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

**No additional workers named**

**Modification:** Detailed in EC2.

### **General conditions of approval:**

Ethics approval has been granted subject to the standard conditions below:

**Original protocol:** Any conditions relating to the original protocol approval remain and must be complied with.

**Permissions:** Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

**External communications:** Ensure you quote the UH protocol number and the name of the approving Committee on all paperwork, including recruitment advertisements/online requests, for this study.

**Invasive procedures:** If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and copies of your completed consent paperwork to this ECDA once your study is complete.

**Submission:** Students must include this Approval Notification with their submission.

**Validity:**

This approval is valid:

From: 11/10/202

To: 12/12/2022

**Please note:**

**Failure to comply with the conditions of approval will be considered a breach of protocol and may result in disciplinary action which could include academic penalties.**

Additional documentation requested as a condition of this approval protocol may be submitted via your supervisor to the Ethics Clerks as it becomes available. All documentation relating to this study, including the information/documents noted in the conditions above, must be available for your supervisor at the time of submitting your work so that they are able to confirm that you have complied with this protocol.

**Should you amend any aspect of your research or wish to apply for an extension to your study you will need your supervisor's approval (if you are a student) and must complete and submit a further EC2 request.**

Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A or as detailed in the EC2 request. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1A may need to be completed prior to the study being undertaken.

**Failure to report adverse circumstance/s may be considered misconduct.**

Should adverse circumstances arise during this study such as physical reaction/harm, mental/emotional harm, intrusion of privacy or breach of confidentiality this must be reported to the approving Committee immediately.

### C3.3

#### FORM EC6: PARTICIPANT INFORMATION SHEET

**1 Title of study**

*Exploration of self reported connections between wellbeing and a conscious connection with personal values*

**2 Introduction**

You are being invited to take part in a study. Before you decide whether to do so, it is important that you understand the study that is being undertaken and what your involvement will include. Please take the time to read the following information carefully and discuss it with others if you wish. Do not hesitate to ask us anything that is not clear or for any further information you would like to help you make your decision. Please do take your time to decide whether or not you wish to take part. The University's regulation, UPR RE01, 'Studies Involving the Use of Human Participants' can be accessed via this link:

<https://www.herts.ac.uk/about-us/governance/university-policies-and-regulations-uprs/uprs>

(after accessing this website, scroll down to Letter S where you will find the regulation)

Thank you for reading this.

**3 What is the purpose of this study?**

*To enquire of individuals, who have undertaken an inventory of their personal values, whether or not any subsequent impacts upon wellbeing have been noticed which individuals attribute, either wholly or partially, to their conscious connection with their values.*

**4 Do I have to take part?**

It is completely up to you whether or not you decide to take part in this study. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. Agreeing to join the study does not mean that you have to complete it. You are free to withdraw at any stage without giving a reason. A decision to withdraw at any time, or a decision not to take part at all, will not affect any treatment/care that you may receive (should this be relevant).

**5 Are there any age or other restrictions that may prevent me from participating?**

The study is only open to adults aged 18 or over of working age.

**6 How long will my part in the study take?**

If you decide to take part in this study, you will have the choice to either be involved for 5-15 minutes to complete a short online anonymous questionnaire or to be involved for 30-45 minutes to take part in a one to one online meeting.

**7 What will happen to me if I take part?**

The first thing to happen will be that you will receive a consent form via email. After reading the consent form, you are still happy to take part you will be asked to sign and return the consent form to the Principal Investigator, Jackie Le Fevre and arrangements will be made to either supply you with the link for the online questionnaire or to agree a mutually convenient date and time for a confidential online meeting.

**8 What are the possible disadvantages, risks or side effects of taking part?**

(Note: if appropriate for this particular study, you will be asked to agree to any required health screening questionnaire in advance of the study. Please also note that circumstances may arise that could result in the need for you to withdraw from the study; should such circumstances occur, the investigator will discuss the matter with you.)

Taking part does carry a time cost of between 15 and 60 minutes depending on whether you would prefer to complete the online questionnaire or take part in a one to one meeting.

**9 What are the possible benefits of taking part?**

The study is an opportunity to share the insights you have gained from your first hand experience of undertaking and working with an inventory of your personal values. Insights from lived experience have huge potential to improve things: both to improve approaches to working with values in future and enable more grounded information to be given to others about how undertaking their own inventory of values may or may not support them in their everyday work and longer term ambitions.

**10 How will my taking part in this study be kept confidential?**

Access to the online questionnaire will be supplied through a Qualtrics link. You will be able to provide an anonymity code that is known only to you, should you want to discuss your answers with the researcher.

No names will be collected however occupation and age will be collected from participants. This information will be stored separately from the interview transcripts and questionnaire responses in password protected files on a password protected computer.

The online meetings will be recorded using a separate dictaphone device (as is usually used in face to face setting) to avoid any online recording that may not be secure. The transcripts will be made as soon as possible and the original recordings deleted.

The transcripts will only have a participant number and no identifiable demographics. Where names are mentioned, these will be removed from the transcript. The transcripts will be kept in password protected files on a password protected computer. All data will be kept for 5 years and destroyed securely, in line with BPS recommendations.



**11 What will happen to the data collected within this study?**

- The data collected will be stored electronically, in a password-protected environment, for up to 60 months, after which time it will be destroyed under secure conditions;
- The data will be anonymised prior to storage.

**12 Will the data be required for use in further studies?**

- The data collected may be re-used or subjected to further analysis as part of the researcher's PhD which is due to run until Spring 2024; the data to be re-used will be anonymised.

**13 Who has reviewed this study?**

This study has been reviewed by:

- The University of Hertfordshire Health, Science, Engineering and Technology Ethics Committee with Delegated Authority

The UH protocol number is LMS/PGR/UH/04146

**14 Factors that might put others at risk**

Please note that if, during the study, any medical conditions or non-medical circumstances such as unlawful activity become apparent that might or had put others at risk, the University may refer the matter to the appropriate authorities and, under such circumstances, you will be withdrawn from the study.

**15 Who can I contact if I have any questions?**

If you would like further information or would like to discuss any details personally, please get in touch with me by phone or by email: Jackie Le Fevre, email either [jl20aar@herts.ac.uk](mailto:jl20aar@herts.ac.uk) or [Jackie.lefevre@btinternet.com](mailto:Jackie.lefevre@btinternet.com) telephone 0788 6922438

**Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address:**

Secretary and Registrar  
University of Hertfordshire  
College Lane  
Hatfield  
Herts  
AL10 9AB

**Thank you very much for reading this information and giving consideration to taking part in this study.**

**C3.4**

**Participant Consent Form**

FORM EC3

CONSENT FORM FOR STUDIES INVOLVING HUMAN PARTICIPANTS

I, the undersigned [*please give your name here, in BLOCK CAPITALS*]

of

hereby freely agree to take part in the study entitled *Exploration of self reported connections between wellbeing and a conscious connection with personal values*

UH Protocol number LMS/PGR/UH/04146

1 I confirm that I have been given a Participant Information Sheet (a copy of which is attached to this form) giving particulars of the study, including its aim(s), methods and design, the names and contact details of key people and, as appropriate, the risks and potential benefits, how the information collected will be stored and for how long, and any plans for follow-up studies that might involve further approaches to participants. I have also been informed of how my personal information on this form will be stored and for how long. I have been given details of my involvement in the study. I have been told that in the event of any significant change to the aim(s) or design of the study I will be informed, and asked to renew my consent to participate in it.

2 I have been assured that I may withdraw from the study at any time without disadvantage or having to give a reason.

3 In giving my consent to participate in this study, I understand that if I take part in a one to one online meeting a voice recording will take place and I have been informed of how/whether this recording will be transmitted/displayed.

4 I have been told how information relating to me (data obtained in the course of the study, and data provided by me about myself) will be handled: how it will be kept secure, who will have access to it, and how it will or may be used, including the possibility of anonymised data being deposited in a repository with open access (freely available).

5 I understand that if there is any revelation of unlawful activity or any indication of non-medical circumstances that would or has put others at risk, the University may refer the matter to the appropriate authorities.

6 I have been told that I may at some time in the future be contacted again in connection with this or another study.

Signature of participant.....Date.....



Signature of (principal) investigator.....Date

Name of (principal) investigator JACKIE LE FEVRE

### C3.5

#### Online Consent Studies Two and Three

Welcome to this study "Exploration of the relationship between wellbeing and a conscious connection with personal values".

**By clicking on the arrow at the bottom of this page, you give your consent for your responses to be included in this study.** This study has been reviewed by the University of Hertfordshire Health, Science, Engineering and Technology Ethics Committee with Delegated Authority and been assigned the UH protocol number LMS/PGR/UH/04146.

There are nine short questions which invite you to share your reflections on various aspects of life and values. It is likely to take around 6 or 7 minutes to complete.

The full Participant Information Sheet - Form EC6 - is available to read [here](#)

**Who can I contact if I have any questions?** If you would like further information or would like to discuss any details personally, please get in touch with me by phone or by email: Jackie Le Fevre, email either [jl20aar@herts.ac.uk](mailto:jl20aar@herts.ac.uk) or [Jackie.lefevre@btinternet.com](mailto:Jackie.lefevre@btinternet.com) telephone 0788 6922438

**Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address:**

Secretary and Registrar  
University of Hertfordshire  
College Lane  
Hatfield  
Herts AL10 9AB

Thank you very much for reading and considering taking part.

#### C3.6 Consent Study Four Prolific

Welcome to this study "Exploration of the relationship between wellbeing and a conscious connection with personal values".

**By clicking on the arrow at the bottom of this page, you give your consent for your responses to be included in this study.** This study has been reviewed by the University of Hertfordshire Health, Science, Engineering & Technology ECDA and been assigned the UH protocol number aLMS/PGR/UH/04146(3).

There are twenty short questions which invite you to share your reflections on various aspects of life and values. It is likely to take around 4 minutes to complete.

The full Participant Information Sheet - Form EC6 - is available to read [here](#)

**Who can I contact if I have any questions?** If you would like further information or would like to discuss any details personally, please get in touch with me by phone or by email: Jackie Le Fevre, email either [jl20aar@herts.ac.uk](mailto:jl20aar@herts.ac.uk) or [Jackie.lefevre@btinternet.com](mailto:Jackie.lefevre@btinternet.com) telephone 0788 6922438

**Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address:**

Secretary and Registrar  
University of Hertfordshire  
College Lane  
Hatfield  
Herts AL10 9AB

I hereby freely agree to take part in the study entitled "Exploration of the relationship between well-being and a conscious connection with personal values".


Yes I consent

No I do not consent



### C3.7

#### Introduction to Prolific Survey

  
**Exploration of relationship between well-being and a conscious connection with personal values**  
By herts.ac.uk  
£0.70 • £10.50/hr 4 mins 300 places  

This study explores the relationship between personal values and well-being by asking a number of short questions. I will be asking you about your general well-being and your sense of your personal values to discover whether there is a connection between the two.

Devices you can use to take this study:

Desktop  Mobile  Tablet

[Open study link in a new window](#)

### C3.8

#### Participant Identifier

Please give a code that can be used to identify your data should you decide to request its removal from the study

### C3.9

#### Additional Question Block

<p>Work</p> <p>Which of the following describes your work situation?</p> <p><input type="radio"/> Employed</p> <p><input type="radio"/> Self employed</p> <p><input type="radio"/> Freelance/Casual</p> <p><input type="radio"/> Other</p>	*
<p>Attention</p> <p>I am paying attention. Please select Unsure as the answer to this question</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Unsure</p>	*
<p>Tool</p> <p>As far as you can recall have you ever used a personal values profiling tool?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Unsure</p>	*
<p><input type="checkbox"/> Explore</p> <p>As far as you can recall have you previously deliberately spent time exploring your values?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Unsure</p>	*

### C3.10

#### Quantitative Questionnaire Study Two and Three

##### About You

Where do you consider to be your home? Drop down list of countries

What is your age?

18-30 31-45 46-60 61-75 76 or over Prefer not to say

What best describes your gender?

Female Male Non-binary Prefer not to say Prefer to self describe.....

What best describes your ethnicity?

Asian Black Mixed/Multiple White Other Prefer not to say Prefer to self describe....

##### About Your Life

Overall, how satisfied are you with life as a whole these days?

0=not at all 10 = completely

Overall, to what extent do you feel the things you do in your life are worthwhile?

0=strongly disagree 10=strongly agree

##### About You

How much do you agree with the following statements? 0=strongly disagree 10 = strongly agree

I know myself well

I have a strong sense of purpose

I am confident in my decisions

I have core values I hold fast to in my life

My values help me understand why I behave the way I do

My values help me make sense of things

My values help me find my way

I feel clear about my personal values

I have the opportunity to put my values in to practice regularly

### C3.11

#### Prolific Questionnaire Study Four

##### Consent

I hereby freely agree to take part in the study entitled "Exploration of the relationship between well-being and a conscious connection with personal values"

Yes I consent

No I do not consent

##### Prescreen

What is your Prolific ID? (Please note that this response should auto-fill with the correct ID)

What is your employment status?

Full time

Part time

Due to start a job within the next month

Unemployed (and job seeking)

Not in paid work (e.g. homemakers, or retired, or disabled)

Other

On a scale where 0 is Not at all and 10 is extremely

Overall, how satisfied are you with life as a whole these days?

Overall, to what extent do you feel the things you do in your life are worthwhile?

Set 1. Using the slides please show how much you disagree or agree with the following statements about yourself

0-10 Strongly agree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree

I know myself well

My values help me make sense of things

I have a strong sense of purpose

I am paying attention. Select Neither agree nor disagree as the answer to this question.

I feel clear about my personal values

Set 2. Using the slides please show how much you disagree or agree with the following statements about your values

0-10 Strongly agree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree

My values help me find my way

I have core values I hold fast to in my life

I am confident in my decisions

My values help me understand why I behave the way I do

I have the opportunity to put my values in to practice regularly

Work

Which of the following describes your work situation?

Employed

Self employed

Freelance/Casual

Other

Attention

I am paying attention. Please select Unsure as the answer to this question.

Yes

No

Unsure

Tool

As far as you can recall have you ever used a personal values profiling tool?

Yes

No

Unsure

Explore

As far as you can recall have you previously deliberately spent time exploring your values?

Yes

No

Unsure

Demographics

What is your age?

18-30

31-45

46-60

61-75

75+

What best describes your gender?

Female

Male

Non-binary

Prefer not to say

Prefer to self describe

Ethnicity

What best describes your ethnicity?

Asian

Black

Mixed or Multiple

White

Other

Prefer not to say

Prefer to self describe

End of Survey

Identifier Please give a code that can be used to identify your data should you decide to request its removal from the study.

## Appendix D

**Table D4.1 Age breakdown of participants for Study One**

Age bracket	20-29	30-39	40-49	50-59	60-69	70-79
Percentage of respondents	12	16	29	28	12	3

**Table D4.2 Members of Informal Advisory Group**

Name	Values Tradition	Position	Country
Brant Menswar	Black Sheep Values *own approach	Founder	USA
Parker Simon	Hall-Tonna & Minessence	Organisational consultant	USA
Barb Swartz-Biscaro	Minessence	Health and Social Care consultant	Canada
Kathryn McEwan	VIA signature strengths	Creator of Resilience at Work Toolkit	Australia
Tim Matthews	Minessence Developer of the Contemporary Values Framework	Consultant	Australia
Dr Julia Reid	Minessence	Senior Lecturer. Teacher Education, University of Melbourne	Australia
Jurgita Gaukštė	Barrett Values Centre – BVC tools accredited	Organisational consultant	Lithuania
Adeeba Hussein	Minessence	Communications consultant	UK
Rosie Hancock	Career Development Knowdell Career Values	UoH doctoral candidate	UK
Jonas Fathy	MSc (2021) Business Psychology used Schwartz in dissertation	Programme Manager Pilotlight (charity)	UK
Emily McArdle	Minessence	Well-being Teams consultant/Speech and Language therapist	UK
Ed Mayo	Schwartz Author 'Values. How to Bring Values to Life in Your Business'	Chief Executive of Pilotlight (charity) UK Values Alliance Member	UK
Lindsay West	*own approach Author 'The Values Coach'	Life Coach UK Values Alliance Member	UK
Alan Williams	31Practices *own approach Author 'The Values Economy'	Organisational consultant UK Values Alliance Member	UK
Andy Green	*own approach Creator of The Dublin Conversations	Communications consultant University lecturer	UK



**Table D4.3 Descriptive Statistics Study One**

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	108	51	20	71	46.36	12.381	-.223	.233	-.505	.461
When Used Tool	108	4	1	5	2.31	1.293	1.180	.233	.267	.461
Frequency of Use	108	4	1	5	3.61	.841	-.502	.233	.157	.461

**Table D4.4 Crosstabulation of Frequency of Profile Use with Recency of Completion**

When * Frequency Crosstabulation						
How long ago	Frequency of Use					Total
	Daily	Frequently	Sometimes	Rarely	Never	
1 year or less	4	20	10	3	1	38
2-5 years	6	18	16	4	0	44
6-10 years	0	8	1	1	0	10
Over 10 years	2	9	5	0	0	16
Total	12	55	32	8	1	108



**Table D4.8 Applications of Values Connection**

In this table 'themes' are labelled as verbs to reflect the 'doing' dimension decision- making (inc choosing), aligning (inc congruence and coherence), self regulating (inc self compassion), relating (inc connecting with self/others/situations and understanding/appreciating)

Person	Application	Where	Thread
1	What needs to be present, how I ask for feedback – lightbulb moment understanding the values that drive me and making sure these are present in my life	Work	Relating 1 Congruence
2	Started to introduce values-consciousness into the way we work - More conscious awareness of values, both my own and those of others. Greater awareness of the potential for development - both personally and within and across organisations. Greater appreciation of values has inspired and enabled me to embark on some work with others setting out to understand what the stories we tell reveal about our most deeply prioritised values. Early days with this but feels like an opportunity which I would not have been aware of without learning about my own values through the inventory and conversations with someone knowledgeable about values.	Work Recruitment	Relating 1
3	Thinking through my response – as part of a team	Work	Self regulating 1
6	To view company values and consider if the organisation has operationalised them – I use them as a reference point	Work	Aligning
7	To learn more about myself – understand my reactions to difficult situations or people		Relating 2
8	Personal decision-making	Work	Decision Making
9	Helped me to see why I am motivated the way I am in some areas – and then to regulate better		Relating 2 Self regulating 1
10	With co-workers to reflect on areas of alignment and develop team values Gave me confidence/affirmation to move in the direction of my intuition. Gave me "permission" to stop worrying about some of my satiable values. Helped to clarify what I am looking for in others as I build a team that has good alignment with organizational values. Having my top values is like having a compass, helping me to follow my true north. It has helped me understand why some situations cause stress and trigger me...helped me to recognize I can step away from those situations and seek out others that are more compatible with my values.	Work  Peers and team	Relating 1  Self regulating 2
11	I feel more comfy in my skin , I am more forgiving of my own reactions , but I am also better at holding that space & thinking about my responses & more empathic of others reactions & actions - even where I don't agree		Self compassion 2  Relating 1
13	In my decision making, to aid my understanding – something to keep you being you		Decision making Congruence
15	Help me choose what I should do with my next academic year - It has helped me to understand why I have struggled to navigate situations in the past and has prompted me to consider what I want my values profile to look like in the future. Seeing my values inventory helped me to understand why I felt I was having issues with my degree during my first semester of my first year, I feel the inventory would have been very useful when I started university as at the time I didn't understand why I felt discontent, however as I reflect now I can see where the problems were.	Early career	Decision making/choice  Relating 2
16	Take decisions in keeping with my values – more conscious about how I live my life and more sensitive to the needs of others with different World Views	Work	Decision making Relating 2
18	Restructured my whole company to create products and services that align solely with my values – been a barometer to know that I'm making the right decisions for my business	Own business	Congruence Decision making

19	Helped me understand who I am as a person In making some significant life decisions	Setting up my own business	Decision making
20	Helped me to make sense of some things for myself. Having that learning has made me more understanding of the positions of others - I might find them still challenging to be around, but when I see them behaving in a way that impacts me I know at least where it is coming from (their values which are not mine) It also helped me to understand the actions and behaviours of others, especially when they seem contrary to my own beliefs and values.		Relating 2
21	To reassess what I want and what I am working towards		Deciding
22	Something we can align and check back with – that explains why we are doing things in a certain way or helps us stay on track. And they are common to the people in the organisation so it is useful to have those at the core	Work	Aligning
23	Use everyday to guide my own thinking and behaviours.	Work	Self regulation 1
24	Helped me to understand my self and how I work with those around me	Work	Relating 1
25	Allowed me to step back and re-evaluate some of my thoughts, feelings and behaviours		Relating 2
27	It has been a useful reflective tool in itself, but also the fact that it formed the basis of my recruitment process was a positive factor in how I viewed the organisation. It demonstrated an intention to be values-based in all aspects of service provision, rather than having values disconnected from practice.	Recruitment	Aligning
28	Reflecting on career and what feels right for me -My values have always been there at my core but I struggled to articulate them. Having a clear description helps me to short-circuit why things feel right or wrong - because it aligns or clashes with my values.	Both personal and professional purposes	Relating 2
29	Shared with my staff team so they get some insights into my values and working style – helped me understand my strengths and vulnerabilities	Work	Relating 1
30	Reflection on my career aspirations, professional development and within relationships – gave me some focus to developmental areas	Work Home	Relating 1
32	It's made me more aware of my own values, what other people's values are and how these interact		Relating 1
33	Career decisions and recruitment process - It has helped me consider my natural fit when making compatibility, decisions where I would often make a more unilateral almost unemotional decision based on perceived norms.	Career	Aligning Decision making
35	What drove my decision making and my response to certain situations How to position my brand, tell the story of who I am – confidence to be myself - and not try to be what I thought clients wanted me to be - instead I am far happier that I will now attract the right type of clients for my business and ways of working as I have been clear about who I	Own business	Decision making Relating 1 Congruence
36	Deciding strategy and action - More understanding of self, others and the world, and so more effective in dealing with others / issues at all scales... Helps brings some peace in knowing the why of things that happen (at all scales) but some deep frustration (by throwing issues into clear relief) in not being able to do more to influence the trajectory of events at larger scales...		Decision making Relating 1
37	Tightening content so there is alignment to who I am and what I do	New business	Congruence
38	Increased awareness about my own perspective at a given point, with regard to myself and also with regard to others within my team(s)		Relating 1
39	To reflect on priorities and explore what projects/activities are aligned with my values. To reflect on where I could spend more time challenging myself		Aligning
42	A huge difference to my aims/goals planning		Choosing
43	A much better understanding of why I react to situations how I do, progressing to a way to integrate more fulfilment into my day to day and allowing myself to open my mind up to how I want to feel and what I can actually do to implement that. Alongside this there is a lot less weight on my shoulders from trying to spread myself too thin in the		Self regulating 1

	belief that I needed to keep on-top of all of these separate values which I now have the understanding of them being boxed-off.		
44	I was hanging on to a value that I could let go. That has stuck with me and acted as a conscience so that when I feel that value kicking in I pause and think about whether I want to go with it or not.		Self regulating 1
46	Life alignment – greater coherence		Aligning
47	communicating with my partner, expressing myself more proficiently, helping me to make decisions, gives words to describe patterns of my behaviour that I can share with others		Decision making Relating 1
51	Affirmation of what is important to me. A new positive view of myself - financial security is a main driver for me borne from a childhood raised in poverty. Have had comments made about only being money orientated in the past which caused me pain & conflict. Now fully comfortable it's why that is such a driver for me.		Congruence coherence
52	To better understand the reasons why I might be drawn to or repelled from something. To share with colleagues so they understand me better. A good way to bring my whole self to work – more self aware and tolerant of myself and can make choices		Decision making Relating 1
53	I used it to change my career path – took me on another path and has enhanced all my experiences	Career	Choosing
54	In refining my company values, in discussions with my family – more certain of who I say I am	Work and Home	Congruence
55	It informs my thinking about work I might undertake and about what matters to me to do in my day to day life		Aligning Choosing
56	When I feel overwhelmed in my business, I remind myself about my core values and switch to living/working those values – increased focus and less stress when I don't let myself get pulled into other people's value priorities	Work	Aligning Self regulating 1
57	As a reminder of what is important to me particularly when making difficult decisions		Decision-making
58	Could have helped a developmental conversation and conflict resolution with a colleague	Work	Relationships 1
59	I have reflected upon how it influences my work. I have also used my values to integrate better balance into my life outside of work - This has allowed me to build on my strengths. It has also enabled me to recognise why I may be low in mood or feeling off key and look to my values to identify what I can actively change to build a greater sense of well-being.	Work Home	Self regulating 1
60	I used the results to change my outlook on my personality which had a direct effect on the life choices I make on a regular basis. Helped me progress in a more positive way.		Decision-making Self regulating 1
62	Understanding others better and being more empathetic towards them. Aligned how I work and what I focus on in my work to better align with my values. Focussed more on particular values that I wanted to honour and uphold in my everyday life.	Work	Relating 1 Aligning
63	It guides me when I'm trying to wrestle with big questions, understand emotional dilemmas, make decisions - it makes things that I can't articulate much easier to understand, it gives me a language and framework to explore goals, purpose, visions		Decision-making
64	It informs the way I choose to allocate my time, service and depth of involvement in my projects, and those of others who invite me to collaborate -It helps me stay aligned with preferred outcomes and assess benefits, contributing to a sense of being on the 'right' path or adjusting where necessary.		Decision-making Aligning
66	I have more insight into where my energies are going and am able to make productive choices		Decision making/choice
67	To assess against my purpose in life – helps me understand who I am and what I am about		Congruence
68	Helped me gain an understanding of how to describe me		Congruence
69	Able to judge job roles appropriate to me	Job/career	Choosing
70	I reflect on the values that matter to me and how my actions for the day align with them – greater sense of clarity in my chosen direction		Aligning
71	I have used my values to influence my choices – to guide me to make new decisions		Decision making/choice

72	Being consciously aware of my priority values has helped me to manage my stress and anxiety levels, helping me to quickly realise any triggers and implement effective strategies that enable me to bring my priority values in to focus again.		Self regulating 1
73	Clarity regarding the meaningfulness of day to day events and activities. Value alignment with daily tasks has provided enthusiasm, motivation and energy to engage with my work duties. It has also been powerful to understand the values of our staff and has enabled us to understand their key motivators by aligning tasks with what they value.	Work – team management	Aligning Relating 1
74	Helped me direction in my career – I feel more self-assured that I am on the 'right' career path and progression	Career	Aligning
75	When looking at leaving my last job and as an aid in thinking about where I would like to work next	Career	Decision-making
77	Developing people under my supervision and new projects; personal development and direction; and employment opportunities – helped me frame what truly matters to my purpose, focus my efforts to specific areas	Work – team, projects	Aligning
78	Used my restored confidence to help others if I felt they were being humiliated. Shared my report with family and friends Can better understand others: their points of view/opinions/choices they make, helps me to empathise with them	Work? Home	Relating 1
79	Had conversations with my partner and a couple of friends – using it to help shift my energy effort and attention into working/communicating differently Encouraging for me to understand similarities with peers, to help improve my working practice. I also hope to use them to understand others and support me (us all) to achieve the outcomes of my (our) work	Work Home	Relating 1
80	Brought into focus my core values in relation to my working life, where my strengths lie and where the strengths of other managers lie	Work	Relating 1
81	To identify my skills while looking for a new career – more confident in applying for jobs based around my strengths and skills	Career	Coherence
82	In recruitment, in team agreements – better understand myself and others	Recruitment - Team	Relating 1
83	Help me with my own development – understand yourself better and your impact on others		Relating 2
85	To be more free from judgement of others - navigate broader behaviours of both myself and others		Relating 2 Self-regulating 2
86	To look at planning what I need to improve on and where my strengths lie – connecting with others, recognise what is strong to others in order to work well with them		Relating 1
87	I have been able to control my feelings and emotions easier		Self regulating 1
90	Discussed with my direct reports and my manager. Made frequent reference to my values in professional conversations. Realised that I used it to make a difficult career decision - in brief, I was asked based on my experience, skills and profile to join a communications agency to lead their client support and business development work. The business owner is a person I know well and have worked with in the past. On the face of it, this fits with my value of generosity and sharing my skills, knowledge and resources with others. Except it is actually a clash, as I want to do so unconditionally. The thought of attaching a commercial aspect to that sharing and supporting of others professional growth felt awful to me! And was the reason I turned down the offer after many detailed discussions.	Work (Team) Career	Decision-making Aligning
91	I've can overthink things quite a lot which sometimes can talk me out of doing some I'd like to do. This doesn't really affect my personal life where I'm much more willing to take risks on things but anything that is related to my work I can become very risk-averse. While this has helped me and i do appreciate having the ability to take a step back from something and consider the best way forward, even if that means sometimes doing nothing, I realise now that this can hold me back from things like getting a message out there. The value assessment has provided a means for me to articulate and understand why I think		Self regulation 1

	or feel the way I do about certain things which has given me the insight to either dismiss or acknowledge as I choose.- allows me to dismiss a lot of the thoughts I had which gave me anxiety or unwillingness to do something _ feel much more in control and as though I'm doing what I want to do rather than just thinking about it and putting it off		Decision making Choice
92	I've used the original profile to understand myself better and the people I work with. To understand what is important to me and how I must prioritise these things to lead a fulfilling life. My profile changed slightly by the time I did the second one but I've been having some personal problems and it reflected that and again gave me insight into what really matters to me and I have reflected on it a lot as I try to decide where my future lies. I felt like I already understood myself well but it was good to articulate this further so I could understand that while my emotions may change my values are fairly constant and should be used as guiding principles in my life. I feel I definitely need to do more work with them as my emotions generally get the better of me and I want to be able to control them better, rather than letting them control me.	Work	Relating 2  Self Regulation 1
93	To express more clearly who I am and what's important to me. It also supports me in my decision making.		Congruence Decision making
94	I focus on my values as part of my personal and professional development, by checking in on how alive these values are in my daily choices and actions. I invite feedback about how I show up in relation to these values to inform my development at work. I centre myself under difficult times by holding the core energy of my values as the source for how I live life. The difference in my live of the inventory and the reflective action cycle is MASSIVE. My career, family relations, and everyday choices are taken more consciously. My entire life path emerges as a result. And this brings me into living life as a journey where I am evolving, which in turn means that I can take better care of myself and make a better contribution to everyone else - at home and at work. In simple terms, it makes it possible to be my best me, so I can do my best.	Work Home Career	Choice Self Regulation 1 Relationships 1
95	1. Helping me to communicate my needs and strengths to others to help with building professional relationships 2. in helping me reflect on my own needs in my professional and personal relationships Helped with self-kindness, develop more empathetic conversations with individual clients,	Work Home	Relationships 1 Self regulating 2
98	As part of team and personal reflection – particularly looking at leadership approaches – given me a depth of understanding of the 'why' of decision making and organisational challenges	Work	Relating 1
100	It has slowed me down (in a good way) and allowed me to empathise more with the "other". I am finding myself guessing other people's – it's allowed for some self affirmation through self reflection	Work	Relating 1
101	To make decisions at work	Work	Decisions
102	To help me make some big life decisions, set new goals – I know myself better, understand my needs and they help me make decisions		Decisions
103	I have shared with my line manager and it has supported our conversations	Work	Relationship 1
105	Mostly at work and developing new skills to look for new skills to develop on and to work towards bigger things		Choice
106	Self reflection, talking to colleagues and manager, talking to stakeholders and using the language of values more as guiding principles	Work	Relationships 1
107	Used to help relate to team dynamic	Work	Relationships 1
108	Creating my own comms consultancy using my values at the heart of that, I am confident in my decisions	Work	Decision making Aligning
109	Occasionally when I'm struggling with things, I look at my profile and the notes from our conversation to see if I can get a helpful perspective on what's in the way and how else I might be able to approach things. A little more self-compassion. Also the idea of dialoging with values and having choice in the values to bring to the fore feels more empowering (see above). Helps me to think of ways to construct/organise my world that is more energising and fulfilling (sufficiently aligned with my top values)		Choice Self regulating 2 Aligning

#### **D4.1 Interview Narratives Describing Sub Theme: difficulty/conflict/struggle**

Interviews n=19 Interviews containing theme: 10/19

Interviewees contributing to theme: 20-67 years

Gender of interviewees contributing to theme: Female and Male

Occupations of interviewees contributing to theme: student/unemployed & job seeking/in-house staff/freelance/consultant/business owner

Occupational sectors contributing to theme: private, public, voluntary/community (NHS, Higher Education, Hospitality, Childrens Services, Communications, Employee Engagement, Change Management)

P1 It let me look at my fears and insecurities and how values can help me get to grips with those things

P2 I would have struggled to decide what to do next without this insight  
if you feel like you have got a war going on between your head and your heart then it is very useful

P3 because I have not been in work (furloughed) I have been struggling feeling a bit down and feeling a bit bored but then looking at my values I can see things that really get me going so I have been able to work on a bit of that to pick myself up again

P4, 5, 6 & 7 nil

P8 At the time I was wrestling with whether I should focus totally on creativity or continue with communications

P9 used my values to think about when trying to tackle something that feels like an uphill struggle

use my values in personal life, when there is something I feel really angry about I can say 'let it go'

P10 nil

P11 I was very much struggling at the time with my own thoughts my own wants and needs - was my thinking aligned to my values at times when I have felt lost the values have helped me to reconnect with myself and to clarify my thinking and give me the confidence that, almost the confidence of my convictions that whether it works out right or wrong I have been true to me and I have done the right thing for me, it is almost taking that element of worry away



P12 what prompted me to dig deeper in to my values was the fact that I was in a bit of a sticky place with work, wasn't quite happy – well it was more than that I was miserable in work

P13 & P14 nil

P15 there has been a couple of occasions where I feel I have lost my mind and got like you know was talking about something and just gone from 'here' to 'here' (hand gestures to show rise in height) to the extent that I was shouting at my partner recently about 'why weren't they doing enough wellbeing work in their business' and you know X is a Director and they should be prioritising the mental health of their people and they are like 'what...just leave me alone' and I all of a sudden I am like 'ok, it's because this is my top value and I am getting all hysterical about it and I just need to recognise that it's not their value and so I should just chill the hell out'

P16 the patient reaching the end of their life and is rushed in to hospital and dies that same day, just a couple of hours later but before they die they are...they have a photo taken of the pressure sore on their bottom so to me the thing that really jumps out about that is the kind of human dignity that is involved, or not, with that situation because that is one of my core values – erm – whereas someone else who really prioritises efficiency might be horrified because the ambulance that came to take them to hospital was from outside of the county because... you know it came from miles and miles away because all the ones in county were already being used so for them it is kind of a breach of their efficiency kind of value because that just seems to be crazy that this old patient who didn't need to go to hospital was brought in by an ambulance that was not even local to them and they might not even really notice the fact that the patient was hoisted and had the photograph taken because if they didn't really, if dignity wasn't one of their values then that wouldn't necessarily jump out at them from that story

P17 nil

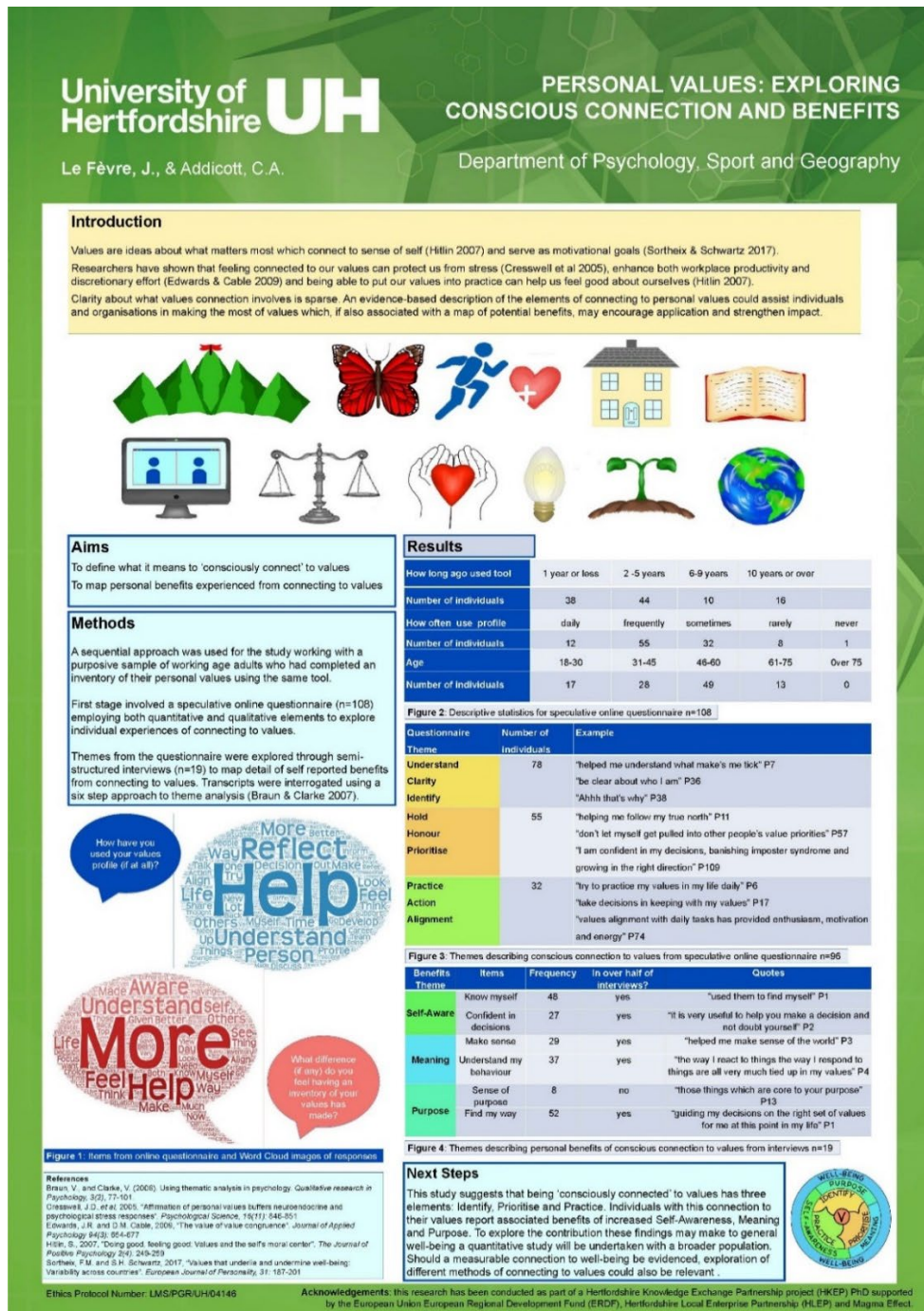
P18 when there have been challenges and working particularly in managing a team it has been really helpful

P19 nil



Figure D4.5

School of Life and Medical Sciences Conference Poster University of Hertfordshire  
May 2022



Feedback received: "The introduction was concise and inviting. However, we found it difficult to understand where the data (particularly in Fig 1) had come from. Some terms needed to be defined: What was the "tool"? And how did we have access to people who had used it over 10 years ago? This lack of clarity coloured the understanding the understanding of the rest of the poster. The poster was visually appealing."

## Appendix E

### E5.1

#### Newspaper Headlines from October to December 2020 and 2021

##### 2020

PM: 'Stay at home, this is a national emergency' – The Guardian 28 March

We're running out of drugs for sickest patients – Sunday Mirror 12 April

Recession like 'we have never seen' – Daily Express 20 May

Pubs to be patrolled as Britain faces 'new normal' – The Times 20 June

£10,000 fines for failing to self-isolate as infections soar – The Observer 20 September

National Lockdown Next Week – The Daily Mail 3 October

Government admits millions may miss out on most effective vaccine –The Guardian 12 November

Covid cases 'must fall faster for a safe Christmas break' – The Scotsman 13 November

Christmas cancelled for millions – The Sunday Telegraph 20 December

Johnson U-turn leaves nation's plans for Christmas in tatters – The Observer 20 December

##### 2021

There may be trouble ahead – The i 7 October

Booster rollout 'too slow' – The Daily Telegraph 19 October

Javid warns of 100,000 daily cases and urges MP's to lead by example – The Guardian 21 October

At last! Minister acts on booster jab chaos – The Daily Mail 24 October

The fright before Christmas – The Sunday Mirror 21 November

Six countries on red list as Covid variant poses 'significant threat' – The Guardian 26 November

Tiers on Steroids – The Sun 22 November

118 days until freedom – The Daily Telegraph 13 December

**Table E5.3**

**Descriptive Statistics Study Two**

**Skewness, Kurtosis, Mean, Median and Maximum in 2020 and 2021 data sets**

Year		Values Connection	Self- assurance	Sense Making	Way finding	Well-being
2020	Skewness	-1.31	-1.04	-1.10	-1.47	-1.17
	Kurtosis	2.27	1.99	2.02	3.04	1.68
	Mean	24.26	15.34	16.08	15.60	15.96
	Median	25	16	16	16	17
	Maximum	30	20	20	20	20
2021	Skewness	-1.73	-1.35	-1.81	1.34	-.87
	Kurtosis	4.59	4.04	5.51	2.48	1.08
	Mean	24.81	15.78	16.29	15.95	14.70
	Median	26	16	17	16	15
	Maximum	30	20	20	20	20

**Table E5.4**

**Independent-samples t-test (two-tailed) results for Values Connection, Self Assurance, Sense Making, Way Finding and Well-being by year**

Component	2020			2021			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Values Connection	552	24.26	4.52	505	24.81	4.51	-.55	-.110, .01	1057	-1.99	.047	.003
Self- assurance	552	15.34	2.66	505	15.78	2.59	-.43	-.75, -.12	1057	2.69	.007	.007
Sense Making	552	16.08	3.02	505	16.29	3.18	-.21	-.58, .17	1057	1.09	.276	.001
Way Finding	552	15.60	3.28	505	15.95	3.13	-.36	-.75, .03	1057	1.81	.070	.003
Well-being	552	15.96	2.98	505	14.70	2.92	1.26	.90, 1.62	1057	6.94	.000	.043

**Table E5.5**  
**Results of Mann-Whitney U Test comparing 2020 and 2021**

Hypothesis	$p$	Decision	Standardised Test Statistic $z$	Effect size $r$
Values Connection distribution same across categories of year	.016	Reject null hypothesis	2.42	.074
Self-assurance distribution same across categories of year	.004	Reject null hypothesis	2.90	.10
Sense Making distribution same across categories of year	.121	Retain null hypothesis	1.55	.048
Way Finding distribution same across categories of year	.059	Retain null hypothesis	1.89	.058
Well-being distribution same across categories of year	.000	Reject null hypothesis	-7.89	-.24

Significance level  $p < .05$

**Table E5.6 Descriptive Statistics for combined 2020 and 2021 data**

	Values Connection	Self-assurance (SA)	Sense Making (SM)	Way Finding (WF)	Benefits (SA, SM, WF combined)	Well-being
N Valid	1057	1057	1057	1057	1057	1057
Mean	24.53	15.55	16.18	15.77	47.50	15.35
Median	25.00	16.00	16.00	16.00	49.00	16.00
Std. Deviation	4.519	2.631	3.096	3.213	7.572	3.02
Minimum	0	0	0	0	9	2.00
Maximum	30	20	20	20	60	20.00
Skewness	-1.50	-1.17	-1.46	-1.42	-1.31	-.95
Standard Error	.08	.08	.08	.08	.08	.08
Kurtosis	3.27	2.82	3.80	2.81	3.02	1.13
Standard Error	.15	.15	.15	.15	.15	.15

### Forward Conditional Binary Logistic Regression Tables

**Table E5.10**  
**Variables in the Equation for Four Models for Percentile 25**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Model 1 <sup>a</sup>	WAY FINDING	.259	.025	110.166	1	.000	1.296	1.235	1.360
	Constant	-3.360	.389	74.405	1	.000	.035		
Model 2 <sup>b</sup>	SELF-ASSURANCE	.160	.033	23.306	1	.000	1.174	1.100	1.253
	WAY FINDING	.194	.028	49.925	1	.000	1.215	1.151	1.282
	Constant	-4.823	.514	88.146	1	.000	.008		
Model 3 <sup>c</sup>	SELF-ASSURANCE	.164	.034	23.884	1	.000	1.178	1.103	1.258
	SENSE MAKING	-.118	.034	12.116	1	.001	.888	.831	.950
	WAY FINDING	.278	.038	54.441	1	.000	1.321	1.227	1.422
	Constant	-4.284	.533	64.526	1	.000	.014		
Model 4 <sup>d</sup>	Values Connection	.071	.028	6.372	1	.012	1.074	1.016	1.134
	SELF-ASSURANCE	.149	.034	19.510	1	.000	1.161	1.086	1.240
	SENSE MAKING	-.164	.039	18.041	1	.000	.849	.787	.916
	WAY FINDING	.240	.040	35.880	1	.000	1.272	1.176	1.376
	Constant	-4.453	.535	69.323	1	.000	.012		

a. Variable(s) entered on step 1: WAY FINDING.

b. Variable(s) entered on step 2: SELF-ASSURANCE.

c. Variable(s) entered on step 3: SENSE MAKING.

d. Variable(s) entered on step 4: Values Connection

**Table E5.11**  
**Inferential test results for Four Models for Percentile 25**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	1212.470 <sup>a</sup>	.124	.171	2.626	.917
2	1188.406 <sup>a</sup>	.143	.199	6.111	.635
3	1175.670 <sup>b</sup>	.154	.213	10.600	.225
4	1169.225 <sup>b</sup>	.159	.220	4.957	.762

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

b. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table E5.12**  
**Variables in the Equation for Four Models for ONS mean**

		B	S.E.	Wald	df	<i>p</i>	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Model 1 <sup>a</sup>	WAY FINDING	.250	.025	100.707	1	.000	1.284	1.223	1.348
	Constant	-3.731	.403	85.903	1	.000	.024		
Model 2 <sup>b</sup>	SELF-ASSURANCE	.161	.033	24.132	1	.000	1.175	1.102	1.253
	WAY FINDING	.185	.028	44.963	1	.000	1.203	1.140	1.270
	Constant	-5.210	.523	99.091	1	.000	.005		
Model 3 <sup>c</sup>	SELF-ASSURANCE	.165	.033	24.960	1	.000	1.179	1.105	1.258
	SENSE MAKING	-.138	.033	17.140	1	.000	.871	.815	.930
	WAY FINDING	.287	.038	55.869	1	.000	1.333	1.236	1.437
	Constant	-4.651	.540	74.291	1	.000	.010		
Model 4 <sup>d</sup>	Values Connection	.077	.028	7.514	1	.006	1.080	1.022	1.142
	SELF-ASSURANCE	.149	.033	20.127	1	.000	1.161	1.087	1.239
	SENSE MAKING	-.187	.038	24.178	1	.000	.830	.770	.894
	WAY FINDING	.245	.041	35.672	1	.000	1.278	1.179	1.384
	Constant	-4.847	.543	79.636	1	.000	.008		

- a. Variable(s) entered on step 1: WAY FINDING.
- b. Variable(s) entered on step 2: SELF-ASSURANCE.
- c. Variable(s) entered on step 3: SENSE MAKING.
- d. Variable(s) entered on step 4: Values Connection

**Table E5.13**  
**Inferential test results for Four Models for ONS mean**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	<i>p</i>
1	1323.114 <sup>a</sup>	.115	.154	3.565	.828
2	1298.009 <sup>a</sup>	.136	.182	13.548	.094
3	1279.954 <sup>b</sup>	.150	.201	9.937	.269
4	1272.283 <sup>b</sup>	.157	.210	6.830	.555

- a. Estimation terminated at iteration number 4 because parameter estimates changed by < .001.
- b. Estimation terminated at iteration number 5 because parameter estimates changed by < .001.



**Table E5.14**  
**Variables in the Equation for Four Models for Percentile 50**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Model 1 <sup>a</sup>	WAY FINDING	.312	.030	108.353	1	.000	1.366	1.288	1.448
	Constant	-5.487	.500	120.223	1	.000	.004		
Model 2 <sup>b</sup>	SENSE MAKING	-.135	.035	14.469	1	.000	.874	.815	.937
	WAY FINDING	.418	.043	95.740	1	.000	1.518	1.396	1.651
	Constant	-5.002	.513	95.130	1	.000	.007		
Model 3 <sup>c</sup>	SELF-ASSURANCE	.120	.035	11.825	1	.001	1.128	1.053	1.207
	SENSE MAKING	-.139	.035	15.343	1	.000	.870	.812	.933
	WAY FINDING	.371	.045	69.394	1	.000	1.449	1.328	1.581
	Constant	-6.080	.618	96.699	1	.000	.002		
Model 4 <sup>d</sup>	Age			8.304	3	.040			
	Age (18-30)	.093	.272	.116	1	.734	1.097	.644	1.869
	Age (31-45)	.503	.254	3.917	1	.048	1.653	1.005	2.720
	Age (46-60)	.299	.300	.992	1	.319	1.349	.749	2.429
	SELF-ASSURANCE	.118	.035	11.192	1	.001	1.125	1.050	1.206
	SENSE MAKING	-.144	.036	16.368	1	.000	.866	.807	.928
	WAY FINDING	.369	.045	67.353	1	.000	1.447	1.324	1.580
	Constant	-6.248	.636	96.569	1	.000	.002		

- a. Variable(s) entered on step 1: WAY FINDING.
- b. Variable(s) entered on step 2: SENSE MAKING.
- c. Variable(s) entered on step 3: SELF-ASSURANCE.
- d. Variable(s) entered on step 4: Age.

**Table E5.15**  
**Inferential test results for Four Models for Percentile 50**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	1264.268 <sup>a</sup>	.133	.180	3.717	.812
2	1249.645 <sup>a</sup>	.145	.197	6.919	.545
3	1237.445 <sup>a</sup>	.155	.210	9.712	.286
4	1229.063 <sup>a</sup>	.162	.219	8.320	.403

- a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table E5.16 Variables in the Equation for Three Models for Percentile 75**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Model 1 <sup>a</sup>	WAY FINDING	.255	.046	31.051	1	.000	1.291	1.180	1.412
	Constant	-6.297	.794	62.913	1	.000	.002		
Model 2 <sup>b</sup>	SELF-ASSURANCE	.160	.055	8.339	1	.004	1.173	1.053	1.307
	WAY FINDING	.185	.051	13.454	1	.000	1.204	1.090	1.329
	Constant	-7.714	.954	65.422	1	.000	.000		
Model 3 <sup>c</sup>	SELF-ASSURANCE	.164	.055	9.047	1	.003	1.179	1.059	1.312
	SENSE MAKING	-.133	.051	6.768	1	.009	.875	.792	.968
	WAY FINDING	.291	.067	19.067	1	.000	1.337	1.174	1.524
	Constant	-7.339	.968	57.530	1	.000	.001		

a. Variable(s) entered on step 1: WAY FINDING.

b. Variable(s) entered on step 2: SELF-ASSURANCE.

c. Variable(s) entered on step 3: SENSE MAKING.

**Table E5.17  
Inferential test results for Three Models for Percentile 75**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	703.275 <sup>a</sup>	.038	.075	3.364	.849
2	694.463 <sup>a</sup>	.046	.090	12.214	.142
3	687.971 <sup>a</sup>	.052	.102	6.442	.598

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

## Appendix F

### F6.1 Email sent to invite Revisit sample

Over the last couple of years you have been kind enough to respond to at least one of the surveys developed as part of my PhD to explore personal values and wellbeing.

I am on the home straight now - lots of writing to do - and would like to collect one final slice of insight from you if you have 6 or 7 minutes free to click through a few questions for the last time.

This is not a general call for help as I am specifically just coming back to those folk who have previously completed this questionnaire and volunteered their email address to do so again.

Here is the link to the survey

[https://herts.eu.qualtrics.com/jfe/form/SV\\_0kX6k9eByuXFn4W](https://herts.eu.qualtrics.com/jfe/form/SV_0kX6k9eByuXFn4W)

I will not be sending nudges or reminders as I am sure that if you can help you will help without being nagged.

I hope life is being fair with you and greatly appreciate everything you have done already to support my work.

All good wishes

Jackie Le Fevre

University of Hertfordshire/Magma Effect

**Table F6.2 Descriptive Statistics 2022 Revisit**

		Values Connection	Self-assurance (SA)	Sense Making (SM)	Way Finding (WF)	Personal Benefits (SA, SM, WF combined)	Well-being
N	Valid	160	160	160	160	160	160
Mean		25.5	16.08	16.86	16.10	49.04	14.94
Median		26.00	16.00	18.00	16.50	50.00	16.00
Std. Deviation		4.05	2.57	2.96	3.39	7.67	3.10
Minimum		3	0	0	0	0	3
Maximum		30	20	20	20	60	20.
Skewness		-1.56	-1.94	-1.82	-1.67	-2.31	-1.29
Standard Error		.19	.19	.19	.19	.19	.19
Kurtosis		5.07	9.01	6.23	4.60	10.91	2.25
Standard Error		.38	.38	.38	.38	.38	.38

**Table F6.10 Variables in the Equation for Two Models for Percentile 25**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Way Finding	.348	.074	22.046	1	.000	1.417	1.225	1.638
	Constant	-4.323	1.153	14.052	1	.000	.013		
Step 2 <sup>b</sup>	Self-assurance	.256	.106	5.818	1	.016	1.292	1.049	1.590
	Way Finding	.280	.080	12.197	1	.000	1.323	1.131	1.548
	Constant	-7.304	1.799	16.484	1	.000	.001		

a. Variable(s) entered on step 1: Way Finding.

b. Variable(s) entered on step 2: Self-assurance.

**Table F6.11 Inferential test results for Two Models for Percentile 25**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	147.862 <sup>a</sup>	.182	.269	6.976	.431
2	141.788 <sup>a</sup>	.212	.314	9.517	.301

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table F6.12 Variables in the Equation for Two Models for ONS Mean**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Way Finding	.330	.071	21.509	1	.000	1.390	1.210	1.598
	Constant	-5.262	1.183	19.802	1	.000	.005		
Step 2 <sup>b</sup>	Self-assurance	.356	.104	11.810	1	.001	1.428	1.165	1.750
	Way Finding	.252	.076	10.947	1	.001	1.286	1.108	1.494
	Constant	-9.787	1.934	25.622	1	.000	.000		

a. Variable(s) entered on step 1: Way Finding.

b. Variable(s) entered on step 2: Self-assurance.

**Table F6.13 Inferential test results for Two Models for ONS Mean**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	<i>p</i>
1	191.251 <sup>a</sup>	.172	.229	5.650	.581
2	177.863 <sup>a</sup>	.238	.318	6.891	.548

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table F6.14 Variables in the Equation for Two Models for Percentile 50**

	B	S.E.	Wald	df	<i>p</i>	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Step 1 <sup>a</sup> Way Finding	.307	.080	14.746	1	.000	1.359	1.162	1.590
Constant	-5.922	1.387	18.226	1	.000	.003		
Step 2 <sup>b</sup> Self-assurance	.284	.109	6.805	1	.009	1.328	1.073	1.644
Way Finding	.235	.084	7.761	1	.005	1.264	1.072	1.491
Constant	-9.407	2.047	21.114	1	.000	.000		

a. Variable(s) entered on step 1: Way Finding.

b. Variable(s) entered on step 2: Self-assurance.

**Table F6.15 Inferential test results for Two Models for Percentile 50**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	<i>p</i>
1	178.581 <sup>a</sup>	.118	.167	11.211	.130
2	171.116 <sup>a</sup>	.159	.223	13.557	.094

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table F6.16 Variables in the Equation for single model at Percentile 75**

	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Step 1 <sup>a</sup> Self-assurance	.333	.115	14.746	1	.004	1.113	1.162	1.749
Constant	-6.998	1.978	18.226	1	.000	.001		

a. Variable(s) entered on step 1: Self-assurance

**Table F6.17 Inferential test results for single model at Percentile 75**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	144.074 <sup>a</sup>	.063	.101	3.358	.645

## Appendix G

### G7.1 Format of Slider QuestionSets on Qualtrics

Set 1



Using the sliders please show how much you disagree or agree with the following statements about yourself

	0	1	2	3	4	5	6	7	8	9	10
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree				
I know myself well											
My values help me make sense of things											
I have a strong sense of purpose											
I am paying attention. Select Neither agree nor disagree as the answer to this question											
I feel clear about my personal values											

Set 2



Using the sliders please show how much you disagree or agree with the following statements about your values

	0	1	2	3	4	5	6	7	8	9	10
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree				
My values help me find my way											
I have core values I hold fast to in my life											
I am confident in my decisions											
My values help me understand why I behave the way I do											
I have the opportunity to put my values in to practice regularly											

**Table G7.2 Prior Engagement with Values**

Form of Engagement	Recall	N	%
Values Tool Use	Yes	17	6.2%
	No	232	85%
	Unsure	24	8.8%
Values Exploration Time	Yes	75	27.5%
	No	173	63.4%
	Unsure	25	9.2%

**Table G7.3 Descriptive Statistics for Prolific data**

	Values Connection	Self-assurance (SA)	Sense Making (SM)	Way Finding (WF)	Benefits (SA, SM, WF combined)	Well-being
Mean	21.9524	15.0183	14.5971	13.8645	43.4799	12.9780
Median	23	15	15	14	45	14
Std. Deviation	5.32626	3.02861	3.39532	3.66320	8.96073	3.85866
Skewness	-.858	-.948	-1.014	-.839	-.917	-.800
Std. Error of Skewness	.147	.147	.147	.147	.147	.147
Kurtosis	1.011	1.970	1.842	1.018	2.024	.536
Std. Error of Kurtosis	.294	.294	.294	.294	.294	.294
Minimum	.00	.00	.00	.00	.00	1.00
Maximum	30.00	20.00	20.00	20.00	60.00	20.00

**Table G7.4 Independent Samples t-test (two tailed)**

	Prior Values Engagement			No Prior Values Engagement			Mean Difference	95% CI	df	t	p	Partial eta squared
	n	M	SD	n	M	SD						
Well-being	78	12.90	4.05	195	13.01	3.79	-.11	-1.13, .91	271	-.22	.828	.000
Values Connection	78	23.03	5.03	195	21.52	5.39	1.50	.11, 2.90	271	2.12	.035	.016
Self-assurance	78	15.01	3.11	195	15.02	3.00	-.01	-.81, .79	271	-.02	.985	.000
Sense Making	78	15.28	3.36	195	14.32	3.38	.96	.07, 1.85	271	2.12	.035	.016
Way Finding	78	14.64	3.73	195	13.55	3.60	1.09	.13, 2.05	271	2.23	.026	.018



## G7.2

### Results of Mann-Whitney $U$ test re Hypothesis 3

*Hypothesis 3:* There will be significant differences in levels of Values Connection, components of benefits and well-being between Prolific and 2022 Revisit.

Revisit population showed Skewness and Kurtosis values of  $>1$  (Appendix VI Table 6.2). Mann-Whitney  $U$  Test used to explore differences between Revisit and Prolific .

The test revealed a significant difference in the level of well-being of Prolific (Md = 14, n = 273) and 2022 (Md = 16, n = 160),  $U = 15909$ ,  $z = -4.65$ ,  $p = < .0005$  .,  $r = .22$ : mean rank Prolific = 194.70 and Revisit = 252.07.

For Values Connection there was a significant difference in the level between Prolific (Md = 23, n=273) and 2022 Revisit (Md = 26, n = 160),  $U = 12456$ ,  $z = -7.4$ ,  $p = < .0005$ ,  $r = .36$ : mean rank Prolific = 181.96 and Revisit = 273.65.

For Self-assurance there was a significant difference in the level between Prolific (Md = 15, n=273) and 2022 Revisit (Md = 16, n = 160),  $U = 166695$ ,  $z = -4.02$ ,  $p = < .0005$ ,  $r = .19$ : mean rank Prolific = 197.61 and Revisit sample = 247.16.

For Sense Making there was a significant difference in the level between Prolific (Md = 15, n=273) and 2022 Revisit (Md = 18, n = 160),  $U = 12259$ ,  $z = -7.59$ ,  $p = < .0005$ ,  $r = .37$ : mean rank Prolific = 181.24 and Revisit = 274.88.

For Way Finding there was a significant difference in the level between Prolific (Md = 14, n=273) and 2022 Revisit (Md = 16.5, n = 160),  $U = 13074$ ,  $z = -6.92$ ,  $p = < .0005$ ,  $r = .33$ : mean rank Prolific = 184.24 and Revisit = 269.79.

**Table G7.13****t-test Comparison of Each Study Population with ONS Data for that Quarter for Each Component of Well-being**

Item	2020 Study			2020 ONS			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Life Satisfaction	552	7.70	1.642	29660	7.34	2.636	-.360	-.58, .14	30210	3.20	.0014*	.0003
Life Worthwhile	552	8.26	1.620	29590	7.69	.878	-.570	-.65, -.49	30140	14.79	.0001*	.0072
Item	2021 Study			2021 ONS			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Life Satisfaction	505	7.11	1.581	25550	7.55	2.854	.440	.190, .690	26053	3.45	.0006*	.0005
Life Worthwhile	505	7.58	1.641	25470	7.79	2.800	.210	-.036, .456	25973	1.68	.093	.0001
Item	2022 Revisit			2022 ONS			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Life Satisfaction	160	7.22	1.512	21360	7.46	2.983	.240	-.224, .704	21518	1.02	.3903	.0000
Life Worthwhile	160	7.72	1.850	21310	7.78	2.607	.060	-.346, .466	21468	.29	.7714	.0000
Item	2022 Prolific			2022 ONS			Mean Difference	95% CI	df	t	p	eta squared
	n	M	SD	n	M	SD						
Life Satisfaction	273	6.48	1.939	21360	7.46	2.983	.980	.62, 1.34	21631	5.41	.0001*	.0014
Life Worthwhile	273	6.92	1.998	21310	7.78	2.607	.860	.55, 1.17	21581	5.43	.0001*	.0017

Note: \*significant  $p < .05$

**Table G7.15**  
**Variables in the Equation for Four Models for Percentile 25**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Way Finding	.245	.043	32.922	1	.000	1.278	1.175	1.390
	Constant	-2.975	.601	24.511	1	.000	.051		
Step 2 <sup>b</sup>	Self-assurance	.135	.061	4.937	1	.026	1.145	1.016	1.290
	Way Finding	.180	.051	12.548	1	.000	1.197	1.084	1.323
	Constant	-4.100	.815	25.322	1	.000	.017		
Step 3 <sup>c</sup>	Age			9.632	3	.022			
	Age (1)	.595	.400	2.217	1	.136	1.813	.828	3.967
	Age (2)	-.417	.399	1.092	1	.296	.659	.301	1.441
	Age (3)	.556	.443	1.576	1	.209	1.745	.732	4.160
	Self-assurance	.164	.064	6.587	1	.010	1.179	1.040	1.336
	Way Finding	.176	.052	11.482	1	.001	1.193	1.077	1.321
	Constant	-4.640	.896	26.796	1	.000	.010		
Step 4 <sup>d</sup>	Age			9.128	3	.028			
	Age (1)	.557	.404	1.901	1	.168	1.746	.791	3.853
	Age (2)	-.370	.402	.848	1	.357	.691	.314	1.518
	Age (3)	.650	.450	2.081	1	.149	1.915	.792	4.630
	Values Connection	-.100	.047	4.513	1	.034	.905	.826	.992
	Self-assurance	.206	.068	9.086	1	.003	1.228	1.075	1.404
	Way Finding	.269	.071	14.498	1	.000	1.306	1.140	1.504
	Constant	-4.383	.908	23.289	1	.000	.012		

a. Variable entered on step 1: Way Finding.

b. Variable entered on step 2: Self-assurance.

c. Variable(s) entered on step 3: Age

d. Variable step 4: Values Connection

**Table G7.16 Inferential test results for Four Models for Percentile 25**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	322.233 <sup>a</sup>	.144	.194	10.985	.139
2	317.217 <sup>a</sup>	.160	.216	8.403	.395
3	307.280 <sup>b</sup>	.190	.257	18.350	.019
4	302.540 <sup>b</sup>	.204	.276	7.059	.530

Note: a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Note: b. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table G7.17**  
**Variables in the Equation for One Model for Percentile 50**

		B	S.E.	Wald	df	<i>p</i>	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Self-assurance	.329	.063	27.656	1	.000	1.390	1.229	1.571
	Constant	-5.994	1.014	34.942	1	.002	.002		

a. Variable entered on step 1: Self-assurance.

**Table G7.18**  
**Inferential test results for One Model for Percentile 50**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	<i>p</i>
1	291.839 <sup>a</sup>	.126	.179	2.956	.889

Note: a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table G7.19**  
**Variables in the Equation for One Model for ONS Mean**

		B	S.E.	Wald	df	<i>p</i>	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Self-assurance	.329	.063	27.656	1	.000	1.390	1.229	1.571
	Constant	-5.994	1.014	34.942	1	.002	.002		

a. Variable entered on step 1: Self-assurance.

**Table G7.20**  
**Inferential test results for One Model for ONS Mean**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	<i>p</i>
1	291.839 <sup>a</sup>	.126	.179	2.956	.889

Note: a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Table G7.21**  
**Variables in the Equation for Three Models at Percentile 75**

		B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratio	
								Lower	Upper
Step 1 <sup>a</sup>	Way Finding	.409	.093	19.554	1	.000	1.506	1.256	1.805
	Constant	-8.579	1.554	30.479	1	.000	.000		
Step 2 <sup>b</sup>	Values Connection	-.143	.074	3.757	1	.053	.867	.750	1.002
	Way Finding	.589	.137	18.588	1	.000	1.802	1.379	2.356
	Constant	-8.030	1.573	26.055	1	.000	.000		
Step 3 <sup>c</sup>	Values Connection	-.234	.085	7.549	1	.006	.791	.670	.935
	Self-assurance	.346	.142	5.907	1	.015	1.413	1.069	1.867
	Way Finding	.522	.139	14.110	1	.000	1.686	1.284	2.213
	Constant	-10.470	1.970	28.258	1	.000	.000		

a. Variable entered on step 1: Way Finding.

b. Variable entered on step 2: Values Connection

c. Variable entered on step 3: Self-assurance

**Table G7.22**  
**Inferential test results for Three Models at Percentile 75**

Model	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test	
				Chi-square	p
1	143.546 <sup>a</sup>	.097	.207	11.493	.119
2	139.889 <sup>a</sup>	.109	.233	9.334	.315
3	133.572 <sup>b</sup>	.130	.277	29.432	.000

Note: a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

**Table G7.24**  
**Descriptives for combined data N=1488**

		Total Well-being	Life Satisfaction	Life Worthwhile	Values Connection	Self-assurance	Sense Making	Way Finding
N	Valid	1488	1488	1488	1488	1488	1488	1488
	Missing	0	0	0	0	0	0	0
Mean		14.9415	7.22	7.72	24.0323	15.5101	16.1116	15.4765
Median		16.0000	8.00	8.00	25.0000	16.0000	17.0000	16.0000
Skewness		-1.020	-.945	-1.010	-1.306	-1.203	-1.295	-1.326
Std. Error of Skewness		.063	.063	.063	.063	.063	.063	.063
Kurtosis		1.362	1.215	1.143	2.340	3.079	2.752	2.550
Std. Error of Kurtosis		.127	.127	.127	.127	.127	.127	.127

### **G7.3**

#### ***Kruskal-Wallis tests of difference for Values Connection, Benefits and Well-being by Age, Gender and Ethnicity***

The first section of G7.3 contains the results for Kruskal-Wallis tests on the combined data of  $n=1488$  ordered by Age, Gender and Ethnicity and calculated for Values Connection, benefits and well-being scales. The second section contains calculations of effect size of significant differences identified.

#### **Section 1**

##### **Age**

###### **Values Connection.**

Significant difference in Values Connection levels across four different age groups (Group 1,  $n = 189$ : 18-30 years; Group 2,  $n = 390$ : 31-45 years, Group 3  $n = 674$ : 46-60 years, Group 4  $n = 235$ : 61-75 years),  $\chi^2(3, n=1488) = 98.45, p = <.0005$ . The youngest age group (18-30 years) recorded a significantly lower median score ( $Md = 22$ ) than 31-45 years ( $Md = 24, p = <.0005$ ), both 46-60 years and 61-75 years ( $Md = 26, p = <.0005$ ). Age group 31-45 years also recorded a significantly lower median score ( $Md = 24$ ) than both 46-60 years and 61-75 years ( $Md = 26, p = <.0005$ ). No significant difference between the two upper age groups of 46-60 years and 61-75 years ( $p = .099$ ).

###### **Benefits.**

Significant difference in benefits levels across four different age groups (Group 1,  $n = 189$ : 18-30 years; Group 2,  $n = 390$ : 31-45 years, Group 3  $n = 674$ : 46-60 years, Group 4  $n = 235$ : 61-75 years),  $\chi^2(3, n=1488) = 98.47, p = <.0005$ . The youngest age group (18-30 years) recorded a significantly lower median score ( $Md = 33$ ) than 31-45 years ( $Md = 47, p = <.0005$ ), 46-60 years ( $Md = 49, p = <.0005$ ), and 61-75 years ( $Md = 51, p = <.0005$ ). Differences between all age groups were significant  $p = <.0005$ .

###### **Well-being.**

Significant difference in Well-being levels across four different age groups (Group 1,  $n = 189$ : 18-30 years; Group 2,  $n = 390$ : 31-45 years, Group 3  $n = 674$ : 46-60 years, Group 4  $n = 235$ : 61-75 years),  $\chi^2(3, n=1488) = 38.70, p = <.0005$ . The youngest age group (18-30 years) recorded a significantly lower median score ( $Md = 14$ ) than 31-45 years ( $Md = 15.5, p = <.0005$ ), both 46-60 years and 61-75 years ( $Md = 16, p = <.0005$ ). No significant differences were found between age groups 2, 3 and 4 ( $p \geq .103$ )

## **Gender**

No significant differences between categories of gender for Values Connection  $p = .08$ , or Personal Benefits  $p = .14$ .

A significant difference was found in Well-being levels across four categories of gender (Female  $n = 993$ ; Male  $n = 477$ ; Non-binary  $n = 9$ ; Prefer self describe/not to say  $n = 9$ ),  $\chi^2(3, n=1488) = 8.47, p = .037$ . Prefer to self describe/not to say recorded a significantly lower median score ( $Md = 12$ ) than Non-binary ( $Md = 18, p = .005$ ), and both Female and Male ( $Md = 16, p = <.05$ ). No significant differences between Female, Male and Non-binary.

## **Ethnicity**

No significant differences between categories of ethnicity for Values Connection  $p = .062$ , Personal Benefits  $p = .755$  or well-being  $p = .506$ .

These results underscore why in the forward conditional binary logistic regression the only demographic descriptor which appears in any models is Age. These results suggest that in broad terms Values Connection, benefits and well-being increase with age.

## **Section 2**

### **Effect size calculations**

Two approaches can be taken to calculation of effect size for a Kruskal-Wallis test: eta-squared and epsilon-squared as shown below, formulae from Tomczak & Tomczak (2014). Effect sizes are reported for all results, irrespective of level of significance as encouraged by Tomczak & Tomczak (2014). First calculations are shown as worked examples.

H is the test statistic, k is the number of groups, n is the total number of observations

$$\text{Eta}^2 = \frac{H - k + 1}{n - k}$$

$$E^2 = \frac{H}{(n^2 - 1)/(n + 1)} \text{ epsilon-squared estimate of effect size}$$

### **Values Connection and Age.**

Age overall

$$\text{Eta}^2 = \frac{98.45 - 4 + 1}{1488 - 4} = 0.0644 \times 100 = 6.44\% \text{ of variance explained by age}$$



$$E^2 = \frac{98.45}{1487} = 0.0662 \times 100 = 6.62\% \text{ of variance explained by age}$$

To err on side of caution for all remaining calculations will use epsilon-squared.

**Table G7.25**  
***Epsilon-squared and percentage variance results for comparison of Values Connection between categories of age***

Age groups compared	$E^2$	% Variance explained
18-30/31-45	0.1376	14%
18-30/46-60	0.2084	21%
18-30/61-75	0.2444	24%
31-45/46-60	0.0708	7%
31-45/60-75	0.1068	11%

Greatest impacts of age difference between the youngest, 18-30 and every other group rising as age difference increases. This finding relates to the idea that values connection can be developed. Younger members of the workforce may need more support and benefit more from support to develop connection more than older colleagues. Although the 31-45 age group also shows significant differences.

**Benefits and Age.**

Overall  $E^2 = 0.0662$ , 7% of variance in Benefits explained by age group.

**Table G7.26**  
***Epsilon-squared and percentage variance results for comparison of Benefits between categories of age***

Age groups compared	$E^2$	% Variance explained
18-30/31-45	0.1220	12%
18-30/46-60	0.1897	19%
18-30/61-75	0.2570	26%
31-45/46-60	0.0678	7%
31-45/60-75	0.1350	14%
46-60/61-75	0.0673	7%

Given the strong monotonic relationship between Values Connection and Benefits not surprising to see the effect sizes for Benefits follow same pattern as for Values Connection namely: greatest impacts of age difference are seen between the youngest, 18-30 and every other group rising as age difference increases. Further underlines the importance of supporting younger members of the workforce to connect to their values and be offered opportunity to experience the benefits of that connection.

**Well-being and Age.**

Overall  $E^2 = 0.000672$  accounting for 0.07% of variance based on age, so although  $p < .0005$  was significant the effect size is very, very small.

**Table G7.27**  
***Epsilon-squared and percentage variance results for comparison of well-being between categories of age***

Age groups compared	$E^2$	% Variance explained
18-30/31-45	0.1115	11%
18-30/46-60	0.1413	14%
18-30/61-75	0.1459	15%

Between age groups only the 18-30’s differ significantly from other groups. Effect size of the difference is smaller than for Values Connection and Benefits.

**Values Connection and Gender.**

Null hypothesis was retained  $p < .076$ , overall  $E^2 = 0.0046$  accounting for 0.05% of variance based on category of gender.

**Benefits and Gender.**

Null hypothesis was retained  $p < .0136$ , overall  $E^2 = 0.0037$  accounting for 0.04% of variance based on category of gender.

**Well-being and Gender.**

Although significant  $p < .037$ , overall  $E^2 = 0.0057$  accounts for 0.6% of variance based on gender which is too small to be of practical impact to this study.

The largest single effect is seen between Non-binary and Prefer to self describe/not say (n= 9) – Non-binary (n = 9)  $E^2 = 0.4028$ , explaining 40% of the variance however the

sample contains small numbers. Non-binary report the highest median of any category of gender. Non-binary/Male  $E^2 = 0.1946$  explains 20% of variance. Non-binary/Female  $E^2 = 0.2081$  explains 21% of variance.

Given the small numbers it is difficult to draw firm conclusions for this data. Additional research with greater numbers of Non-binary and other communities of identity across the gender continuum is needed.

### **Ethnicity.**

No significant results were shown in any category  $p \geq .062$ . Effect sizes were Values Connection and Ethnicity  $E^2 = 0.0007$ , .8%, Benefits and Ethnicity  $E^2 = 0.0022$ , .2% and, Well-being and Ethnicity  $E^2 = 0.0036$ , .4%.