

**ADAPTABILITY AND MINDFULNESS
OF CHINESE KNOWLEDGE WORKERS
IN MULTINATIONAL COMPANIES**

Graham Norris, MBA

Submitted for the qualification of Doctor of Business Administration

Heriot-Watt University
Edinburgh Business School

September 2019

The copyright in this thesis is owned by the author. Any quotation from the thesis or use of any of the information contained in it must acknowledge this thesis as the source of the quotation or information.

Abstract

Important aspects of human activity such as international trade, travel and investment are gaining pace, in what has become known as the “Great Acceleration”. For companies, technology adoption cycles are contracting, disrupting industries and increasing the pressure on workers to adapt. At the same time, mindfulness is attracting attention for its success in improving people’s mental health, including the reduction of stress. This research investigates how a group of 13 Chinese knowledge workers perceive and respond to their rapidly changing environment, and the possible influence of mindfulness on helping them cope with change. Adopting a critical realist approach, in-depth interviews were conducted with individuals at multinational corporations in China and analysed using the Framework process. The research builds on existing theory by developing a process model of adaptability that incorporates the new concept of “adaptability gaps” that need to be addressed in response to change and also highlights the influence of age and experience on successful coping. Evidence supports to some extent the theoretical linkages between mindfulness and adaptability, especially in participants’ attitude and responses to change. Implications for professional practice include the need for organisations to identify and nurture adaptability in their work forces, and for individuals to increase their awareness of change and develop tactics to close the “adaptability gaps” that it creates.

Acknowledgements

I'd like to express my sincere appreciation to my supervisor, Professor Jane Nolan, whose support and advice lost none of their value over the 5,000 miles that usually separated us. I'd also like to thank my mentor, Professor Devi Jankowicz, who helped me navigate the vast seas of knowledge to come up with a workable proposal.

Special thanks go to the American Chamber of Commerce in China, its president, Alan Beebe, for providing a working environment conducive to completing a doctorate, and its members for generously giving up their precious time to participate in the study.

Finally, I'd like to thank my wife, Nicole, for her patience and understanding.

Research Thesis Submission

Please note this form should be bound into the submitted thesis.

Name:	Graham Norris		
School:	Edinburgh Business School		
Version: <small>(i.e. First, Resubmission, Final)</small>	Final	Degree Sought:	Doctor of Business Administration

Declaration

In accordance with the appropriate regulations I hereby submit my thesis and I declare that:

1. The thesis embodies the results of my own work and has been composed by myself
2. Where appropriate, I have made acknowledgement of the work of others
3. The thesis is the correct version for submission and is the same version as any electronic versions submitted*.
4. My thesis for the award referred to, deposited in the Heriot-Watt University Library, should be made available for loan or photocopying and be available via the Institutional Repository, subject to such conditions as the Librarian may require
5. I understand that as a student of the University I am required to abide by the Regulations of the University and to conform to its discipline.
6. I confirm that the thesis has been verified against plagiarism via an approved plagiarism detection application e.g. Turnitin.

ONLY for submissions including published works

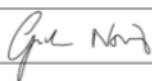
Please note you are only required to complete the Inclusion of Published Works Form (page 2) if your thesis contains published works)

7. Where the thesis contains published outputs under Regulation 6 (9.1.2) or Regulation 43 (9) these are accompanied by a critical review which accurately describes my contribution to the research and, for multi-author outputs, a signed declaration indicating the contribution of each author (complete)
8. Inclusion of published outputs under Regulation 6 (9.1.2) or Regulation 43 (9) shall not constitute plagiarism.

* Please note that it is the responsibility of the candidate to ensure that the correct version of the thesis is submitted.

Signature of Candidate:		Date:	25/9/19
-------------------------	---	-------	---------

Submission

Submitted By <small>(name in capitals)</small> :	Graham Norris
Signature of Individual Submitting:	
Date Submitted:	25/9/19

For Completion in the Student Service Centre (SSC)

Limited Access	Requested	Yes	No	Approved	Yes	No
<i>E-thesis Submitted (mandatory for final theses)</i>						
Received in the SSC by <small>(name in capitals)</small> :				Date:		

Table of Contents

CHAPTER 1: INTRODUCTION	1
1.1. AIMS AND OBJECTIVES	1
1.2. RATIONALE	1
1.2.1. KNOWLEDGE WORKERS	2
1.2.2. CHANGE	2
1.2.3. ADAPTABILITY	3
1.2.4. MINDFULNESS	4
1.3. CONTRIBUTION	4
1.4. DESIGN OF EMPIRICAL WORK	5
CHAPTER 2: LITERATURE REVIEW	6
2.1. BACKGROUND	6
2.2. THE CHINA CONTEXT	9
2.2.1. RAPID ECONOMIC GROWTH	9
2.2.2. TECHNOLOGICAL AND SOCIAL CHANGE	10
2.2.3. CHINA-U.S. RELATIONS	12
2.2.4. ACADEMIC RESEARCH IN CHINA	13
2.2.5. NATIONAL CULTURE	13
2.2.6. SUMMARY	15
2.3. KNOWLEDGE WORKERS	15
2.3.1. DEFINING KNOWLEDGE WORK	16
2.3.2. KEY RESEARCH ON CHINESE KNOWLEDGE WORKERS	18
2.3.3. SUMMARY	20
2.4. CHANGE	20
2.4.1. THE NATURE OF CHANGE	20
2.4.2. RAPID AND ACCELERATING CHANGE	22
2.4.3. SUMMARY	23
2.5. ADAPTABILITY	24
2.5.1. EVOLUTIONARY ORIGINS	24
2.5.2. ORGANISATIONAL DEVELOPMENT	25
2.5.3. TRAINING TO ADAPT	26
2.5.4. ADAPTIVE PERFORMANCE	26
2.5.5. REACTIVE AND PROACTIVE ADAPTABILITY	27
2.5.6. APPRAISAL, STRESS AND COPING	28
2.5.7. WORK-LIFE BALANCE	30
2.5.8. PERSON-ENVIRONMENT FIT	31
2.5.9. INDIVIDUAL DIFFERENCES	32
2.5.10. CRITIQUE OF THE “INDIVIDUAL DIFFERENCES” APPROACH	35
2.5.11. CAREER ADAPTABILITY	36
2.5.12. MODELS OF ADAPTABILITY	36
2.5.13. STUDY OF ADAPTABILITY IN CHINA	38

2.5.14. DEFINING ADAPTABILITY	39
2.5.15. SUMMARY	40
2.6. MINDFULNESS	40
2.6.1. BACKGROUND	41
2.6.2. INCREASING POPULARITY IN THE WEST	41
2.6.3. DEFINITION OF MINDFULNESS	42
2.6.4. MECHANISMS OF MINDFULNESS	43
2.6.5. MEASURES OF MINDFULNESS	45
2.6.6. RELATED CONCEPTS	46
2.6.7. EFFECTIVENESS	47
2.6.8. CHALLENGES IN MEASURING MINDFULNESS	49
2.6.9. MINDFULNESS IN THE WORKPLACE	50
2.6.10. METHODOLOGICAL CHALLENGES	53
2.6.11. CRITICISMS OF MINDFULNESS	54
2.6.12. SUMMARY	55
<u>CHAPTER 3: LITERATURE SYNTHESIS, BASIC THEORY AND RESEARCH</u>	
QUESTION	56
<hr/>	
3.1. MAIN THEMES	56
3.1.1. CHANGE AND CHINA	56
3.1.2. PSYCHOLOGICAL IMPLICATIONS OF CHANGE	57
3.1.3. ADAPTABILITY AND MINDFULNESS	58
3.2. DEVELOPMENT OF BASIC THEORY	59
3.2.1. CHINESE KNOWLEDGE WORKERS ARE FACING A GREAT DEAL OF CHANGE	59
3.2.2. THEY WILL PERCEIVE AND INTERPRET THESE CHANGES IN VARIOUS WAYS	60
3.2.3. CHINESE KNOWLEDGE WORKERS CAN DRAW UPON VARIOUS RESOURCES TO ADAPT TO CHANGE	60
3.2.4. THE PERCEPTION OF CHANGE AND THE ABILITY TO ADAPT TO IT MAY BE INFLUENCED BY MINDFULNESS	61
3.3. RESEARCH QUESTION, AIMS AND OBJECTIVES	61
<u>CHAPTER 4: RESEARCH METHODOLOGY</u>	63
<hr/>	
4.1. THEORETICAL FOUNDATION	63
4.2. RESEARCH STRATEGY	69
4.2.1. STRATEGIC CONSIDERATIONS	70
4.2.2. RELIABILITY	71
4.2.3. VALIDITY	73
4.2.4. RESEARCHER REFLEXIVITY	75
4.2.5. SUBJECTIVITY STATEMENT	76
4.3. RESEARCH DESIGN AND SAMPLING	77
4.3.1. DATA SOURCES	78
4.3.2. DATA SAMPLING	78
4.3.3. SATURATION	82
4.4. DATA COLLECTION TECHNIQUES	82

4.4.1.	IN-DEPTH INTERVIEWS	82
4.4.2.	ETHICAL CONSIDERATIONS	83
4.4.3.	ASSISTANCE	85
4.5.	DATA ANALYSIS	85
4.6.	SUMMARY	86
 CHAPTER 5: DATA COLLECTION AND ANALYSIS		88
<hr/>		
5.1.	IN-DEPTH INTERVIEWS	88
5.2.	ANALYSIS	90
5.2.1.	FAMILIARISATION	90
5.2.2.	IDENTIFYING A THEMATIC FRAMEWORK	91
5.2.3.	INDEXING	91
5.2.4.	CHARTING	92
5.2.5.	MAPPING AND INTERPRETATION	93
5.3.	REVISITING THE SUBJECTIVITY STATEMENT	94
 CHAPTER 6: RESULTS		97
<hr/>		
6.1.	CORE ISSUES	97
6.1.1.	WHAT IS CHANGING?	97
6.1.2.	DRIVERS OF CHANGE	102
6.1.3.	PACE OF CHANGE	108
6.1.4.	ATTITUDES TO CHANGE	109
6.1.5.	PERCEPTIONS AND DEMONSTRATIONS OF ADAPTABILITY	111
6.1.6.	VARIOUS UNDERSTANDINGS OF MINDFULNESS	114
6.2.	CRITICAL THEMES	114
6.2.1.	THE IMPORTANCE OF RELATIONSHIPS	114
6.2.2.	THE INFLUENCE OF WECHAT	120
6.2.3.	APPRAISALS	122
6.2.4.	RESPONSES TO CHANGE	124
6.2.5.	IMPACT OF STRESSFUL EVENTS	131
6.2.6.	EXPERIENCE AND ADAPTABILITY	134
6.3.	INFLUENCE OF MINDFULNESS ON ADAPTABILITY	134
6.3.1.	EQUANIMITY	136
6.3.2.	ACCEPTANCE OF IMPERMANENCE	137
6.3.3.	ATTENTION	138
6.3.4.	AWARENESS	140
6.3.5.	SELF-REGULATION	142
6.3.6.	VALUES CLARIFICATION	145
6.3.7.	FLEXIBILITY	148
6.3.8.	EXPOSURE DESENSITISATION	149
6.4.	SUMMARY	150
 CHAPTER 7: GENERAL DISCUSSION AND THEORY DEVELOPMENT		151
<hr/>		
7.1.	DISCUSSION OF RESULTS	151

7.1.1.	TYPES OF CHANGE	151
7.1.2.	SITUATING CHANGE IN A SOCIO-POLITICAL CONTEXT	152
7.1.3.	ATTITUDE TOWARD CHANGE VS. ADAPTIVE ORIENTATION AND RESISTANCE TO CHANGE	154
7.1.4.	APPRAISAL	154
7.1.5.	ADAPTABILITY GAPS	155
7.1.6.	MINDFULNESS AT WORK	160
7.1.7.	ADAPTIVE PROCESSES	163
7.1.8.	INFLUENCE OF AGE AND EXPERIENCE	165
7.2.	THEORY DEVELOPMENT	165
7.2.1.	CHINESE KNOWLEDGE WORKERS ARE FACING A GREAT DEAL OF CHANGE	165
7.2.2.	THEY WILL PERCEIVE AND INTERPRET THESE CHANGES IN VARIOUS WAYS	166
7.2.3.	CHINESE KNOWLEDGE WORKERS CAN DRAW UPON VARIOUS RESOURCES TO ADAPT TO CHANGE	168
7.2.4.	THE PERCEPTION OF CHANGE AND THE ABILITY TO ADAPT TO IT MAY BE INFLUENCED BY MINDFULNESS	170
7.2.5.	SUMMARY	171
CHAPTER 8: CONCLUSION		173
8.1.	OVERALL OUTCOMES	173
8.2.	ACADEMIC CONTRIBUTION	175
8.3.	PROFESSIONAL CONTRIBUTION	176
8.4.	LIMITATIONS	178
8.5.	SUGGESTIONS FOR FURTHER RESEARCH	180
8.6.	CONCLUDING REMARKS	181
APPENDICES		182
APPENDIX A - TOPIC GUIDE ORIGINAL		182
APPENDIX B - MINDFULNESS QUESTIONNAIRE		184
APPENDIX C - EMAIL INVITATION TO PARTICIPATE IN THE MINDFULNESS QUESTIONNAIRE		189
APPENDIX D - SURVEY INFORMATION SHEET		191
APPENDIX E - CONSENT FORM		193
APPENDIX F - TOPIC GUIDE REVISED		195
APPENDIX H - FOCUS GROUP INFORMATION SHEET		197
APPENDIX I – PILOT STUDY		199
I.1	RESPONDENT DETAILS	199
I.2	METHODOLOGY	201
I.3	RESULTS	202
I.4	SUMMARY	207
APPENDIX J – CODE LIST		208
REFERENCES		211

List of Tables

Table 2.1 - Taxonomies of knowledge worker activities	16
Table 2.2 - Definitions of adaptability.....	40
Table 4.1 - Eight assumptions behind critical realism.....	67
Table 4.2 – Questions of reliability.....	72
Table 4.3 – Characteristics of survey respondents	81
Table 5.1 – Interview participants	90
Table 5.2 – Example classification.....	94
Table 6.1 – Attitudes to change.....	110
Table 6.2 – Personal and interpersonal adaptability	112
Table 6.3 – Macro- and micro-level adaptability.....	113
Table 6.4 – Responses to change.....	124
Table 7.1 – Change responses and related adaptability gaps.....	169
Table I.1 - Details of pilot study focus group participants	201

List of Figures

Figure 2.1 - Global socio-economic trends.....	7
Figure 2.2 – Growth of global digital data creation.....	8
Figure 2.3 - Gross domestic product for selected countries (in trillion US\$)	10
Figure 2.4 - Population for selected countries (in billions).....	10
Figure 2.5 – Chinese Mobile Internet Access Traffic	11
Figure 2.6 - Van Dam’s Resource-Based Framework for Individual Adaptability	37
Figure 4.1 – Survey respondent distribution.....	81
Figure 6.1 – Drivers of change.....	103
Figure 6.2 – Conceptualisations of mindfulness.....	135
Figure 7.1 – Basic process model of adaptability based on data presented in Chapter 6	164
Figure 7.2 – Detailed process model of adaptability	172

List of Abbreviations

KSAO	Knowledge, skills, abilities and other characteristics
MNC	Multinational corporation
AmCham China	American Chamber of Commerce in China

Chapter 1: Introduction

1.1. Aims and Objectives

The aim of the research is to investigate how Chinese knowledge workers at multinational companies perceive and respond to their rapidly changing environment, and whether mindfulness is a useful way of understanding these perceptions and responses.

The objectives are therefore:

- Identify the most salient forces of environment change to Chinese knowledge workers
- Examine how they perceive and interpret these forces
- Explore the resources they employ to adapt to change
- Examine how mindfulness may influence their perception of change and their ability to adapt to it

1.2. Rationale

Numerous studies suggest that industrialised and newly-industrialised societies are in the midst of a “Great Acceleration,” whereby the pace of change in people’s lives is increasing (Steffen *et al.*, 2011; Colvile, 2016). People in these societies now produce and consume more data (Hilbert and López, 2011) and get more frustrated with delays (Zimbardo and Boyd, 2008). Factors such as these are increasing pressure on people, especially at work, to be adaptable. As the stresses of modern life increase, so has interest in the palliative effects of mindfulness (Shapiro, Schwartz and Bonner, 1998; Speca *et al.*, 2000; Grossman *et al.*, 2010). In China, the world’s most populous nation (The World Bank, 2017c), change in some sectors is occurring even more rapidly than in industrialised countries (The Maddison-Project, 2013; IDC, 2018b). Much of the early research on change in China’s labour force focused on the development of the manufacturing sector and the profound consequences of this transition on rural-urban migration (Ngai, 2005; Chang, 2009). However, as part of its goal to move up the global value-chain, recent economic policy in China has focused on shifting from an

over-reliance on manufacturing to the development of a knowledge economy (Altenburg, Schmitz and Stamm, 2008). While the precise definition of a knowledge economy is contested, it is generally accepted that it relies on the intellectual capabilities of certain sections of the workforce, ‘knowledge workers’, and their ability to both contribute to, and adapt to, an accelerated pace of technical and scientific development (Powell and Snellman, 2004). This study therefore examines how the large number of knowledge workers in China adapts to change, and how mindfulness may aid adaptability. A critical discussion of each these concepts is provided in Chapter Two. Summary definitions of their use in this study are outlined below.

1.2.1. Knowledge Workers

The term “knowledge worker” has been in use since the late 1950s (Cordata, 1998; Machlup, 1962), to describe workers who were well-educated; were able to apply theories and conduct analysis; could adopt a “different” approach to work; and had an interest in lifelong learning (Drucker, 1994). However, the term is not without its critics, who question whether it is anything more than a buzzword (Collins, 1997) or if there are really any jobs that don’t involve knowledge (Hagel, Brown and Davison, 2010). In the present study, the term is used to distinguish the subjects of investigation from those primarily engaged in manual or mechanised work, as well as from other “white-collar” workers whose roles require little in the way of expertise or experience (Švarc, 2016). Hence the adoption of Davenport’s definition:

“Knowledge workers have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution or application of knowledge” (2005, p.10).

1.2.2. Change

The study of change as it relates to the workplace crosses many disciplines incorporating many similar concepts presented in different frameworks (Armenakis and Bedeian, 1999), making analysis challenging (Baard, Rench and Kozlowski, 2013). Change can be driven by external or internal factors, sudden or gradual (Orlikowski, 1996). Specific types of organisational change include: work process change, new technology implementation, reorganisation, strategy change, relocation, outsourcing, leadership change, and downsizing (Herold, Fedor and Caldwell, 2007). One of the

most important aspects of change is the pace at which it occurs. Accelerating technological change (Good, 1966) creates not only particular psychological adaptive challenges (Scarlett, 2016), but also difficulties in how it can be researched (Rabenu and Tziner, 2018).

China is of particular interest because of its rapid economic growth, urbanisation, and access to technology (Boston Consulting Group, 2015; The World Bank, 2017b; The World Bank, 2017d). As China's economy develops, the nature of work is changing and along with it demand for knowledge workers, who now number in the tens, if not hundreds, of millions (Wang, 2016).

In this study, the participants' perception of change is the key focus of the investigation and a definition is required that encompasses the broad range of sources of change. In the absence of a suitable definition in the literature, change is here defined as any perceived difference to an individual's work that requires appraisal of its potential impact on how the individual does their work, no matter how the difference arises.

1.2.3. Adaptability

Individual adaptability has been examined from various perspectives: as a skill that can be learnt, as a type of performance, in terms of proactivity and reactivity, as a form of coping, and in terms of individual differences (Ployhart and Bliese, 2006). A number of researchers have tried to develop theories around these various streams of research, including the Resources approach (van Dam, 2013), but, as discussed in more detail in Chapter 2, none has been developed to any great extent. This paper uses the definition provided by van Dam (2013), as hers is the most useful model when discussing the relationship of adaptability to mindfulness:

“Individual adaptability at work: employees' underlying potential as derived from cognitive, affective, and behavioural resources that can be applied to effectively adjust and/or anticipate to [sic] task-related, environmental and vocational demands.” (p.127)

1.2.4. Mindfulness

Academic interest in mindfulness has expanded rapidly over the past few years (Davidson and Dahl, 2018). Research has been conducted into various populations examining mindfulness as a trait, the impact of mindfulness interventions, and aspects of mindfulness in laboratory settings, demonstrating the ability of mindfulness to alleviate the psychological distress and even symptoms of those suffering from disease, as well as those suffering from psychological problems (Brown and Ryan, 2003; Thompson and Waltz, 2007; Baer *et al.*, 2008; Giluk, 2009). As a result, interest is increasing among companies and lawmakers about how mindfulness can be applied in the workplace, in particular to reduce stress and improve performance (The Mindfulness Initiative, 2014; Mindfulness All-Party Parliamentary Group, 2015).

Nevertheless, there are numerous challenges in conceptualising and measuring mindfulness, and its application in the workplace has also been the subject of critical scrutiny. Glomb *et al.* (2011) question whether mindfulness could have counterproductive effects in the workplace, such as by prompting people to become more aware of the importance of, for example, family over their work commitments. Masicampo and Baumeister (2007) argue that mindfulness training is nothing more than a type of self-control exercise. While acknowledging differences in the definition of mindfulness, this study adopts the definition provided by Bishop *et al.* (2004, p.234):

“A process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and a quality of relating to one’s experience within an orientation of curiosity, experiential openness, and acceptance.”

1.3. Contribution

By better understanding how a sample of Chinese knowledge workers view change, and how mindfulness may influence these perceptions, the study contributes to the knowledge base by developing a process model by which people regulate their emotional response to change, and defining more specifically they are adapting to. This has training implications and contributes to theoretical and conceptual debates in industrial and organisational psychology. It also helps inform how mindfulness interventions are deployed in Chinese white-collar populations working for

multinational corporations, and contributes to the development of new kinds of intervention.

The application of mindfulness in the workplace is already proving popular in companies such as Google and General Mills (Williams and Whybrow, 2014), and mindfulness programs designed for the workplace are being developed (see Klatt, Buckworth and Malarkey, 2009; Hunter and Chaskalson, 2013; Klatt, Steinberg and Duchemin, 2015; Klatt *et al.*, 2016). This study builds on the current understanding of change and mindfulness so that it is applicable to the various real-life situations Chinese knowledge workers find themselves in.

1.4. Design of Empirical Work

This study adopts a critical realist approach to address the aims and objectives. Using the Chinese members of the American Chamber of Commerce in China as the sampling frame, the main data collection technique is in-depth interviews. The participants for the interviews were selected based on their level of trait mindfulness, as measured in a survey. The data were analysed using Framework (Ritchie and Spencer, 1994). Framework is based in British social policy research and employs a highly structured process, offering greater methodological transparency and therefore potentially increasing confidence in the conclusions.

Chapter 2: Literature Review

2.1. Background

The world is changing at an increasingly rapid pace. Since around 1950, many measures of human activity including gross domestic product, energy use, telecommunications and transportation use have grown at rates unseen before. This phenomenon has been described as the “Great Acceleration” and is perhaps best depicted at a macro-scale in the graphs produced by the International Geosphere-Biosphere Programme and updated by Steffen *et al.* (2015) (see Figure 2.1). For example, the world’s population grew from around 2.5 billion in 1950 to about 7 billion by 2010, with real gross domestic product increasing from less than US\$10 trillion to more than US\$60 trillion over the same period. In fact, the impact of human activity on the environment has prompted some scientists to suggest the world has moved into a new epoch, the Anthropocene (Steffen *et al.*, 2011).

This acceleration of change can also be seen at a more micro-scale. For example, the amount of digital data created annually is growing at an exponential rate (see Figure 2.2), and is forecast to expand from 33 zettabytes in 2018 to 175 zettabytes in 2025 (IDC, 2018a). Another example is the design cycle time for automobiles in the US, which fell from 60 months to 24-36 months over the five years to 2013 (McGrath, 2013).

In China, the pace of change is no less impressive, with growth in data creation outpacing that globally (IDC, 2018b). According to data compiled by the Maddison-Project (2013), it took Britain more than 60 years to double GDP per capita from \$2,500 to \$5,000 (as measured in 1990 International Dollars), the United States 37 years and China just 10 years. In terms of technological disruption, the data are also eye-opening: to reach 100 million users worldwide, it took 75 years for the telephone, 16 years for the mobile phone, 4.5 years for Facebook and 433 days for WeChat, an instant messaging service popular in China (Incitez China, 2012; Boston Consulting Group, 2015).

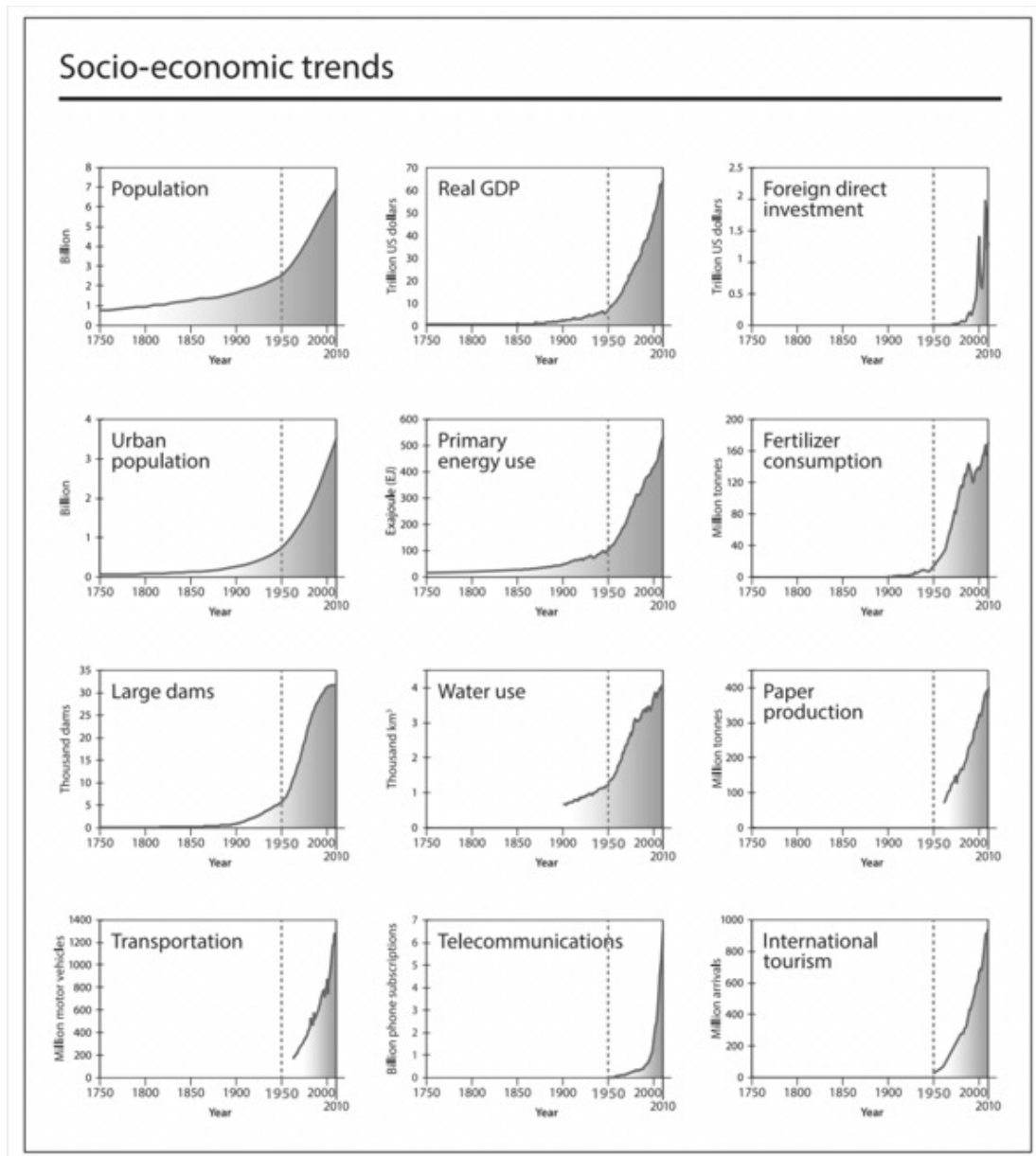


Figure 2.1 - Global socio-economic trends
 (reproduced from Steffen *et al.*, 2015, p.84)

The pace of technological change creates great pressure on companies and their employees to adapt, and failure to change can have huge consequences for them. Kodak, Blockbuster and most recently Nokia are companies that failed to change with the times and collapsed, sometimes very quickly (Yin, Ansari and Akhtar, 2017). To adapt effectively, people now need to process significantly more information than before, creating its own burden. Based on their work into the world's technological capacity to process information, Hilbert and López (2011) estimated that by 2007 each

individual received an amount of information daily equivalent to 174 85-page newspapers, compared with the equivalent of 40 newspapers in 1986.

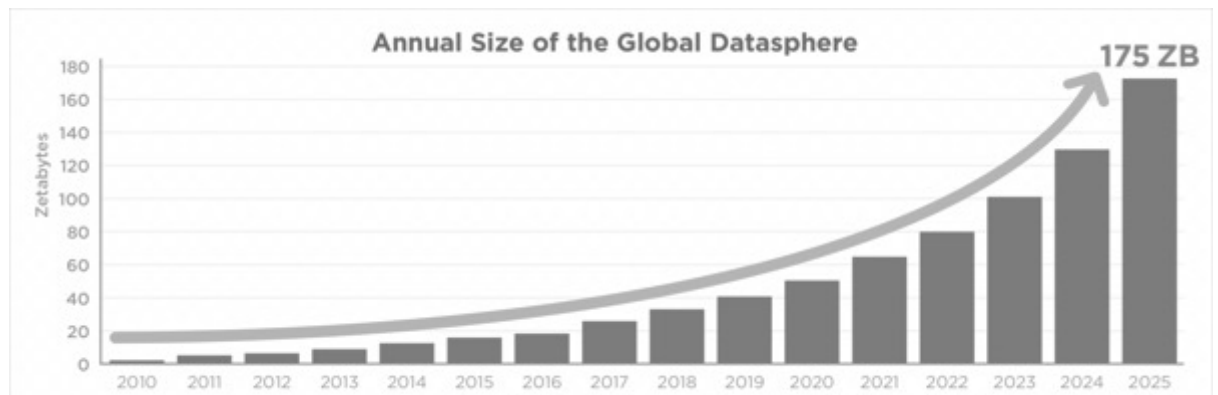


Figure 2.2 - Growth of global digital data creation
(reproduced from IDC, 2018a, p.6)

Rapid change, therefore, is prone to create psychological challenges in terms of discomfort resulting from uncertainty and effective decision-making (Benson and Magee, 2018). In response to the psychological impact of rapid change, individuals will likely adopt one of a range of coping techniques (Folkman and Moskowitz, 2004) derived from their adaptive resources (van Dam, 2013). As a way of facilitating adaptive psychological functioning, mindfulness has attracted increasing attention in recent years (Keng, Smoski and Robins, 2011). In particular, research has shown relationships between mindfulness and adaptability and flexibility in a changing environment, well-being, and behaviour regulation as well as lower emotional reactivity (Kadziolka, Di Pierdomenico and Miller, 2016).

Against this background, the remainder of the Literature Review will proceed as follows. First, the geographical and cultural context will be examined, as even though the study does not aim to compare individuals across cultures or geographies, that the study was conducted in China bears some relevance to how the research was conducted. This will be followed by a brief exploration of the concept of knowledge worker as a way to describe the participants in the study, compared with other terms such as white-collar worker. The discussion will then turn to the more substantial topics of the investigation, starting with change as it relates to the workplace and those working within it. A major part of the Literature Review centres on the issue of adaptability, including the many perspectives on how people view, assess and adapt to change.

Finally, mindfulness is examined for its possible influence on how people view change and their ability to adapt to it.

2.2. The China Context

Before delving into the core concepts of the study, it is important to provide the geographical context. The present study itself makes no attempt to compare populations – all the participants are Chinese nationals. Issues such as similarities and differences in national culture are not therefore central to the investigation. Nevertheless, it is important to acknowledge that the study is being conducted in a particular location and in a cross-cultural context, which has implications for how the research is carried out, the data analysed and the results presented. The cross-cultural aspects are that: the participants, while Chinese, all work for multinational companies and speak as a mother tongue Mandarin Chinese (while this thesis is written in English); the researcher is from a different cultural background from the participants; Heriot-Watt University, and therefore most likely those assessing the thesis, are also from a different cultural background from the study participants; and most existing research on the topics of study has taken place outside of China – exceptions are highlighted where appropriate.

2.2.1. Rapid Economic Growth

As already discussed, China has experienced great change in terms of communications technology. This comes against a backdrop of rapid economic growth emerging from a period of economic and social turmoil. As can be seen from Figures 2.3 and 2.4, for at least the second half of the 20th century, China's economy was not even as large as the U.K.'s despite having a population more than 10 times the size. Yet since 2005, China's economy has expanded rapidly, growing more than 500 percent over the following 10 years (The World Bank, 2017b). On its own, this expansion reflects the momentous change that the country and most of its citizens have gone through over a very short period of time, and these two graphs provide a useful starting point in discussing some other aspects of China that will be relevant to Western readers in understanding the present study.

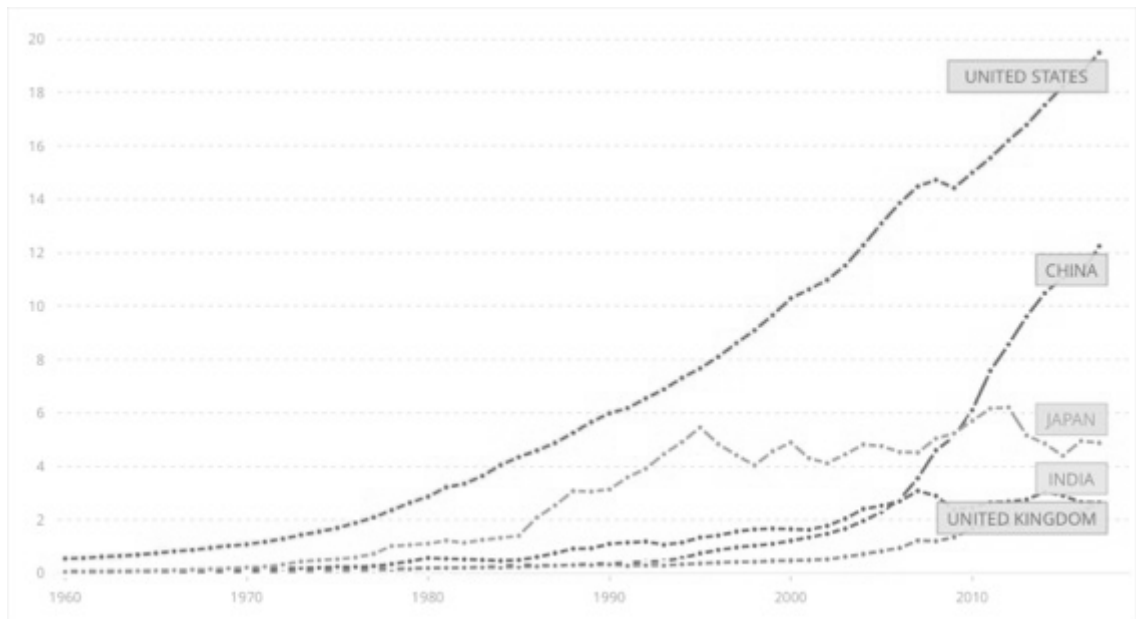


Figure 2.3 - Gross domestic product for selected countries (in trillion US\$)
(World Bank, 2017a)

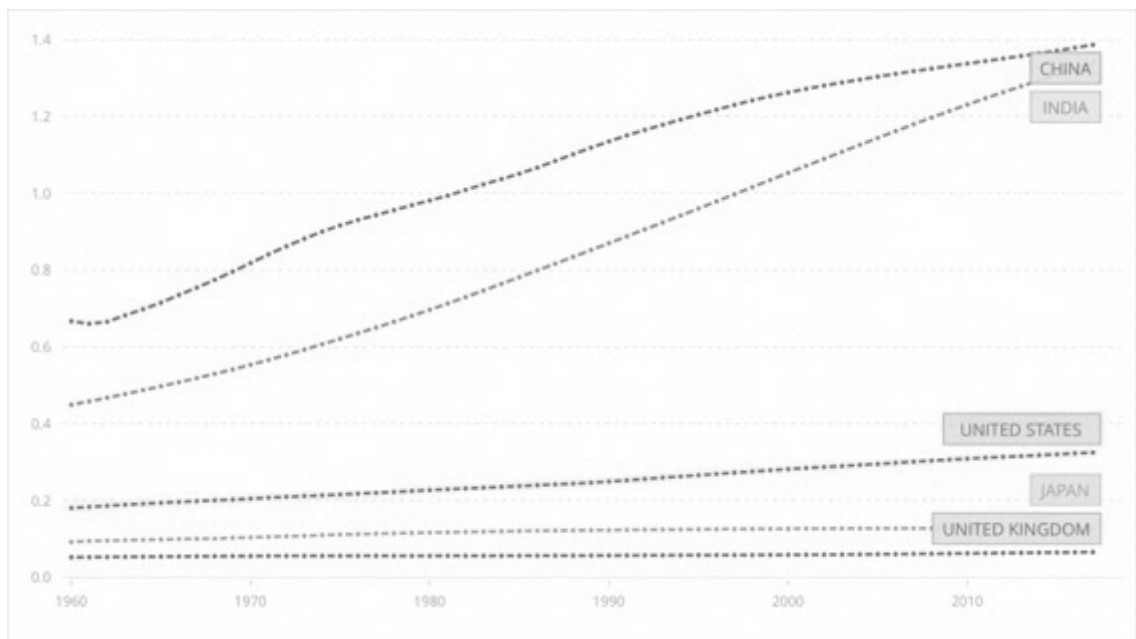


Figure 2.4 - Population for selected countries (in billions)
(World Bank, 2017b)

2.2.2. Technological and Social Change

China has a lot of people, and they are getting closer to each other. At 1.39 billion (The World Bank, 2017c), China's population is the largest in the world, and it has been getting more densely clustered in the cities as the country's urbanisation rate has increased from just under 20 percent in 1980 to 58 percent in 2017 (The World Bank,

2017d) . At the same time, technological advances have greatly accelerated the flows of information and the ability of people to connect with each other. By the end of 2017, the number of Internet users in China reached 772 million, up from 210 million a decade earlier, and of these, 97.5 percent accessed the Internet at least some of the time using a mobile device (China Internet Network Information Center, 2018). In the first 11 months of 2017, data accessed through mobile devices increased by 158 percent over the same period the previous year (China Internet Network Information Center, 2018), as can be seen in the below chart.

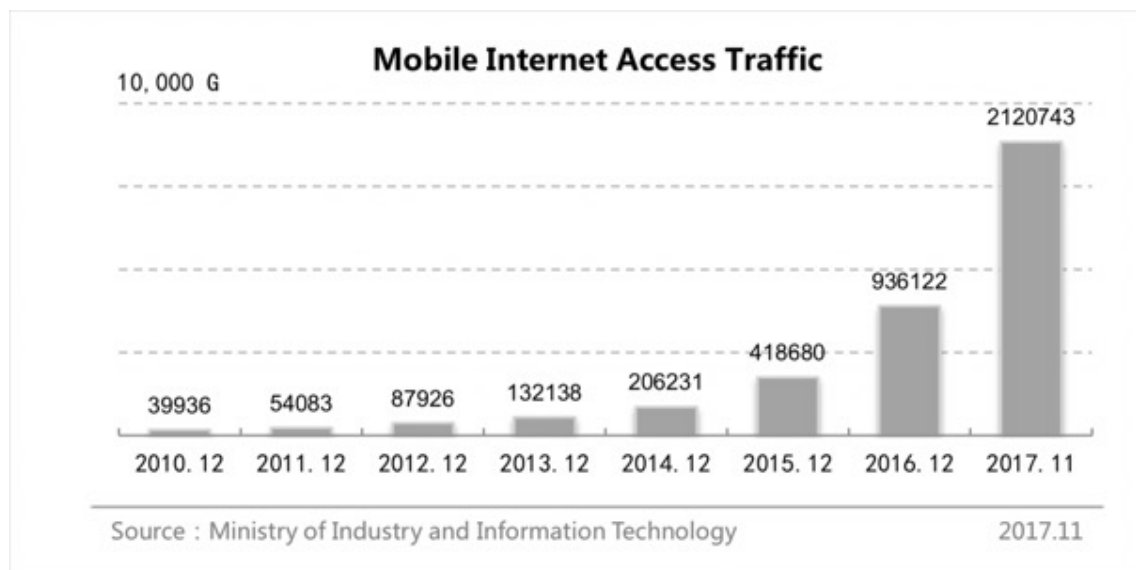


Figure 2.5 – Chinese Mobile Internet Access Traffic
 (reproduced from China Internet Network Information Center, 2018, p.23)

The rapid increase in opportunities for face-to-face and digital interactions, as well as the sharp rise in the use of online social media discussed earlier, therefore suggests that not only will other changes in the economic environment spread increasingly quickly, but also that these changes will be experienced in increasingly social contexts.

When discussing how people engage with one another in the context of China, it is necessary to acknowledge the importance *guanxi*, a Chinese word that loosely translates to “relationships” or “connections.” It has been conceptualised as a uniquely Chinese cultural phenomenon, an institutional system also found elsewhere, or as “purposive network behaviour” (Chang, 2011, p.316). At an institutional level, *guanxi* can be important for foreign MNCs doing business in China (Tam, 2016), but at an individual

level has been found to be more important for workers at state-run companies than private ones (Gu and Nolan, 2015).

Another important aspect of Chinese society is the impact of Communist Party rule. During the second half of the 20th century, the Communist Party oversaw not just economic upheaval but also social upheaval. The Cultural Revolution in particular dismantled much of the fabric of Chinese society at the time, including through the suppression of religion (see Lai, 2005). Religion continues to be tightly controlled (Potter, 2003), and the proportion of Chinese who identify as Buddhist is just 18.2 percent (Pew Research Center, 2012). This means that, even though mindfulness is based on Buddhist teachings, and Buddhism had been a popular religion in China through much of the past 1,500 years (Ch'en, 2015), it is not as familiar to many Chinese as the country's Buddhist heritage would suggest. Moreover, those born after the end of the Cultural Revolution have been found to have very different attitudes and values to those from earlier generations (Fish, 2015). The "post-80s" (九零后- jiu ling hou) generation – referring to those born from 1980 onwards – is defined by not only by the experience of rapid economic growth, but also the impact of the one-child policy, broader opportunities for cultural expression, and globalisation (Lian, 2014). Rapid change since then has also led to the increasing recognition and study of the "post-90s" generation (see, for example, Rosen, 2009; Xu and Chen, 2009; Wei, 2011; Zhou, 2011). Nevertheless, various aspects of traditional Chinese culture continue to perpetuate gender expectations and inequality (Fincher, 2016).

2.2.3. China-U.S. Relations

At a more general level, and of particular relevance to the present study, is the impact of China's rapid expansion on its relationship with the U.S. China's increasing economic power has engendered an increase in nationalism and foreign policy assertiveness that challenges the U.S.'s erstwhile hegemonic power (Schweller, 2018). The increasingly competitive nature of U.S.-China relations has as a result threatened the economic interests of American companies who have come to rely on Chinese markets and supply chains (Blackwill and Tellis, 2015; De Graaff and Van Apeldoorn, 2018). U.S. companies have therefore been experiencing an increasingly challenging operating environment because of strict regulation of foreign companies and increasing scrutiny of compliance with those regulations, with little expectation that the situation will

improve anytime soon (Campbell and Ratner, 2018). As the participants in the study are Chinese nationals working for mostly U.S.-based multinational corporations, shifts in the relationship between the two countries is likely to be salient.

2.2.4. Academic Research in China

Finally, the standard of academic research in China is improving, but remains inconsistent. For four straight years, China was No. 1 on a list of most improved countries for research in several natural science fields produced by Nature Index (Phillips, 2016), prompting the editor's praise: "China's remarkable rise in high-quality research output is now well established, which is why we no longer consider the country a rising star" (p.S49). However, evidence of fraud (The Economist, 2013) and a large number of recent retractions in international journals (Chen, 2017) call into question whether this quality is being maintained across the board. Where possible in the subsequent literature review, relevant research from Chinese-language publications is cited, but published research into relevant topic areas is limited, and it is difficult to assess the quality of these publications.

2.2.5. National Culture

The present study does not aim to compare individuals from different national cultures, yet most of the existing research has been conducted in Western working environments, so models of national culture could be of interest in explaining how Chinese knowledge workers perceive change. A pioneer in the field of cultural research is Geert Hofstede, who defined culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 2001, p.9). He also developed several rating scales by which national cultures could be described: power distance, uncertainty avoidance, masculinity, individualism and long-term orientation. While Hofstede's original study did not include China, he did develop a fifth dimension – long-term orientation – based on the results of the Chinese Values Survey developed by Bond (reported in Hofstede and Bond, 1988) and including participants from Hong Kong and Taiwan. Characteristics of societies with high long-term orientation include persistence, personal adaptability and "adaptation of traditions to new circumstances" (Hofstede, 2001, p.360). China is also included in the GLOBE Project (Global Leadership & Organizational Behavior Effectiveness, 2004), which is based on Hofstede's work. For example, China's score for uncertainty avoidance,

defined as “the extent to which a society, organisation, or group relies (and should rely) on social norms, rules, and procedures to alleviate unpredictability of future events,” was 4.94 on a scale of 1 to 7, compared with an average of 4.16 for all countries covered in the project.

However, despite the widespread use of such scales, Hofstede’s work also has its limitations and detractors (Orr and Hauser, 2008). As Hofstede and others point out (Hofstede, 2001; McSweeney, 2013; Venaik and Brewer, 2013), dimensions can be applied only at the national level, and can not be used to either describe an individual or even measure the individual compared to others, the so-called “ecological fallacy”. Moreover, McSweeney levels several criticisms of Hofstede’s specific scales, including the representativeness of the sample – which was based on workers at just one company, and included very small samples for some countries – the validity of the questionnaire and the extent to which cultural “dimensions” can really be derived from it (McSweeney, 2002). However, McSweeney offers nothing in the way of a competing perspective, reflecting the scepticism of several researchers regarding the feasibility of studying culture as a stable construct at a national level (Tung, 2007). These criticisms are particularly apt for China, where, as already discussed, economic and social change has been rapid in recent years. Although differences between particular pairs of countries may be generally stable, they do shift over time (Tung, 2007; Beugelsdijk, Maseland and van Hoorn, 2015), which is particularly likely in the case of China. Indeed, in a longitudinal study of managerial work values in China and the U.S., Ralston *et al.* (2006) found that four of the eight values studied changed significantly over the period of the study. However, the study covered the years 1989 to 2001 and, as already discussed, economic development in the country has accelerated significantly since then. Moreover, as China encompasses more than a billion people of various ethnicities speaking dozens of languages (Kurpaska, 2010), the concept of “national culture” is further challenged.

Disagreement over the significance of national culture also frames an on-going debate over whether management research should treat China differently to other countries. Research into management has fallen into two main camps: developing a “theory of Chinese management” based on theories originally developed elsewhere, and a “Chinese theory of management” that focuses on what’s different about China (Barney and Zhang, 2009). These two approaches have also been referred to as “outside in” and

“inside out” (Tsui, 2006). In contrast to focusing on how the theory is generated, Child (2009) argues that the important point is whether theory can be validated and used for comparisons with other cultures. Child (2009) also highlights that until the late 1970s, China did not have much of a management culture to study and that rapid economic development over the past 30 years means what is currently being studied is neither fixed nor consistent across locations.

Given the challenges in conceptualising national culture and the disagreements over its relevance, the present study treads cautiously in applying “cultural” concepts to the analysis or interpretation of the data. Particular attention is paid to avoiding the ecological fallacy of making assumptions about the individual participants based on their national culture, and the supposed cultural features that nationality implies. Rather, importance will be placed on the expressed experiences of the participants, and commonalities or differences based on location addressed as appropriate.

2.2.6. Summary

Several aspects make China an interesting place to conduct research. Its size, long and rich history, and recent rapid economic growth mean its importance in the global economy has yet to be reflected by contemporary investigation. As a theatre for the study of change and adaptability, therefore, it appears ideal. Yet the research aims to remain open-minded about the implications of where it is conducted to avoid making unwarranted inferences regarding national culture, if such a term can even be applied to a country as large and diverse as China. While capitalising on an opportunity to redress the paucity of research on change, adaptability and mindfulness in China, therefore, the research will also balance the need to recognise potential “cultural” commonalities, such as *guanxi*, among the study participants with the substantial limitations of existing research into national cultures, especially as they apply to contemporary China.

2.3. Knowledge Workers

Having set the context, the discussion now addresses the issue of exactly what a knowledge worker is, how this term relates to similar terms and what it means in China.

2.3.1. Defining Knowledge Work

While Machlup (1962) is sometimes credited with being a pioneer in the study of knowledge workers during the 1950s and 1960s (Cordata, 1998), the renowned management consultant and author Drucker (1994) lays claim to coining the term in his 1959 book, *Landmarks of Tomorrow*. However, definitions of knowledge workers are hard to come by. Drucker (1994) himself never provided a satisfying definition, simply describing their characteristics: Well-educated; able to apply theories and conduct analysis; adopt a “different” approach to work; interest in lifelong learning. Knowledge workers have also been defined by the actions that they take, as shown in the table below (Reinhardt *et al.*, 2011).

(Davenport, 1999)	(Davis, 2003)	(Sellen and Harper, 2003)	(Efimova, 2004)	(Holsapple and Jones, 2004, 2005)	(Hädrich, 2008)	(Bernstein, 2010)
acquisition application creation dissemination documentation packaging	authoring review planning collaboration communication	acquiring annotating composing organizing processing	awareness collaboration conversations creativity establishing and maintaining relations exposure lurking making sense of information organizing ideas	acquisition assimilation control coordination emission generation leadership measurement selection	acquisition authoring co-authoring expert search feedback invitation training update	analyzing applying evaluating organizing presenting retrieving securing sharing storing

Table 2.1 - Taxonomies of knowledge worker activities
(reproduced from Reinhardt *et al.* 2011).

While characteristics take us some of the way to understanding what knowledge workers are, Davenport takes us one step further with this definition: “Knowledge workers have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution or application of knowledge” (2005, p.10). As well as a definition, Davenport also offers a list of job types according to the US Bureau of Labor Statistics:

- management
- business and financial operations
- computer and mathematical
- life, physical and social scientists
- legal
- healthcare practitioners
- community and social services
- education, training and library

- arts, design, entertainment, sports, media

When he was writing, in 2005, these professions made up 28 percent of the U.S labour force, which by 2015 had risen to 37 percent (U.S. Bureau of Labor Statistics, 2015). However, this list seems to make the obvious omission of architecture and engineering occupations, which if added in would bring the total to 57.94 million people, or 39 percent of the U.S. population, according to the U.S. Bureau of Labor Statistics.

In a summary of the literature on knowledge workers, El-Farr (2009) concludes that the vague definitions of the term undermine its relevance to the analysis of work forces. Indeed, from the mid-1990s onward, the term knowledge worker has been frequently attacked, with the concept of knowledge-intensive firms, organisations and workers questioned because of ambiguity over terminology (Alvesson, 1993). Blackler (1995), for example, believes the abstract concept of knowledge, a thing that is acquired, is inferior to the more material concept of knowing, which is what people do. Collins (1997) describes the term as a buzzword, and that it would be more fruitful to examine the “working knowledge” of everyone in the work force. There is also the argument that all employees are knowledge workers to some extent, as even routine work requires improvisation and judgment (Hagel, Brown and Davison, 2010), and that certain knowledge workers (termed innovation workers) have greater insight than others (Patalas-Maliszewska, 2013).

Nevertheless, knowledge worker may have use in distinguishing worker types from the more general “white-collar” workers. White-collar worker has its roots in studies of social stratification that emphasise occupation as a marker of class (Goldthorpe, 1960; Weber, 2009). Whereas “white-collar” had been a useful way to describe those working in the relatively well-paid and comfortable office jobs, the increasing economic importance of service industries means this class of workers now features many people with relatively low skills and education (Švarc, 2016). The term remains problematic (Savage *et al.*, 2013) but is usually taken to refer to a job that does not involve manual labour though may still be relatively low-skilled (Crompton, 2008). Unfortunately, white-collar worker is now so generally used that few studies discuss its explicit meaning (for example Murray and Khan (2014) and Kelly *et al.* (2010)).

For the purposes of the present study, therefore, Davenport's definition will be adopted, namely, "Knowledge workers have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution or application of knowledge" (2005, p.10). This definition distinguishes the subjects of the study from those primarily engaged in manual or mechanised work, as well as from other "white-collar" workers whose roles require little in the way of expertise or experience.

2.3.2. Key research on Chinese Knowledge Workers

While "white-collar worker" might have wider currency, the term knowledge worker has nevertheless attracted some attention among Chinese academics, and has at least four ways of being translated into Chinese (Liao and Wen, 2009). All the translations use the same Chinese word for knowledge (知识-zhi shi), but different words for worker: 员工-yuan gong, literally "employee;" 工作者-gong zuo zhe, literally "someone who works;" 工人-gong ren, literally "worker." The most common term is 知识型员工 (zhi shi xing yuan gong), literally "knowledge-type employee" (Zhan, Tang and Zhang, 2013). The limited amount of empirical work conducted in Chinese has focused on the characteristics of knowledge workers. A study of Chinese-language articles on the subject, for example, found that independence and high level of turnover were the two most frequently mentioned characteristics of knowledge workers (Zhan, Tang and Zhang, 2013).

In terms of numbers, direct comparison with US data is not feasible given differences in the data collection and analysis of labour statistics as conducted by China's National Bureau of Statistics (Wang, 2016). Wang (2016) nevertheless derived four measures of knowledge workers based on occupational categories and level of educational achievement data collected by the National Bureau of Statistics. The narrowest measure included only "unit heads" and professional and technical personnel with a degree or higher, numbering 37,120,975 people in 2010, or 4.9 percent of the working population. The broadest measure also included "clerks and related workers" as well as those without a college degree in all three occupational categories, and amounted to 98,175,450 people in 2010, equivalent to 12.9 percent of all workers, or just under 8 percent of the population. With China's economy still growing at more than 6 percent (The World Bank, 2017a), that figure could be expected to rise, as it did in the U.S.

To date, the key themes that have been investigated in the study of Chinese knowledge workers include relationships between psychological factors and productivity outcomes as well as the important influences of social network, job design and supervisor support. For example, Bartol *et al.* (2009) found that among information technology professionals, job insecurity moderated a positive relationship between perceived organisational support and knowledge sharing. This study's strength was in the size of the sample (255) and that two sources of data, the IT professionals and their supervisors, were utilised, although the applicability of the findings to other industries may be limited. In a study limited to one company and a single measure of job performance, Chen and Gable (2013) found that for auto engineers, there were limits to the marginal benefits of wider social networks beyond a certain point. Yan, Peng and Francesco (2011) demonstrated the relative importance of job design on the effectiveness of both knowledge workers (computer programmers) and manual workers (cleaning and maintenance workers) at a Chinese information technology company, noting that job enrichment improved the performance of knowledge workers but harmed the performance of manual workers, although the small sample size for each group in the quasi-experimental research was a major limitation.

Studies that focus more specifically on psychological factors include Peng's (2012) research on the role of personality variables in predicting counterproductive work behaviours in Chinese knowledge workers. Peng's study of employees from Chinese information technology and software companies found that variables such as agreeableness, conscientiousness, neuroticism, and locus of control could predict counterproductive work behaviours, although the sample was small and substantial bias is likely when relying on self reports of counterproductive work behaviours. In the Chinese language, theoretical work has been carried out on the psychological contract (Lei, 2005) for knowledge workers and optimising incentives (Guo, 2002), and empirical research has shown that various factors including attitude to work were related to job performance (Sun, Tan and Luo, 2011).

There are few studies of adaptability or mindfulness in Chinese knowledge workers specifically, especially in English, but these will be reviewed in the following sections.

2.3.3. Summary

While the term “knowledge worker” may not be universally accepted, the definition and list of included job types offered by Davenport, as well as the definition by Drucker, provide a useful starting point in narrowing down from the more general “white-collar worker” the subject of inquiry in the present study. In China, this group likely numbers in the 10s of millions at least (Wang, 2016), and this could be expected to grow, based on the experience of the U.S. As the Chinese economy expands, this group will have an increasingly central role to play not just in China’s development, but in the world’s.

2.4. Change

Having addressed the contextual background and the nature of the individuals subject to the present inquiry, the core topics of interest are now examined. As well as identifying typologies of change, this section will also deal with accelerating change, discussion of which has become more prevalent in recent years with the growth of big data and the implications this has had for the development of technologies such as artificial intelligence.

2.4.1. The Nature of Change

In a review of the literature on organisational change, Armenakis and Bedeian (1999) identified three main themes: the nature of the change (content), the context in which the change is occurring, and processes by which change is enacted. In terms of change content, an important model of organisational performance and change is presented by Burke and Litwin (1992), which compares transformational change with transactional change. In their model, transformational change refers to large-scale change requiring behavioural responses from the organisation’s employees, and includes variables such as leadership, mission and strategy, and organisational culture; transactional change is incremental and short-term change resulting from interaction among the organisation’s employees, such as adjustments to how tasks are performed. The model is somewhat dated and, by their own admission, complex, yet nevertheless emphasises that change is the result of the interplay of numerous factors, the most important emanating from outside the organisation. This aligns with the “technological imperative” perspective that places technology as the main driver of change in organisations, and stands in contrast to the “planned change” concept of organisational transformation, which places managers and leaders at the heart of change (Orlikowski, 1996).

While context is often industry- or even company-specific, the Armenakis and Bedeian (1999) review also found that internal factors such as organisational maturity and size could impact a company's inclination to initiate change, and that external factors such as technology and regulation could prompt dramatic organisational change. These factors have been grouped into three categories of "frame-breaking change" (Tushman, Newman and Romanelli, 1986): i) industry discontinuities, which impact the competitive landscape for companies in an industry; ii) product life-cycle shifts that act as a catalyst for new business strategies and models; and iii) internal company dynamics, such as change in company size or personnel. However, while using the organisation as the unit of analysis is useful in understanding the drivers of change, it has limited utility in explaining change and its impact at an individual level.

A longitudinal study by Orlikowski (1996) of a customer service department at a software company to some extent addresses this issue by examining the "situated" changes resulting from the implementation of an electronic call-tracking system. It found that numerous areas of the department's work were impacted, including the nature and distribution of the work, the nature of the relationships and collaboration among colleagues and with customers, as well as mechanisms of accountability and performance management (Orlikowski, 1996). The richness of the data from this study, exploring micro-level changes over the course of two years at a location in the U.S., reflects the complexity of understanding the nature of change for the individuals involved, although it was conducted some time ago and its applicability to other circumstances is likely limited. Another analysis of specific types of change identified work process change, new technology implementation, reorganisation, strategy change, relocation, outsourcing, leadership change, and downsizing (Herold, Fedor and Caldwell, 2007). As well as these changes, individual workers may experience change when crafting their roles (Berg, Wrzesniewski and Dutton, 2010), as well as changing jobs (Hou *et al.*, 2012).

There are, therefore, various perspectives of change, but little in the way of universally accepted definitions. For the purposes of the present study, change is defined as any perceived difference to an individual's work that requires appraisal of its potential impact on how the individual does their work, no matter how the difference arises. This broad definition takes into account the wide range of drivers of change (including the

individuals themselves), as well as their potential impacts and responses. It places at its centre the subjective perceptions of the individual.

2.4.2. Rapid and Accelerating Change

An important aspect of change is the timeframe over which it occurs. Change can be a single event, a series of events, or an ongoing process (Glick *et al.*, 1990), which can have important implications for the ability of individuals to adapt to it (Bernerth, Walker and Harris, 2011). Of particular significance is the convergence of various scientific and technological trends that are having an increasingly profound impact on certain industries and work more generally. Advances in biotechnology, for example, have greatly reduced the cost of human genome sequencing that allows for more personalised and specialised regenerative medical techniques (Muir *et al.*, 2016; van Nimwegen *et al.*, 2016). Artificial intelligence and robotics are replacing humans in various work tasks, with spending on robotics and drones forecast to increase on average 20 percent a year from 2017 to 2022 (IDC, 2018c). Developments in information and communication technology are connecting increasing numbers of people with each other and to information networks. These connections are spurred by higher connectivity speeds, increasing use of data-capturing technology such as sensors, and increasingly sophisticated means of interaction such as social media and virtual reality (Kadtke and Wells, 2014). As noted in the Introduction, the social media application WeChat has expanded in China at a pace even greater than equivalents in the West (Incitez China, 2012; Boston Consulting Group, 2015). While some of these technologies will have a direct impact on industries such as healthcare, manufacturing and information technology, the rapid increase in data generation, capture and analysis has spurred discussion about the potential impacts on the future of work. Increasing automation of both manual and non-manual tasks, for example, has led to concerns regarding skills gaps and unemployment (Janssen and Mohrenweiser, 2018; Lent, 2018; Paus, 2018; West, 2018).

Of particular relevance to the present study is the concept of accelerating change, whereby technological advances build on each other at an increasingly rapid pace (Good, 1966; Kurzweil, 2000). The study of rapid technological advances such as those described above has attempted to identify trends such as Moore's Law (Moore, 1998), which predicts a doubling of transistors on a microchip every two years (Jiang, 2011).

However, the adoption of technology has been shown to progress according to an “S” shape, whereby initially slow uptake is followed by a period of rapid adoption and a subsequent slowdown (Adner and Kapoor, 2016). Although many of these studies of technology have focused on the semiconductor industry, where measuring technological advances is relatively straightforward, the existence of S-curves has also been demonstrated in other industries (Benson and Magee, 2018). The significance of the S-curve in technological adoption is that advances build on advances in an ever-steepening series of S-curves according to what has been described as the “law of accelerating returns” (Kurzweil, 2000). Nevertheless, despite evidence of increasingly rapid change in the recent past, there can be no guarantees of what might happen in the future. Some researchers believe that there are resource limitations to technological advance – the so-called “complexity brake” (Allen, 2011) – and that the world might have already passed its innovation peak (Modis, 2002; Huebner, 2005).

Even so, from a psychological point of view, change can create adaptive challenges (Scarlett, 2016), as will be discussed in more detail in subsequent sections, and also presents difficulties for those attempting to study it, especially in the social sciences (Rabenu and Tziner, 2018). However, accelerating change poses particular perceptual challenges as, intuitively, people will conceive of problems in linear rather than non-linear ways (Olsson, Enkvist and Juslin, 2006). This exponential growth bias means people may be overconfident of their abilities to understand and make decisions about issues centred on non-linear relationships, producing poor predictions about the future, especially when relying on intuition rather than calculation (Levy and Tasoff, 2017; KöNigsheim, Lukas and NöTh, 2018).

2.4.3. Summary

This section has shown there are various perspectives on change at different levels of analysis. While the prospect of superhuman intelligence causing widespread unemployment may grab headlines, change at the individual level may be more mundane, although no less disruptive. However, as will be seen in the next section, the specifics of change are often overlooked in the discussion of adaptability, an omission the present study seeks to avoid.

2.5. Adaptability

As noted earlier, the study of adaptability as it relates to the workplace crosses many disciplines incorporating many similar concepts presented in different frameworks, making analysis challenging (Baard, Rench and Kozlowski, 2013). It is also characterised by several failed attempts to come up with a unifying model that could become a benchmark for future research. In the absence of any schools of thought, researchers from various backgrounds have tried to lay their claim to scholarly leadership in this relatively new field, but to little avail. The following review will look at some of the origins of research into adaptability before examining some of the more persuasive contemporary ways of conceptualising adaptability, with a focus on areas that relate to mindfulness.

2.5.1. Evolutionary Origins

While the term “adapt” has a simple dictionary definition (“to adjust or become adjusted to new requirements or conditions,” (Random House, 2001)), it has nevertheless taken on different degrees of significance in various disciplines. Along with natural selection, adaptation is a central plank of Darwin’s theory of evolution (Darwin, 1872). In Darwin’s sense, adaptation refers to an organism’s ability to adapt to its environment across generations. While interesting, studying attributes derived genetically is not particularly useful to business administration, where prompt response to changes in the immediate environment are most valued. Nevertheless, an appreciation of the long-term processes of adaptation is useful in understanding the real-time adjustments people make to their environment (Martin, Carlson and Buskist, 2010).

It is therefore important to distinguish between two concepts: adaptation, which is a trait or behaviour whose successful functioning leads to its natural selection; and adaptive, which describes a behaviour that leads to the reproductive success of people currently (Laland and Brown, 2011). The field of human behavioural ecology tends to focus on the adaptive nature of behaviours, regardless of whether they are adaptations (naturally selected for) or some other trait that happens to be useful in current society. “For these researchers, the key legacy of our evolutionary history is *adaptability*, not the psychological or behavioural adaptations” (emphasis in the original) (Laland and Brown, 2011, p. 94).

While incorporating evolutionary biology into the study of workplace adaptability has appealed to several researchers (Ployhart and Bliese, 2006; van Dam, 2013), it is important to emphasise the distinction: Adaptation occurs over generations, and the bottom line is reproductive success; in the workplace, adaptability happens in real time, and the bottom line is performance.

Nevertheless, a jumble of nomenclature has made it into the relevant literature, so adaptability, adaptivity and even adaptation are often mixed up with many other similar terms.

2.5.2. Organisational Development

One of the first to seriously examine the impact of change on the individual in the workplace was Kurt Lewin. As a pioneer in the field of Organisational Development, he studied resistance to change and developed his theory of organisational change based on the three-step process of unfreezing-moving-freezing (Lewin, 1947). Building on Lewin's work and in cooperation with him, Coch and French (1948) generated a theory of resistance to change, including the discovery that greater participation by factory workers in changes to their work reduced their resistance to that change. Although Coch and French believed resistance to change was largely a result of situational context (Burnes, 2015), much research has focused on individual personality characteristics.

In fact, research into resistance or otherwise to change developed slowly until the late 1980s, when there was growing recognition that the nature of work itself was changing, in the West (and Japan) at least, in response to forces such as technology, globalisation and downsizing (Cascio, 2003). Annual job losses in the U.S. grew from 12.3 million in 1979 to more than 30 million in the first few years of the 1990s (Abu-Lughod, 1999), many of them manual jobs. Lay-offs, mergers and acquisitions and the already discussed increasing importance of knowledge work in concert with the expansion of information technology also had a fundamental impact on the nature of the relationship between the individual and the organisation. Cascio (2003), for example, focused on the psychological contract between worker and employer, and its rapid evolution from predictability, standard work patterns and one-time learning to uncertainty, flexible work and lifelong learning.

During the late 1980s to mid-1990s, the disruptive effects of computerisation and information technology were already being documented, with “technofear” entering the lexicon of research on the workplace (Cooley, 1986; Connor, 1992) and some studies showing that knowledge workers reporting differing levels of comfort with a computer-based rather a human-based workplace (Connor, 1992; Thach and Woodman, 1994). As early as 1990, it was clearly recognised that parts of advanced economies were being irreversibly impacted by globalisation and the shift to services from manufacturing, increasing the cognitive complexity required of workers (Goldstein and Gilliam, 1990). Change has been shown to create discomfort among workers (Bareil, Savoie and Meunier, 2007), both because of the specifics of the change and because some may be are dispositionally resistant to change (Oreg *et al.*, 2008).

2.5.3. *Training to Adapt*

However, the first to systematically study adaptability were Kozlowski and Pulakos at the turn of the century. Kozlowski and various research collaborators view adaptability through the lens of training, as a skill to be developed (Kozlowski, 1998; Kozlowski *et al.*, 2001; Baard, Rench and Kozlowski, 2013). Kozlowski and others argue that modern work environments increase the need for dynamic decision-making on ambiguous and emerging issues based on large amounts of data under acute time pressures (Kozlowski *et al.*, 2001). This means that traditional training methods that focus on “routine” expertise leaves workers inadequately prepared to handle an ever-changing workplace, and that what is required is the development of adaptive skills that can help them generalise knowledge to novel tasks and problems (Smith, Ford and Kozlowski, 1997; Kozlowski, 1998). However, this work remains largely theoretical and lacks thorough empirical investigation.

2.5.4. *Adaptive Performance*

Around the same time, Pulakos *et al.* (2000) developed a taxonomy of adaptive performance. There had been some attempts to identify characteristics of workers that could predict adaptability, which will be discussed shortly, but Pulakos and her collaborators argued that it was pointless to look for predictive traits until there was some agreement about what success looked like in terms of adaptive performance. By reviewing the literature on a diverse range of topics including psychology, education,

organisational behaviour and cultural studies, Pulakos *et al.* (2000) derived a list of six dimensions of adaptive performance. They confirmed these six and revealed two more through a study of more than 1,000 critical incidents across 21 jobs in 11 government, private sector and military organisations. The eight dimensions are:

1. handling emergencies or crisis situations
2. handling work stress
3. solving problems creatively
4. dealing with uncertain and unpredictable work situations
5. learning work tasks, technologies, and procedures
6. demonstrating interpersonal adaptability
7. demonstrating cultural adaptability
8. demonstrating physically oriented adaptability

The broad range of occupations studied by Pulakos *et al.* (2000) lend weight to the eight-dimension taxonomy of adaptive performance, which was incorporated into subsequent models (Ployhart and Bliese, 2006), but it was not without its weaknesses. Griffin and Hesketh (2003) point out that no theory has been developed in which to ground the eight dimensions, and a follow-up study only partially supported them (Pulakos *et al.*, 2002), and even then only in a military context. Griffin and Hesketh (2003) propose a simplified model based on proactive, reactive and tolerant behavioural adaptivity. However, in a study of an Australian IT company and public service organisation, they found this model also proved to be a poor fit. In both the Pulakos *et al.* (2002) and Griffin and Hesketh (2003) studies, only a single-factor model was supported, perhaps reflecting the weakness of the supervisor-rating measures they both used that, because of their subjective nature, are prone to biases such as the halo effect that can obscure potential multidimensional explanations.

2.5.5. Reactive and Proactive Adaptability

The focus on reactive and proactive adaptability has been developed in other lines of research. Adaptability can be considered reactive “when an individual perceives a change in the environment,” and proactive “when an individual perceives the need to change even though the environment has not” (Ployhart and Bliese, 2006, p.13), perhaps in anticipation of change (Jundt, Shoss and Huang, 2015). In a qualitative study, Berg, Wrzesniewski and Dutton (2010) found that workers at a manufacturing

company and non-profit advocacy organisation with different ranks employed different reactive and proactive tactics when overcoming job-crafting challenges. A study by Griffin, Neal and Parker (2007) broke down adaptability into proficient, reactive and proactive at the individual, team and organisational levels based on studies of Australian state government employees and two Australian public sector organisations. However, only a small number of items were used to measure each construct and, as Beard, Rench and Kozlowski (2013) point out, the mixing of content differences with various referent levels makes identifying the source of differences in the confirmation factor analysis difficult.

2.5.6. Appraisal, Stress and Coping

Another line of enquiry has explored how people appraise change and choose how to cope with it. Seminal work in this area was conducted by Lazarus and Folkman (1984), who argue that there are two types of appraisal in response to an “adaptational encounter” (Lazarus, 1991). Primary appraisal is a basic assessment of the change – irrelevant, benign-positive, or stressful (including harm/loss, threat and challenge) – and secondary appraisal is an assessment of the possible responses. While irrelevant and benign-positive changes likely require no action, and harm/loss changes can not be responded to because they have already occurred, threat and challenge events require a secondary appraisal of coping options.

Coping refers to the way a person responds to the “adaptational encounter,” and has frequently focused on the problems of threat-induced distress and maladaptive responses (Carver and Scheier, 1994; Folkman and Moskowitz, 2004). It is defined as “cognitive and behavioural efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the person’s resources” (Lazarus and Folkman, 1984, p.141). Folkman *et al.* (1986), unfortunately in a non-work setting, looked at eight coping strategies: confrontive; distancing; self-controlling; seeking social support; accepting responsibility; escape-avoidance; planful problem-solving; positive reappraisal. These were grouped into two main categories: problem-focused coping (trying to change the stressor or environment), and emotion-focused coping (such as avoidance or escape). Other researchers, accepting the basic appraisal-coping model, have identified different classes and categories of coping, including the creation of measurement tools such as the COPE Inventory (Carver, Scheier and Weintraub, 1989).

Robinson and Griffiths (2005), for example, looking at change in a UK government department, identified 15 coping styles grouped into four types: task-centred; social support-based; cognitive and emotion-focused. The influence of age on coping has also been explored, with research into a U.S. sample showing that individuals became more adaptable from adolescence until the onset of old age, after which they become less adaptable (Diehl *et al.*, 2014).

While some argue that coping is a form of adapting (Ployhart and Bliese, 2006), others argue it is quite separate but could usefully complement research on adaptability (Jundt, Shoss and Huang, 2015). Closely associated with coping is self-regulation, which in the Adaptive Learning System of Kozlowski *et al.* (2001a) refers to the personal assessment of current state compared with desired state (goal). Another related term is emotional regulation, which includes such aspects as situation selection and modification, attentional deployment, cognitive change, and emotional modulation (Gross, 1998). Huang *et al.* (2014) argue that emotion regulation can aid with adaptation to expected or unexpected changes in the workplace, and in a meta-analysis of 71 samples found that it indeed helped in reactive forms of adaptive performance. Emotion regulation and its counterpart, neuroticism, can be viewed as individual differences, which will be examined in a later section.

Also of particular relevance here is the work of Weinstein, Brown and Ryan (2009), who examined how mindfulness impacted the appraisal of change in college students. Appraisal of change could involve judging whether it is “good, bad, or neutral, positive or negative, or as involving challenge (generally positive appraisals) or threat, harm, or loss (negative appraisals)” (p.375), particularly based on the perceived ability of the individual to manage the change. They found that higher levels of mindfulness resulted in more benign assessments of change, as well as the ability to choose responses with better outcomes in terms of well-being, i.e. problem-focused, or approach, coping.

Nevertheless, as discussed by Folkman and Moskowitz (2004), there are three related challenges in coping research: defining effective coping outcomes in the short and long terms, finding a common language to understand coping, and measurement. In particular, details of the “adaptational encounter” – the change – are often overlooked in studies of stress and coping. As discussed in the previous section, there are many conceptualisations of change, which could have profound influences on how individual

responses are perceived. Furthermore, while acknowledging individual differences and the importance of context, coping research has focused on universal remedies for stress rather than what specific individuals can do in specific situations (Somerfield and McCrae, 2000).

2.5.7. *Work-life Balance*

The relationship between work and other aspects of life is an increasingly important topic generally because of the potential stress it produces (Boswell and Olson-Buchanan, 2007), and specifically with regard to the present study because of the adaptability constraints they place on each other and the conflict this can cause. There are two main drivers behind this development: the introduction of technology that crosses traditional boundaries between work and the rest of life (Diaz *et al.*, 2012); and gender roles combined with the increasing involvement of women in the work force (Karkoulian, Srour and Sinan, 2016).

Technology in the form of high-speed communications and mobile devices has in some ways introduced more flexibility into working schedules by allowing for remote work at hours that suit the worker (Nansen *et al.*, 2010). However, the blurring of boundaries, both temporal and spatial, has diluted the concept of the ‘working day’ (Macik-Frey, Quick and Nelson, 2007) and can also cause conflict with family expectations and responsibilities (Boswell and Olson-Buchanan, 2007). A study by Diaz *et al.* (2012), for example, found that greater use of communications technology resulted in increased work satisfaction, but also increased work-life conflict. More specifically, use of such technology has been found to increase workload, in turn increasing work-life conflict, which is a stressor (Yun, Kettinger and Lee, 2012).

Gender roles common in many countries mean the experience of work-life conflict differs between genders (Higgins, Duxbury and Lee, 1994). Studies conducted in various countries have found that expectations for women to take on primary childcare and household responsibilities remain a challenge for female workers (Karkoulian and Halawi, 2007; Rehman and Azam Roomi, 2012). For men, the expectation may be that they need to provide the financial support to the family, which may force them to spend more time working even though they would prefer to be with their families (Evans, Carney and Wilkinson, 2013). In the Chinese context, studies have shown that rapid growth of the private sector combined with an increase in intensity of work was

contributing to work-life conflicts, but that the concept of work-life balance was less well-established in China (Xiao and Cooke, 2012).

2.5.8. Person-Environment Fit

As Lazarus (1991) points out, the arena for discussion of stress (no matter challenge or threat) is the relationship between the person and their environment. Person-environment fit is relevant to the study of adaptability in the workplace as changes to the person or the environment require adjustment. Person-environment fit can be assessed from a number of levels, although there is often a great deal of overlap (Judge and Ferris, 1992; Schneider, Goldstein and Smith, 1995). One is person-organisation fit (Chatman, 1989), defined as “the compatibility between people and organisations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both” (Kristof, 1996, pp. 4-5). Related, and indeed contributing, to person-organisation fit is person-job fit, which comprises complementary fit and supplementary fit (Muchinsky and Monahan, 1987). Of particular importance is complementary fit, which builds on the definition of person-organisation fit above by breaking down the nature of compatibility between people and organisations. It comprises demands-abilities fit, referring to the abilities of the individual meeting the demands of the organisation, and needs-supplies fit, whereby the organisation supplies what the individual needs (and expects) in terms of salary and higher-order needs (Kristof - Brown, Zimmerman and Johnson, 2005). Research has shown that job crafting is used to adjust person-job fit to increase meaningfulness of work (Tims, Derks and Bakker, 2016).

Although research combining theories of adaptability with those of person-environment fit are limited, studies have been conducted on the success of newcomers’ to adapt to their new work environments. This includes a study by Wang *et al.* (2011) of new recruits at a large Chinese company, which found that measures of adaptability, including learning adaptability, were associated with improvements in “fit” perceptions over a three-month period. This study suffers from many of the weakness identified in the coping research, such as the reliance on self-report scales to measure both adaptability and fit.

A more recent line of enquiry has focused on person-change (or person-innovation) fit, introduced by Chung *et al.* (2014). Based on the person-environment fit literature, person-change fit comprises two aspects: values and abilities. In a study they conducted of a merger in China, they found that value fit, but not ability fit, was related to behavioural support for change and post-change performance, although ability fit did predict positive change expectations. The authors suggested this might be because culture, in particular collectivism and Confucian philosophy, created an environment where social pressure resulted in resistance to change that could have nevertheless benefited the individuals. However, as the researchers did not investigate the reasons behind the workers' views, their conclusions are conjectural and risk inferring causation based on unjustified assumptions about national (and local) culture.

Another aspect of fit is that between people. Research into person-group fit, and person-supervisor fit (Kristof - Brown, Zimmerman and Johnson, 2005) examines how an individual relates to colleagues according to various dimensions of "fit." Bayl-Smith and Griffin (2018) presented the concept of "work styles fit," defined as "how an individual's speed, effort, rhythm, and endurance in work tasks corresponds to the style suitable for or expected by their organisation" (Bayl-Smith and Griffin, 2018, p.210). This builds on a great deal of research conducted into interpersonal flexibility (Paulhus and Martin, 1988; Aronoff, Stollak and Woike, 1994), including comparisons between U.S. and Chinese cultures (Cheng, Feixue and Golden, 2010). Kaufman *et al.* (1991) introduced the idea of time congruity as a way of describing the extent to which the "time styles" of the individual match those of the organisation, and the difficulties of closing gaps in time congruity for salespeople has also been explored, albeit in only a theoretical manner with a very limited number of examples (Weeks and Fournier, 2010).

2.5.9. Individual Differences

An important line of research has focused on the personality characteristics that could predict adaptability. As long ago as 1982, researchers were examining whether certain personality traits and abilities that were conducive to greater adaptability could improve performance (Caldwell and O'Reilly, 1982). But once again, it was Pulakos and colleagues who spurred interest in this area. They looked at self-efficacy, openness, emotional stability, achievement motivation, cognitive ability and social desirability as

possible indicators of adaptive performance in a study of military personnel based on the ratings of their superiors, with cognitive ability, openness and achievement motivation most highly correlated with adaptability measures (Pulakos *et al.*, 2002).

Subsequent research into these characteristics, which are also known as individual differences, or knowledge, skills, abilities and other characteristics (KSAOs), has frequently focused on the Big Five personality traits (extraversion, conscientiousness, openness, neuroticism, agreeableness) (McCrae and Costa Jr, 1999) and core self-evaluations (locus of control, generalised self-efficacy, self-esteem, neuroticism) (Judge, Locke and Durham, 1997). In a review of the literature, Vakola, Armenakis and Oreg (2013) included these among numerous personality dispositions as one class of antecedents, along with motivational needs, coping styles and demographics. They viewed these dispositions as stable traits, while the coping styles were dynamic and situation-dependent. Some of these are worth considering further, as they relate to the concept of mindfulness that will be explored later.

The most studied disposition, according to the review by Vakola, Armenakis and Oreg (2013), was locus of control (Rotter, 1966). Locus of control describes the extent to which an individual feels master of their own destiny (internal locus), or at the whim of often unknown external forces (external locus). For example, following an acquisition, managers with an external locus of control have been found more likely to report a greater fall in control over their jobs and perceive employees' terminations as unfair (Fried *et al.*, 1996). Internal locus of control has been shown to be positively related to readiness for change among private and public sector workers (Holt *et al.*, 2007), while external locus of control has been associated with more negative reactions to job insecurity among Swedish nurses (Näswall, Sverke and Hellgren, 2005). However, both studies rely on self-report data, which is subject to problems such as response bias.

Another of the frequently examined dispositions is self-efficacy (Bandura, 1977), which describes the extent to which an individual believes they can achieve certain objectives. For example, a positive relationship has been identified between self-efficacy and commitment to organisational change (Herold, Fedor and Caldwell, 2007) as well as change acceptance (Wanberg and Banas, 2000).

Adaptability can also be considered in terms of creativity. For example, in response to change, Kirton (1976; 2003) found a “personality continuum” from adaptor, meaning those people who make incremental adjustments according to established patterns, to innovator, meaning those more likely to challenge existing paradigms to reveal problems and their solutions. Building on this Adaption-Innovation Theory, Buttner and Gyskiewicz (1993) found that entrepreneurs tended to be more innovative, but that more adaptive entrepreneurs tended to be more successful. A similar model is the Assimilator-Explorer model (Martinsen and Furnham, 2016), which expresses a spectrum of behaviour from familiarity-seeking through to novelty-seeking.

In contrast to adaptability, research into resistance to change following the tradition of Coch and French (1948) has uncovered its own set of potentially useful predictors. One of these is cognitive dissonance (Festinger, 1962), an inconsistency between values and behaviour, which has been examined in specific organisational changes (Bernard and Hakeem, 1995). Further research by Oreg (2003) found four facets of resistance to change – routine seeking; emotional reaction to imposed change; short-term focus; and cognitive rigidity – which predicted resistance in studies of students and faculty undergoing changes to their work or study situations.

Other dispositions studied include conscientiousness (Le Pine, Colquitt and Erez, 2000; Griffin and Hesketh, 2003; Shoss, Witt and Vera, 2012), dispositional employability (Fugate and Kinicki, 2008), neuroticism and extraversion (Huang *et al.*, 2014), and tolerance for ambiguity (Judge *et al.*, 1999). Research into the ambiguity created by organisational change specifically has revealed three types of uncertainty: strategic, implementation and job-related (Bordia *et al.*, 2004; Allen *et al.*, 2007). Both these studies and others (for example, Olsen and Stensaker, 2014) found that individuals desired greater communication, from the organisation or colleagues, in response to the uncertainty.

Resources supporting cognitive adaptability include hope and optimism, two of the four elements of Positive Psychological Capital (Luthans and Youssef, 2007), which have been studied in some depth because it is sometimes possible to raise their levels in individuals through interventions. Studies of UK insurance company workers and police officers and Chinese insurance agents, for example, found that hope was positively related to task adaptivity, both directly and indirectly, although optimism was

not (Strauss *et al.*, 2015). A study of managers at organisations across four continents showed that positive self-concept and risk tolerance could predict the ability of individuals to cope with change (Judge *et al.*, 1999).

2.5.10. Critique of the “Individual Differences” Approach

Baard, Rench and Kozlowski (2013) have identified several shortcomings in the study of adaptability through the lens of individual differences. First, they raise concerns over the wide range of definitions of adaptability, the need to differentiate it from other constructs and how to identify the mechanisms by which it impacts performance. Second, the lack of consistency in definition is reflected in the lack of agreement on measurement, which also makes comparisons challenging. The 20 studies they looked at each had their own definition of adaptability and included a wide range of measurement instruments, mostly in the form of self-report surveys, which are prone to biases such as the “consistency motif” and social desirability bias (Podsakoff and Organ, 1986). As has been already discussed, both Pulakos *et al.* (2002) and Griffin and Hesketh (2003) developed measures of adaptive performance that were only moderately supported by their own studies. Finally, Beard, Rench and Kozlowski (2013) question the widespread use of subjective reporting, which are subject to various rater biases, and the prevalence of cross-sectional studies, from which causal conclusions are difficult to make.

Another major criticism of studies of dispositions is that they frequently fail to take into account the interplay of factors within the person in different change contexts (Jundt, Shoss and Huang, 2015). They argue that most of the research ignores the importance of situational context on the individual, and that individual differences will have different weightings in the impact on adaptive performance. This once again reflects a poor current understanding of the stimulus for adaptability – the changes to the situation for the individual – possibly because of difficulties in identifying discreet “encounters.” As will be discussed in the chapter on research design, the present study will adopt an approach that seeks to avoid many of these shortcomings by collecting richer, qualitative data that explores change and adaptability in greater detail.

2.5.11. Career Adaptability

A somewhat similar line of research has focused on the concept of career adaptability, originally defined as “readiness to cope with changing work and working conditions” (Super and Knasel, 1981, cited in Johnston, 2016). Savickas further developed the concept as part of his Career Construction Theory (2005), which describes a sequence of adaptation starting with readiness to adapt, adaptability resources, adapting responses and finally adapting results. The results, which include items such as employment status, promotability and organisational loyalty, point to the longer-term view of career adaptability compared with adaptive performance, but it is mentioned here because of the work force turnover rate in China, which in 2016 was estimated at over 20 percent (Aon Hewitt, 2016). There are numerous measures of career adaptability, including an instrument that has been translated into Chinese (Hou *et al.*, 2012).

2.5.12. Models of Adaptability

Various authors have attempted to generate models of adaptability, with van Dam and colleagues looking at the topic from various angles (van Dam, Oreg and Schyns, 2008; van Dam, 2011; van Dam and Meeting, 2012; van Dam and Niklova, 2012). Her resource-based framework (van Dam, 2013) is based on the three core psychological concerns of affect, behaviour and cognition, which have also been described as “ABCs of the self” (Kassin, Fein and Markus, 2013, p. 54). Her model uses these three concepts to categorise the psychological resources that an individual can employ when dealing with change. She argues that much of what is described elsewhere as individual differences are in fact psychological properties that an individual can bring to bear on a situation. For example, she identifies adaptive orientation as one type of cognitive resource, comprising optimism, hope, self-efficacy, challenge, open-mindedness, learning orientation and curiosity, among others. She suggests that these resources are malleable, and while there may be limits, it is not so much a question of how much of these resources an individual has, as it is how they are applied.

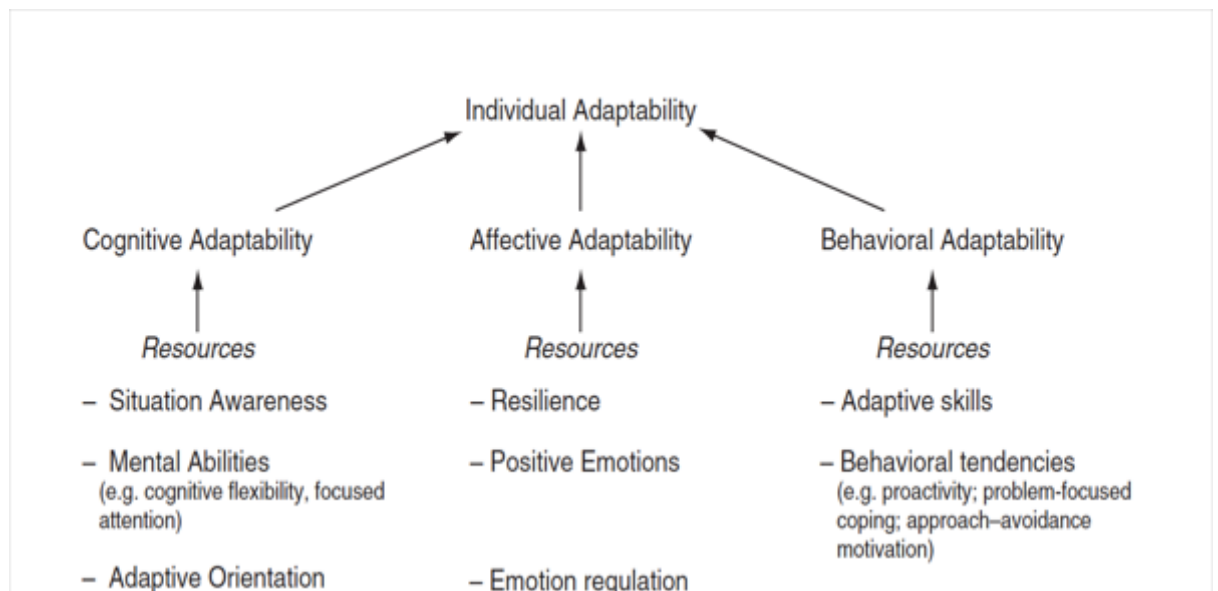


Figure 2.6 - Van Dam’s Resource-Based Framework for Individual Adaptability
(reproduced from van Dam, 2013, p.128)

The ability of people to draw on resources to handle change has been researched in several contexts. For example, personal resources such as meaning-making and organisation-based self-esteem that were already present before a change were studied in a sample of Dutch police officers by van den Heuvel, Demerouti and Bakker (2014). They found that these pre-change personal resources were positively related to leader-member exchange, and all three were found to be positively related to adaptivity (van den Heuvel, Demerouti and Bakker, 2014).

However, while this classic “ABCs” approach may help to categorise various aspects of adaptability research, even van Dam acknowledges the fuzziness of the distinctions and the complicated web of relationships that the model obscures. Nevertheless, regarding these resources as somewhat under the control of the individual has potentially much broader appeal than approaches viewing them as mostly fixed traits.

Another approach is offered by Ployhart and Bliese (2006), who developed the Individual Adaptability (I-ADAPT) theory. Their theory includes not only KSAOs, but also the eight dimensions of adaptive performance developed by Pulakos *et al.* (2000), a set of mediating processes and the concept of reactive and proactive responses (discussed above) to the environment, which could be relatively stable or dynamic. The theory assumes that the KSAOs are stable and trait-like, and the adaptive performance dimensions only slightly less so. However, the mediating processes are viewed as being

more dynamic and influenced by situational factors, which makes them easier to influence through, for example, training interventions. The model is not only comprehensive but is also the basis of a measure of adaptability. Despite attracting praise (Baard, Rench and Kozlowski, 2013), neither the model nor the measurement tool have been widely adopted, with a few exceptions that will be addressed shortly.

Baard, Rench and Kozlowski (2013) tackle the issue of individual adaptability from yet another angle. An exhaustive review of the literature on individual and team-level adaptability, based on a review of 105 papers, identified four approaches: performance construct, individual difference construct, performance change and process. The analysis also produced a three-dimension “conceptual architecture that can be used to situate theoretical and research treatments of adaptation across the organizational space” (Baard, Rench and Kozlowski, 2013, p.89), the dimensions being Focal Level, Adaptive Process Mechanism and Task Complexity Change. However, this framework has not been widely adopted.

Perhaps the simplest model is that of Fugate and Kinicki (2008), who offer a linear process model of adaptability. Antecedents (including dispositions, motivational needs and coping styles) lead to explicit reactions (cognitive, affective and behavioural) and consequences (work-related and personal). Their analysis also revealed some confusion in the naming of various traits that conflated cognitive, affective and behavioural factors, as well as a lack of research in the areas of coping and motivational needs.

More closely related to resistance to change is the Kubler-Ross grief cycle (1969, as described in Leybourne, 2016), which includes five stages: denial and isolation; anger; bargaining; depression; and acceptance. In a work context, Williams *et al.* (2002) describe a five-stage process of coping with change: denial, defense, discarding, adaptation and internalisation. Bridges (2009) and Carnall (2007) offer similar models, but in all cases, the same criticism is applicable: They deal only with changes appraised as being negative (stressful).

2.5.13. Study of Adaptability in China

Study of adaptability in the Chinese context remains limited. In English, a study comparing school-age children across cultures found Chinese students were more

adaptable than those in the U.S. and U.K., and this adaptability contributed to greater motivation and engagement at school (Martin *et al.*, 2016). The I-ADAPT measure of adaptability developed by Ployhart and Bliese (2006) has been translated for use in studying the relationship between adaptability and life satisfaction in Chinese university students (Zhou and Lin, 2016) and in a longitudinal study of person-organisation fit for newcomers to a large Chinese company (Wang *et al.*, 2011). In the Chinese language, discussion of adaptability began only in 2003 (Ma) and has focused mostly on conceptual work (see Wu and Yuan, 2010).

2.5.14. Defining adaptability

Not everyone who researches individual adaptability cares to define it, and the diverse range of investigatory origins has resulted in overlapping terminology. As can be seen from the awkward phrasings in Table 2.2, definitions can variously focus on adaptability’s proactive-reactive nature, potential or application, or the “affect-behaviour-cognition” triumvirate.

Term and definition	Citation
Adaptive performance: task-performance-directed behaviours individuals enact in response to or anticipation of changes relevant to job-related tasks.	(Jundt, Shoss and Huang, 2015, p.S54-S55)
Performance adaptation: cognitive, affective, motivational, and behavioural modifications made in response to the demands of a new or changing environment, or situational demands.	(Baard, Rench and Kozlowski, 2013, p.89)
Individual adaptability at work: employees’ underlying potential as derived from cognitive, affective, and behavioural resources that can be applied to effectively adjust and/or anticipate to task-related, environmental and vocational demands.	(van Dam, 2013, p.127)
Dispositional employability: a constellation of individual differences that predispose employees to (pro)actively adapt to their work and career environments. Employability facilitates the identification and realisation of job and career opportunities both within and between organisations. Conceived this way, employability is a disposition that captures individual characteristics that foster adaptive behaviours ...	(Fugate and Kinicki, 2008, p.504)

Individual adaptability: an individual’s ability, skill, disposition, willingness and/or motivation to change or fit different task, social, and environmental features.	(Ployhart and Bliese, 2006, p.13)
--	-----------------------------------

Table 2.2 - Definitions of adaptability

While it seems there is plenty of room for a more graceful definition, this paper will use that provided by van Dam (2013) as hers has the most explanatory value for the data that was generated in this study, especially when discussing the relationship between adaptability and mindfulness:

“Individual adaptability at work: employees’ underlying potential as derived from cognitive, affective, and behavioural resources that can be applied to effectively adjust and/or anticipate to [sic] task-related, environmental and vocational demands.” (p.127)

2.5.15. Summary

Increasingly rapid change in the workplace in the West has spurred interest in how individuals adapt to it. Individual adaptability has been examined from various perspectives: as a skill that can be learnt, as a type of performance, in terms of proactivity and reactivity, as a form of coping, and in terms of individual differences. Various researchers have tried to develop theories around these various streams of research, but none has been universally accepted. To a large extent, research into adaptability has been hamstrung by a poor appreciation of change and a reliance on positivist approaches to investigation of psychological phenomena that might more fruitfully be explored from other perspectives. Nevertheless, the van Dam (2013) definition and framework provide an adequate platform from which to build a Basic Theory.

2.6. Mindfulness

Research into mindfulness contrasts from that into adaptability in several ways. The first is volume – the Buddhist origins of mindfulness trace back more than 2,000 years, compared with less than 100 for the study of change and adaptability. Mindfulness also features champions, including Jon Kabat-Zinn of the University of Massachusetts Medical Centre, and Mark Williams at the University of Oxford, whereas there are no cohesive schools of thought regarding adaptability. Finally, mindfulness includes an element of agency – the sense that something can be done, and that it works – which is

largely lacking from the literature on adaptability, with the notable exception of van Dam's psychological resources model (2013). Indeed, one of the aims of the present research is to help determine how mindfulness might contribute to adaptability.

The religious and non-religious origins of mindfulness will be examined first, before a review of the still-nascent research into its applicability in the workplace.

2.6.1. Background

Before looking at more modern conceptions of mindfulness, some aspects of meditation unique to Buddhism that relate to the study of adaptability should be addressed. One is the concept of impermanence, which recognises that nature, and therefore our experiences, are constantly changing, and therefore it is futile to get attached to any particular experience (no matter pleasant or unpleasant), as it will soon pass (Dreyfus, 2013). By accepting change, one can appreciate pleasurable experiences while they exist, and understand that unpleasant experiences are only temporary. One long-time student described it thus: "The more we are experientially attuned to impermanence, the less we grasp and fixate, thus leading to our being less encumbered by mental confusion and obsession" (Batchelor, 2013, p.159).

Another important concept is that of equanimity, one of the Buddhist virtues that can be cultivated through meditation (Wetlesen, 2002). It has been defined as "an even-minded mental state or dispositional tendency toward all experiences or objects, regardless of their affective valence (pleasant, unpleasant or neutral) or source" (Desbordes *et al.*, 2015, p.359). As was discussed in the previous section on adaptability, such regulation of the emotions can contribute to the ability to adapt to, or at least cope with, change. In one study, students from the U.S. who attended intensive meditation training developed greater equanimity through the ability to adapt to sometimes unpleasant experiences, such as fear or anger (Kornfield, 1979).

2.6.2. Increasing Popularity in the West

While many of the basic Buddhist texts had been translated in the 18th century and studied closely by the transcendentalists in the following century, it was not until a surge in popularity of Zen Buddhism in the United States during the 1950s and 60s that mindfulness and meditation techniques became well-known in the West (McCown,

Reibel and Micozzi, 2010). Practitioners tended to focus on the meditation aspects of Buddhism, which fostered an interest in other meditation-heavy traditions, including Tibetan and then Theravada (McCown, Reibel and Micozzi, 2010).

However, these Buddhist practices carried religious baggage that made mindfulness inaccessible to Christians and atheists in the West. It was Kabat-Zinn (1982) who developed a secular form of mindfulness that could be applied to clinical ends. Kabat-Zinn started his Stress Reduction and Relaxation Program at the University of Massachusetts Medical Center in 1979 to complement the traditional medical services provided there, especially when those services were ineffective (Kabat-Zinn, 2013b). It focused initially on problems such as chronic pain (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth and Burney, 1985), and later anxiety (Miller, Fletcher and Kabat-Zinn, 1995) and the skin condition psoriasis (Kabat-Zinn *et al.*, 1998).

Despite the program's Buddhist underpinnings, and even though he was an experienced practitioner of Buddhist meditation, Kabat-Zinn went to great pains to maintain its secular presentation, including in the name, which eventually became Mindfulness-Based Stress Reduction, or MBSR (Kabat-Zinn, 2013b). The eight-week program he developed has been modified in a number of ways, including the development of Mindfulness-Based Cognitive Therapy (Teasdale *et al.*, 2000), Dialectical Behaviour Therapy (Dimeff and Linehan, 2001), and Acceptance and Commitment Therapy (Twohig, 2012).

2.6.3. Definition of Mindfulness

The most commonly used definition is that provided by Kabat-Zinn: "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p.23). An alternative definition also comes from Kabat-Zinn: "Simply put, mindfulness is moment-to-moment non-judgmental awareness" (Kabat-Zinn, 2013a, Introduction). Brown and Ryan (2003, p.822) define it as: "the state of being attentive to and aware of what is taking place in the present." Naht Hanh (1975, p.11) describes it as "keeping one's consciousness alive to the present reality." Then there is "bringing one's complete attention to the present experiences on a moment-to-moment basis" (Marlatt and Kristeller, 1999, cited in Baer, 2013, p.245). Others include: "The tendency to be highly aware of one's internal and external experiences in the context of an accepting, nonjudgmental stance toward those experiences," (Cardaciotto *et al.*,

2008, p.205). This study will adopt the definition provided by Bishop *et al.* (2004, p.234): “A process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and a quality of relating to one’s experience within an orientation of curiosity, experiential openness, and acceptance.” This definition encompasses not only the elements common to other definitions, namely attention and awareness, but is also more explicit about the objectives of being mindful.

2.6.4. Mechanisms of Mindfulness

The discussion now turns to the mechanisms behind mindfulness and how it applies to adaptability. Shapiro *et al.* (2006) unpacked Kabat-Zinn’s definition to derive a model that describes how mindfulness works. They argue that mindfulness practice is built on three core components:

1. Intention – the individual’s purpose for developing mindfulness, which may evolve over time
2. Attention – in particular, sustaining focus, being able to shift focus, and the ability to resist distraction
3. Attitude – what attributes the individual will bring to their practice of mindfulness, such as curiosity or compassion

From these components the authors propose a core mechanism of mindfulness – re-perceiving – and four contributing mechanisms. They define re-perceiving as a “significant change in perspective” (p.377) with regard to experience that gives the individual space to witness it as separate from themselves. This is not to disconnect or dissociate with the experience, which would be the opposite of giving attention to it, but rather emphasising that the experience is not the person. However, it is the contributing mechanisms that are of particular interest with regard to the study of adaptability. They are:

1. Self-regulation and self-management – referring to the ability to employ a greater range of coping and adaptability tactics in response to stimuli
2. Values clarification
3. Cognitive, emotional and behavioural flexibility – taking advantage of the greater choice offered by re-perceiving to avoid the conditioned, automatic and reflexive responses to changes in the environment
4. Exposure – by facing unpleasant experience (exposing to it), we become desensitised to it

The suggestion is, therefore, that mindfulness, through the mechanism of re-perceiving, can endow an individual with greater awareness and understanding of changes to the environment and thereby offer them more options in responding to them.

A two-component model has been proposed by Bishop *et al.* (2004) based on their definition identified in the previous section. One component is the self-regulation of attention, which involves being able to sustain attention, switch attention, and inhibit elaborative thinking (such as rumination). The other component is orientation to experience, which refers to the ability to regard thoughts, feelings and sensations with an attitude of curiosity and acceptance. They argue that mindfulness is useful in helping people disengage from their goals to reduce negative rumination on the difference between current and desired states, as well as encouraging them to face unpleasant experiences rather than avoid them.

Looking at the work context, Good *et al.* (2015) identified the active ingredient of mindfulness as its ability to improve attention in three aspects. First is the stability of attention, which manifests itself as the ability to reduce mind wandering. Second is control over attention, which refers to direct attention and resistance to distraction. The increasing obstacles workers face when trying to focus on work have been recognised for some time (Davenport and Beck, 2002), and now training interventions have been developed to manage the distractions and overwhelming flows of information presented by, for example, email (Soucek and Moser, 2010). Finally, mindfulness can improve the efficiency of cognitive processes through attention.

These three models, while capturing important common elements of mindfulness, are nevertheless theoretical and unsupported by subsequent empirical research. As a result, they remain untested. Nevertheless potentially they all offer valuable perspectives on what is a very difficult concept to pin down and operationalise, as will be further discussed later.

Nevertheless, a somewhat different approach has been taken by Baer *et al.* (2006), who present a five-facet model based on factor analysis of the components of several mindfulness questionnaires, which will be addressed shortly. The five facets, with example items, are (Baer *et al.*, 2008):

1. **Observing:** I notice the smells and aromas of things.

2. **Describing:** I am good at finding words to describe my feelings.
3. **Acting with awareness:** I find myself doing things without paying attention. (reverse-scored)
4. **Non-judging of inner experience:** I think some of my emotions are bad or inappropriate and I should not feel them. (reverse-scored)
5. **Non-reactivity to inner experience:** I perceive my feelings and emotions without having to react to them. (p.330)

However, in empirical studies they found that while meditation could cultivate observation, this facet improved psychological wellbeing only in experienced meditators. Moreover, they found that meditating did not significantly improve the ability to act with awareness, which they suggested could be the result of the already high levels of education in the sample.

2.6.5. *Measures of Mindfulness*

The five-facet model is based on measurements of mindfulness as a trait, and the construction of these instruments sheds more light on the concept of mindfulness. It analysed five instruments:

Mindful Attention Awareness Scale (Brown and Ryan, 2003, p.824): Measuring “the presence or absence of attention to and awareness of what is occurring in the present.”

Freiburg Mindfulness Inventory (Walach *et al.*, 2006): Measures various aspects of awareness in those with some mindfulness experience.

Kentucky Inventory of Mindfulness Skills (Baer, Smith and Allen, 2004): Focuses on “observing, describing, acting with awareness, and accepting without judgment” (p.191).

Cognitive and Affective Mindfulness Scale (Kumar, Feldman and Hayes, 2008, p.736): Measures “(1) the ability to regulate attention, (2) an orientation to present or immediate experience, (3) awareness of experience, and (4) an attitude of acceptance or nonjudgment towards experience.”

Mindfulness Questionnaire: “Assessing a mindful approach to distressing thoughts and images” (Chadwick *et al.*, 2005 cited in Baer *et al.*, 2006, p.29).

The five-facet model itself generated a new scale to measure those facets, the Five Facet Mindfulness Questionnaire (Baer *et al.*, 2006). Other measures include the Applied Mindfulness Process Scale (Li, Black and Garland, 2016), which offers “a measure to

quantify the application of mindfulness and processes of change in the context of MBIs and general mindfulness practice” (p.6); and the Philadelphia Mindfulness Scale (Cardaciotto *et al.*, 2008), which measures “present-moment awareness and acceptance” (p.204).

However, as well as a trait, mindfulness can also be considered as a mode or state (Bishop *et al.*, 2004), a practice (Grossman and Van Dam, 2013), and a psychological process (Germer, Siegel and Fulton, 2005), although in many studies this distinction is not made clear (Jamieson and Tuckey, 2017). As a state, mindfulness can be measured using the Toronto Mindfulness Scale, which includes the two factors of curiosity and decentering, referring to the ability to distance oneself from thoughts and feelings (Lau *et al.*, 2006).

These measures of mindfulness each have their critics. In promoting their own measure, for example, Walach *et al.* (2006) claim that their Freiburg Mindfulness Inventory offers a more complete measure of mindfulness than predecessors Mindful Attention Awareness Scale and the Kentucky Inventory of Mindfulness Skills by including aspects such as accepting attitude and insightful understanding. The Five Facet Mindfulness Questionnaire intends to go one better by conducting exploratory factor analysis on the 112 items from the five earlier instruments to eliminate those with low factor loadings. However, as Grossman (2011) points out, these various measures correlate poorly with each other, which also reflects differences in understanding about the definition of mindfulness and the extent to which it can be operationalised. Moreover, Grossman (2011) argues, in the absence of a quintessentially mindful person against which to benchmark, all measures are to some extent speculative. Finally, he is particularly critical of self-report measures for being susceptible to significant biases, especially in situations where participants become increasingly familiar with mindfulness and their understanding of what they are being asked in the questionnaires evolves.

2.6.6. Related Concepts

Before moving on, it is necessary to acknowledge some concepts that share similarities or overlap with mindfulness. Of particular note is Langer’s concept of mindfulness, which also emphasises the importance of attention in overcoming automated responses to situations, or mindlessness (Langer, 2014). However, Langer does not present

meditation as the answer to overcoming mindlessness and, as Bishop *et al.* (2004) note, focuses instead on techniques such as creating new categories to make sense of external stimuli, rather than attending primarily to internal stimuli.

Another related concept is emotional intelligence (Goleman, 2006), which involves being aware of one's emotional states, an ability that would also be associated with mindful individuals (Brown and Ryan, 2003). In fact, emotional intelligence has been found to be positively correlated with mindfulness in samples of students (Baer, Smith and Allen, 2004), and partially mediated the impact of mindfulness on life satisfaction and stress (Wang and Kong, 2014).

A concept that relates specifically to the automaticity of response to stimulus is that of heuristics (Kahneman, 2011), which relates to the mental shortcuts that people take to avoid the cognitive burden of having to consciously process all their experiences. While adequate in most circumstances and crucial to our survival, Kahneman argues that heuristics can result in biases and sub-optimal decision-making.

2.6.7. Effectiveness

In the past few years, there has been a rapid expansion of research into the effectiveness of mindfulness (Davidson and Dahl, 2018). Research has looked at clinical and non-clinical populations, and studied mindfulness as a trait, the impact of mindfulness interventions, and aspects of mindfulness in laboratory settings.

As a trait, positive relationships have been found between mindfulness and self-regulated behaviour (Brown and Ryan, 2003); positive emotional states (Brown and Ryan, 2003); agreeableness (Thompson and Waltz, 2007); conscientiousness (Thompson and Waltz, 2007); self-esteem (Giluk, 2009; Rasmussen and Pidgeon, 2011); psychological adjustment (Baer *et al.*, 2008); emotional intelligence (Baer, Smith and Allen, 2004). Negative relationships have been found between mindfulness and mood disturbance (Brown and Ryan, 2003); stress (Brown and Ryan, 2003); neuroticism (Thompson and Waltz, 2007); social anxiety (Giluk, 2009; Rasmussen and Pidgeon, 2011); depression (Dekeyser *et al.*, 2008; Cash and Whittingham, 2010); cognitive failures (Herndon, 2008); dissociation (Walach *et al.*, 2006); uncontrollable rumination (Raes and Williams, 2010); cognitive reactivity (Raes *et al.*, 2009); alexithymia (Baer, Smith and Allen, 2004).

As well as examining those with trait mindfulness, researchers have examined the benefits of mindfulness-based interventions, including Mindfulness-Based Stress Reduction. While the quality of some of these has been challenged, as will be discussed shortly, randomised trials have nevertheless found that these interventions reduced anxiety (Shapiro, Schwartz and Bonner, 1998); psychological distress (Shapiro, Schwartz and Bonner, 1998; Speca *et al.*, 2000; Grossman *et al.*, 2010); depression (Astin, 1997; Williams *et al.*, 2001; Shapiro *et al.*, 2005; Oman *et al.*, 2008; Bränström *et al.*, 2010; Grossman *et al.*, 2010; Beshai *et al.*, 2016); social anxiety (Speca *et al.*, 2000; Koszycki *et al.*, 2007; Sephton *et al.*, 2007); rumination (Jain *et al.*, 2007). Conversely, they increased empathy (Shapiro, Schwartz and Bonner, 1998); emotional well-being (Anderson *et al.*, 2007); positive mind state (Jain *et al.*, 2007); sense of control (Astin, 1997; Bränström *et al.*, 2010); and well-being (Beshai *et al.*, 2016).

It is also worth noting that mindfulness has been examined through the lens of neuroscience (see Tang, Hölzel and Posner, 2015, for a review). For example, neuroimaging has identified the default mode network, which is associated with mind-wandering (Hasenkamp *et al.*, 2012; Smallwood and Schooler, 2015), which can be deactivated through mindfulness (Brewer *et al.*, 2011; Taylor *et al.*, 2011).

Early studies looking at the influence of age on psychological wellbeing suggested a flat or mildly positive relationship (Diener *et al.*, 1999; Argyle, 2001). However, more recent research, including a study of half a million people by Blanchflower and Oswald (2008), shows that happiness tends to decrease from the end of childhood to the mid-40s before rising again, in both men and women. One study looking specifically at the impact of age on mindfulness and psychological wellbeing found that older adults were both more mindful and psychologically healthier, although the authors acknowledged that more research was needed to understand the relationship between age, mindfulness and psychological wellbeing (Hohaus and Spark, 2013).

Increasing numbers of studies are also being conducted on Chinese participants. A study comparing school-age children across cultures found Chinese students were more adaptable than those in the U.S. and U.K., and this adaptability contributed to greater motivation and engagement at school (Martin *et al.*, 2016). A study of Chinese students and non-students showed that mindfulness was positively related to life

satisfaction, as well as negatively related to mental distress, consistent with previous studies in other cultures (Wang and Kong, 2014).

As with the literature in English, that in Chinese is more developed in the study of mindfulness than for adaptability. Nevertheless, the emphasis is still on theoretical rather than empirical work. For example, based on existing Western models of mindful parenting, Chen, Zhou and Wang (2017) developed a new model of mindfulness training mechanisms, and Duan (2014) critiqued the definitions and measures of mindfulness in a way similar to that provided by Grossman (2011), discussed above. Another similarity with the research in English is the emphasis on quantitative empirical research. For example, Wang *et al.* (2017) found that the Mindfulness-Based Stress Reduction intervention can reduce fatigue and improve sleep quality in breast cancer patients undergoing chemotherapy, while Chen and Wang (2017) found that the same mindfulness intervention improves the mental health and sleep quality of college students compared with a control group.

2.6.8. Challenges in Measuring Mindfulness

Despite considerable evidence of the effectiveness of mindfulness-based interventions, studies are methodologically challenging to conduct (Davidson and Dahl, 2018). The most rigorous test of effectiveness – the double-blind, placebo-controlled trial – is not possible in the study of mindfulness, because participants will be aware if they have received the mindfulness intervention. In an analysis of mindfulness interventions among clinical populations, Goyal *et al.* (2014) found just 47 with appropriate controls, and none with strength of evidence that they could describe as “high,” defined as “indicating high confidence that the evidence reflects the true effect and that further research is very unlikely to change our confidence in the estimate of the effect” (p.359). Nevertheless, the analysis did confirm moderate evidence of effectiveness in reducing depression, anxiety and pain. Davidson and Kaszniak (2015) argue in favour of the “dual blind” design, where participants are unaware of which intervention is the subject of the experiment, and investigators are unaware of which participants have undergone which intervention, although they acknowledge the remaining difficulties in controlling for non-specific factors. These include, for example, the qualities of the instructor in the intervention, which is frequently overlooked in descriptions of research designs (Davidson and Kaszniak, 2015).

A few qualitative studies of mindfulness have been undertaken. Dobkin (2008) conducted focus groups with breast cancer patients who had undergone a mindfulness intervention, finding evidence confirming the “reperceiving” theory of Shapiro *et al.* (2006). Mackenzie *et al.* (2007) conducted semi-structured interviews validated with a focus group to identify the themes by which mindfulness impacted cancer patients, which were: opening to change, self-control, shared experience, personal growth, and spirituality. Beckman *et al.* (2012) studied the benefits to U.S.-based physicians of Mindfulness Communication training using semi-structured interviews, finding three main themes: i) sharing experiences; ii) acquiring the skills of attentiveness, listening, honesty and presence; and iii) taking time for personal development. Adopting a mix of action research, ethnography and creative research, Nugent (2011) studied how physicians in the U.K. apply mindfulness in their professional lives, finding that while mindfulness can create discomfort and uncertainty in the short term, it can also create space for reflection, reduce work-related stress and promote change.

2.6.9. Mindfulness in the Workplace

The use of mindfulness to alleviate the psychological distress and even symptoms of those suffering from disease, as well as those suffering solely from psychological problems, is therefore well-established. As a result, interest is increasing among companies and lawmakers about how mindfulness can be applied in the workplace, in particular to reduce stress and improve performance. For example, British legislators set up the Mindfulness All-Party Parliamentary Group in 2014 to examine possible policy applications for mindfulness (The Mindfulness Initiative, 2014), and organisations including Google, Transport for London and Bosch offer mindfulness-based training for their employees (Mindfulness All-Party Parliamentary Group, 2015). However, the application of mindfulness in the workplace is still evolving.

In reviewing the research into mindfulness in the workplace, Good *et al.* (2015) identified four “functional domains” that are impacted by the mindfulness-influenced attention:

Cognition: Fluid intelligence is “a complex human ability that allows us to adapt our thinking to a new cognitive problem or situation” (Jaeggi *et al.*, 2008, p.6829), and has been shown to be positively correlated to mindfulness (Gard *et al.*, 2014). Mindfulness

training has also been found to improve aspects working memory capacity (Roeser *et al.*, 2013), which itself contributes to fluid intelligence (Engle *et al.*, 1999; Mrazek *et al.*, 2013). Mindfulness has also been shown to contribute to flexible cognition (Georgsdottir and Getz, 2004) by improving the ability of divergent thinking (Colzato, Szapora and Hommel, 2012), as well as creative thinking as demonstrated by improvements in the ability to solve problems requiring some level of insight (Ostafin and Kassman, 2012).

Emotion: Mindfulness has been found to impact emotion regulation by moderating the reactivity to both pleasant and unpleasant stimulus (Arch and Craske, 2010), as well as shortening the lifecycle of emotions (Creswell *et al.*, 2007; Brown, Goodman and Inzlicht, 2013; Keng *et al.*, 2013). This is closely related to the concept of equanimity discussed earlier.

Behaviour: An important way that mindfulness affects behaviour in a work context is by reducing automatic mental processes and responses to stimulus (Bargh and Chartrand, 1999; Brown, Weinstein and Creswell, 2012). While such automation is essential to survival by avoiding cognitive overload, it can also hinder creative thinking (Ostafin and Kassman, 2012) and contribute to mindlessness (Langer, Blank and Chanowitz, 1978).

Physiology: As well as reducing the physical response to stress (Brown, Weinstein and Creswell, 2012), mindfulness has also been associated with neuroplasticity, which refers to changes in the structure of the brain (Tang *et al.*, 2007; Hölzel *et al.*, 2010). A meta-analysis by Fox *et al.* (2014) found eight areas of the brain that were consistently affected by meditation, with a “medium” global effect.

The Good *et al.* (2015) framework also identifies workplace outcomes from mindfulness based on performance, relationships and wellbeing. Of most interest with regard to adaptability is the impact on resilience, which is “characterised by positive coping and adaptation in the face of significant risk or adversity” (Luthans *et al.*, 2007). For example, a significant positive relationship has been found between mindfulness and resilience among samples of university students (Foureur *et al.*, 2013) and nurses (Pidgeon and Keye, 2014).

Glomb *et al.* (2011) provide a framework that focuses on the role of mindfulness in raising work performance by improving self-regulation of thoughts, emotions and behaviour. This is achieved through three primary processes (decoupling the self from

emotions and experiences, decreased use of automatic mental processes, awareness of physiological regulation) and seven secondary processes, some of which they recognise as being important in the ability of individuals to adapt to large-scale change: “Cultivating mindfulness might also be beneficial for organisations during periods of large-scale change. Consider the benefits of increased empathy, response flexibility, and affective regulation along with decreased rumination in times of uncertainty and stress such as during a downsizing, restructuring, or merger. The advantages of mindfulness programs might be heightened in such contexts” (p.147).

Affective regulation was discussed in the context of the Good *et al.* (2015) model above. While theoretically, mindfulness should contribute to empathy (Glomb *et al.*, 2011), there has been little research into the impact of mindfulness on interpersonal outcomes (Creswell, 2017), especially in a work context. Notable exceptions include a study of Dutch students showing that various aspects of mindfulness were positively associated with self-expression, empathy, better identification of feelings and less social anxiety (Dekeyser *et al.*, 2008). Also, studies of Singaporean supervisors and subordinates showed that supervisor mindfulness was related to various aspects of employee wellbeing, including psychological need satisfaction and emotional exhaustion (negative) (Reb, Narayanan and Chaturvedi, 2014).

Response flexibility is the ability to take time to consider the available options before acting, rather than responding reactively (Siegel, 2007). It is related to the flexible cognition mentioned in the Good *et al.* (2015) model, and is worth exploring more here. Flexibility as defined by Georgsdottir and Getz (2004) can be either adaptive or spontaneous. Adaptive flexibility is the ability to create new ways of handling problems when old methods no longer work, and can be considered a response to change. Spontaneous flexibility refers to creating new solutions even when there is no external pressure to do so. Referring back to the Buddhist origins of mindfulness and impermanence, flexibility is also related to the notion of non-attachment, which is the absence of mental fixations (Sahdra, Shaver and Brown, 2010). Mindfulness has been shown to improve cognitive flexibility in experiments (Moore and Malinowski, 2009), and cognitive flexibility has been shown to be negatively related to affective, cognitive and behavioural resistance to change (Chung, Su and Su, 2012; Kuo and Yeh, 2015). It is closely related to the concept of psychological flexibility, which is at the core of the mindfulness-based technique Acceptance and Commitment Therapy (Twohig, 2012). A

study of psychology students showed that those with higher levels of trait mindfulness demonstrated more flexible self-regulation when dealing with stress, which the authors related to adaptability (Kadziolka, Di Pierdomenico and Miller, 2016).

The final element that Glomb *et al.* (2011) recognised as potentially contributing to adaptability was a decrease in rumination. Rumination is a kind of repetitive thought that can be constructive or unconstructive depending on whether it helps the individual reach the goal that is the subject of the rumination (Watkins, 2008). Mindfulness has been shown to be negatively correlated with uncontrollable rumination in students (Raes and Williams, 2010).

2.6.10. Methodological Challenges

Some of the challenges of measuring mindfulness and mindfulness interventions have already been discussed, but the study of mindfulness in the workplace creates extra problems. Within the clinical environment, Mindfulness-Based Stress Reduction has become the accepted therapy for use in treating a number of conditions (Kabat-Zinn, Lipworth and Burney, 1985; Miller, Fletcher and Kabat-Zinn, 1995; Kabat-Zinn *et al.*, 1998). However, it is an intensive program lasting eight weeks, which has spurred interest in pared-down versions of the original MSBR program that shorten the weekly meeting and daily home practice, conduct the weekly group sessions in the workplace and adapt the yoga practice, with mixed results. Klatt and colleagues, for example have found that the Mindfulness in Motion intervention can reduce stress and improve sleep in U.S. physicians and Dutch bank employees (Klatt, Steinberg and Duchemin, 2015; Klatt *et al.*, 2016), but in only one of the studies did it improve work engagement. With their Mindful Vitality in Practice intervention, van Berkel *et al.* (2014) found no improvement in work engagement or mental health. Another program, Occupational Mindfulness, which incorporates elements of Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy and positive psychology, was evaluated very positively by Australian providers of disability services, but resulted in significant decreases in job satisfaction (Brooker *et al.*, 2013). Moreover, the study found increases in both positive and negative affect, as well as increases in stress, albeit also with higher perceived ability to manage stress, which the authors attributed to increased awareness of emotional states (Brooker *et al.*, 2013).

In their review of mindfulness interventions in the workplace, Jamieson and Tuckey (2017) found that almost half of the 40 papers they looked at failed to measure whether the mindfulness intervention had actually increased mindfulness (in addition to the hoped-for benefits of mindfulness), and that studies rarely triangulate or examine variables beyond health and well-being. For example, Roeser *et al.* (2013) found no significant changes in the physiological measures of blood pressure, resting heart rate or cortisol levels in a sample of teachers, even though they reported feeling less stressed, anxious, depressed and burnt out following a mindfulness intervention. Furthermore, it is far from clear if the benefits of mindfulness apply in all work conditions. For example, for repetitive tasks it may be the case that increased mindfulness could be detrimental to the individual as well as work outcomes, for example in situations where greater awareness of one's situation and values creates conflict with organisational objectives (Dane, 2010; Glomb *et al.*, 2011; Jamieson and Tuckey, 2017; Hafenbrack and Vohs, 2018).

Possible biases have also been identified. For example, neuroscientific studies by Taylor *et al.* (2011) and Cahn, Delorme and Polich (2013) showed that long-term mindfulness practice produced beneficial effects (emotional stability, and perceptual clarity) when compared with novices or control group. However, self-selection bias among long-term meditators could confound the results, especially given the small sample sizes (10 and 16). For neuroscientific studies of mindfulness in particular, Fox *et al.* (2014) suggested the paucity of research in which meditation failed to have an impact pointed to possible publication bias. Davidson and Kaszniak (2015) also warn against "reverse inferences," a type of fallacy whereby conclusions are drawn about psychological function based on measures of brain activity.

2.6.11. Criticisms of Mindfulness

As well as challenges in studying mindfulness, its application in the workplace has also been the subject of critical scrutiny. Glomb *et al.* (2011) question whether mindfulness could have counterproductive effects in the workplace, such as by prompting people to become more aware of the importance of, for example, family over their work commitments. Masicampo and Baumeister (2007) argue that mindfulness training is nothing more than a type of self-control exercise.

Other critics of mindfulness in the workplace complain not that it is ineffective, but that it is being “commodified” (Hyland, 2015) and promoted in ways that overplay the scientific evidence (Farias and Wikholm, 2016). A frequently cited online media commentary suggests that disconnecting mindfulness from its Buddhist roots risks it being used for unethical purposes, for example by shifting the burden of responsibility for dealing with toxic work environments from the employer to the employee (Purser and Loy, 2013). Schmidt (2016) counters that the delinking from Buddhism has been essential to the adoption of mindfulness in non-Buddhist populations, a point made by Kabat-Zinn (2013) when developing Mindfulness-Based Stress Reduction. Bodhi argues that while secular analysis of mindfulness should respect its Buddhist traditions, if elements of mindfulness are helpful in new applications, this should be welcomed (Bodhi, 2013).

2.6.12. Summary

As effective as mindfulness seems to be in treating both physical and mental conditions, the active ingredients have proven very hard to identify and measure, especially in a workplace context. Nevertheless, its efficacy in medical environments is spurring research in to how it can be employed more widely, including in the workplace. In particular, mindfulness has been applied to the issue of workplace stress, demonstrating various areas of overlap with the literature on change-related stress and coping. The Literature Synthesis will further examine, among other things, the relationship between adaptability and mindfulness.

Chapter 3: Literature Synthesis, Basic Theory and Research Question

The Literature Review has examined the core topics of change and adaptability, the nature of knowledge workers as the subject of investigation, as well as the contextual aspects of research in China. The review has also looked at mindfulness with a view to identifying possible connections with change and adaptability. This chapter draws together the various strands of the Literature Review with the aim of developing a Basic Theory and a Research Question.

3.1. Main Themes

In reviewing the literature and integrating its various elements, several themes in particular stand out as promising and practical areas of investigation.

3.1.1. Change and China

The Literature Review has shown that various aspects of human activity have been expanding rapidly since around 1950, the so-called Great Acceleration (Steffen *et al.*, 2015). Much of this change has been driven by advances in areas such as health and information and communications technology, resulting in the increasingly rapid development and adoption of new technologies, such as biotechnology and artificial intelligence (Muir *et al.*, 2016; van Nimwegen *et al.*, 2016).

When looking at China specifically, we can see the country has had to catch up with more developed parts of the world. Despite having a large population, its economy was not even as big as the U.K.'s until 2005, when it entered a period of exponential growth itself (The World Bank, 2017a). It is now the second largest economy in the world, and if current trends continue, it will overtake the U.S. It can be seen, therefore, that human activity in China is in the midst of an even faster acceleration than most of the rest of the world in areas such as data creation (IDC, 2018b). This rapid growth has occurred in its entirety during the lifetimes of those currently engaged in the workforce in China, meaning these individuals should have experiences of, and perspectives on, change uncommon in more developed parts of the world where much of the research on adaptability has been conducted.

Knowledge workers, who are engaged in some of the most dynamic sectors of the economy, such as finance, technology and medical, are likely to be at the forefront of economic and workplace trends (Davenport, 2005). In China the number of knowledge workers is likely already in the 10s of millions (Wang, 2016) and, thanks to the overall size of the population, it is becoming an important group even by global standards. Nevertheless, there is lack of research on workplace change in China and how it impacts knowledge workers.

3.1.2. Psychological Implications of Change

The Literature Review explored several perspectives on the impact of change on workers. While there has been some consideration of “proactive” adaptability (Griffin and Hesketh, 2003), the majority of research has focused on reaction to change, and in particular maladaptive responses to change. This is reflected in models such as that for stress and coping (Lazarus and Folkman, 1984), and handling grief (Leybourne, 2016). However, in an environment such as China’s, it is possible that rapid economic growth has actually created a lot of opportunity for those working there, which may present a more complex situation than simply dealing with issues such as resistance to change. For example, while there is some research into change “fatigue” (Bernerth, Walker and Harris, 2011), little has been written about how perpetual change becomes the norm for individuals experiencing it.

The Literature Review also revealed an inclination for previous research to seek universal responses to change, often driven by fixed individual traits. This lack of granularity in investigation of change and adaptability has often removed context from the equation, even though individuals may well behave differently in different situations. This is potentially particularly true in China, where a rapidly changing environment will continually produce novel situations.

Moreover, adaptability to accelerating change is a relatively new area of study. For example, the exponential growth bias that hinders people’s ability to accurately consider non-linear relationships has attracted academic attention only over the past few years (Levy and Tasoff, 2017). Even if change is not uniformly “exponential” in all aspects of work in China, the present study aims to inform research into rapid change, with a particular emphasis on participants’ subjective experience of change.

3.1.3. *Adaptability and Mindfulness*

The Literature Review showed that mindfulness and individual adaptability share many related concepts, although few have recognised this link so far (Glomb *et al.*, 2011; Vich, 2015). The connections between mindfulness and adaptability can perhaps be most clearly seen using the Good *et al.* (2015) functional domain framework of mindfulness to overlay van Dam's Framework for Individual Adaptability (van Dam, 2013).

For example, Van Dam (2013) discusses several aspects of cognitive adaptability. One is situational awareness, or knowing that change is taking place, or could take place. While Good *et al.* (2015) do not mention awareness in this context, awareness nevertheless underpins the concept of mindfulness. Another is mental ability, such as cognitive flexibility and focused attention. Regarding focused attention, again this is a fundamental component of mindfulness, as demonstrated in Bishop *et al.*'s (2004) definition. Furthermore, Good *et al.* (2015) argue that mindfulness can aid attentional stability, control and efficiency. Regarding cognitive flexibility, van Dam (2013) argues that those who can think more flexibly will be better able to adjust to new tasks or situations. Good *et al.* (2015) suggest that mindfulness can increase both cognitive flexibility and capacity through the ability to generate novel ideas, convergent/divergent thinking and problem solving. Regarding affective resources, van Dam (2013) identifies resilience, which is one of the Positive Psychological Capital traits. As discussed earlier, a significant positive relationship has been found between mindfulness and resilience among university students (Foureur *et al.*, 2013) and nurses (Pidgeon and Keye, 2014). The second is positive affect, which she closely ties to resilience as useful in emotionally adjusting to change. The third is emotion regulation, which is intimately tied to mindfulness. As discussed in Section 2.6.9, emotion regulation includes such aspects as situation selection and modification, attentional deployment, cognitive change, and emotional modulation (Gross, 1998), and can aid the adaptation to changes in the workplace (Huang *et al.*, 2014).

These frameworks demonstrate various connections between mindfulness and adaptive performance. For example, affective resources such as emotion regulation will be instrumental in improving adaptive performance dimensions, such as handling work stress or crises (Pulakos *et al.*, 2002). Further, studies have shown that mindfulness meditation can improve emotion regulation (Creswell *et al.*, 2007; Arch and Craske,

2010), through mechanisms such as re-perceiving (Shapiro *et al.*, 2006). Therefore, it appears that mindfulness could fortify the affective resources an individual can apply to improving adaptive performance.

3.2. Development of Basic Theory

The Literature Review and its Synthesis reveal several promising areas of investigation. China is as an area of unusually rapid change, and its knowledge workers appear to be at the cutting edge of this change. The specifics of change and the ability of individuals to adapt to it is not well understood, especially as the pace of change increases. Moreover, it has shown that mindfulness and adaptability are connected in several respects, and mindfulness therefore could augment the psychological resources individuals employ when adapting to new situations. However, as the literature is undeveloped in many areas, especially in the case of geographies experiencing rapid growth such as China, the research will be largely exploratory. As a result, a Basic Theory has been developed from the Literature Synthesis in the form of four belief statements, which will in turn be developed into a Research Question, Aim and Objectives.

3.2.1. Chinese knowledge workers are facing a great deal of change

The previous discussion has shown how China's economy is growing quickly, resulting in a further acceleration of trends evident globally. In China, this can be seen in technological advancement as well as urbanisation, which not only further contribute to the spread of new ideas, technologies and shared experiences, but also increase the concentration of knowledge workers.

It should be expected, therefore, that these workers are experiencing significant changes in their working lives as new companies are created, grow and reorganise, new jobs are created, new technologies are applied, leaders change, strategies shift and offices relocate (Herold, Fedor and Caldwell, 2007). Sometimes the individual will be forced to change because of external factors, and sometimes the individual will change in response to opportunities or expected changes in the environment, as evidenced by China's significant labour turnover. It is also worth recognising that some changes will have materially greater impacts than others that need to be accounted for when examining the data. For example, someone laid off will likely have a different view of

a restructuring when compared with someone who kept his or her job, but not necessarily because they have differing perceptions of change in general.

The increase in the amount of information on which to base decisions, combined with a reduction in the amount of time in which to assess and analyse the information, is likely increasing levels of ambiguity, meaning workplaces are continuing a shift from predictable to uncertain (Kozlowski *et al.*, 2001a). Work processes are shifting from standardised to flexible, and education models are migrating from one-time study to lifelong learning (Cascio, 2003).

3.2.2. They will perceive and interpret these changes in various ways

For some, change will be intimidating and they will resist it, perhaps because they seek routines or maintain a short-term focus (Oreg, 2003). Others may accept it, and still others may act in anticipation of change. Coping with change involves appraising its significance and the resources available to react, as well as choosing whether to regulate the emotional response to it or take some form of action (Folkman *et al.*, 1986, Carver and Scheier, 1994).

Self-regulation involves a personal assessment of the current state compared with the desired state (Kozlowski *et al.*, 2001a), and the relationship between the two is likely to be continually changing. The desired state could be various measures of an individual's ability to handle emergencies or work stress, solve problems creatively, deal with uncertain work situations and learn new tasks or technologies, among others (Pulakos, 2000).

3.2.3. Chinese knowledge workers can draw upon various resources to adapt to change

People have various psychological resources available to them with which they can better adapt to change. Following van Dam (2013), these resources can be categorised as cognitive, affective or behavioural, although there is significant overlap between the components of these three categories.

3.2.4. The perception of change and the ability to adapt to it may be influenced by mindfulness

The psychological resources people can apply to adaptability are malleable, and some will be more useful than others in helping any particular individual adapt to change. Many of the resources that have been identified by van Dam (2013) as being relevant to adaptability are more abundant in those with greater mindfulness and can be increased through mindfulness interventions (Good *et al.*, 2015). Based on the synthesis of these two works, it should therefore be expected that more mindful individuals would have available to them greater adaptive resources, such as:

- Situational awareness of when change is taking place
- Cognitive flexibility to respond appropriately to change through the generation of novel ideas
- Attitudes such as optimism that can contribute to adaptive orientation
- Emotion regulation and resilience when confronting change
- Reduced reliance on automatic responses to stimuli

Nevertheless, as little research has been conducted with Chinese knowledge workers, the study seeks to identify any other coping strategies or adaptive resources that can contribute to our understanding of adaptability and mindfulness. There is much to be gained from foregrounding the socially situated nature of change in different cultural or organisational contexts. While the emphasis will be on investigating the detail and richness of individual experience, the study also aims to embed those experiences in a broader, contextual understanding of the nature of change.

3.3. Research Question, Aims and Objectives

Based on the literature synthesis and basic theory outlined above the key research question for this study is:

How do Chinese knowledge workers in multinational companies in China adapt to change, and what is the influence of mindfulness?

The aim of the research is to find out how Chinese knowledge workers at multinational companies respond to their rapidly changing environment, and whether mindfulness is a useful way of understanding these responses.

The objectives are therefore:

- Identify the most salient forces of environment change to Chinese knowledge workers
- Examine how they perceive and interpret these forces
- Explore the resources they employ to adapt to change
- Examine how mindfulness may influence the perception of change and the ability to adapt to it

Chapter 4: Research Methodology

4.1. Theoretical Foundation

Addressing the Research Question, Aim and Objectives requires a Research Methodology based on a philosophical foundation, of which several are applicable to business research (Remenyi *et al.*, 1998; Snape and Spencer, 2003; Maxwell, 2012; Saunders, Lewis and Thornhill, 2015). The main consideration in selecting an appropriate research philosophy was that it would support investigation of the Research Question, with consideration also given to the epistemological, ontological and axiological beliefs of the researcher.

Management research sometimes adopts the positivism favoured in the natural sciences, based on identification and manipulation of variables to ascertain correlations and, where possible, causality. If a positivist approach were taken to address the present study's research aim or objectives, significant challenges would be quickly encountered. As discussed in the literature review, a great deal of positivist work has gone into studying both adaptability and mindfulness, which is important in identifying relationships, including degrees of adaptability/mindfulness and effectiveness of interventions. Yet researchers struggle to define adaptability and mindfulness, and there is still a great deal of disagreement on how to operationalise study of the key concepts, and even the main issues (Baard, Rench and Kozlowski, 2013; Goyal, Singh and Sibinga, 2014; Davidson and Kaszniak, 2015; Jundt, Shoss and Huang, 2015; Jamieson and Tuckey, 2017). That mindfulness and adaptability can be interpreted in many ways makes the search for universal laws, as positivist research attempts, challenging and risks reducing the complexity of these constructs to such an extent that it undermines their utility as explanatory concepts. Change, people's perception of it, and how they deal with it are not just complex issues but also, especially in the workplace, to some extent constructed (Snape and Spencer, 2003). In the case of mindfulness, the limits of this approach have been recognised by Grossman (2011), who suggests a greater emphasis on qualitative research, even though it is more labour intensive: "Such open-ended approaches may also result in the creation of novel, as yet unconsidered, categories of psychological effects associated with mindfulness..." (p.1039).

This study aims to explore the mental processes of adaptability to change, requiring acceptance of the view that people "think, argue, and experience the world or events in idiosyncratic ways and that positivistic research strategies are unable to deliver an

understanding of these human dimensions” (Remenyi *et al.*, 1998, p.97). Hence the need to dig deeper to extract meaning from individuals through their interpretation of the phenomena they experience.

Alternative approaches sometimes broadly referred to as interpretivist (Bryman, 2016) or phenomenological (Jankowicz, O’Farrell and Wallace, 2016) accept that conducting research in social contexts, such as in a business environment, challenge positivist notions of reality and the ability to study it in purely objective ways. From an ontological perspective, some researchers reject the existence of a single, “true” reality, believing instead that reality is socially constructed through continuous interpretation (Denzin and Lincoln, 2017). This philosophy, described variously as postmodern or poststructuralist, therefore focuses on the importance of language as a medium through which reality is constructed, and rejects the positivist notion that it can be understood objectively. In management research, this approach is driven by a critical view of the power relationships within organisations – Foucault and Ewald (2003), for example, examined how “power/knowledge networks” can create “mechanisms of exclusion”. The notion that “no assumption of reality can exist as anything more than its representation in language” (Clegg and Hardy, 1999, p.381) implies that constructionism is, therefore, “ontologically mute” (Gergen, 2009, p. 72) – there is no reality beyond the knowledge generated through language.

In management studies, these anti-realist ontologies gained prominence toward the end of the last century – the so-called “linguistic/cultural turn” (Reed, 2005) – as a critique of analysis assuming the material existence of organisations with objective structures that could be studied (Westwood and Linstead, 2001). While postmodernism encompasses an eclectic range of views, its application in organisational research draws on philosophers such as Derrida (1988) in seeking to challenge established modes of thinking and research, especially as they relate to power structures, and embracing investigation of the margins rather than the centre (Hassard and Parker, 1993; Kilduff and Mehra, 1997). Such approaches might be appealing for the study of change and, in particular, mindfulness, as the experiences of change and mindfulness will likely be understood in a unique way by each individual. Even from an epistemological standpoint, it appears a lot can be learnt by examining the narratives and interpretations, as they stand, of those experiencing change. However, the explanatory limitations of assuming the organisation exists solely in the eye of the beholder – in other words, there

can be as many “realities” as there are people to talk about those realities – undermine its utility. The present study aims to generate findings that can be generalised at least to some extent, which would be greatly aided by the assumption of an objective reality, while acknowledging the limits in our ability to accurately interpret observations of that reality. (The issue of generalisation is addressed below in the section on Validity.) For example, the lack of consensus on what the terms adaptability and mindfulness really mean reflects their nebulous nature and that different individuals will understand them in different ways. Nevertheless, this is not to say that psychological realities (such as mindfulness techniques and coping strategies as identified in existing research) cannot be ascertained. Rather, it means accepting that our knowledge of this reality will always be open to question, reinterpretation and investigation through social interactions, not just individual self-report.

This ontological realism combined with epistemological interpretivism is recognised broadly as critical realism (Maxwell, 2012). This perspective is realist because “it is asserted that there are objects in the world, including social objects, whether the observer or researcher can know them or not,” and critical because “any attempts at describing and explaining the world are bound to be fallible, and also because those ways of ordering the world, its categorisations and the relationships between them, can not be justified in any absolute sense, and are always open to critique and their replacement by a different set of categories and relationships” (Scott, 2005, p.635).

Although its origins can be traced back much further, critical realism is most closely associated with Bhaskar (1978), who sought to adapt traditional concepts of science for use in the social sciences. His philosophy of science called transcendental realism challenged the simplistic objectives of empiricist scientists in identifying cause and effect at the level of events, suggesting instead that investigation should be conducted at the level of generative mechanisms, the understanding of which can be improved over time, rather than proved positive or false. His complementary concept of critical naturalism suggests that this transcendental realism can be applied to social sciences as long as it is accepted that the human world is in many ways more complicated than the physical world because of the transitory nature of human structures. This recognises that instead of the closed systems of the natural world, where researchers can ostensibly pick out discreet variables to be measured, the social world is an open system of potentially endless complexity (Pawson and Tilley, 1997). This critical realism,

therefore, offers “an alternative both to the spurious scientificity of positivism and to idealist and relativist reactions to positivism” (Sayer, 2005, p.6).

Although critical realism was originally intended as a critique of the perceived limitations of positivism (Layder, 1990), in the context of management research it has developed in response to the popularity of social constructionism that grew from the post-structuralist/postmodernist movement of the 1970s and 1980s (Reed, 2005), described as “the descent into discourse” (Harvey, 1996, p.85). Some of the most detailed elaboration of Bhaskar’s work has been produced by Sayer (2010), who offers eight assumptions behind critical realism:

1.	The world exists independently of our knowledge of it.
2.	Our knowledge of the world is fallible and theory-laden. Concepts of truth and falsity fail to provide a coherent view of the relationship between knowledge and its object. Nevertheless knowledge is not immune to empirical check and its effectiveness in informing and explaining successful material practice is not mere accident.
3.	Knowledge develops neither wholly continuously, as the steady accumulation of facts within a stable conceptual framework, nor discontinuously, through simultaneous and universal changes in concepts.
4.	There is necessity in the world; objects—whether natural or social—necessarily have particular powers or ways of acting and particular susceptibilities.
5.	The world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events. These structures may be present even where, as in the social world and much of the natural world, they do not generate regular patterns of events.
6.	Social phenomena such as actions, texts and institutions are concept dependent. We not only have to explain their production and material effects but to understand, read or interpret what they mean. Although they have to be interpreted by starting from the researcher’s own frames of meaning, by and large they exist regardless of researchers’ interpretation of them. A qualified version of 1 therefore applies to the social world. In view of 4–6, the methods of social science and natural science have both differences and similarities.

7.	Science or the production of any kind of knowledge is a social practice. For better or worse (not just worse) the conditions and social relations of the production of knowledge influence its content. Knowledge is also largely—though not exclusively—linguistic, and the nature of language and the way we communicate are not incidental to what is known and communicated. Awareness of these relationships is vital in evaluating knowledge.
8.	Social science must be critical of its object. In order to be able to explain and understand social phenomena we have to evaluate them critically.

Table 4.1 - Eight assumptions behind critical realism

(Sayer, 2010, p.4)

These assumptions require some elaboration of their implications for research in general, and the present study in particular. From an ontological point of view, the world exists at three basic levels: the real, the actual and the empirical (Bhaskar, 1978). The “real” comprises structured entities possessing “powers” and “susceptibilities” that generate events (the “actual”) via mechanisms or processes. Therefore, reality, especially as it relates to social phenomena, can not be directly observed, but rather perceived through the events they create that can be observed (“the empirical”), perceptions that will always be open to interpretation. This stands in contrast to positivism, which assumes reality and its “regular patterns of events” can be directly observed and hypotheses proved or falsified by focusing purely on that which can be measured (Easton, 2010). This interpretivist epistemological standpoint recognises that knowledge is mostly constructed through language, yet the resulting theories should aim to offer a clearer account of the underlying reality.

A central area of concern for critical realism is the relationships and generative mechanisms among entities and what can be understood about them by the resulting observable events they produce. The concept of emergence, for example, is based on a stratified ontology that views the world as comprising separate, albeit overlapping, realms (Bhaskar, 1978; Archer, 1995; Sayer, 2010; Elder-Vass, 2012; Pratten, 2013). This relates to the structure-agency debate over whether it is social structures or individual agency that are most important in defining human behaviour (Reed, 2003), in which critical realists would tend to take the view that it is important to understand both social norms, the individuals and the relationships between them when studying social phenomena (Archer, 2000). Relationships can be necessary, whereby the nature of entities are mutually defined by each other, or contingent, where they may affect one

another, but not necessarily so (Sayer, 2010). Investigation therefore seeks to explain events through understanding of both necessary and contingent relations: “If all relations were contingent then each explanation would be unique and incapable of contributing towards anything by way of generalisation” (Easton, 2010, p.121). As well as relationships, critical realist researchers analyse the generative mechanisms by which entities cause events, as it is from this understanding that critical realism derives its explanatory power (Bhaskar, 1978). However, generative mechanisms may or may not be evident in observable events, depending on the circumstances – meaning they are “tendential” or “contextually conditioned” (Blom and Morén, 2011). This stands in contrast to positivist research, which would place much greater confidence in the existence, or non-existence, of correlations based on a limited number of, or even single, observations. Explanations of mechanisms can therefore take on forms other than linear additive, such as linguistic (Easton, 2010).

Critical realism is not without its critics. Denzin and Lincoln, for example, dismiss critical realism for failing to take a normative stance: “We want a social science committed upfront to issues of social justice, equity, nonviolence, peace, and universal human rights. We do not want a social science that says it can address these issues if it wants to do so. For us, this is no longer an option” (Denzin and Lincoln, 2017, p.11). For some, the combination of ontological realism with epistemological relativism is contradictory, thereby leading to a conflation of ontology and epistemology, a criticism rejected by Maxwell: “Not only is ontological realism compatible with epistemological constructivism, but ontology has important implications for research that are independent of those of epistemology” (Maxwell, 2012, p.13).

Critical realism seems appropriate for the present study, for several reasons. The focus of the research is the psychological impact of change on knowledge workers, their perceptions and responses to it, and the influence of mindfulness. From an ontological perspective, to address the Research Question, there seems little utility in disputing the reality of the people being investigated, the organisations they work for, the changes they experience and their responses to those changes – these are the so-called entities or objects in critical realist parlance. At the same time, it is also necessary to understand the perceptions of those changes in the minds of those being studied, the perceived impacts of those changes and the potential responses, as well as appreciate the interpretations of these by the researcher. The reality of the objects of investigation,

therefore, can not be observed directly, but is rather accessed through the expressed experiences of those being studied – the actual and empirical domains of critical realist study.

Of particular interest in the present study are the mechanisms, especially mechanisms of change and the conscious and subconscious mental processes involved in adapting to change. The Research Objectives directly ask not just about the most salient forces of change for Chinese knowledge workers (acknowledging the ontologically “real” basis of their experiences), but also their perceptions of those changes (accepting that the knowledge about those changes is epistemologically constructed by the actors themselves). This distinction is important, as an attempt is made to identify, at the most basic level possible, the driving forces of change that will most likely impact others in a similar context to those being studied, as well as the perceived impact of those changes on individuals. For example, one such process that has already been identified is coping (Folkman *et al.*, 1986), the mechanism by which change is assessed and responses considered.

Also of importance in the present study are relationships, of which there are potentially many relevant to answering the Research Question. The individuals being studied will have relationships with their work, their organisations and their co-workers. It could be said they have a relationship with change, through the attitudes they possess toward various types of change. And as the study includes consideration of mindfulness, it is also fruitful to consider the relationships the individuals have with themselves. There may also be relationships between various kinds of changes, and individuals’ responses to them. Moreover, as the central interest of the research is change, these relationships themselves may be subject to mechanisms of change.

4.2. Research Strategy

Building on the philosophical foundations for the research, the research strategy will guide the design and execution of the research. This section will look at the strategic considerations of adopting a critical realist approach to addressing the Research Question, namely the adoption of a qualitative approach and the processes of sampling and data analysis. It will also include a discussion of reliability and validity issues, followed by a review of axiological concerns and researcher reflexivity. The

subsequent section examines the more detailed questions around the research design and techniques.

4.2.1. Strategic Considerations

While the ontological position of critical realism is relatively clear-cut, its epistemological position is somewhat more flexible, which has implications for the strategic direction of the present research. There are various methods associated with critical realism, yet it is not prescriptive in terms of how acceptable knowledge can be generated. Nevertheless, two strategic positions can be taken regarding the present study that are consistent with critical realism.

First, the research will be based on the collection of largely qualitative data. The critical realist rejection of the positivist position that the world can be explained through the identification and measurement of discrete variables alone (Pawson and Tilley, 1997) means qualitative rather than quantitative data collection techniques are more suitable in addressing the Research Question: How do Chinese knowledge workers in multinational companies in China adapt to change, and what is the influence of mindfulness? Indeed, the aim and the objectives of the research are largely exploratory – seeking to identify the forces of change, perceptions of them and responses to them – rather than evaluating courses of action or relationships. Explanations will be provided discursively rather than numerically. This is not to say that quantitative techniques offer no utility whatsoever – in fact, as will be discussed in the research design, a quantitative technique will be used to distinguish between those demonstrating high and low levels of mindfulness as part of the sample selection process. Nevertheless, the basis of the investigation will be qualitative, as this data is most appropriate for analysis in answering the Research Question.

The second strategic consideration centres on how the data will be analysed. As discussed earlier, the focus of critical realist research is investigating phenomena to explain the underlying mechanisms, entities and structures. Identification and conceptualisation of mechanisms is achieved through retrodution (Blaikie, 2000; Danermark *et al.*, 2002; Sayer, 2010) – moving back from the analysis of phenomena to mechanisms that could explain them. Retrodution was first developed by Harré (1961) and then Bhaskar (1978) for application in the natural sciences before it was adopted in

the social sciences (Bhaskar, 1978; Blaikie, 2000). It stands in contrast to the more traditional forms of inference, deduction and induction, which seek to explain the general from the specific or vice versa. The retroductive process needs to take into account both great complexity, with powers and mechanisms sometimes conflicting, competing or compounding based on context (Reed, 2005). Analysis therefore centres on the investigation of tendencies for certain events to occur under certain sets of conditions (Pawson and Tilley, 1997; Reed, 2005), on which causal explanations can be based. Each round of investigation into certain phenomena seeks to reveal another, deeper level of understanding about the structures and mechanism behind them (Blaikie, 2000). This qualitative, retroductive strategy “will necessarily draw on, but cannot be reduced to, the discursive practices and forms – that is, the ‘discursive technologies’ – through which social actors come to understand and interpret the underlying structures and mechanisms that produce the events in which they are engaged” (Reed, 2005, p.1631). The particular choice of “discursive technologies” will be discussed further in subsequent sections, based on consideration of reliability and validity issues.

4.2.2. Reliability

There has been a great deal of discussion about how to apply the concept of reliability derived from the natural sciences to qualitative studies (Ritchie and Lewis, 2003). One particular challenge is demonstrating that a qualitative study of complex concepts based on the interpretation of a particular sample and a given researcher could be replicated by someone else. Indeed for the present research this would be impossible – the research design will be explained in great detail to ensure transparency, but the basic theory is based on the assumption that change is rapid and accelerating, especially in China, challenging the “replicability” of the study.

Rather than adopt the positivist terminology of reliability, Lincoln and Guba (1988) have suggested an alternative term, dependability, to refer to the ability of others to understand how the research focus evolves during the enquiry thanks to the diligent recording of the changes by the researcher (Saunders, Lewis and Thornhill, 2015). Presentation of the data analysis and results in the present study, therefore, aims to capture the evolution of the research from design to completion, including modifications required in response to emerging circumstances. Going one step further,

the study also addresses a series of questions posed by Ritchie and Lewis (2003) regarding reliability:

	Quoted from Ritchie and Lewis, 2003, p.272	Design of Present Study
1.	Was the sample design/selection without bias, “symbolically” representative of the target population, comprehensive of all known constituencies; was there any known feature of non-response or attrition within the sample?	The sample design aimed to be representative of the population in that every Chinese member of the chamber had the opportunity to participate, although this meant non-response bias was likely to be substantial.
2.	Was the fieldwork carried out consistently, did it allow respondents sufficient opportunities to cover relevant ground, to portray their experiences?	The fieldwork was carried out in a consistent way that allowed respondents sufficient time to cover the items in the Topic Guide.
3.	Was the analysis carried out systematically and comprehensively, were classifications, typologies confirmed by multiple assessment?	The analysis was carried out systematically and comprehensively. Because the results included in-depth discussion of mindfulness, which some of the participants were unfamiliar with, the interpretations and conclusions were instead discussed with the Research Supervisor.
4.	Is the interpretation well supported by the evidence?	The interpretations are well supported by the evidence.
5.	Did the design/conduct allow equal opportunity for all perspectives to be identified or were there features that led to selective, or missing, coverage?	The research design allowed for a wide range of perspectives, although self-selection bias appears to have limited input from those demonstrating lower levels of mindfulness.

**Table 4.2 - Questions of reliability
(Ritchie and Lewis, 2003, p.272)**

When it comes to bias, Saunders, Lewis and Thornhill (2015) highlight three of particular concern in qualitative work. Interviewer bias is most apparent in the way that the interviewer guides the discussion or interprets the discussion, either as it is happening or during the analysis. Interviewee, or response, bias is where the respondent does not provide accurate information, for example because they may believe it would be socially unacceptable. Participation bias refers to the quality of the sample, and the nature of who agrees, or does not agree, to be in the sample.

In terms of interviewer bias, this can be reduced by being aware of the possible biases the interviewer may possess by, for example, writing a Subjectivity Statement (see below), and by creating a topic guide (see Appendix A). Interviewee bias can be reduced during data collection through such tactics as probing for more information and recognising situations in which the participant may be reluctant to share information. Participation bias can be minimised by avoiding the use of subjective sampling techniques and providing flexibility over the time and location of data collection. This issue is dealt with further below in Section 4.3.

4.2.3. *Validity*

Validity normally refers to the extent to which a study investigates what it purports to be investigating (internal validity), and the extent to which its findings are relevant to individuals in other settings (external validity). Again, Lincoln and Guba (1988) have come up with parallel terms, respectively credibility and transferability, to be applied in qualitative research. The present study aims to establish credibility by ensuring the data collected is sufficient, that findings are reflected upon in discussions with others, and that the researcher regularly reflects upon and challenges any preconceptions they have about what they expect to discover (Saunders, Lewis and Thornhill, 2015). It also seeks to minimise bias in sampling, ensure that phenomena are labelled in a way that represents the intended meaning of the interviewees and present the results in a way that remains “‘true’ to the original data” (Ritchie and Lewis, 2003, p.274). Reflection and reflexivity are discussed further below.

Regarding external validity, there is a great deal of disagreement about the extent to which certain types of research can be generalised (Ritchie and Lewis, 2003), a term originating with positivist research. Remenyi *et al.* (1998) argue that research

conclusions based on interpretive research are no less generalisable than those based on positivism. While positivism takes a reductionist approach, controlling for variables such that an unnatural situation is created, phenomenology takes a holistic approach, and is hindered by the uniqueness of the situation. In both cases, they argue, further studies are required to validate the conclusions so that they can be generalised, in the case of positivism by relaxing the controlled variables so that a fuller picture can be generated, and in the case of phenomenology by studying different contexts. Generalisation can seem particularly challenging in critical realist research because of the acceptance that there are countless potential relationships and mechanisms and that phenomena may present themselves only in certain contexts: “The major explanatory task for the student of organisation and management, drawing on the intellectual resources that critical realism makes available, is to construct and deploy theoretical models of these complex interactions and the patterns of social relations that generate and sustain over time and place” (Reed, 2005, p.1638). Ritchie and Lewis (2003) identify three types of generalisation relevant to qualitative research:

1. Representational: from the sample to the parent population, by accurately capturing and interpreting the phenomena as experienced by the sample, and the representativeness of the sample itself
2. Inferential: from the current setting to similar settings, achieved through the production of a “thick” description
3. Theoretical: creating or enhancing theory

The nature of the study makes representational generalisation challenging – This is discussed further in Section 4.3 on sampling below. Inferential generalisation is analogous to the “transferability” of Lincoln and Guber (1988), and is achieved through a comprehensive representation of the situations facing the interviewees in the present study so that the relevance of their experiences to similar settings can be ascertained by third parties. In particular, the study elaborates on the nature of the changes experienced by the interviewees as well as the context in which they occur. Moreover, the present study seeks to make a theoretical contribution to the understanding of change, adaptability and mindfulness, which is elaborated on in the Conclusions.

One final validity hurdle that had to be overcome was language and cultural reflexivity. The candidate’s native language is English, and the thesis needs to be submitted in English. The native language (or at least schooling language) of the subjects was

Mandarin Chinese, although they are mostly fluent in English. While in many cases it might be preferable to conduct research in the mother tongue of the research subjects, the boundary between Chinese and English has to be crossed somewhere, and allowing the participants to translate their own thoughts as they speak offered the best chance of accurately capturing their true impressions. Nevertheless, where the subject preferred speaking in Chinese, the transcripts were then translated and checked for veracity.

4.2.4. Researcher Reflexivity

Because qualitative research is based on the search for meanings through interpretation, on the part of the researcher as well as the research subjects, biases and threats to reliability can be recognised and minimised through researcher reflexivity (Saunders *et al.*, 2015). Mann (2016) emphasises the importance of self-awareness in conducting qualitative research, defining reflexivity as “a conscious process of thought and articulation centred on the dynamics of subjectivities in relation to the interviewer, the interviewee(s), and the research focus and methodology” (p.15). Mann distinguishes reflexivity from reflection, which is basically thinking about something, and reflective practice, “a process of learning from experience through some form of reflection” (2016, p.9). He also cautions against excessive reflexivity, reflecting on reflections in an endless and counterproductive cycle.

Mann (2016) identifies various themes relevant to the present study, such as understanding the impact of identities and relationships in the conduct of research, understanding the role of the “self” in relation to the knowledge, and continually questioning claims and interpretations based on the data. This can be achieved using a subjectivity statement to recognise, for the benefit of the researcher and the reader, those aspects of the researcher that could impact how the research is conducted. What follows is a subjectivity statement based on four questions posed by Etherington (2004) (quoted below from p.11):

1. How has my personal history led me to my interest in this topic?
2. What are my presuppositions about knowledge in this field?
3. How am I positioned in relation to this knowledge?
4. How does my gender/social class/ethnicity/culture influence my positioning in relation to this topic/my informants?

4.2.5. Subjectivity Statement

Much of my ontological and epistemological position has been covered in Section 4.1, so this section will focus on my personal background and how that might influence the conduct of the research, and will be written in the first person.

From January 2010 to September 2018, I was living in Beijing, the capital of China in the north of the country. Although I'm British, since mid-1995 I have spent just two years living in the U.K., with at least one year spent in each of the U.S., Taiwan, Singapore, Japan and Mainland China. That I have chosen to live away from my homeland for most of my working life reflects curiosity in foreign cultures, as well as boredom with the brief spells spent in the U.K. The moves between the mostly Asian countries were usually driven by career considerations, and I have been part of and led several multinational teams. Time spent in Chinese cultures (Taiwan, Mainland China, and to some extent Singapore) represents more than three-quarters of my time abroad, and I speak reasonable Mandarin Chinese, the national language in both Taiwan and Mainland China. (I have achieved Hanyu Shuiping Kaoshi level 5, out of a total of six levels). My wife is a Chinese national, and I am a white male born in 1974. I have been practicing mindfulness meditation on a daily basis since mid-2016.

From these factual statements about myself, it should be apparent that I have not only experienced a great deal of change, but actively sought it. Moreover, the places of greatest interest to me (Taiwan and Mainland China) have been those that experienced the most change in recent times. As I contemplated a more permanent return to the U.K. with my family, an in-depth enquiry into the change I've witnessed and the impact on the people I've lived and worked with offered an appealing capstone to an important episode in my life. The "Great Acceleration" described in the Introduction to this study is having profound effects on societies around the industrialised world, aided by the proliferation of information technologies, which is creating psychological challenges as people adapt. One of the presuppositions of my research is that China's rapidly developing economy is an excellent context in which to study these challenges.

While mindfulness has been a more recent discovery for me, I have successfully applied it to my personal and professional life. My belief in its efficacy is not only a source of inspiration for my enquiry, but also a risk as the research progresses. My literature synthesis has identified many areas of overlap between adaptability and mindfulness,

but I realise that I need to remain open to the possibility that it may be irrelevant to the study of adaptability as it relates to the subjects of my study – Chinese knowledge workers.

During the data collection process, it was also important to recognise the contrasts in background between myself and the informants. By design the participants in the research had Chinese nationality, spoke Mandarin Chinese as their mother tongue and had varying levels of international experience. In terms of power relationships, as the participants are members of the American Chamber, rather than my colleagues, it should be of little significance. These issues will be addressed further in the Data Collection and Analysis chapter.

In terms of cultural differences that could bias results, such as social acceptability bias, it is certainly the case that I've come across situations in China and Taiwan where information has not been forthcoming, often to save face, a concept perhaps of greater significance in Chinese than the West. However, I'm confident that my experience of working with and leading teams including Chinese people, as well as marrying into a Chinese family, has provided me with much greater awareness of when this kind of bias is likely to occur and how to minimise it. In fact, a salon I conducted in mid-2017 of around 25 Chinese nationals at a meeting of a local Toastmasters Club was very successful in encouraging the participants to open up about, in some cases very personal, aspects of their lives in relation to deriving meaning from their work.

4.3. Research Design and Sampling

Building on the preceding considerations, a cross-sectional design was chosen. Particularly for the study of change, longitudinal designs offer many potential benefits, such as the ability to study a change and its impacts as they develop, and the success of coping techniques and adaptations, for example. However, for the present study, a longitudinal design would make sense only if a particular change or set of changes had been identified, for example a specific organisational change event. Moreover, longitudinal studies risk failure if the researcher's personal circumstances change substantially during the course of the data collection process so that it cannot be completed. A cross-sectional design was therefore deemed adequate to address the Research Question.

4.3.1. Data Sources

The candidate used the membership of the American Chamber of Commerce in China as the sample frame. As of May 30, 2017, the chamber's membership comprised 3,334 cardholders, of whom 1,584 (47.5%) had been identified as nationals of Mainland China (excluding Hong Kong). The membership includes all paid-up members of the chamber, plus those in a one-month grace period after their membership expires. The list is continuously updated, but nationality data was missing for 680 individuals, meaning that a screening question was needed to ensure only Chinese nationals participated. The chamber's 860 member companies are all multinational companies – by law, they can become a member only by proving they have a company registration outside of Mainland China. Data on corporate headquarters is lacking, but not all U.S.-based companies are members of the chamber, and not all members are based in the U.S. It should also be noted that many companies separate their registered corporate headquarters from their main administrative functions for tax reasons.

4.3.2. Data Sampling

For the purposes of this study, the sample was based on Chinese knowledge workers who were members of the American Chamber of Commerce in China. The nature of the study means that statistical inferences were unnecessary, yet the sample aimed to be representative of the target population (Chinese knowledge workers among chamber members).

A top-down approach to sampling was used. This involved surveying the entire sampling frame and analysing the results to identify those with high and low trait mindfulness. From those two groups, participants for the in-depth interviews were invited. The advantages of this method are that there is no need to conduct a random sample for the survey and it would hopefully generate adequate pools of high- and low-mindfulness individuals. The disadvantages are that the response rate might be low, creating concerns of non-response bias. No completely comparable surveys had been carried out of the chamber's membership, but a survey conducted in 2015 of all the chamber's members (including non-Chinese nationals) regarding their perceptions of the chamber's performance achieved a response rate of around 5 percent (150 individuals).

Survey Design

The target population (Chinese AmCham members) was first assessed for degree of trait mindfulness, with respondents at the extremes investigated further through interviews on their attitudes toward change and adaptability. This is consistent with the critical realist approach being taken for the study, which recognises the existence of ontologically “real” entities, in this case the survey participants.

As mentioned earlier, several instruments have been developed to measure mindfulness, although they have their limitations (Grossman, 2011; Davidson and Kaszniak, 2015). For the present study, the Five Facet Mindfulness Questionnaire, developed by Baer *et al.* (2006) was used (see Appendix B). The five-factor structure of the questionnaire has been confirmed in subsequent studies by Baer *et al.* (2008), with Bohlmeijer *et al.* (2011) finding that each facet represented a distinct, yet related, element of mindfulness. The five facets are described in Section 2.6.5 together with example items. The facets each include five items apart from non-react, which includes four. The items are measured on a scale of 1 to 5, including some reverse scored items. The measure has been shown to have good construct validity (Baer *et al.*, 2008), with four of the facets showing significant positive correlation with meditation experience, as well as incremental validity in predicting psychological wellbeing. In a study of a Dutch version of the questionnaire, Veehof (2011) found the internal consistency of the facets to be sufficient, with Cronbach’s α of between .69 and .90, and test-retest reliability of 0.61 to 0.84. The questionnaire has also been successfully used in Chinese contexts (Deng *et al.*, 2011; Hou *et al.*, 2014). Deng *et al.* (2011), basing their study of a Chinese-language version of the questionnaire on students of a university in mainland China, found the Cronbach’s α to be acceptable for all the factors except non-reacting (0.448). The test-retest correlation for each facet ranged from 0.512 to 0.714. It was hoped that the availability of Chinese-language versions of the Five Facet Mindfulness Questionnaire would help to increase the response rate.

In addition to the standard questionnaire, a screening question was added regarding nationality, plus demographic questions and an invitation to participate in subsequent focus groups/interviews. The questionnaire was administered using Survey Monkey, which has been used before with the chamber’s members, and invitations sent to the

sample frame via email in English and Chinese (see Appendix C). It was conducted according to the ethical considerations discussed in Section 4.4.2.

As a survey was necessary to identify two subgroups varying in trait mindfulness, there was also the question of whether “mixing methods” would undermine the validity of the enquiry (Bennett, 1991). However, it is perhaps more accurate to describe the study as employing “mixed techniques,” with techniques describing how populations will be sampled and data collected, and methods describing how data will become information (Jankowicz, 2016). Referring back to the discussion of critical realism in Section 4.1, it can be seen that using a survey as a sampling technique to generate a set of groups that may be more fruitful to investigate takes nothing away from the overall qualitative design. This recognises the reality that some people are more mindful than others (although measures of mindfulness are far from perfect), as well as the fact that knowledge about how this might impact their perceptions of change is best understood through people’s interpretations of it. As will be discussed further in the chapter on Data Collection and Analysis, the survey response rate was at the low end of expectations. Nevertheless, it served its purpose in identifying, as much as they can be, individuals possessing high and low levels of trait mindfulness.

Survey Results

The questionnaire was hosted on the Survey Monkey platform, from which an initial email invitation sent on 12 October, 2017. A follow up email was sent from the candidate’s work email account on 16-18 October, 2017. The survey was sent to 2,002 members of the American Chamber of Commerce in China who were identified as either Chinese nationality or unidentified nationality. Of these, 91 provided responses. They were all provided with a summary of their scores, and a brief description of the five facets.

Three were excluded from the analysis because a screening question revealed that they were not Chinese nationals. A further 26 refused the invitation for an interview and so were not considered for the next stage of the research. This left a pool of 62 respondents. Of these, 71 percent were female and 29 percent male. In terms of age, 79 percent were between 35 and 54 years old. As the purpose of the survey was to identify groups of potential interviewees based on their degree of mindfulness, little

demographic information was collected, but some details of the respondents can be seen in the tables below.

Gender\Mindfulness Score	High	Medium	Low	Totals
Male	3	12	3	18 (29%)
Female	8	29	7	44 (71%)
Totals	11	41	10	62

Mindfulness Experience\Age	18-24	25-34	35-44	45-54	55-64	Totals
Regular	-	-	1	2	-	3
Some	-	2	7	4	1	14
None	1	7	17	18	2	45
Totals	1	9	25	24	3	62

Table 4.3 – Characteristics of survey respondents

In terms of the mindfulness score, the mean and median were 132. The lowest score was 95 and highest 164. The standard deviation was 14.77. (The minimum possible score was 39, and the maximum 195, for a midpoint of 117). The histogram below shows a normal distribution with few anomalies.

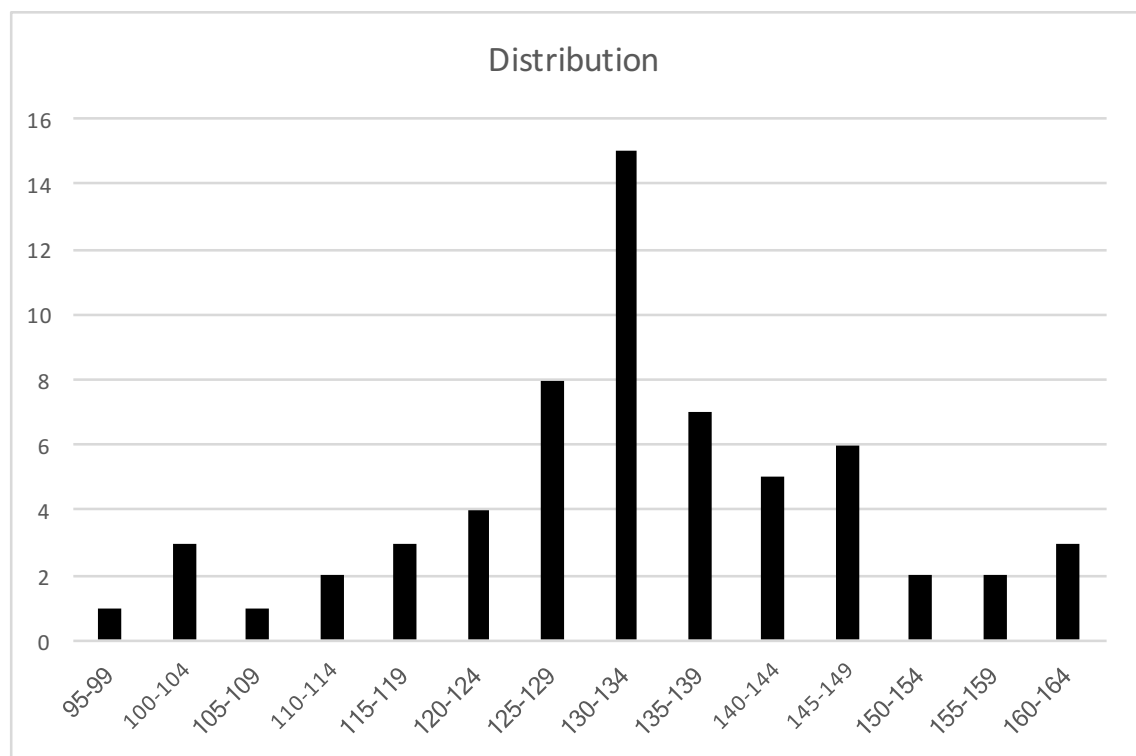


Figure 4.1 – Survey respondent distribution

Standard deviation from the mean was chosen as the basis for distinguishing between high and low mindfulness individuals. With a mean of 132 and standard deviation of 14.77, this meant those scoring 117 or less would be classified as “low mindfulness,” numbering 10 individuals. Those scoring 147 or higher were classified as “high mindfulness,” and they numbered 11. It is worth pointing out that even those in the “low mindfulness” category are only just below the midpoint of the scale, and therefore these categorisations are relative to others within this particular group.

4.3.3. Saturation

For the interviews, the concept of saturation needs to be addressed when deciding on the number of participants. Saturation refers to the point where additional enquiry uncovers nothing new to contribute to the categories under investigation (Glaser and Strauss, 2009). However, this means that the sample size can only be ascertained once the data collection, and analysis, has already begun.

For the purposes of planning the interviews, Guest, Bunch and Johnson (2006) suggest that major themes can be identified in six interviews, and saturation reached at 12 interviews, although more will be needed if “a selected group is relatively heterogeneous, the data quality is poor, and the domain of inquiry is diffuse and/or vague” (p.79). This is particularly relevant to the present study, as the initial aim was to identify two groups (high and low mindfulness).

4.4. Data Collection Techniques

As already stated, this exploratory study originally aimed to employ focus groups and in-depth interviews. However, a lack of participants for the focus groups meant the main data collection technique became in-depth interview.

4.4.1. In-Depth Interviews

Interviews are a primary means of collecting qualitative data. They are characterised by a combination of structure and flexibility, and an interactive conversation in which the interviewer aims at eliciting increasing depths of explanatory data (Legard, Keegan and Ward, 2003). Kvale and Brinkmann (2009) identify two perspectives on interviews based on epistemological outlook. One views the interviewer as a miner, digging up objective facts and knowledge in an impartial way. The other portrays the interviewer

as a traveller, actively engaged in the creation of narratives through interactions with others. This second approach suggests the construction of knowledge, and is indeed associated with constructivist research. The present study will adopt the first perspective, that there is objective knowledge to be discovered, no matter how imperfectly – an approach consistent with critical realism.

Interviews can achieve great depth of inquiry with an individual so that interesting themes or experiences can be explored further. However, successful interviewing requires skill on the part of the interviewer to guide the discussion in fruitful directions. A successful interviewer requires good listening skills and the ability synthesise what is being said in order to formulate relevant probing questions (Kvale and Brinkmann, 2009), as well as curiosity in the subject and the ability to build rapport with individuals being interviewed (Thompson, 2000; Patton and Fund, 2002). In these respects, the candidate is well-positioned because of his previous experience as a journalist.

The interviews were semi-structured, so that the core topics areas were covered, but remained flexible enough to allow the participants to define what they believe is important from their experiences. A Topic Guide was developed, which ensured that all the required data were collected in the time allotted for each interview (Arthur and Nazroo, 2003). It includes questions on both content mapping, which seek to ascertain the scale and nature of the topic, and content mining, which seek to explore in more depth the underlying reasons (Legard, Keegan and Ward, 2003). The Topic Guide (Appendix A) was tested and adjusted (Appendix F) based on the results of a Pilot Study, the details of which can be found in Appendix I.

4.4.2. Ethical Considerations

The research was carried out in accordance with the various ethical requirements of Heriot-Watt University (2017). There are also some specific considerations that need to be addressed (Remenyi *et al.*, 1998; Ritchie and Lewis, 2003; British Psychological Society, 2014; Saunders, Lewis and Thornhill, 2015; British Psychological Society, 2017).

Respect: Participants were kept fully informed of the nature of the research (see Appendix D), and questions or requests were attended to promptly. Research was

conducted in a way that was considerate of the participants' time, and provided whatever had been promised. For example, the survey promised to feed back scores to participants.

Avoidance of Harm: Defining what constitutes a sensitive subject in social research is not straightforward. According to some definitions, all research could be considered sensitive. For example, Sieber and Stanley (1988, p.49) suggest that sensitive research includes those studies that have “potential consequences or implications, either directly for the participants in the research or for the class of individuals represented by the research.” Renzetti and Lee (1993, p. 6) note that the following topics could be considered particularly threatening to participants:

“(a) where research intrudes into the private sphere or delves into some deeply personal experience;

(b) where the study is concerned with deviance or social control;

(c) where the study impinges on the vested interests of powerful persons or the exercise of coercion or domination; or

(d) where the research deals with things that are sacred to those being studied that they do not wish profaned.” (Renzetti and Lee, 1993: p.6)

That said, there remains a need to conduct research on potentially sensitive subjects in order to further our understanding of important social and psychological concepts. In this research the discussion of adapting, or failing to adapt, to changes that may have had negative consequences for the participant could evoke unpleasant emotions, and care was needed to minimise any harm this might cause, such as by conducting the interviews in a neutral environment, allowing the interviewees to express certain emotions and suspending the interview or discussion if necessary (McCosker, Barnard and Gerber, 2001; Ritchie and Lewis, 2003).

Informed Consent: Participants in the survey and interviews were asked directly if they agreed to take part in the research, and their consent was recorded, either electronically in the survey or by signing a consent form. They were informed of the nature of the research through an Information Sheet (see Appendix D), as well as up to what stage they were able to withdraw consent.

Confidentiality and Anonymity: Particular care was taken regarding confidentiality and anonymity for this study. The survey on mindfulness collected data including identifying information for two reasons. First, participation was encouraged by offering to feed the scores back to the participants. Second, the survey's main purpose was to identify individuals with high and low mindfulness for the purposes of recruitment to the interviews. This data therefore needed to be handled carefully to ensure an individual's mindfulness score was shared only with that person. The identifying data was stored electronically in a password-protected environment, and identifying information removed from transcripts at an early stage. Quotes were scrutinised for potentially identifying information.

4.4.3. Assistance

As well as the supervisor assigned by the university, the candidate also received help from his wife in checking Chinese translations, and his colleagues in the technicalities of survey administration. He also employed a transcription service to transcribe the recordings of the interviews, and a translation service to translate those interviews conducted in Chinese.

4.5. Data Analysis

As discussed earlier, the focus of the research is investigating the nature of underlying entities and their structures, and the mechanisms by which they create events, through a process of retroduction. This process of retroduction is aided by the iterative construction of a coding frame, or index (Ritchie and Lewis, 2003; Barbour, 2007) by which to analyse the interview data. One such method is interpretive phenomenological analysis, or IPA (Smith, Jarman and Osborn, 1999). Primarily used in psychology, IPA focuses on meanings and processes for a person in a particular context (Larkin and Thompson, 2012). However, the output is usually purely exploratory, rather than explanatory, which limits its application. Alternatives include discourse analysis, conversation analysis and narrative analysis (Braun and Clarke, 2006), but their own epistemological underpinnings make them inappropriate for the present study. A similar approach divorced from any epistemological standpoint is Framework (Ritchie and Spencer, 1994). Framework is based in British social policy research and employs a relatively highly structured process, offering greater methodological transparency and therefore potentially increasing confidence in the conclusions. It is also flexible enough

to achieve a wide range of research objectives, including defining concepts, mapping phenomena, developing typologies, making associations as well as developing explanations and theory (Ritchie and Spencer, 1994). Ritchie and Spencer (1994) identify five steps in the process:

1. Familiarisation: Getting a feeling for the range and diversity of the data.
2. Identifying a thematic framework: This involves developing an index, initially based on *a priori* issues and then on emergent topics derived from participants' responses.
3. Indexing: The codes generated in the framework are applied to the data in an iterative way, with new codes being added as necessary.
4. Charting: For each participant for each code, a summary of their coded comments is added to a matrix chart.
5. Mapping and interpretation: The completed charts allow for the analysis that will achieve the research objectives, such as defining concepts, mapping phenomena, etc.

It is important to note that while this process is linear, it is not one way. The analysis moved forwards and back again as codes and conclusions were re-evaluated and refined based on increasingly greater depth of understanding of the data. Specific details of how Framework was employed to analyse the data is included in the next chapter.

The candidate used NVivo software provided by the university. While such software has been shown to increase the efficiency of qualitative data analysis (Hilal and Alabri, 2013), there are also potential drawbacks to its use that need to be recognised. These include the possibility that computer-aided analysis leads to excessive distance (or, conversely, closeness) to the data, emphasis on coding and retrieving over other types of analysis, over-mechanisation of the analytical process, and oversimplification of the analytical method (Bazeley and Jackson, 2013).

4.6. Summary

A critical realist approach will be taken to addressing the Research Question, which is consistent with the nature of the Research Aim and Objectives and the axiological beliefs of the researcher. This approach recognises the existence of an objective reality, but that knowledge of this reality will always be imperfect and open to further

investigation. Critical realism also seems appropriate given the nature of the topics under investigation – change, adaptability and mindfulness – which can be difficult to define and measure and involve numerous mechanisms and relationships. This leads to a Research Strategy based on the collection of qualitative data analysed through a process of retroduction. Specifically, in-depth interviews of Chinese members of the American Chamber of Commerce were used as the main data-gathering technique, analysed using Framework.

While “replicability” is unachievable, the present study aims to achieve “dependability” (Lincoln and Guba, 1988) through a presentation of analysis that captures the evolution of the research, as well as ensure the research is conducted in a consistent, systematic and comprehensive way, producing results that are well-supported by the evidence (Ritchie and Lewis, 2003). It also aims to address the issue of validity by adopting the Lincoln and Guba (1988) concept of “credibility” by ensuring sufficient data is collected and interpretations reflected upon, where possible in concert with others. The study also aims to produce results in such a way that their “transferability” to other situations is clear.

While many methodological approaches might be appropriate in investigating adaptability and mindfulness, the approach presented here was chosen to be consistent with addressing the Research Aims and Objectives, and yet flexible enough to withstand change itself in rapidly evolving circumstances. As will be discussed more in the Data Collection and Analysis chapter, for example, the survey did not collect as many responses as hoped for, meaning the preferred data-collection technique of focus groups became impractical, yet this did not threaten the ability of the candidate to complete the investigation. Moreover, a longitudinal study was ruled out because of the time it would take to collect the data, and indeed the candidate left China before such a study could have been completed. Such flexibility comes at a cost – the exploratory nature of the study meant less structure to the interviews and increased the analytical burden in interpreting the data. Yet this also provided a richer set of data that the candidate could use to develop satisfying descriptions and explanations.

Chapter 5: Data Collection and Analysis

In the original research design, focus group was the main data collection technique, supported by in-depth interviews. Despite the small number of individuals in each of the two categories “high” and “low” mindfulness, an attempt was made to form two focus groups. However, a lack of response in particular from those in the “low” category combined with challenges coordinating schedules meant that even a group combining both “high” and “low” mindfulness individuals was not possible. The main data collection technique therefore became in-depth interview.

5.1. In-Depth Interviews

All individuals in the two categories were invited by email for an interview at a time and location of their choosing. Six people in the “high mindfulness” category agreed to be interviewed, and two in the “low mindfulness” category. Reasons given for not participating were business travel, time, poor level of English, and lack of interest in the study. Several simply did not reply to the email invitations, particularly for “low mindfulness” individuals, despite up to five attempts to contact them.

While it had been hoped to compare individuals with “high” mindfulness scores with those scoring “low” in the survey, the paucity of interviewees in the “low” category despite repeated attempts to engage them meant an adjustment to the research strategy was required to ensure the research remained feasible. Specifically, actions were taken to expand data collection, and to analyse in more depth the experiences of those interviewed.

To expand data collection, the decision was made to also interview those in the “middle” category. This decision was taken with the following considerations:

- While some studies have shown that saturation could be achieved with as few as six interviews (Guest, Bunce and Johnson, 2006), it was difficult to conclude with confidence that point had been reached with the eight interviews conducted with “high” and “low” mindfulness individuals.
- There was only one research objective relating explicitly to mindfulness, and therefore the overall Research Question could be more comprehensively addressed with additional data, even if that meant compromising the direct

comparisons between those identified as “high” and “low” mindfulness based solely on the survey results.

- The mindfulness score was just one means of assessing mindfulness in the individuals, as coding was also generated for mindfulness knowledge, mindfulness experienced, and practical demonstrations of mindfulness (or mindlessness).

Those in the “middle” mindfulness category were contacted just once by email, and five agreed to be interviewed. At this point it was felt that a satisfactory point of saturation had been reached, based on the types of issues covered and the dimensions generated from them.

In total, 13 individuals were interviewed between November 2017 and February 2018. Most interviews were conducted in English, but two were conducted in Chinese at the request of the interviewee. All were conducted in person, apart from one that was conducted by telephone, as the person was located in a city several hundred kilometres from Beijing. The participants all signed the consent form, and the interviews were all recorded.

In most cases, all sections in the topic guide, an abbreviated version of which was provided to the interviewees before the interview, were covered. All the interviews were transcribed by a third-party service provider, and those conducted in Chinese translated by another company. The transcriptions and translations were then checked by the candidate. Details of the participants and the interviews are provided below. The names are not their real names.

	Mindfulness score	Age	Gender	Seniority	Industry	Mindfulness experience	Function	Interview Location	Interview Language	Length (mins)
Alan	Middle	55-64	M	VP	Auto	None	Government Affairs	Company office	English	82
Barbara	Middle	35-44	F	Director	Medical Device	None	Government Affairs	Restaurant	English	59
Catherine	Middle	45-54	F	VP	Pharmaceutical	Some	Human Resources	Company office	English	64
Delia	High	45-54	F	VP	Chemicals	None	Government Affairs	Restaurant	English	38
Elaine	High	45-54	F	VP	Biotech Agriculture	None	Government Affairs	Company office	English	49
Fiona	High	45-54	F	Director	Entertainment	None	Human Resources	Company office	English	74
Glenda	Low	25-34	F	Manager	Industrial	None	Administration	Company office	Chinese	58
Howard	High	45-54	M	Director	Manufacturing	Some	Government Affairs	Via telephone	English	72
Ivy	Middle	45-54	F	VP	Oil & Gas	Regular	Human Resources	Company office	English	78
James	Low	35-44	M	Owner	Training	Some	Owner/Entrepreneur	AmCham office	English	56

Karen	Middle	35-44	F	Director	Real Estate	None	Sales	Company office	English	64
Linda	High	35-44	F	Manager	Education	Regular	Marketing	AmCham office	Chinese	70
Maggie	High	25-34	F	Manager	Professional services	None	Lawyer	Restaurant	English	44

Table 5.1 – Interview participants

As described in the methodology, the study was conducted in an iterative way. To this end, partial analysis was conducted on the first three interviews before continuing. Based on this partial analysis, adjustments were made to the topic guide to ask more specifically about:

- upbringing
- relationships at work
- why they agreed to participate in the research

5.2. Analysis

This section will detail how the analysis of the data was conducted leading to the results. As described in the section on Methodology, Framework was the tool used to analyse the data collected through the in-depth interviews. Richie and Spencer (1994) identified five steps in the process, which will be used here to describe how the data were actually processed.

5.2.1. Familiarisation

The interviews generated more than 800 minutes of transcribed data, which needed to be managed and reduced into analysable form. The first step was familiarisation with the data with a view to creating the thematic framework (the next step in the process). This was achieved initially by reviewing notes taken during the interviews and recording memos of the most important points. After the interviews were transcribed, the audio recordings were reviewed again to ensure accuracy and add in missing data. Those conducted in Chinese were reviewed again to ensure accuracy of the translation.

This process helped reveal certain characteristics of the participants that had not been considered previously. It also helped identify themes that went beyond the framework initially suggested by the research question and objectives, which was central to constructing the thematic framework.

5.2.2. Identifying a thematic framework

The thematic framework was devised initially based on the *a priori* issues presented in the research question and objectives, namely:

- Types and causes of change
- Perceptions of change impact
- Dealing with change
- Mindfulness

Within these major themes, subthemes were identified, such as “Change timeframes” and “Drivers of change” under the main theme of “Types and causes of change.” Other expected areas of interest were also given codes, including “Connection with personal life” and “Personality traits.” Each subtheme was also given a definition with an example to ensure consistent application, for example, “Drivers of change”:

Definition - The primary forces behind the changes that the subject feels.

Example - “The main kind of, uh, force that drives the changes, really, um, technology, I feel. Technology and how technology makes it possible to, uh, kind of connect people differently, uh, from, from previous years, that force actually drive everything else that we do.”

Various emergent issues raised by participants also generated separate codes. Some of these were created after preliminary analysis of the first three interviews, such as “Upbringing,” for which a separate question in the Topic Guide was also created to identify if its relevance extended beyond a single case. Other codes related to far fewer participants, but were of great importance to those who raised them. The best example of this is “Comparisons,” which addressed the extent to which social comparisons influenced change and the response to it. It also became clear that participants’ reasons for joining the study would be an important consideration in understanding biases in the sample, so a separate code and question were created. Finally, a code was created to accommodate the use of specific Chinese phrases or idioms that participants used to express themselves. A list of all the codes with definitions can be found in Appendix J.

5.2.3. Indexing

The thematic framework was applied to the data through the application of codes using the NVivo for Mac (version 11.4.2) provided by the Heriot-Watt University. This was

done in an iterative way, with the *a priori* codes applied to the first three interviews, emergent codes added and definitions of codes adjusted. As more interviews were indexed, further codes were added, and the definitions continually reviewed for applicability.

Once all the transcripts had been coded, the codes were finalised and the transcripts all reread to ensure consistency in the application of the index. In the end, 1,033 data items were indexed according to 20 codes.

5.2.4. Charting

Once the coded items had been consistently identified, they went through a process of reduction and added to a matrix chart. This required each item to be further examined and then summarised to retain meaning and context as it related to the assigned code. The aim was to make the data manageable without losing so much that the original data would need to be continually consulted. This was done according to the suggestions from Richie and Spencer (1994) that key phrases are maintained, interpretation minimised and material retained even if its relevancy was not immediately clear. Interesting quotes and stories were marked rather than recited in the summaries.

For example:

“And you can imagine this kind of change management, oh my God, there are so many rumours at that time and they had that turnover rate, they do it in 2011, at the end of 2011 especially for 2012, the turnover rate is more than 40%. And we have got half employees just left and the, the, the business, return on business in really down and a lot of, uh, rumours from outside rather than inside, we heard a lot of rumours or questions from other companies. And so, uh, in, uhm, not really the time, I, I, I strongly doubted oh my God, why I choose this company? Because it [previous company], it’s really a very good company. I, I were so regretting at that time, I, I really hated myself, uh, and I even tried to go back to, to, to go back to [previous company].”

Was reduced to:

Termination of country head led to a lot of rumours, very high turnover, more than 40% the following year. I strongly doubted this company, and really hated myself, even tried to go back to previous company.

Each data item was then entered into thematic charts using Excel software in a matrix arrangement, with the interview cases by row and subthemes by column. During this process, further refinement was made of the appropriateness of each code to the items allocated to it, and some items moved to other codes where appropriate. In total, five thematic charts were created, for each of the four main themes, plus “Other” to include all the subthemes not allocated to a main theme.

5.2.5. Mapping and Interpretation

The final step was to map and interpret the data to answer the research question and objectives. This was done in two main stages: developing descriptive accounts, and then explanatory accounts.

The aim of descriptive analysis – through a process of detection, categorisation and classification – is to “display data in a way that is conceptually pure, makes distinctions that are meaningful and provides content that is illuminating” (Richie and Spencer, 1994; p.237). Detection involved examining all cases for a particular subtheme to understand the range of experiences described. It was then possible to further distil, through several rounds, each data item into distinguishable categories. These categories were then assessed once more to identify possible classifications. An example from the subtheme “types of change”:

Original quote	Summary	Abstract A	Abstract B	Category
But anyway, uh, when I, when I joined two months later, so Taiwanese, that, that, that general manager, was all of sudden was, uh, terminated and it's such a shock because, uh, I remembered after the holiday, uh, October, October 1st holiday, we came back October 8th. So at that time I only joined for two or three, three... I joined in June, so this happened in October, uh, and, uh, uh, he, he even bring, brought his, uh, breakfast and came into the office and then he saw a lot of global visitors in his office. And he was shocked and we were shocked as well because we didn't know, wow, there are so many global visitors here. And then	3 months after I joined, the GM was suddenly terminated, and it was a big shock to me.	Sudden termination of organisation's leader.	Change in organisation's leadership.	Company leadership

<p>they they, they closed the door and talked about, uhm, uh, the whole morning and in the noon time he just grabbed everything and he was gone. And in the afternoon, uh, the global visitors give us, uhm, a short townhall meeting to Beijing employees and announce that he was gone. And one of the global visitors will become the interim and they will look for other, uh, you know, candidate and please don't ask why and when we have the opportunity we will let you know.</p>				
--	--	--	--	--

Table 5.2 - Example classification

The data were then examined for associations. Although Framework analysis, as with many types of phenomenological analysis, does not provide clear conclusions on relationships, the identification of associations in accounts of personal experiences can be useful, especially if the data also offer explanations for these associations, which positivist analysis would struggle to uncover.

The search for associations and related explanations was achieved through the construction of a “central chart” containing all data items on a single Excel sheet. This allowed for each case to be studied across themes in quick succession, and possible associations noted and referred back to.

The search for associations and explanations particularly focused on addressing the fourth objective, namely: “Examine how mindfulness may influence the perception of change and the ability to adapt to it.” Several possible associations were explicitly searched for, including possible relationships between mindfulness and attitude to change, ease of dealing with change, responses to change and perceived success in adapting to change. These searches proved fruitless, but the process revealed other associations that will be examined in the Results chapter.

5.3. Revisiting the Subjectivity Statement

Based on the discussion of researcher reflexivity in Section 4.2.4, what follows is a review of the Subjectivity Statement from Section 4.2.5 and how it applied to the

interviews, in particular looking at the similarities and differences between the interviewer and participants.

In terms of demographic profile, the interviewees were in some ways similar to the pilot study participants. They were all Chinese nationals (which is the subject of the study), and mostly female, in contrast to the male, British interviewer. However, the interviewees were in some cases more senior than I was (five out of 13 were VP level), four were a similar level, and three were more junior. Because of my experience, I could better relate to those at a similar or lower level of seniority, and had to rely more on the descriptions provided by those more senior to understand their experiences. For example, some of those more senior discussed the impact of changes in global leadership and large-scale restructuring in their organisations, which I had not personally experienced. In terms of power dynamics (Edwards and Holland, 2013), I am the Communications Director for the American Chamber of Commerce in China, which provides its members (including the interviewees) with various services for which fees are paid. At an individual level, the participants in the survey were contributing their time and information to me for minimal personal benefit.

In terms of age, seven were older, four were in the same age range, and two were younger than me. As with seniority, those who were older had longer-term perspectives on change than the interviewer, and passed through more “life stages,” especially in terms of the interaction between personal and professional lives. For example, some participants had grown-up children, had been through divorce, or were nearing retirement.

In terms of function, five of the interviewees were involved in government relations, and three in human resources. This reflects the priorities of members of AmCham China – in annual surveys, policy and human resources issues are routinely in the top 5 challenges to doing business in China (American Chamber of Commerce in the People's Republic of China, 2018). In my work for the chamber, I have become familiar with many of the issues these functional areas encounter, but not to any great extent of expertise.

In terms of industry, the participants represented a wide range of primary, secondary and tertiary industries, mostly unfamiliar me. All but one were living in Beijing.

Perhaps most relevant to this study is that at least five of the participants knew me prior to the study. In fact, in one instance, this was given as the reason for agreeing to participate in the study, and it likely influenced the decision of others to read and respond to communications from me. It is hard to tell what impact this may have had on the data collection. Those known to the interviewer needed to provide less background information on their circumstances before moving into the more substantial parts of the interview. However, the analysis will also show that some of the participants were unexpectedly willing to share details of their personal lives, as they related to work, and in most cases these participants were previously unknown to me. In these instances, it seemed they felt they could share these details because I was not in any of their circles of acquaintances. While there is some debate about the impact on qualitative research of being an insider or outsider to the group being studied (Edwards and Holland, 2013), Dwyer and Buckle (2009) argue it is possible, and probably desirable, to acknowledge that the researcher occupies “the space between,” sharing some familiarity with the subject, yet needing to maintain the curiosity of the researcher to gain greater understanding.

Finally, some of the participants who had studied mindfulness techniques clearly felt a shared experience with me, and in some cases participated in the study because they wanted to encourage the spread of knowledge about the subject.

Chapter 6: Results

Based on the Framework approach outlined above, the results will be presented in three sections. The first section will address core issues, such as what specific changes at work are the participants experiencing, what do they see as the causes of those changes, how do they perceive their own attitudes to change and adaptability, and what do they understand by mindfulness. These definitions and typologies will provide a grounding for the second section dealing with specific themes that emerged from analysis of the data that help to answer the Research Question. The third section will deal specifically with the mindfulness-related themes that emerged from the analysis. Where quotes are presented, they have been lightly edited to improve readability by, for example, removing redundant words.

6.1. Core Issues

This first section addresses the core issues around change, adaptability and mindfulness. This section also introduces some more background information on each of the participants in the study, which will aid in understanding the themes discussed in the subsequent section.

6.1.1. *What is Changing?*

The first issue is: When Chinese knowledge workers talk about change, what are they really talking about? The participants revealed a number of aspects of workplace change when discussing their experiences. As well as specifying types of change, they also brought up issues of frequency or pace of change, and discussed change in positive or negative terms. The majority of changes were “passive,” in that the participant was the subject of the change. However, some of the most important changes were instigated by the participants themselves, such as leaving one company for another.

An examination of the types of change as identified by the interviewees uncovered 26 categories, which were split into three classifications: nature of work, relationships, organisational.

Nature of Work

Nature of work included changes to either the role content or the way it was executed. It included, for example, expansions or contractions in responsibilities or workload, the

type of tasks being undertaken, the ease with which the tasks could be completed, and the influence of external parties on the ability to complete tasks. This classification also included job changes, both internally and initiated by the individual. Compared with the relationships and organisational, the participants tended to talk about changes to the nature of their work in relatively positive terms.

For example, Elaine had experienced over the previous few years an expansion in her role, going from working on her own at a biotech agriculture company to becoming the manager of a team and greatly expanding the scope of her work. At the time of the interview, she was considering taking on a regional role that had opened up as a result of a merger of her company with another. When asked how she felt about all the changes she'd been through, she said:

“I really feel it is my opportunity to learn new things, know new people and visit new places. This keeps me excited. I like to travel, I like meeting new people, I like talking to new people or learning some new things.”

Another example is that of Glenda, an administrator at an industrial instruments company. She originally did not even want to look for a job after graduating, but with persuasion from her parents took a job as a receptionist. After some years, she was offered a promotion, which she was reluctant to take, although she eventually embraced the new opportunity:

“Now I've found out that managing some staff and more work is not that difficult, and it can bring me more income and a better life. I believe it's also good to live like this.”

Those who had proactively changed their situation, such as changing companies, were generally satisfied with the decision they had made. Alan, for example, spent many years in aviation before moving to the auto industry, which he said was developing very quickly, mainly because of the influence of artificial intelligence and self-driving cars. The oldest participant in the study, he appreciated the opportunity to learn something new.

“I just feel very excited with all these new features, so that now, people talk about a future where people don’t have to drive.”

Nevertheless, there were some exceptions where changes in the nature of work were viewed negatively. In particular, several of the participants work in government relations, and noted that regulations had tightened up in pretty much every sector where they were operating, which made their work more challenging. Elaine at the biotech agriculture company also has to gain government approvals for her company’s products, which include genetically modified organisms. She noted:

“Starting from 2013, the regulatory work became more difficult. Then we have lots of advocacy or lobbying or, you can say, engagement work with government officials or with the key scientists, to explain to them, how good is our product, how safe it is, how much data we have got from US, and so we always have to communicate with them.”

Barbara works in the government affairs section of a medical device company, and also noted the increasing regulatory burden. In her work, she must keep up with the rapid changes in the regulations regarding her company’s products and make sure they can get approval to be sold on the market. The time it takes to get products approved has grown from weeks to years, and she finds some of the new regulations are initially baffling. A specific example:

“Each [foreign supplier] company must now have a Chinese name. Why? I really cannot imagine why. [Laugh] I mean, I really feel frustrated about why there is such kind of regulation. You know, national confidence shouldn’t be presented through this way.”

Nevertheless, she could also appreciate the positive aspects of this situation.

“Then we can think through another way: If there weren’t too many very difficult and unimaginable regulations in China, I cannot find such a good job in China.”

Relationships

The second class of changes involves relationships, in other words, with whom and how the individual interacts with others both inside and outside the organisation. This included turnover in subordinates, supervisors or other co-workers, switches in whom the person worked with within the organisation or externally, changes in the number, age or type of subordinate, and how communications between people were conducted.

While the participants sometimes talked about changes in relationships in positive terms, they more often discussed negative changes to their working relationships.

Linda, for example, arranges events for a university, and has seen not only the scope of her role contract, but also the number and complexity of relationships she needs to manage increase, especially compared with her previous work at a marketing agency. She identified coordinating agreement among stakeholders as her biggest challenge:

“Currently, we are slowly communicating about lots of our work. Our communications are very new, so lots of work requires communication with various departments and many new partners in China. So, this is a very long process of communication. When many departments have different opinions, to reach a good conclusion, it will need a long process. So, this is quite different from my previous style. Before, I was used to the fast pace.”

For Karen, the frustration is with the generation gap between members of the sales team she leads selling co-working space. She has been in the role less than a year and has built her team as her company has grown rapidly. Her new company is quite different from previous companies she’s worked for, requiring a younger and more dynamic work force to reflect the nature of the clients, but it has been difficult to find the right mix of people for her team.

“The youngest is only 24. The older one is 36. For the older one, they’re OK. The younger one, the common sense, that’s the really bad part, kind of lack something, like responsibility. For me, something that is very easy to understand, you don’t have to tell me - I will know how to do

certain things. But some younger people, you have to tell them, treat them like kids.”

Modern organisational structures often require workers to report to more than one supervisor, multiplying the possible impact of organisational change. Catherine, working in human resources at a pharmaceutical company, had reported to three line managers and three country general managers in the space of four years.

“Maybe difficult is not the right word, but there are some challenges because after you get along or get familiar with one general manager, and then all of a sudden you change to another general manager, you start to rebuild up the trust or working relationship with the other one and then change it to another one. So keep changing and, fortunately or unfortunately, at the same time, with the role I got, the general manager changed and my boss will also change. So that means every time when general manager change, my boss will be changed, so I will get the two most important key stakeholder change at the same time.”

Elaine, who built up her government relations team at the biotech agriculture company, became quite emotional when discussing her reassignment.

“I think particularly now, because I have to leave my team, I feel so sad. I built this team, and now I hand to someone else, to take care of. But actually, they do not belong to me, right? But it’s really sad, psychologically, very difficult. That’s my difficult part.”

An exception to the largely negative experiences regarding changes to relationships was Fiona, who works in human resources at a media and entertainment company. She spoke about how technology was making it easier to connect with potential job candidates.

“For example, like 20 years ago, how do I recruit people? I need to go to the job fair, set up a booth, and then talk to people, they meet me and they know the company. Nowadays you don’t need to do that, right, because you have a new way of connecting people, and more broadly as well.”

Organisational

Organisational change includes changes to the organisation's size, structure, leadership, culture, location or performance. Compared with the previous two classes, "Nature of Change" and "Relationships," these changes were often discussed in neutral terms.

For example, Fiona at the media and entertainment company talked about how changes in business models, performance management, organisational structures and the need for greater innovation in work forces impacted her work, but in neither positive nor negative ways. She described the changes as "drastic" and that we were currently at a "critical time" in terms of technological advancement, but passed no judgment other than that the changes were "interesting."

Only company performance seemed to generate strong positive or negative responses. Participants Catherine and Glenda introduced earlier both spoke about the benefits of rapid growth in their companies and the opportunities it had given them. On the other hand, Howard, who works in government affairs at a manufacturer of consumer goods, described the threat to his job from the decline in growth for his company.

"Company business development speed is becoming slower as China is transforming from high-speed to mid-speed development. My working load as government affairs manager is less important than before. The company's organisation is changing rapidly, with lot of colleague dismissal. As a mid-aged manager I'm also facing some pressure, I might be fired some day. And I need to find a new job before my retirement. So this change is a bit challenging for me."

6.1.2. Drivers of Change

The participants were also questioned about what they thought was behind the changes they were experiencing. While individuals would have clear in their own minds chains of cause and effect, when aggregated there is significant overlap between cause and effect in chains of change. For example, organisational changes feature prominently as both changes experienced by the participants, and the reasons for the changes they experience. The participants were allowed to define themselves what was change, and

what as driving the change. But for the purposes of analysis the line has been drawn, where possible, between change directly experienced by the person, and changes that have only an indirect impact, while acknowledging that some changes may have both direct and indirect impacts. One classification system was identified, with five classes, with each code based on interview data.

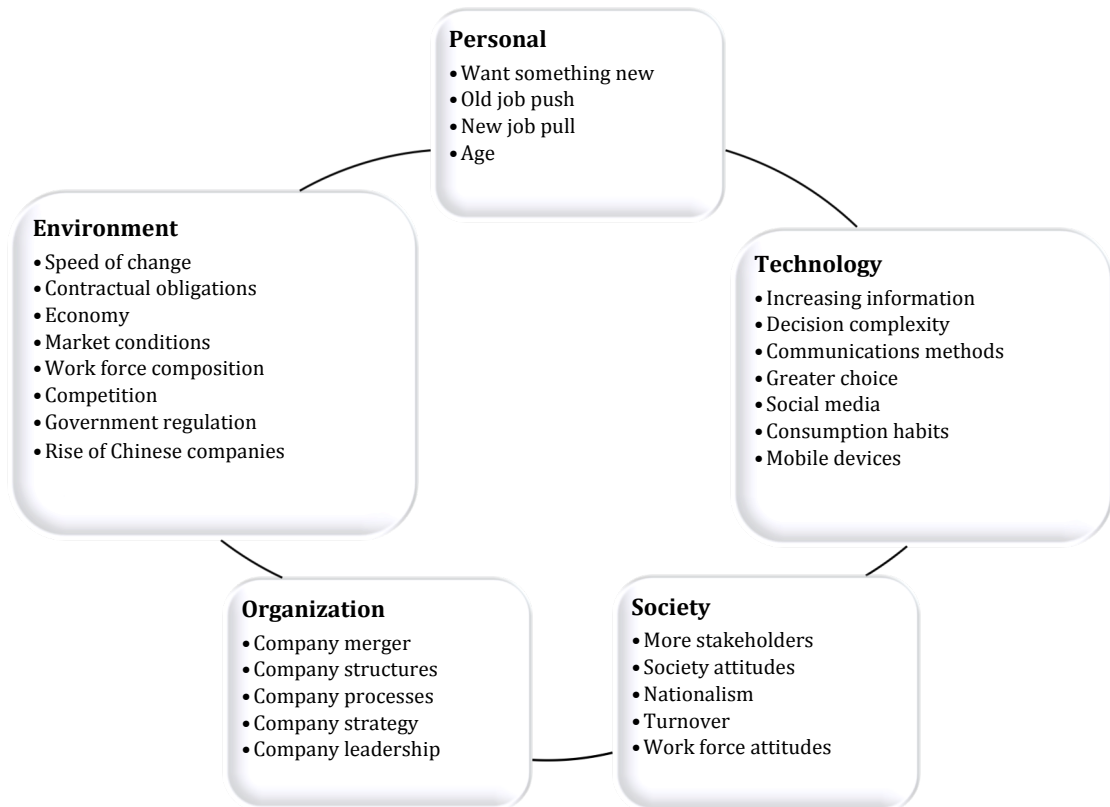


Figure 6.1 – Drivers of change

Personal

Personal drivers were most often those that led to a change in job. Participants expressed some level of dissatisfaction in their previous position, or compelling attractions in the position they took on.

For example, Alan said that he’d lost some of the “energy” and “curiosity” after a long time working in the aviation industry.

“After staying in aviation for 30 years, I kind of feel working on sales, government relations, manage the regulations, I know quite a bit about aviation and I kind of feel I lost the interest.”

He gave an example of a technology that colleagues were getting excited about now that he'd actually first researched 15 years earlier.

“So that’s one of the example that shows maybe I feel, you know, kind of the energy level has been going down. And I think maybe we switch to another industry that can stimulate my learning and try something new.”

Maggie said that age was also a motivating factor for her. As a lawyer at a law firm, and one of the two youngest people I interviewed, she was nevertheless sensitive to how the passage of time would impact her career.

“First thing is: those companies have discrimination of age. They do have discrimination about gender, but more age. So, when I’m getting old, I may have that age problem, and also my skills... because I’m away from that industry too long. A couple years later, it’s more sophisticated. Or more people are in this industry, more talents in this industry. So, it’s hard to get into. That may not be what I can control.”

Technology

Many of the participants discussed the impact of technology as a driving force behind the changes they were seeing at work. Fiona, who works in human resources at the media and entertainment company, mentioned the word, or a variation of it, almost 40 times during her interview.

The various technological developments raised by the participants were often related, and frequently could be traced back to the proliferation of mobile devices. This seemed to be a dominant factor for Karen, who relies on a mobile phone for her work in sales for a co-working space, although not necessarily for phone calls. She mentioned the word “phone” 20 times in her interview.

“They don’t even call as much as much as before because there’s WeChat, voice messages. So that’s why we see people like to play with their cell phones at work all the time. They just work with their cell phones. You cannot even work without a cell phone. So, that’s really, also, a big change in the communication way.”

The WeChat social media platform will be discussed in a separate theme.

Delia works in government affairs for a chemical company. Much of her role involves communicating with stakeholders about what the company is doing. She said the development of information technology had substantially shortened the response cycle for issues related to her company.

“I think it’s mostly because of this information technology and also devices like smart phones available to almost everybody. So people can make comments, make decisions and make their voice heard live. And also as a company we have to be vigilant and monitor all those stuff and be reactive if we need, almost immediately. Just take media as an example. In the past they have television, or print media, newspaper... You have almost 24 hours to react. Television, still, several hours. Now, with social media it’s seconds.”

She was also sensitive to the increasing complexity that technology brings to her work.

“So too much information, and to make a decision, there are a lot of moving parts. And, and if we look at the social media or everything, then what matters? What doesn’t matter? How much weight does something have? It’s very, very difficult.”

Some participants also talked about how technology increased choice. James owns a company providing training services to large multinational companies. He said that technology was behind an evolution in the habits of clients, and in particular a shift in power from the companies to the individuals being trained. The greater number of training options now available online meant people were now taking charge of their own training development, and it was easier to see now what worked and what did not in terms of behavioural change at work.

“In the past, the clients are the companies. They buy from you, so you just need to make them happy. But in the future, the users play a bigger role at decision-making, the users are the employees. They take charge of

their own learning, they will pay from their own pocket for training programmes now, for subscriptions. So you need to be able to make these people happy, the users, the end users, rather than just the HR, the managers.”

Society

Some of the participants noted societal shifts in values and attitudes – some general, some more specific – which impacted their work.

Alan, the government affairs professional at the auto company who was also the oldest participant in the study, said that while some forecasts about the negative impact of China’s one-child policy had not been realised, there were still significant differences in the younger generations of workers, echoing some of the frustrations of Karen mentioned earlier.

“A lot of Chinese young people, they don’t want to work, because they, they don’t need money, their parents will have a whole lot of money. They have a house, they have a car, their parents will prepare everything. So what is the motivation for them to work hard, challenge themselves, deal with changes? Like you said, you know, the study is how you’re dealing with the changes, so if people are quite satisfied with their life, what is the motivation for them to make change? Probably the only word is boredom, right?”

This perception of a generational gap was to some extent supported by Glenda, one of two participants in the youngest 25-34-year-old category. She is from Beijing, and did not see the need to get a job after graduation.

“We have a good family fortune and we rely on it, so we are very lazy. Therefore, I didn’t want to be a leader at first, but my manager was gone and my boss asked me whether I wanted to become a leader. I’d just given birth to a child and I was like, now that you trusted me, I would do it well. So I took this offer. But to be honest, I should have set a goal for myself when I was a reception staff, to become a manager for instance,

but I didn't. I just thought that having a job was enough for me, because I didn't rely on it for a living.”

For other participants, the changes were more specific to their experiences. Elaine at the biotech agriculture company, highlighted a notable shift in sentiment among the public against genetically modified organisms (GMO), such as those sold by her company.

“In the recent two years, the driving force of the changes is the anti-GMO movement, many people against biotech. Actually, the reason why they are against the biotech is, some people are against the government, and some people are just against multinational companies.”

Related to the previous discussion about the influence of technology, Delia at the chemicals company said that more voices could now be heard on any particular matter, which complicated decision-making.

“In the past probably, there are several opinion leaders whose opinion matters. And probably several officials who can make the decision. But now there are too many moving parts, too many stakeholders or influencers.”

Organisation

Participants described events at their organisations as both changes and the drivers of change. These included changes to the company structure, processes, strategy, and leadership, as well as merger. Given the similarities with the organisational changes mentioned in the previous section, they will not be discussed further here.

Environment

Participants described various other drivers of change external to the company and themselves that were not clearly societal or technological, although they may be related.

For example, increasing Chinese nationalism was cited by several of the government affairs practitioners in the study as leading to a less welcoming regulatory environment for foreign companies. Alan noted that:

“The Chinese government would like to promote local brands. As a foreign company coming over, we are cooperating with the government and seeking for a more fair, equal and transparent policy environment.”

Howard, the government affairs lead at a factory based in eastern China, also noted a change in the way foreign companies were treated:

“The Chinese business environment is changing, with incentive enticement to foreign companies becoming less and less. So my working load as a government affairs practitioner is facing some challenge.”

Some changes affected several participants, such as slowing growth in the economy and the increasing competitiveness of Chinese companies. Others were more specific, such as the contractual obligations of the oil & gas company for which Ivy was working as the human resources director. Combined with the sharp decline in the market price for oil, the contractual arrangements with the Chinese partner created a series of challenges for her.

“So when the company is at a growing phase our main focus is really about growing the organisation. We put a lot of effort on recruiting people. If the company becomes stable, then we try to focus on the development of national employees and nationalise the expert positions. And afterwards during the reduction phase obviously we did a lot of work in transferring employees from us to our partner and also at the same time we had to unfortunately lay-off some people as well.”

6.1.3. Pace of Change

Many of the participants commented on the pace of change, with several noting that change appeared to be accelerating. Delia, for example, said the information “explosion” was contributing to acceleration in change, while Fiona attributed the acceleration to technology. Catherine talked a lot about organisational change and how it affected her.

“Previously every three years maybe we got some big changes in the structure, but nowadays even one year we got some very big, change. Not only from China, but from global directly and so if you cannot adapt to the change then you will be out and you really cannot survive well in this environment. So change is everything in this company.”

Nevertheless, perception over the pace of change was also context-specific. For example, Ivy in the oil & gas company had been through major hiring and laying off periods because of her company’s contractual obligations and the decline in the oil price. Compared to those tumultuous times, she said the company was now pretty stable and would likely remain so.

The two who scored lowest in the mindfulness survey also both regarded the environment as stable. Glenda said growth in her industrial equipment company would likely level off in the near future, but that that was unlikely to create any major changes for her. James said that the advent of the WeChat had created some unexpected changes for his business that he acknowledged he had been slow to recognise. But he did not expect any other such major changes in the near future.

6.1.4. Attitudes to Change

In terms of how the participants perceive and interpret change, their attitudes to change were first assessed. It was discovered that there was a spectrum of attitudes to change based on comfort, ranging from dealing with change through to making it happen.

Type	Participant – attitude summary	Example
Dealing with change	Glenda - Ambivalent	He (my boss) asked me whether I wanted this job. Since I’ve worked for him for a long time, I said, “Do it or not, I’m okay with both options.”
	Howard - I can handle it	A bit of pressure. But I have learned some skills to cope with this kind of pressure.
	Catherine - Change is difficult, but worth it	Very huge changes sometimes really give you a lot pressure. And also feel frustration sometimes because of the uncertainty and more ambiguity, during the change you are not comfortable. But after the change, if you look back, I’m obviously full of gratitude to all of the changes or all of the challenges because I really want to become a better person and without this kind of changes I can never become me today. So I really enjoy, not the process, but enjoy outcome, I mean [laughs].

Accepting change	Barbara - Accept change	Just tell myself, change everything is kind of your work. It's kind of one of the abilities. You must have this kind of ability to adapt to different work styles.
	Linda - Accept change	Take it. And if it happens, it's there, just to go with it.
	Ivy - Accept change; risk and opportunity	On one side it's a risk, right? It's uncertainty, you never know what will happen. And on the other side it's opportunity. But people normally are fearful about the change because it's uncertain. But because it's uncertain, opportunity may also come true.
	James - Open to change	I think I'm a quite open type of person, so I view them as opportunities, not much as a threat. And I think I can adapt, you know, and learn, so basically it's not impacting us hugely.
Preferring change	Karen - Like change; risk and opportunity	I like change, change is opportunity, right? Change has risks and opportunity. I think opportunity, right now, is more about the technology. You're going to change people's lives, lifestyle, changing people's thinking, and changing people's work style as well, in aspect of life. So, I like the changes. I don't understand the people who don't like change. They do the same thing every day for 10 years, 20 years, or, like, 100 years. You see your life in 40 years from now, it's all the same, and that's boring.
	Fiona - Change is comfortable	I'm a very curious person, so I feel quite curious about the world and I feel very curious about the changes. So, literally, I like changes [laughs], so it's not a pressure to me at all and I feel quite excited, actually.
	Alan - Push myself to change	Naturally people don't like change, so people like to stay in their comfortable zone, that's just human nature. So I'm kind of aware of this and sometimes purposely challenge myself to change. So I think it's kind of an internal conflict all the time: you don't want to change, you have to change, you don't want to change, you have to push yourself for change.
Creating change	Maggie - I make change, but cautiously	If it's something you can control or if it was in your expectation, it will be easier generally. If something out of your expectation and is subject to other factors which you cannot control... I think that will be more challenging.
	Elaine - Change is an opportunity, which I sometimes create	I am an adventurous person, I like learning new things. If I work in the same product, in the same country or same culture, I would feel bored. So I think it's learning, it's a very good process for me. Because our lifetime is very limited, right. As long as I can learn new things, my knowledge becomes enriched."

Table 6.1 – Attitudes to change

There was one case that did not fit neatly into this scale. Delia’s attitude could be summarised as “change is a given,” as can be seen in this response to a question about her attitude toward change:

“I think it’s a silly question. [Laugh] You know, how do you look at change? ... Because there is no answer at all.”

Her attitude could be considered as somewhere around the “Accepting change” level on the scale, yet that she does not even regard change as something to be considered distinguishes her from the other participants.

It is important to note that the spectrum offered here does not seem to cover all the possibilities, particularly with regard to more negative attitudes toward change. While it is difficult to imagine anything on the scale beyond “Creating change” at one end, it is conceivable that there would be levels of discomfort beyond “Dealing with change” at the other. Moreover, the fact there was no one with particularly negative attitudes to change, as suggested in much of the literature on resistance to change, reflects the possible biases of the sample. This will be addressed in greater detail in the Discussion section.

6.1.5. Perceptions and Demonstrations of Adaptability

The topic “What is change?” was addressed earlier. With this in mind, it is also important to understand from the participants how they view adaptability. The data were examined for examples of how the participants viewed successful adaptability. To this end, the analysis was conducted by looking for comments that could be expressed desires or examples of successful adaptability. The comments were made at various levels.

At one level, participants talked about personal and interpersonal adaptability, as shown in the chart below:

Personal	Interpersonal
<ul style="list-style-type: none"> • Become more psychologically comfortable 	<ul style="list-style-type: none"> • Adopted work habits appropriate to my colleagues’ company culture

<ul style="list-style-type: none"> • Found the positive aspects of change • Developed more flexible thinking • Become more equanimous • Focused more • Better managed stress/pressure • Become more self-aware • Created meaning in my work 	<ul style="list-style-type: none"> • Adopted work habits appropriate to my colleagues' national culture • Built productive new relationships • Improved current relationships • Better handled conflict
--	---

Table 6.2 – Personal and interpersonal adaptability

In discussing the difficulties in adjusting to her company’s culture, Barbara touched on several of these demonstrations of adaptability. She used to work for what she described as an “aggressive” company, which suited her own style. But then she moved to a family-controlled company, which she found to have a much more consensual type of corporate culture. However, the company then hired a much more aggressive leader, which caused an upheaval in the culture. Barbara could more easily switch back to her original working style, and some of her colleagues questioned how she could so easily adapt.

“You must change yourself, adapt to it, because this is this company’s culture. You have to choose leave, or choose stay. If you choose to stay, you have to adapt to it. And if you always feel unhappy, it’s your personal problem.”

In particular, she said she took her husband’s advice to always find the bright spot in any event or change, which she said made her feel better when difficult situations arose.

Howard had been struggling to maintain relevance at work in the face of an increasingly difficult operating climate for his company. His motives in adapting to the evolving situation included earning “respect and appreciation from my company,” and “more confidence to face a challenging situation if I need to find a new job.” He also said that it had been very easy for him to get angry, but that he had improved greatly in “emotion management” and handling pressure.

At another level, the participants talked about adaptability at macro and micro scales.

Macro	Micro
<ul style="list-style-type: none"> • Better work-life balance • Developed more flexibility in my career 	<ul style="list-style-type: none"> • Acquired new role-critical information • Done a better job • Generated more creative solutions • Better handled mistakes • Spent my time more effectively • Become better at making predictions • Taken work less personally

Table 6.3 – Macro- and micro-level adaptability

For example, because of the declining importance of his role at his company, Howard was learning various personality testing and training systems as a potential alternative source of income if, as he expected, he was made redundant before he retired. He had already given numerous training sessions to students, colleagues and government officials to build up experience.

“But this kind of teaching activities will give me some help if I need to find a new job. Because this kind of training experience, or lecture experience, will make me stronger, will make me more confident, will give me more skills, so this is important help for me.”

Ivy gave several examples of what she regarded as successful adaptability at work through flexibility. She focused on the need to see the big picture, be creative, and not get caught up in obstacles that may turn out to be unimportant. “Again it’s what you can do, what I can’t do and what might be the possible ways of getting this around.” This type of flexibility, she said, also applied to handling crises. She gave the example of a time when a manager at her company told one of his subordinates she would be laid off, even though an official announcement had yet to be made.

“So he came over to say, I’m sorry I did a mistake. I said, it has happened. You can feel angry, you can feel not happy, but how this can help? So I said this is just a test of flexibility. We know you are testing us. We will get prepared then let’s work on a plan.”

6.1.6. Various Understandings of Mindfulness

It was also important to explore what the participants understood by the term “mindfulness” and its Chinese equivalent, 正念 (zheng nian). The participants made associations with:

- Positive, particularly in relation to the word “zheng.” The questionnaire had been distributed in Chinese, and so the participants seemed to have the term “zheng nian” in mind when discussing mindfulness. Alan said: “So when you say [zheng nian], mindfulness, I look at this as always keep yourself positive, look at the positive side.” The word “zheng” in particular was cited as having a “positive” connotation. Most definitions of mindfulness do not make this association, instead emphasising equanimity and not getting attached to positive or negative experiences.
- Religion, especially Buddhism. Some, but not all, participants recognised the religious background to the Chinese term for mindfulness. “I did a lot of reading in Chinese, so before I thought it was a religion, it was Buddhism... I think 60, 70 percent of what I read is related to Buddhism.”
- Standard mindful terminology. Those who had studied it in depth had more similar definitions to those discussed in the literature review.
- Nothing. They said they were ignorant of the term, in English or Chinese, until they had been contacted regarding this investigation.

6.2. Critical Themes

Having examined the Core Issues of change, adaptability and mindfulness as experienced by the participants, the analysis will now examine some of the main themes that emerged from analysis of the data that will be important in answering the research question. As all the participants have been introduced in the previous section, relevant identifiers will be added on future references to aid recall.

6.2.1. The Importance of Relationships

The participants were asked about, and otherwise volunteered, interpretations about how change “impacted” them – another level of detail beyond explaining change itself. The issue of relationships came up not just as a type of change, as addressed in the previous section, but also as a series of challenges that must be managed and adapted to.

Also identified in the previous section was interpersonal adaptability as an objective of the participants. This section goes into more depth into explaining the complex of relationships and how participants adapt to changes in them.

There were five relationships that participants mentioned as being impacted by changes at work.

Boss

Apart from James (entrepreneur, training), who owned his own company, all the other participants reported to other people in their organisations, and even when they remained at the same company for some time, many reported that their bosses or reporting lines would change frequently. Dissolution of these bonds and the need to build relationships with new bosses was cited by several participants.

One case in particular illustrates the challenges, and coping methods, for those experiencing changes in whom they report to. Barbara, the government affairs director at the medical devices company, is working in a matrix structure, reporting to a line manager overseas and a country general manager. She said that some general managers wanted to know everything she was doing, whereas others she'd worked with did not really regard her as a direct report at all:

“Actually the bosses really change a lot. Each boss has each kind of work type. And everyone needs to adapt to the different work type immediately, as far as you can, the furthest you can, adapt to the new style. Then you will have more benefits. [Laugh].”

As mentioned earlier she had been working at a very “aggressive” type of company, which suited her style of working. She then moved to a family-run company and had to get used to a different style of working, a transition she described as “really awful.” She said, for example, that in her new company, sometimes colleagues simply did not respond to her emails, which was markedly different from her previous company. She also said that her company would unexpectedly pull products from the approval process, no matter how much time or money had been spent on trying to get the approval, which could take up to three years. She felt it was unprofessional and that there was no plan. But she nevertheless decided that adapting to this new style, for example by using the

telephone instead of email to contact colleagues, gave her a chance to get to know them better.

The arrival of a new leader from the same type of “aggressive” company that she had been at previously caused a great deal of disruption to her boss and colleagues, and Barbara was forced to change her style once again.

“You know, those big companies, they hope to see some very beautiful PPTs (PowerPoint presentations), beautiful forms, to present what you have done. And they want you to be much more aggressive to cooperate with the authorities. And aggressive to work together with the manufacturers, because all our manufacturers are located overseas. So they hope you will give them much more pressure, through the very professional way, like to set up teleconferences, work out the meeting minutes, and the follow-up every week, like that way. So it’s fine for me. I know it. [Laugh].”

She said that while changes at the company continued to surprise her, adapting to them was simply part of her job, and therefore did not cause her too many problems. Nevertheless, she had not always found dealing with change so easy, and when she was younger had found major changes of personnel in the workplace distressing. Of particular help was her husband, who advised her to find the bright points in any change.

“The most of important thing to change is your attitude. Just tell myself, changing everything is kind of your work, one of the abilities. You must have this kind of ability to adapt to different work styles.”

In this case as well as for Catherine, the human resources director at the pharmaceutical company, the participants drew on cognitive resources, as defined in the van Dam model, to make behavioural changes. They demonstrated acute awareness of the change in their circumstances with regard to their bosses and what was expected of them, as well as possessing the flexibility to respond to meet those new expectations.

Colleagues

Again, most of the participants have colleagues, but the impact of change on these relationships was not viewed as being as critical as that of the relationship with bosses. Nevertheless, several participants spoke about the challenges of handling changes to relationships with colleagues within a team or in other departments.

For example, Linda, who works in marketing for a university, had previously worked at an agency for several years, but found the relationship with her colleagues deteriorating as she became increasingly frustrated with her work. At her new job, she joined a small team and had varied responsibilities, but found her influence at work waning amongst her colleagues as her team increased in size. She said:

“I think at the very beginning my work is basically working on all the events, like related to even a little part of media and communications. Because we have a very lean team, few people at that time. Now I think my work scope actually became smaller than before on part of the events. So, to me, some of the ideas could not really be realised... Or to say my responsibility is now more focused and also it will involve a lot of other people to do that because before all the information came to me.”

In particular, it now required her coordination among several departments to get anything done, with progress more difficult compared with the agency she had worked at previously. Nevertheless, she had studied mindfulness techniques and applied them at work to be more aware of and regulate her emotions, allowing her to make better decisions and feel better about working in the slower-paced environment.

Subordinates

Not all participants had subordinates, but the impact of change on these relationships could be significant in the eyes of those who had them. Two of the participants in particular spent substantial time talking about changes to the relationships with their subordinates and how they dealt with them, albeit in very different circumstances.

Karen spoke at length about the challenges of working with a team of younger subordinates:

“I’ve been sales director for many years, and before all my teams were older, like over 30 years old. So I don’t have to teach them how to do this kind of thing. But now I have to [laughs]: ‘okay, you need to do this, this, this.’ Very specific. Just for the young kids.”

She related a number of stories about the difficulties she faced dealing with a young and diverse team of salespeople, some of whom brought with them very little experience. One of them, she said, did not tell her all the details of a sale he’d just made.

“He only told me what he thought was important. But other things are also important. He gave another one-month free rent, but didn’t tell me... It’s the big picture. For sales people, our target is to sell, but I need to sell to make the company profitable. I found with some young people, they say: ‘I just want a sale. I want to settle a deal, I don’t care whether this price makes a profit or not.’”

Karen said that despite the experience having been a frustrating one, it nevertheless helped her to more easily adapt her thinking regarding future hires.

“I have to adjust my own management style, or way of managing people. So, I have to learn, the young people, how they think, how they do things, and then learn from that. That will impact on my next candidate choosing. (Rather than) just take it for granted they’re the same as my other teams, because these young people are going in to the mainstream, so I have to adjust myself, learn about them, and improve myself.”

She gave another example of how one of her more senior team members, a star performer, refused to cooperate with one of the younger ones. She wanted to keep the high-performing member, but knew it would be unfair to force out the younger one. The issue came to a head when she told the senior salesperson to take a week off to reconsider what she was doing, even though she knew she may not see her again. But the senior salesperson returned after a week and went from tolerating her younger colleague to eventually cooperating with him, which Elaine regarded as a success of resilience on her part.

“I was so excited and so happy. At one time I gave up, and then I didn’t... And I saw change, and I think it’s a success.”

Like Karen, Elaine did not have much to say about bosses or change of bosses, but seemed to be more greatly impacted by the relationship with her subordinates. She was originally alone in her position, but eventually was given authority to hire people to help her, first one and then more. Her work become more focused on management and coaching and less on the technical work, and she built a strong relationship with the team members. This made parting with them when she took on another role a difficult experience, but one she felt should could deal with.

“Everyone, they just fresh graduate with PhD degree, so I coached them in everything, not only the work but also the personality, responsibility and behaviour. I really treat them as like my son and my daughter. So now I feel oh, I have to leave to them, so that’s the very difficult part. Because when I told them that I will have a new job, so you will have a new boss, they cried. That’s why it’s difficult for me.”

External Working Relationships

Some of the participants were in client-facing roles, while several were in government affairs positions dealing with government officials and other stakeholders. One government affairs practitioner, Delia, discussed the impact of technology on her external relationships, referencing the influence of WeChat:

“In the past, people sit down, have a cup of coffee. And now it’s increasingly challenging. People tend to communicate using WhatsApp or WeChat, or email. People don’t talk to each other, sit down with each other as often as in the past.”

She said that the way she handles these more numerous but weaker relationships is to break down her tasks to move forward. She gave the example of trying to influence the policy on biotech seed approval.

“It’s horrible, but if you break it down into the people that matter, the relationships that matter and what kind of opinions you want to change,

and break down over probably a week or month, then you find actually, you know, you can build up a final success on a lot of those small successes.”

James (entrepreneur, training industry) is in very close contact with both his clients and, increasingly, the individuals receiving the training. He noted the rising influence of the trainees in the way trainings are delivered:

“In the past we used to be dealing with the employers, now we should be getting better at dealing with the employees. It’s a very different focus. The employees, the users, we don’t understand them that much. In a sense we were doing B2B business, now we are doing B2C.”

Karen also talked about the changing nature of her clients, who used to be older and from bigger companies, who focused on following processes. The clients at her new company are much younger, make faster decisions and are easier to get to know.

“When I talk to these people, it’s so much more fun. You talk about the business, but same time you know more about these people. They like to talk more about their business, themselves, and sometimes maybe you’ll feel closer to them.”

Family

Some participants spoke freely about the impact of changes at work on their personal lives, including relationships with their family members. This will be discussed in depth in the theme on work-life balance.

6.2.2. The Influence of WeChat

It is important to mention here the impact of WeChat, known in China as Weixin, a social media software application that now has more than 1 billion users (Deng, 2018). (Internationally popular social media platforms such as Facebook and Twitter are blocked in China.) It is used as a medium for one-on-one communication, and to post photos, text and articles to “followers.” It also has a payments function that can be used

at most points of sale around the country and to pay for things such as mobile phone or electricity bills.

Eight of the participants mentioned it explicitly, most often in the context of Technology classification mentioned as a driver of change. As it related to social media, for example, Fiona said:

“So what I observe is when people are actually sitting together, some of the, especially young, people, they actually send WeChat posts to the group that is sitting together.”

Several of the participants talked about how WeChat decreased expected response times while at the same time increasing the amount of information that needed to be processed. Barbara, the government affairs director at the medical devices company, does not normally need to respond on a minute-by-minute basis to developments in her work, but is nevertheless expected to know what is going on. She said:

“Our response speed, you know, on WeChat Weixin, the information is really fast. Just maybe a new regulation issued on the website at maybe five o'clock. And if we didn't check, and then we go back home, and then there is a lot of information on WeChat. And then our commercial colleagues start, 'Hi (Barbara), do you know there is a new requirement?' [Laugh].”

She suggested that while some people in her position might find it embarrassing to be first hearing about important information from colleagues, she accepted that it happens, and welcomed the fact her colleagues were so engaged.

WeChat was much more central to the working lives of some participants than others. The training company entrepreneur and the coworking space sales director, for example, discussed the influence of social media and WeChat in particular at length.

James, the entrepreneur with the training company, spoke about how WeChat was altering in particular his relationship with those participating in his courses.

“Yes, I think customers are in more constant contact with you on social media, like WeChat. And the target participants are also able to be in a personal relationships with you on social media. Basically you connect with each other on social media. In the past, when training workshops are over, you stop seeing the person, you never hear from the person again. And now, because we all have WeChat, so we all connect with each other on WeChat, whether in a group or on an individual basis. So you are still having a connection with the participant. So basically, you are in relationship with the person forever, as long as you are on WeChat.”

Karen said she'd noticed that people do not even make phone calls so much anymore because they can write or leave voice messages on WeChat. However, the greater ease of communication raised expectations of responsiveness.

“You know, we get WeChat messaging from work, and you want to respond right now, or you feel like you are not doing your job. So that's stressful.”

She also recognised the increasing reliance people have on their mobile phones in all aspects of their lives.

“Just like without a cell phone, you almost cannot do anything. For example, you go out, you don't have a WeChat pay, but you don't have cash, and you are like blind, right?”

The ubiquity of WeChat in China is not confined to the young. Elaine, who although not in the oldest age category was at one point in our conversation talking about how she would be retiring in seven years, nevertheless referenced the importance of the tagline on her WeChat account: “Be the best of myself.”

6.2.3. Appraisals

It became apparent during the analysis that the participants were assessing the impact of the changes they were facing according to various dimensions. These dimensions were

sometimes explicitly stated, or otherwise implicit from the nature of the response taken. With examples, the dimensions identified were:

Knowledge – Change creates a desire to know something more, or different, from what is known now. “And I think, maybe we switch to another industry that can multiply, stimulate my learning.” - Alan.

Comprehension – Change creates confusion, or at least a desire to reduce ambiguity. “Very huge changes sometimes really give you a lot pressure, and also feel frustrated sometimes because of the uncertainty and more ambiguity.” - Catherine

Compartment – Change creates a dissonance of working styles. “So I just worked closely with this new boss to change my style, to be much more aggressive.” - Barbara

Rapport – Change can destroy the relational links between people, or create the need to establish new relationships. “I try to find a different way. Sometimes I have to put myself in other people’s shoes, to think how they think, right?” - Karen

Creativity – Change can increase the need for creativity. “If I think about it, you need to be very, very open so that you can really get connected with what’s happening outside in the world, so that you can keep up with the change, and also you can be innovative as always, because if you don’t open up, you can’t really innovate.” - Fiona

Attention – Increasing information overload and distractions undermine the ability to focus. “Sometimes it’s difficult because you need to pick up phone call and you have to attend meetings and you got urgent email.” - Maggie

Values – Change can create a conflict among a person’s values. “For sales people, we don’t want to miss the opportunities. So even though I really want to spend time with my family, but maybe it’ll take me two minutes to answer this message, and answer that. And that becomes like a circle, you cannot jump out.” - Karen

Temporal – Changes require time to adapt to, and create the need for shorter reaction times. “I think this is a big change, so I feel it’s not difficult, but I just feel I have to spend enough, a lot of time and energy, to change myself.” - Elaine

Meaning – Change can undermine meaning at work. “I make some efforts to find some objectives to demonstrate my value, and to apply for more government incentives. But generally speaking, the working role is getting less important.” - Howard

Ataraxia – Change can create psychological discomfort. “If I met some challenges in life, or something that makes me uncomfortable or frustrated, I will wonder what’s the reason.” - Linda

6.2.4. Responses to change

An objective of the research was to understand how the participants' response to change, and how they might build on the models covered in the literature review synthesis.

An examination of the responses revealed six classes containing 22 categories.

Category	Example
Acquiring Resources	
Learn	Keep a note of new terms heard in conversations (Alan)
Gather information	Monitoring more news and social media (Delia)
Consult	Discuss emerging issues with smart people in company (Ivy)
Delegate	Leave more work to subordinates (Maggie)
Increase efficiency	Raise productivity to leave work on time (Maggie)
Resource Organisation	
Reflect	Listen to voice in head about whether keeping open minded (Fiona)
Prioritise	Focus on the right things; don't panic about other stuff (Ivy)
Plan	What is important to organisation, and available resources (Delia)
Internal Adjustment	
Reframe	Finding the good aspect in a negative event (Barbara)
Identify biases	Recognising biased decisions when under pressure (Linda)
Relax	Trying to keep relaxed when stressed (Linda)
Adjust mindset	Switch from technical details to policy and strategy (Elaine)
Empathise	Put yourself in others' shoes to get different insights (Karen)
External Adjustment	
Concede	I do all that I can, and then let it go (Barbara)
Accommodate	Go through process of adjustment to new development (Catherine)
Negotiate	Can't always persuade, so need to find reasonable concession (Glenda)
Seek alternatives	Find new ways to demonstrate value to colleagues (Howard)
Experiment	Pilot new ideas with trusted clients (James)
Adjust behaviour	Put phone away for several hours to focus on task (Fiona)
Avoidance	
Exercise	Release pressure through boxing (Glenda)
Distract	Go shopping (Glenda)
Rejection	
Reject	Turn down job offer in another city (Alan)

Table 6.4 - Responses to change

One class of response to change was **acquiring resources**, in particular time and knowledge. This was achieved through five categories of activity:

1. Learn
2. Gather information
3. Consult
4. Delegate
5. Increase efficiency

The first three relate to the acquisition of knowledge. “Learn” refers to the unspecified acquisition of transferable skills, or more specifically terminology, ways of thinking, task-specific skills, or skills to handle change itself, such as mindfulness. This knowledge was acquired from books, training, observation, conferences, news, and formal education. “Gather information” refers to the more general collection on a day-to-day basis of information necessary to ensure work tasks are accomplished.

A good example of this is Alan (government relations, auto industry), who makes a point of paying close attention to the language used by the people he interacts with. He will observe not just what he hears, but also the context in which it is being said, all the time ensuring he keeps an open mind about potential meanings.

“When I move or change the job I try to focus what is the key performance in that industry, what the new group of people is looking at, and try to forget what you know or what you have mastered before. Then from time to time you kind of naturally relate what they doing now with your previous experience. So the focus is how do we talk the same language with this group of people and to address what is the key performance they are looking at.”

When he hears a new term, he will find out what it means, either from an internet search or from his colleagues, and then record it in a personal dictionary for later reference. The dictionary now contains 10,000 items, and he’s not ashamed to reconfirm meanings with his colleagues, even if they sometimes tire of repeating themselves.

“Consult” refers to talking with others for information and advice. This source of knowledge was widely used, especially with those regarded as possessing more

experience or some kind of specialisation. Ivy (human resources, oil & gas industry) said that talking with other people in her company helped her handle the difficulties of taking the company through a major downsizing transition. She found that discussing issues widely helped avoid the kind of groupthink that comes from discussing only among close colleagues in the same function.

“One thing I learned from experience is that I used to feel I’m very smart, so I can work out everything. I don’t want to attend many training classes. I don’t want to talk with many people, I said, ‘Let me do this. I can have the best way.’ But then I realised, maybe I’m smart, but I’m not the smartest, and no-one is smartest. You just need to work with different people.”

“Delegating” and “increasing efficiency” were conscious attempts to outsource work or home responsibilities and improve productivity with the aim of freeing up time. Although several of the other participants mentioned that adapting to some of the changes they were experiencing required more time, Maggie (lawyer in a foreign law firm) was the only one to offer possible responses to free up time as a resource. For example, she said that she now keeps a more comprehensive timesheet, recording not just billable hours to clients but also non-billable activities such as internet browsing and organising files, so that she can see how much time she is wasting.

A second class of responses related to **resource organisation**, and included three categories:

1. Reflect
2. Prioritise
3. Plan

These three activities were recognised by participants as contributing to their ability to adapt to change based on the resources available to them. These activities – reflecting on options, prioritising objectives and planning action – helped them ensure that they applied their knowledge in the most time-efficient manner to achieve their objectives. Delia (government affairs, chemical industry), for example, offered a process for responding rapidly to change.

“You have to make quick decisions. You have to understand what’s important and what’s less important. What are your priorities, and those all come from knowledge... The number one is really what matters to the organisation, you know. And secondly is how feasible. And third is what resources you have. If I don’t have enough resources, what’s my plan B?”

The third class of responses related to **internal adjustments**:

1. Reframe
2. Identify biases
3. Relax
4. Adjust mindset
5. Empathise

These five responses represent psychological activity beyond simple consideration with the aim of adjusting to change. Reframing was a response employed by Barbara (government affairs, medical devices industry) when she encountered difficulties. She gave the example of her global colleagues pressing her team to try things they felt were pointless.

“For my team members, sometimes they feel frustrated, because all of us know it doesn’t work. And I will tell them, ‘but please find the positive aspects from this case. At, at least you’ll try a different way. You’ll try a different thinking style. And just try.’ And I tell them, ‘You can try a different way with money. But not your money.’ [Laugh].”

“Identifying biases” and “relax” were responses offered by Linda (marketing, education industry). Linda has studied mindfulness and spoke about developing the ability to identify flaws in her own decision-making, which is easier to achieve in a relaxed state. She gave the example of a project she was working on where she was feeling overwhelmed, and asked her boss if someone could help her. Her boss refused, and at first she felt disappointed. But the following day, the project progressed much more smoothly, even without the extra support she requested.

“I realised that the day before, actually I was in a bad mood. When thinking about my handling methods by that time, actually some parts were not quite right. My supervisor had his own reason for not approving my request. So, I think at this time, especially under great pressure, I had biases when looking at the problems.”

A good example of “adjust mindset” was provided by Elaine, whose role had been evolving even before she was offered a position overseeing a regional team. She said originally she was focused on the technical aspects of biotechnology, but had increasingly to consider the political aspects of her work, including U.S.-China relations. And again, when taking on the regional role following the merger of her company with another, she said she would need to change her mindset again to include the whole of Asia, rather than just China, as well as the products produced by the other company.

Karen (sales, coworking space) talked about the importance of trying to “empathise” with others, giving the example of conflicts her team had with another department.

“I try to find a different way. Sometimes I have to put myself in other people’s shoes, to think how they think. I think I have a relatively sharp insight, or feeling, about people.”

While the sales team sees the value of marketing investments to attract customers, the operations team at her company focuses on process, which sometimes led to conflict. By trying to understand the difficulties of the operations team, she managed to approach them in a different way about marketing projects that required their cooperation.

The fourth class of responses related to **external adjustment**.

1. Concede
2. Accommodate
3. Negotiate
4. Seek alternatives
5. Experiment
6. Adjust behaviour

The first three of these refer specifically to changes in relationships, while the others relate to context of the change and the individual's position within it. "Concede" refers to accepting what cannot be changed. As Glenda (administration, industrial) said:

"I try my best to accept. I have the right to be unhappy, because even if the one who asks me to do paperwork speaks to me in a really bad manner, I have to do the work anyway."

"Accommodate" goes a step further than "concede" by taking action to make the new situation more acceptable. Catherine (human resources, pharmaceutical industry) said she goes through a process of adjustment in the face of substantial change.

"During the process you are obviously very tense; very huge changes sometimes really give you a lot pressure. And also feel frustrated sometimes because of the uncertainty and more ambiguity. During the change you are not comfortable. But after the change, if you look, I'm obviously full of gratitude to all of the changes, or all of the challenges, because I really want to become a better person, and without this kind of changes I can never become me today. So I really enjoy not the process, but enjoy outcome, I mean [laughs]."

Barbara found the need to "negotiate" once a change in leadership at her company meant her opinion was not so welcome anymore. The sales managers had the ear of the new leadership, but the issues at stake were important to Barbara.

"So I started to adapt my suggestion. Maybe find a middle way. Maybe not like the regional sales managers' suggestions, but not like my previous suggestions. Find a middle way to let her agree but still insist on my principle."

Howard talked a lot about choice, apparently in part because of insecurity in his government affairs position at the manufacturing company. As a result, he was "seeking alternatives" in two ways. First, he was trying to find ways at work to better demonstrate his value, despite the declining influence of his role, for example by successfully applying for government incentives for his company. Second, he was

preparing for a likely future where he would be laid off by seeking alternative sources of income, in this case by learning personality and psychological assessment techniques and offering pilot training to people in his community.

James was responding to changes in his industry, which provides training services to multinational companies, by “experimenting.” He was actually foregoing some regular business to focus on designing pilot programs which he felt had more potential as clients demanded more from his training offering.

“You keep exploring, and you keep learning. You just have to do some pilots, do some experiments. You work with the client, and take up a proper project, and try to convince them that that’s the right way to go. ‘So would you like to do that along with us?’ So if you’re the client, buy in to the methodology, or they trust you enough, then you can take on the project, and start to implement ideas based on the principle of learning and behaviour change.”

A good example of “adjust behaviour” was provided by Fiona, who, in response to the increasing distractions of her phone, would simply put it away for a few hours if she need to focus on completing some particular task.

The fifth class of responses has been labelled **avoidance**, as they are responses that do not directly deal with the change:

1. Exercise
2. Distract

These relate in particular to Glenda, who offered various responses when asked how she dealt with significant changes.

“It’s like, something is very painful but I can’t deal with it immediately, I will have to shift my focus to another thing, because there’s nothing I can do about it except distraction.”

When asked if that might make the situation worse, she said that as long as the issue was not of central importance, distraction was effective because it would allow time to

erase the discomfort. She said she would also distract herself from problems at home by focusing more on her work, and that shopping was another effective distraction technique for her. She had also hired a personal trainer to help her learn boxing as another response to the changes she was going through at work and at home.

The final class is **rejection**, containing the single category, reject. Some of the participants had provided instances where they had rejected change, when they had the agency to do so, most commonly related to internal or external job opportunities. For example, Alan rejected a promotion within his company because he felt he did not have the necessary professional network, and rejected an external job offer because of loyalty to his company at a critical time, despite the persuasive efforts of the head-hunter.

“I said that’s fine, because once I’ve personally committed to do it, I want to do it well. I just don’t want to leave the company in such a difficult situation.”

6.2.5. Impact of Stressful Events

Some of the participants, especially those in the “high” mindfulness category, had not perceived that they had encountered any particularly stressful changes in their lives. However, there were a couple of exceptions where stressful events or situations prompted the individual to study mindfulness. There is also an example of where mindfulness was not adopted to handle apparently high levels of stress. Examination of these cases will shed more light on the subsequent section on mindfulness-related themes.

Both participants Howard and Linda had spent considerable time studying mindfulness and related topics (and both scored highly in the mindfulness survey), albeit for very different reasons. Howard has been working in government affairs at his company, a manufacturer of consumer products, for 14 years. However, a combination of social, personal and work-related pressures were building, forcing him to reconsider his future. Howard has a son, currently studying at a university in Germany. When his son returns to China, Chinese cultural norms dictate that Howard should provide his son with his own apartment, otherwise it may be difficult for him to find a wife. However, the price of apartments in their hometown has risen strongly over the past few years, so that he can no longer afford to buy his son an apartment. At the same time, the fortunes of his

company are declining, and the US parent company is investing less in its development. This means that the demand for his government affairs skills and experience are also declining – he forecasts he will need to find another job before his retirement, likely within the next few years. Compounding the pressures is Howard's mother, who continually criticises him for failing to earn as much money as others in a similar position, and for being unable to buy his son an apartment. In fact, he says his upbringing left him with emotional shortcomings, resulting primarily in challenges controlling his anger.

Against this background, Howard had begun exploring psychological concepts and personality testing tools. He learnt the tools and began giving sessions to colleagues, students and government officials to help them better understand their own personalities.

“Through this kind of teaching I have learnt lots of knowledge and skills, and I have more confidence, more skills to communicate with my colleagues, my boss, my outside stakeholders. This kind of skills or teaching practice have also given me more confidence to face a challenging situation if I will need to find a new job.”

Just as importantly, he learnt about mindfulness during his research, which he said he applied to many aspects of his life. For one, he said it had helped him with his personality “weakness” in managing his emotions. This in turn had aided his relationships, at home and work.

“Relationship is really important for me. On the positive psychology point of view, relationship is very important in my life. In everybody's life. I do really feel positive loving relationship is so important. This kind of relationship helps me feel happy, fulfilment, that life is meaningful.”

Moreover, the mindfulness concepts he'd learnt were helping him to deal with the pressure of his situation, his mother's disapproval, societal expectations regarding buying property for his son, and the decreasing importance of his role at work, as well as his expected upcoming redundancy.

“The most important point is I need to make right choice in the near future. So this kind of mindfulness will help me release my psychology pressure. Make me feel better. Help me maintain a good mind situation and health.”

There were two other participants who discussed stressful episodes in their lives, but were not aware of mindfulness. Catherine (“middle” on the mindfulness survey) five years ago decided to move from a comfortable but junior job in human resources at a big pharmaceutical company to a more challenging but more senior role at a smaller company. However, soon after joining the company, the country head was unexpectedly removed from his position, undermining morale at the company and prompting a sharp rise in employee turnover. This made Catherine quite discontent in her new role.

““Oh my God, why I choose this company?’ Because at [my previous company], it’s really a very good company. I was so regretting at that time, I really hated myself, and I even tried to go back to [my previous company]. And I tried, but unfortunately I passed six interviews and then failed at the last one... Then I really think that I am in the darkness and I was very, very unhappy during those days.”

This situation continued for around a year until new leadership and new responsibilities persuaded her that her career was progressing in a healthy direction. Catherine had read about mindfulness and some of the concepts, but did not practice it. Rather, mindfulness seemed to be just one of many concepts she had read about and applied to her work. Another example of these concepts comes from *Conversations with God*, a series of books by Neale Donald Walsch:

“I am not religious at all, but that book actually tells you something to look at yourself, inner you, and to try to answer some question that really puzzled me a lot: How to build up the relationship with the people who around you. And I should say those kind of books really help me a lot and they are telling me something that, if I really want to be happy and to

be stronger, I need to go this way to look at who I am rather than who you want me be.”

6.2.6. Experience and adaptability

Most participants at some point during their interviews said they found dealing with change was getting easier, frequently because they had more experience. This was the case even though many of them said that that pace of change was increasing. For example, Ivy said: “Much easier, yes. Learnt from all the experiences, yes.”

It seems this experience also cultivated other traits useful in adaptability, such as confidence, ability to make accurate predictions, and the feeling of control. Catherine, for example, had gone through several major and difficult changes at work that she felt had left her much better prepared for future changes:

“I should say change itself is always the same. Some changes are bigger, some changes are small. But how I look at change actually, that’s the big deal for me because maybe a couple of years ago, if some changes came to me, I felt very uneasy or I felt very frustrated and powerless. But nowadays I am not afraid anymore and I know some changes will be very difficult, but I have the confidence nowadays to go through that patiently.”

This was true even for those who had scored less on the mindfulness survey. Glenda, for example, had also gone through several major changes in her professional and personal life, and suggested the ability to predict the future more accurately increased the level of comfort with it: (translated from Chinese) “It’s getting easier because you can foresee many things. The more you do, the more prepared you are for potential changes.” Delia, government affairs lead at the chemicals company, said she could predict the course of events in her work with 90 percent accuracy based on her past experience.

6.3. Influence of Mindfulness on Adaptability

Mindfulness-related themes were given special consideration, although direct discussion of the topic with participants unfamiliar with the terminology was challenging. As addressed in the Literature Review, despite a working definition, there is no consensus

on exactly how to conceptualise mindfulness. In the Literature Review Synthesis, it was suggested that the Good *et al.* (2016) framework would be a suitable departure point for analytical purposes, as it specifically addresses mindfulness in work contexts. Nevertheless, the data analysis revealed that other frameworks were also relevant, including that of Shapiro *et al.* (2006), combined with the Buddhist concepts of impermanence and equanimity that underpin mindfulness. The eight themes identified in the analysis could therefore be considered as comprising the philosophical underpinnings, key mechanisms and supplementary mechanisms of mindfulness, as shown in the figure below.

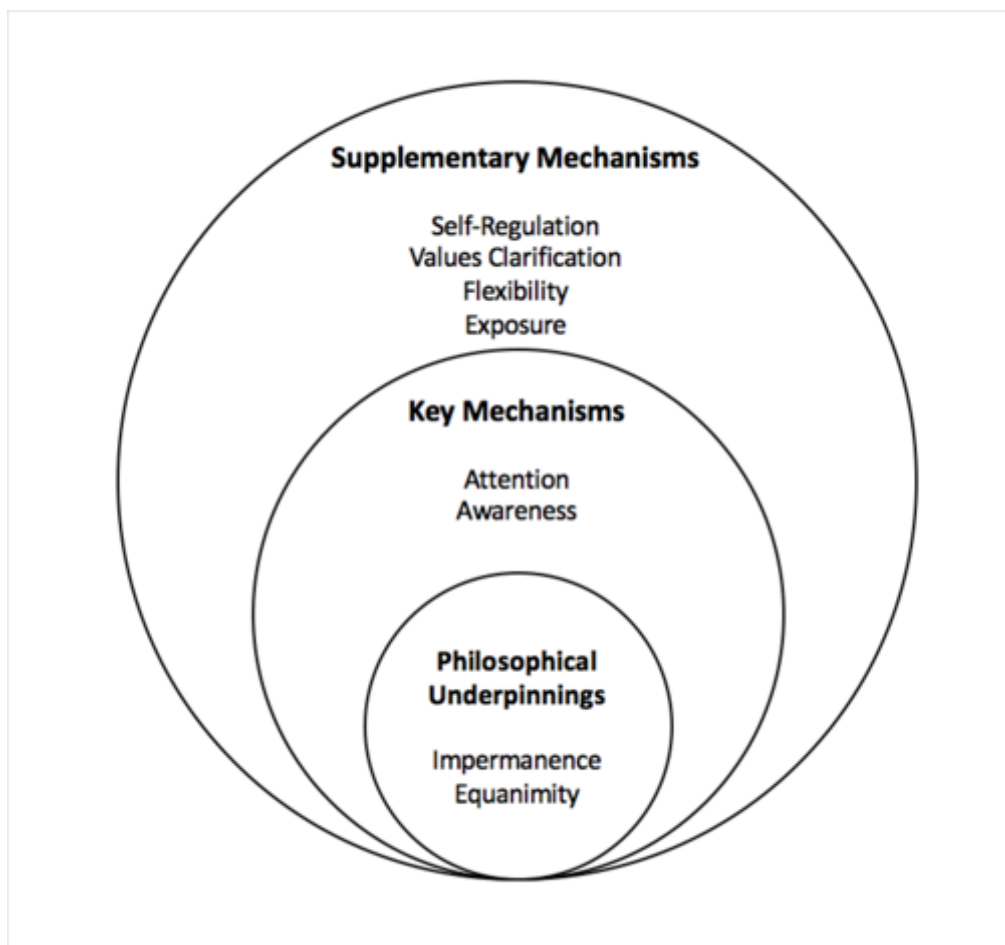


Figure 6.2 – Conceptualisations of mindfulness

Source: Author

Of particular note were the internal dialogues many of the participants expressed, demonstrating the self-reflective processes that formed part of their experiences of change. These can be seen in the examples of the eight themes below with single quote marks (‘...’) within the regular quotes.

6.3.1. Equanimity

As discussed in the literature review, equanimity is “an even-minded mental state or dispositional tendency toward all experiences or objects, regardless of their affective valence (pleasant, unpleasant or neutral) or source” (Desbordes *et al.*, 2015, p.359). Some of the participants demonstrated equanimity, including some who recognised its benefits and tried to cultivate it.

Fiona discovered her equanimity through a feedback assessment from her colleagues, which came as a surprise to her. Nevertheless, she said it was likely the result of the time she spent with herself reflecting on various aspects of her life. She said she made of point of spending time away from work and family, for example in flower-arranging classes, so that she could have a healthy relationship with herself.

“Colleagues will say that I’m very a peaceful person, I’m very cool. I’m not really easily impacted by changes or by stuff. I’m just very stable and very cool.”

She said this helped her think more clearly when problems came up and generate more solutions, because she was not panicking.

Alan demonstrated equanimity in two crisis situations at his company. On both occasions, he was presented with information at a critical moment in the sales process for an expensive product suggesting a competitor might get the contract instead of his company. In both instances, despite pressure from colleagues, he researched the issues and correctly questioned the authenticity of the new information.

By contrast, Glenda had become aware of her emotions, but felt they were largely beyond her control:

“This prioritising and unhappy feeling sometimes concern me, but I am who I am. I’m a human, and I also have emotions and tempers, which certainly affect my choice.”

6.3.2. Acceptance of Impermanence

Acceptance of impermanence recognises that nature, and therefore our experiences, are constantly changing, and therefore it is futile to get attached to any particular experience (no matter pleasant or unpleasant), as it will soon pass (Dreyfus, 2013). For many in the “high” mindfulness range for the survey results, acceptance of constant change was common, and in some ways seemed to define their attitude toward change.

At one extreme is Delia (government affairs, chemicals industry), who responded to a question about her attitude to change by saying:

“I don’t spend a lot of time asking myself those questions. I think it’s a silly question. [Laugh] You know, how do you look at change? How do you look at work and life balance? Because there is no answer at all. So I never spend time on those questions. I just do what I need to do. Things happen.”

For her, the fact that the situation today maybe different from yesterday is irrelevant. The only thing to thing to consider is what is happening right now.

“I never ask myself if I need to deal with it. It’s just what I’m going to do about it.”

Elaine (government affairs, biotech industry) also largely took change as a given. When asked what tactics she employed to adapt to change, she responded:

“Actually no, no tactics. It’s my personality... I always think life is changing. So I have to learn new things, and adapt to it, that’s all. I have to think about study, or what it is I have to get to know, to learn, what is my new job responsibility, what I should do and how I should it.”

Fiona (human resources, media industry) even embraced change, including the momentous changes the human resources function was going through and the highly creative environment of the media and entertainment industry. In fact, she had taken some moves in her career to increase the amount of change she was subjecting herself too. For example, she had lived in Hong Kong for some time, but found the

environment there too established for her, and so she returned to the “rhythm” and “stimulation” of Mainland China that she preferred.

“I’m a very curious person, so I feel quite curious about the world and I feel very curious about the changes. So, literally, I like changes [laughs], so it’s not pressure to me at all and I feel quite excited, actually.”

As well as general attitudes to change being influenced by the acceptance of impermanence, there were also specific examples of applying this principle to a situation. Linda (marketing, education sector) had studied mindfulness techniques and detailed some occasions when she used them. She found that recognising impermanence was useful when undergoing stressful situations in particular:

“Next time when I’m anxious, I know that I will not be like this when I’m not anxious, and such anxious state will not always exist.”

Conversely, in the “low” mindfulness group, Glenda (administration, industrial) said she did not like change, the only one to make such a flat-out assertion. She initially said she did not like change because she was lazy, and then elaborated:

“You are not sure whether it’ll be good or bad. You need to spend new time and energy on work you might be familiar but not sure if it’ll change. For instance, I am the administrator in our company, and probably also the administrator in another company, with similar responsibilities but different work content. Yet part of the difference is predictable, but part of it unpredictable. Can you accept the unpredictable part? If not, just like I can’t accept my divorce at the beginning, I was ill.”

6.3.3. Attention

Attention is an important component of mindfulness, and in fact for many of the models it is a central mechanism. Nevertheless, it was not a topic the participants spoke easily about, apart from those who had studied mindfulness in greater detail. For example, when asked about her understanding of mindfulness, Maggie (lawyer), who had not studied mindfulness but was familiar with the term, said:

“Everyone should pay attention to what they are doing. So, you do something mindful and not mindless, right? If you read an article, you read article, you focus on it, and after you read it you can summarise, you can describe it to your partners, you can describe it to your colleagues. Not like you read it and you don’t know anything about it.”

Participants Linda and Howard, on the other hand, spoke in much more detail about how paying attention could help them make better decisions and feel better about the decisions they were making. Linda, for example, said she had been putting herself under a lot of pressure in a previous job, and was becoming less and less efficient, generating a lot of stress for her and her colleagues. After she quit her job and spent more time studying mindfulness, she found herself in a better position to reassess what had happened to her and how she could deal with pressure in the future.

“When I can relax, I put all these aside, and focus on my own state, to really think about what happened to me, how can I be happy and lift myself.”

She said a crucial ingredient in her recovery was the change of environment, and the fact she took some time out and then returned to the work force in a different type of role.

Howard, who had also studied mindfulness techniques, although without regular meditation practice, emphasised the importance of directing attention to constructive endeavours. He gave the example of mistakes made by colleagues at work, who may use inappropriate language when communicating with government officials.

“We don’t complain about each other. Now we just persuade my colleague to focus our attention on the life choice. Not complain about the past, what we have done, for the mistakes we have made. Best to focus on the next choice.”

At a more detailed level, some of the participants talked about their challenges in focusing the attention in practical ways during the day. Fiona, for example, puts her phone away to concentrate on work:

“The downside maybe is, alongside with connectivity, the whole thing is distraction, because you’re constantly kind of getting the signal from your mobile phone where you are just getting reached all the time and that means it will kind of take away your attention off things. So for myself, some of the time, I have to kind of discipline myself to kind of put my phone away for, like, four hours if I need to work on something, I really need concentration. So that’s how you live peacefully with the technology. To me, it’s something kind of quite interesting.”

Karen, on the other hand, puts the phone away in the evenings to focus on her family.

6.3.4. Awareness

Closely related to, and overlapping with, attention is the concept of awareness. Recalling the definition of mindfulness adopted for this study, attention is regulated “in order to bring a quality of non-elaborative awareness to current experience” (Bishop *et al.*, 2004, p.234). For example, several participants talked about discussions they had with themselves to help them consider how to handle change. At a basic level, for example, Elaine said:

“I have to think about every day, or just, just a quick summary in my mind, ‘Oh this is wrong or it’s right, it’s good or bad, how I can improve.’ I always say, improve myself, that’s always what I am thinking.”

An important distinction with awareness is between external and internal. Some participants focused on how they maintained awareness of changes in their environment, such as their industry, the economy or with key relationships. In these cases, they were often aiming to understand if they needed to adjust their behaviour. In other cases, the participants were sensitive to their emotional status, maybe their mood, with a view to self-regulation of emotions (which will be discussed in more depth in the next section).

An example of the latter is Ivy (human resources, oil & gas industry), who had studied some mindfulness techniques, although she practiced meditation only irregularly. She

used techniques to recognise when her emotional state had been adversely influenced by her work when the company was going through rounds of layoffs.

“At the time I was full of those thoughts and I felt the stiffness of my body, or sometimes in subtle way I just found my fist like this [clenching fist, laughing]. So from time to time I can remind myself, I became aware, that I’m not being mindful. I’ve too many thoughts in my mind, and so sometimes I shout at my kids for example, and right after I know, ‘Oh, I’m shouting. I must be pressured in myself. I need to recognise I have a lot of things on my mind and I have a lot of things I needed to do. I’m pressured.’ I need to know about this fact and shouting at the kids is a result of those things instead of just he’s doing not right. So I would say mindfulness is in my life, is part of my life but I confess I’m not practicing enough [laughing].”

Another of the participants who had studied mindfulness, Linda, also described how the techniques she’d learnt helped her to maintain awareness of her emotional state and how it had been influenced by her work.

“So to me, when I have challenges, I will keep it in mind, ‘OK, I’m going through such things, here’s the situation.’ So I try to keep aware of it and know the situation, not just be in there, and put myself in the mood. I think that’s the practice. If we do it more, then it’s easier to know, ‘OK, something is going on and it could be a bit difficult to communicate.’ It gets easier to know that.”

Rather than focus on challenges, Fiona discussed how she maintained high levels of sensitivity to environmental changes so that she could respond appropriately. She was notable in the extent to which she reflected on her situation. She said she made a point every month to consciously consider whether she was still achieving what she wanted. She also talked about a voice in her head “that keeps reminding me, ‘whether you are open enough, whether you are still learning new things every day.’ So it’s really the curiosity, I think, and then the constant reminder there that will push you to be open to learn new things. And I think some of the learning also helped me to be more creative and curious.” She closely associated awareness with learning and innovation, which for

her were central to the ability to adapt successfully to a changing environment. This reflects her current industry, media and entertainment, which is based on creativity, not just in the content produced but also in the way it is delivered, which is shifting from large screens to smaller ones.

“You’ve got to be very open minded, so you’re aware of what’s happening, and then bring that learning and bring that awareness into the work that you do. And also you’ve got to be very adaptable. If I think about it, it’s really you need to be very open so that you can really get connected with what’s happening outside in the world, so that you can keep up with the change, and also you can be innovative as always, because if you don’t open up, you don’t know, you can’t really innovate.”

Conversely, James acknowledged that at some points he had failed to be aware of some of the changes in the nature of the market for his training services.

“Some come as a big surprise, some don’t come as a surprise. Like the whole economy thing, it’s not surprising. But this KOL (key opinion leader) type of learning provider, they don’t come as sudden surprise, but I was not really paying attention to them in the past few years. I was busy going after clients, chasing after clients, and closing deals, selling our courses. So I was overlooking those type of new generation of learning providers.”

6.3.5. Self-Regulation

Self-regulation of thoughts, emotions and behaviour is an important functional ability associated with mindfulness that is also central to adaptability. It follows on from awareness – without awareness of present and desired states, it is impossible to move from one to the other. A good example of how self-regulation, especially of emotion, follows from awareness of emotional states is provided by Fiona, who in the previous section discussed how she maintained a non-judgmental awareness of her environment with a view to ensure she could be innovative in responding to it. She also discussed how she monitored her own emotional state, what the biggest influences were, and how she used this understanding to regulate her mood.

“A lot of those are internal, because those external changes can’t really be controlled by anybody. They are just changing. But internally, how you view the world and your perceptions, all that stuff, actually, create your own world, and that will impact on your feelings. A lot of times actually you didn’t know, and it’s only when you are aware that there are certain feelings within you that affect you, that you start to kind of face the feelings and then pick yourself up.”

Through a process of emotional regulation, Linda (marketing, education industry), is trying to become more equanimous. By applying mindfulness meditation techniques she studied in classes and books, she was attempting to shorten the emotion life-cycle when experiencing anxiety about a situation.

“When you really use it, you will calm down and relax, and realise your state when you are anxious. Next time when I’m anxious, I know that I will not be like this when I’m not anxious, and such anxious state will not always exist. Maybe at the beginning, you can only know it the next day after things happened, next time maybe half a day, and after more practices you will know immediately after it happened.”

Some of the participants even described processes they go through to cope with change and adjust to it through self-regulation. In her government affairs work for a medical devices company, Barbara said she had encountered many surprises, particularly in the leadership styles of the various bosses she had answered to and from new regulations handed down by the government.

“And for me, I just hide my emotion. OK there is a surprise, there is bad news. Then find a way. Find a solution to do it. Although I cannot imagine if it can be solved not, but all I do is what I can do. Just let it go.”

While “hiding” an emotion may appear maladaptive in some circumstances, in the context of the discussion, it was clear she was rather referring to her ability to be aware of the emotion of surprise (or sometimes frustration), accepting it, and focusing on

finding a constructive response to the change, no matter how limited the response options might be.

This process of self-regulation was even more explicit for Catherine (human resources, pharmaceutical industry), who even described the most difficult steps in adapting to change:

“For any change I cannot adapt myself very quickly at the first minute. Usually I will take some time and I allow myself to go through that process. First maybe you really feel a little bit surprised and second sometimes you really have some defensive, or you have a lot of frustrations as well. And I realise I cannot skip that part, even though you told yourself that you are a professional person, you are in this kind of position and sometimes ‘please pretend you are OK’ and, especially in front of the public, you need to pretend you are so professional. But it doesn’t work. You can pretend sometimes, but you know in the back of your heart you know that you’ve not gone through that process completely yet. You still have something in your body that still felt painful or still felt defensive. So you have to let yourself just smoothly go through the whole process and to just experience or acknowledge that you’re defensive and acknowledge that ‘I really do not like this kind of change’ sometimes. I just allow myself go through that process and then at the end of the day I always have the capability to adjust myself.”

She gave the example of when she had just joined her current company several years previously, and the country head was fired soon after. The disarray and low morale at the company made working there unpleasant, to the extent she even tried to return to her previous company. Although she might question why the changes had happened, she would try to avoid dwelling on the reasons for it.

“I do have those kinds of thoughts at the beginning of changes sometimes. Because I am a human being, of course sometimes I have the reaction, but still, the good thing is I have good self-awareness or sometimes I can have an observation about myself and I tell myself, ‘You’re stuck there again and you need to step out from that situation and

try to think from another angle.’ I always thought like that and then you really can change the focus from that part and to look at what the benefits of this change and if I can take anything out from this change.”

The experience of Catherine shows that she is aware not only of her emotions, but also of her ability to regulate them. This was also the case with Glenda (administration, industrial), who was the only participant to say she did not like change. As with Catherine, she also referenced the foibles of being human when presented with situations beyond her control.

“There’s always something we cannot choose, but I can at least be dissatisfied and unhappy, and try my best to accept. I have the right to be unhappy, because even if the one who asks me to do paperwork speaks to me in a really bad manner, I have to do the work anyway. However, I can prioritise. Good manner, I do it first; bad manner, I postpone it. This is also a solution. I have a waiting list in my heart, and will choose which task I’ll do first. This prioritising and unhappy feeling sometimes concern me, but I am who I am. I’m a human, and I also have emotions and tempers, which certainly affect my choice.”

When asked if she had other options when faced with situations beyond her control, she replied: “I think it’s my mindset, I have in my brain only two solutions: quarrel or ignore. Only them. Of course, everyone’s different.”

6.3.6. Values Clarification

The issue of values clarification for the participants mainly centred on the importance they placed on their work, often in comparison with other aspects of their lives. According to Shapiro *et al.* (2006), those who are more mindful should be clearer about what’s meaningful and important to them. For some participants, their values remained constant despite the changes they were experiencing, while for others the changes were resulting in conflicts between competing values.

Barbara, Ivy, and Linda, for example, acknowledged an emotional distance between themselves and their work, which helped them adapt to workplace changes. Linda put it like this:

“For me, changes at work may not be the things that I care about the most. It’s just a part of life.”

Barbara emphasised that she had accepted the limitations of her influence at work, and on more than one occasion asserted that it was up to others to decide what the company’s direction should be. Even at an interpersonal level, she would offer her opinion on the basis that she did not mind whether it was accepted or not:

“Maybe I give some comments in very soft way to the bosses, or to some other colleagues. If they don’t adopt it, it’s fine. It’s not my business. I have given you my comments. [Laugh].”

Ivy said that getting agreement with family members was more challenging than dealing with changes at work:

“At work I think it’s easier because, like I said, I can discuss with many people, and people are supporting you as a group. But something you cannot share with others, like in life, it’s hard to share, then that would be more difficult for me.”

Other participants, however, said they experienced conflicts in balancing priorities at work and home. Participants Elaine, Karen and Maggie described adjustments they needed to make between work and personal lives that demonstrated the difficulties in adapting. For example, Maggie said:

“So, sometimes I have to bring my laptop home. Actually, every day I bring my laptop home because I always have some worry, you know, overthink maybe something will happen. Maybe something will happen in the evening, maybe (the boss) will send you email, say something urgent, deal with as soon as you can.”

Nevertheless, she said she aimed to increase her efficiency at work and leave the office at 5pm every day so she could spend more quality time with her family in the evening, even if it meant occasionally switching her laptop on at home to handle an emergency.

In the conflict between work and life, Karen was particularly interesting in the depth in which she described her experience. She spoke of the powerful emotions she felt when she would look at her phone after a period ignoring it.

“Sometimes, if I turn on my phone, I see emails, and they’re over 200, or whatever, 100 emails, you haven’t responded to, I feel, ‘Oh, my God,’ I feel guilty. You feel guilty you haven’t responded to them.”

She also talked about how the proliferation of mobile communications combined with her new role as a salesperson distracted her during time spent with her family.

“As a salesperson, you need to seize all the opportunity, right? So, when the customer sends you a message, you have to answer very quickly. It’s better when the customer is in a decision stage. So, sometimes, for sales people, we don’t want to miss the opportunities. So even though I really want to spend time with my family, but, OK, maybe I answer this only... it’ll take me two minutes to answer this message, then answer that message. And that becomes, like a circle, right, you cannot jump out. And that’s also a distraction to my family. Sometimes my husband is saying he feels like I’m there, but I’m not there. So, I didn’t do very well. And my husband had a serious conversation with me [laughs].”

A specific example she gave was of a family holiday to Europe, where because of the time zone difference, she was up late at night handling correspondence with potential clients back in China. As a result, she said she felt like she did not sleep for four days, and felt balancing her job with her family was challenging. Nevertheless, based on the advice of a friend, she got into the habit of putting her phone away for a couple of hours from 7pm every evening.

“You think that there will be something urgent that you didn’t deal with, but then, after a couple of days, you think: ‘Oh, actually, there’s not many

urgent things.’ There is just the one, two hours (of messages) to answer, that is not a big issue, right?”

At another extreme, Delia dismissed the whole concept of work-life balance, but recognised the lack of a boundary as a good thing, thanks to the flexibility it provided.

“Well, it’s just no division at all. You can work at home, or enjoy life in the office. So I think the blurry comes that there is no, basically, boundaries. You can work while on the beach, or I can just read a novel at the office.”

Another participant, Howard, described how the declining importance of his role at work meant he would likely need to find another job in the next few years. Job insecurity combined with the social expectation that he buy an apartment for his son placed a lot of pressure on the participant, which stimulated him to study psychology as a means to manage the pressure as well as a likely future source of employment.

6.3.7. Flexibility

By reducing automatic responses and increasing the ability of people to distance themselves from their thoughts, mindfulness theoretically improves flexibility of response to change. Again, this concept has considerable overlap and complex relationships with the other concepts on which mindfulness is based, as recognised by Ivy:

“So to me flexibility, first you are aware, the awareness is important. Awareness of change is constant and it’s acceptable. Change is alright. And then flexibility means that you need to have this mindset, which is really the most important thing. I can see a lot of anxieties arise. ‘I just did it. Now you want me to change again. What’s happening? Are you crazy?’ Sometimes like this. So awareness and accepting, this is very important. You are aware of this and you aware that changes are OK.”

She gave the specific example of layoffs at her oil company, which she was responsible for overseeing in her role as head of human resources. Although the layoffs were predictable in many ways, the impact was still difficult to forecast at a company level,

and impossible at an individual level. The result was continual revisions to the plans she was making in coordination with other departments.

“So the plan is the plan today, but tomorrow it may change, so we need to be prepared for change. We have like a transition plan, if we keep the track in the version, I guess it’s like maybe 100 versions. Everyday it’s changing, so you can’t just stick to the plan and you need to be prepared for this.” She said fortunately she never plans for anything, so it wasn’t difficult to adjust. “So when a lot of plans are broken for me it’s not that big a challenge. I can easily understand. Plan is just plan. We need to be prepared for change for anything and I’m happy to change any plan [laughing].”

6.3.8. *Exposure Desensitisation*

Exposure desensitisation refers to the idea that by facing unpleasant experiences (or even pleasant ones), the strong emotional responses to them will subside. This demonstration of mindfulness contrasts with behaviours such as avoidance or distraction, whereby the unpleasant sensations are regarded as something to be avoided. This idea is related to both acceptance of impermanence, in that sensations will come and go naturally, and by facing them an individual can reduce the emotional impact they have.

The participants demonstrated varying degrees of exposure desensitisation. At the extreme is Delia, who said most events now fail to produce an emotional response:

“I have sort of lost the function of surprise. [Laugh] At an early age, in work or life, I still got surprised, but now nothing surprises me.”

This could explain her attitude toward change, which she said was not worth considering, as instead she could be “embracing the new stuff.”

Even for Glenda, who scored “low” on the mindfulness survey and still struggled to control her feelings of frustration in dealing with colleagues, demonstrated elements of exposure desensitisation, suggesting it could be related to age or experience.

“It’s getting easier because you can foresee many things. The more you do, the more prepared you are for potential changes.”

As can be seen from these examples, there is also a great deal of overlap with the influence of age/experience, suggesting that greater mindfulness, by encouraging exposure to experience, could accelerate the benefits experience that accumulate as someone ages.

6.4. Summary

The aim of the research was to find out what types of change are most salient for Chinese knowledge workers, and how they perceive and respond to their rapidly changing environment, as well as whether mindfulness is a useful way of explaining any of these responses.

The results show that indeed Chinese knowledge workers at multinational corporations are experiencing a range of, sometimes rapid, changes driven by several factors. The themes identified point to a broad array of responses, including the identification of “adaptability gaps” that they feel they must address. Moreover, many of their responses to change seem to be supported by mindful traits or practices. However, it is difficult to come to a clear conclusion that mindfulness influences the perception of change and the ability to adapt to it, as even non-mindful individuals exhibit some mindfulness in their responses to change. The next chapter further interprets the results and reconsiders the Basic Theory in light of them.

Chapter 7: General Discussion and Theory Development

Based on the results of the data analysis, the literature was reassessed and the theory developed further to incorporate evolved understanding of the knowledge base and emergent findings from the present research. In particular, the relevance of the “adaptability gaps” was further explored, and a process model of adaptability was developed.

7.1. Discussion of Results

7.1.1. Types of Change

The Literature Review revealed that, while there was a reasonable body of knowledge on adaptability, not much attention had been paid to specifically what was being adapted to, an issue that this study sought to address. Pulakos *et al.* (2000) somewhat backed into this question through their taxonomy of adaptive performance. But describing what successful adaptability looks like is not the same as understanding specifically what is being adapted to, a gap in the literature also identified by Jundt, Shoss and Huang (2015).

The literature identified several types of workplace change – work process change, new technology implementation, reorganisation, strategy change, relocation, outsourcing, leadership change, and downsizing (Herold, Fedor and Caldwell, 2007), as well as changing jobs (Hou *et al.*, 2012). The results of the present study revealed similarities and differences to the types of change that had been found previously. For the participants, outsourcing was not identified as a change. This may be a result of the small sample size, or because in a rapidly expanding economy such as China’s, the emphasis for companies is growth, whereas in more mature economies, such as the U.S. (the subject of Herold, Fedor and Caldwell’s (2007) study), there is a greater emphasis on controlling costs, which would more likely require outsourcing. It is also noteworthy that none of the participants mentioned new “technology implementation” at work, despite the use of smartphones (WeChat in particular), which are personal tools often used for work tasks. When Herold, Fedor and Caldwell (2007) were writing in the mid-2000s, it is possible that major new technological roll-outs in the workplace were more disruptive, whereas in China now the participants perceived technological implementation as common, pervasive and incremental.

When combined with the “drivers of change,” the “types of change” bear some comparison with the model of organisational performance and change presented by Burke and Litwin (1992). While their model also underplays the importance of technological change, it is useful in that it compares supposedly major, infrequent transformational change with relatively minor yet frequent transactional change. The experiences of the participants in the present study suggested that because the frequency of transformational change, such as structural and leadership changes, was increasing, the line was blurring between transformational change and transactional change. The prevalence of transformational change in the experiences of the participants suggests the level of behavioural responses expected of the participants is also increasing.

7.1.2. Situating Change in a Socio-Political Context

As well as identifying the most salient changes and drivers of change from the point of view of the participants, the present study also revealed something of the important socio-political context in which change, and perceptions of change, emerged. Moreover, it demonstrated how broader structural constraints may limit the range of psychological resources available to any one individual, drawing attention to the necessity of understanding the ‘constrained choices’ in the participants’ experiences (Archer, 2000; Reed, 2003). There were three aspects in particular that stood out.

First was the geopolitical environment in which the participants were operating. As discussed in Chapter Two, Literature Review, China’s size and rapid economic development has strained relations with the United States, accentuating the competing interests of rival political systems (Schweller, 2018). The participants of the present study, as Chinese employees of mostly U.S.-based companies operating in China, were keenly aware of shifts in the nature of the international relationship and how this impacted their work. Five of the participants were in fact directly involved in government relations, meaning they were to some extent representing their companies with regard to the Chinese government. For them, ongoing shifts in the U.S.-China relationships, especially the deterioration in the economic relationship, created challenges in terms of keeping up with developments and interpreting their implications in an opaque political environment. Moreover, as noted in Chapter Two, Literature Review, there is little sign that this situation will change in the near future (Campbell and Ratner, 2018). These changes may also have challenged their sense of loyalty – to

their country or their company – but in most cases the participants did not offer their opinions on this, likely reflecting the sensitivity over issues of nationalism in China.

Second was the issue of family. As discussed in Chapter Two, Literature Review, there is evidence that shifts in the composition of the work force, including increasing female participation, and technological developments are increasing the importance of work-life balance for many workers (Boswell and Olson-Buchanan, 2007; Diaz *et al.*, 2012; Karkoulian, Srour and Sinan, 2016). While the participants were not directly asked about the relationship between work and family life, several of the female participants related experiences about how the distinction between work and home life had become blurred, particularly as a result of technology (Yun, Kettinger and Lee, 2012). As discussed, this is likely true in other geographical contexts (Karkoulian and Halawi, 2007; Rehman and Azam Roomi, 2012), but it is worth noting that one of the male participants also spoke of his responsibility as a father to provide his son with a home in order to attract a wife, reflecting the complexities of viewing this issues through the lens of gender (Evans, Carney and Wilkinson, 2013). His increasingly precarious role at work combined with rising property prices in his home city meant he was having to reconsider his financial situation. This example demonstrates how change in China's fast-moving economy (The World Bank, 2017b) can strain the ability of individuals to adhere to more traditional societal expectations (Xiao and Cooke, 2012).

Finally is the issue of generation gaps. In China, generations are referred to in terms of the decade an individual was born (eg. 1980s or 1990s) (Rosen, 2009), and the participants in the present study made several references to the different attitudes of the generations toward work in general. As discussed in Chapter Two, Literature Review, rapid economic growth from a period of poverty for most Chinese has resulted in marked differences between generations in terms of expectations from work and their lives more generally (Lian, 2014). As most of the participants were among the older generations, they were particularly cognisant of the apparent lack of willingness of the more modern generations to put in effort at work – a perception in some ways confirmed by the youngest participant, who identified with others in her generation, especially those from Beijing and still living there, who were reluctant to work and preferred to rely on the wealth of their parents. Nevertheless, it needs to be emphasised that the participants in the present study were in general from well-off backgrounds and worked with those enjoying similar access to high-quality educational resources –

younger generations from poorer backgrounds may have different attitudes to work (Fish, 2015).

7.1.3. Attitude Toward Change vs. Adaptive Orientation and Resistance to Change

The attitude of the participants in the present study appeared to be important in how they perceived the changes they were experiencing and their responses to them. One way to look at attitude toward change is as resistance to change, including routine seeking, emotional reaction to imposed change, short-term focus, and cognitive rigidity (Oreg, 2003) – measurable on a scale, the validity of which has been confirmed across 17 countries, including China (Oreg *et al.*, 2008). However, the participants' experiences bore little resemblance to these factors, perhaps because the original scale was derived from studies of people in a purely educational context, many of them students. Moreover, the focus of Oreg's research was to identify problems in adapting to change – resistance – rather than simply understanding attitudes in a neutral way. By contrast, the participants in the present research had a generally favourable opinion of change – some of them not only accepted change, but actively sought it.

Attitude among participants to change is more easily compared with the “Adaptive Orientation” category of cognitive resources in the van Dam model (2013). This includes eight dimensions: optimism, hope, self-efficacy, control, challenge, open-mindedness, curiosity, learning orientation. The participants in the present study displayed many of these facets – in particular self-efficacy, open-mindedness, curiosity and learning orientation – which contributed to their attitude toward change, but these attributes do not cover all aspects of the attitudes identified in the data analysis.

In particular, the current literature does not address the impact of mindfulness on attitudes toward change, which will be discussed in Section 7.1.6 below.

7.1.4. Appraisal

The experiences of the participants demonstrated that how they appraised change was an important step in a process of adaptation, as well as one that could be influenced by mindfulness. In the adaptability literature, there are two models that focus on process. The appraisal step is recognised by Ployhart and Bliese (2006) as “situation perception

and appraisal,” in particular whether the change is stressful or merely challenging, but ignored by Fugate and Kinicki (2008). The concept of appraisal also appears in the healthy organisational change model by Michel and Gonzalez-Morales (2013). Similarly, Kozlowski *et al.* (2001a) refer to “self-regulation” as the personal assessment of current state compared with desired state. These concepts suggest assessment of a gap, which has particular relevance to the present study.

Literature regarding appraisal is most developed in research on stress and coping. The participants described various situations, some of which were perceived as presenting threats, and others presenting challenges, as described by Lazarus and Folkman (1984). In fact, some of the participants described examples of successful adaptation as being able to reframe certain events as challenging after they had initially been perceived as threatening, or even to perceive of all change as simply challenging. This reinforces a point made by Lazarus (1991) that the terms “primary” and “secondary” appraisal are misleading in that they imply a two-step process, whereas in fact change and the range of response options are continually being assessed simultaneously.

The results of the data analysis also support the findings of Weinstein, Brown and Ryan (2009), who found that higher levels of mindfulness in college students resulted in more benign assessments of change, as well as the ability to choose responses with better outcomes in terms of well-being. This work in particular points to the influence mindfulness has on the way the research participants in the current study perceived change, as well as how they decided to respond to it. This theme will be explored further in the Theory Development.

7.1.5. Adaptability Gaps

The data analysis revealed that appraisals for the participants meant specifically identifying what needs to be adapted to, the “adaptability gaps.” The concept of “adaptability gaps” in some ways builds on the various elements of person-environment fit (Judge and Ferris, 1992; Schneider, Goldstein and Smith, 1995). Person-job fit (Muchinsky and Monahan, 1987), for example, includes demands-abilities fit, referring to the abilities of the individual in meeting the demands of the organisation, and needs-supplies fit, whereby the organisation supplies what the individual needs (and expects) in terms of salary and higher-order needs (Kristof - Brown, Zimmerman and Johnson,

2005). These studies employ various measures of “fit,” and by implication “misfit,” or gap, in demands-abilities and needs-supplies.

Related specifically to adaptability is the nascent concept of person-change (or person-innovation) fit introduced by Chung *et al.* (2014). Their research, coincidentally also conducted in China, found that a better fit between the values of the individual and organisation after a change was related to behavioural support for change and post-change performance. Ability fit, on the other hand, predicted positive change expectations, but not behavioural support for change. This may be because their study was of retail workers who may not have felt they had much agency in how they conducted their work, whereas the present study of knowledge workers suggests that rather than simply accept the lack of congruence (the “gap”) in values or abilities, they would seek to close them.

Nevertheless, the results of the data analysis show that the experiences of the participants were far richer than that suggested by the above study. Beyond simply values and abilities, 10 specific gaps were identified:

Knowledge – As discussed above, one type of fit between a person and their work is demand-abilities (Kristof - Brown, Zimmerman and Johnson, 2005), and knowledge acquisition is a central process in the adaptability theory of Ployhart and Bliese (2006). The experiences of the participants in the present study show that some types of knowledge gap were one-off, such as the need to learn a new regulation or industry jargon, while others were more persistent, such as keeping up with technological developments. For many of the participants, this type of gap would be the result of a “challenge” appraisal, to the extent that they sought situations that would stimulate them to learn more.

Comprehension – Three types of uncertainty related to organisational change were identified in the literature: strategic, structural and job-related (Bordia *et al.*, 2004; Allen *et al.*, 2007). Strategic change refers to why changes are made, structural to unit functions and reporting structures, and job-related to role and personal opportunities. The present study suggested that more mindful participants would concern themselves more with structural and job-related change, rather than strategic change. Even though many of them were relatively senior in their organisations, strategic decisions were

nevertheless out of their control, so they focused instead on what they needed to understand about the resulting structures and their roles within them.

Comportment – While many of the participants in the present study talked about working styles, this topic had not until recently been addressed directly in the literature. Bayl-Smith and Griffin (2018) presented the concept of “work styles fit,” in which they include “speed, effort, rhythm, and endurance.” Yet the participants described a much wider range of situations in which there was a gap in work styles, such as medium of communication with colleagues, level of detail expected in reporting tasks, and how to treat clients. Many of these gaps were quite intangible, and were often related to turnover in colleagues, bosses or subordinates. Nevertheless, analysis of the data suggests participants perceived the need to build relationships with people separately from the need to adapt work styles.

Rapport – Again the person-environment fit literature is relevant to this finding. Research into person-group fit and person-supervisor fit has focused on such dimensions as goals, values and personality traits (Kristof - Brown, Zimmerman and Johnson, 2005). Nevertheless, the participants in this study were more concerned with how to build relationships with new colleagues, superiors, subordinates and clients, in many cases based on the implicit assumption that the initiative to close gaps created by goals, values or traits needed to be taken by the individual themselves. This “functional flexibility” (Paulhus and Martin, 1988) or “ego adaptability” (Aronoff *et al.*, 1994) in interpersonal relationships relies on possession of a range of responses, and the awareness to select the appropriate one for the situation. Among the participants in the present study, even those who were aware of gaps and the appropriate responses, it was nevertheless taxing to repeatedly build new relationships. And for those who struggled, the issue was most often not of awareness of the gap or even possessing a wide range of possible responses, but rather selecting the appropriate one.

Creativity – The literature on creativity as it relates to adaptability is based on several personality spectrums, ranging from a conservative end where only incremental adjustments made to familiar situations, to a novelty-seeking end that challenges existing paradigms (Kirton, 1976; Kirton, 2003; Martinsen and Furnham, 2016). These frameworks suggest that in an increasingly unstructured environment, “innovators” will more readily perceive change and the need for creative responses. In the present study,

it was found that those who had demonstrated more mindful behaviour were also those most aware of the rapidly changing environment and the need for innovative responses to it. The link between mindfulness and creativity is a strong one, as it has been shown to contribute to flexible cognition (Georgsdottir and Getz, 2004), divergent thinking (Colzato, Szapora and Hommel, 2012), and creative thinking (Ostafin and Kassman, 2012). In this study, it was the person who scored most highly in the mindfulness questionnaire in the present study who was most emphatic about the need to be open to understand change in the environment in order to generate innovative responses.

Attention – Several participants in the present study expressed awareness of a rise in distractions and competing demands for their attention. The impact on productivity of poor focus at work is well-known (Davenport and Beck, 2002), especially regarding email (Soucek and Moser, 2010). However, the present study found that social media, in particular the China-originated WeChat, was particularly salient because of its use for work as well as personal purposes, and that it mainly used on mobile phones. One way WeChat creates an attention gap is the result of decreasing expected response times – arriving messages have to be promptly attended to in order to meet these expectations, no matter what else the person is doing at the time.

Values – Some of the participants experienced situations which forced a behaviour change in them that led to an inconsistency among their values, especially as employees and family members, leading to cognitive dissonance (Festinger, 1962). Sometimes this was related to specific organisational changes (Bernard and Hakeem, 1995), but also with respect to work relationships (Kristof-Brown *et al.*, 2005) and work-life balance. Regarding work-life balance, there is some overlap with the attention gap and temporal gap, as it is work that is competing with family for time and attention. For those experiencing this type of gap, it was often the most frustrating and difficult to manage.

Temporal – The existence of temporal gaps is suggested by the literature on time incongruity (Weeks and Fournier, 2010), according to which both the individual and the organisation exhibit profiles that reflect how they respond to time-related demands. Where an organisational change explicitly demanded a reallocation or increase in allocation of time, this required a change in “time style” (Kaufman *et al.*, 1991) of the individual. However, this is just one type of temporal gap, and more frequently the participants in the present study regarded change as creating a gap between time

available and time required. This is because time in a basic sense for the participants is a finite resource that is often regarded as already being fully utilised. Moreover, the temporal gap is somewhat of a meta-gap – change of any type takes time to appraise, and any of the other gaps will likely require time to close.

Meaning – Change resulting in meaning gaps for the participants in the present study were not common, yet were significant when they did occur. This may be because identifying the specifics of how people experience subjective meaning at work has proved challenging (Steger *et al.*, 2012), so only the most pronounced examples will become apparent. This type of gap was more likely to be appraised as a threat rather than a challenge (Lazarus and Folkman, 1984), as was the case with one participant whose role at work had decreased over time to the extent he was expecting to be laid off in the next few years. It was also observed that in some situations, participants actively tried to create a meaning gap as a response to change. This occurred when insurmountable change at work evoked a “distancing” coping strategy (Folkman *et al.*, 1986).

Ataraxia – Change has been shown to create discomfort among workers (Bareil, Savoie and Meunier, 2007), both because of the specifics of the change and because they may be dispositionally resistant to change (Oreg *et al.*, 2008). The results of the present study show several sources of this discomfort. One is simply the taxing nature of continual appraisal of change, no matter benign or stressful. It was also the case that some changes were appraised, at least initially, as posing a threat, implying that responding to the change would likely require resources exceeding those available to the person (Lazarus and Folkman, 1984). As with the temporal gap, this type of gap in psychological comfort could be applied to the other gaps when they are appraised as a threat.

Taken as a whole, the concept of “adaptability gaps” derived from analysing the experiences of the participants in the present study connects and builds on various theories of fit, congruence, dissonance and mindfulness and could offer a new, more nuanced, way of understanding the impact of workplace change on individuals and how they adapt to it.

7.1.6. Mindfulness at Work

The literature review discussed several ways of conceptualising mindfulness based on understandings of its mechanisms (Bishop *et al.*, 2004; Shapiro *et al.*, 2006; Good *et al.*, 2015) and tools used to measure it (Brown and Ryan, 2003; Walach *et al.*, 2006; Baer *et al.*, 2008; Kumar, Feldman and Hayes, 2008). The Literature Synthesis focused on the framework set out by Good *et al.* (2015), yet the experiences of the participants suggested a hybrid would be more suitable, combining the Shapiro *et al.* (2006) conceptualisation, the attention and awareness mechanisms in mindfulness definition by Bishop *et al.* (2004), along with elements of the Buddhist philosophical concepts of impermanence and equanimity that underpin mindfulness.

Of particular note are the Buddhist elements, which are not usually included in discussions of contemporary, secular mindfulness. Equanimity, “an even-minded mental state” (Desbordes *et al.*, 2015, p.359), was demonstrated by some of the participants, including those who tried to cultivate it themselves. Of even greater relevance was acceptance of impermanence, which recognises the nature of the world as constantly changing (Dreyfus, 2013). Acceptance of constant change was common for those in the “high” mindfulness range of the survey results. This suggests that while the delinking of mindfulness from its Buddhist roots has been important to its acceptance by non-Buddhist populations (Schmidt, 2016; Kabat-Zinn, 2013), these concepts retain their relevance when examining the influence of mindfulness on adaptability.

The Literature Synthesis discussed the ways in which mindfulness might influence adaptability, by augmenting the adaptability resources as presented by van Dam (2013). The experiences of the participants showed that mindfulness could particularly influence two areas: i) attitudes toward change, and ii) responses to it.

Influence on Attitude

Mindfulness has been found to influence some of the cognitive and affective resources in van Dam’s (2013) resources-based model of adaptability, particularly what she describes as “Adaptive Orientation.” These include the Positive Psychological Capital traits of optimism, hope, self-efficacy (Malinowski and Lim, 2015), as well as sense of control (Astin, 1997, Bränström *et al.*, 2010) and psychological adjustment (Baer *et al.*, 2008).

Nevertheless, the influence of mindfulness among participants in the present study seemed to go beyond these basic KSAOs. Moreover, specific aspects of mindfulness influenced their attitudes toward change and, therefore, their appraisals of change.

As discussed previously, the concept of impermanence recognises that our experiences are constantly changing, and any particular experience, no matter pleasant or unpleasant, will soon pass (Dreyfus, 2013). In the present study, more mindful participants tended to hold a more accepting or welcoming attitude to change, including one who dismissed the idea that change was even worth discussing. In turn, these people were more likely to appraise change as presenting challenge rather than threat, such as by regarding “adaptability gaps” as either manageable or even desirable. In particular, the more mindful participants would also display greater non-attachment (Desbordes *et al.*, 2015), a concept closely related to acceptance of impermanence that could be observed as psychological flexibility, even-mindedness and sense of ease (Sahdra, Shaver and Brown, 2010).

There is some overlap here, therefore, with another important concept identified in the Literature Review and exhibited by some of the participants in the present study, that of equanimity, a Buddhist virtue that can be cultivated through meditation (Wetlesen, 2002). As with acceptance of impermanence, those displaying greater equanimity tended to be more accepting or even welcoming of change, and would more likely appraise change as presenting more manageable adaptability and challenging (rather than threatening) adaptability gaps.

Also important to understanding the relevance of mindfulness to the participants’ experience of and attitude toward change are the concepts of attention and awareness, which are also central to the definition of mindfulness being used for the present study. In fact, attention and awareness are two other aspects of “cognitive resources” in the van Dam (2013) model examined in the literature review synthesis. Regarding awareness in particular, those who scored lower on the mindfulness survey were more likely to acknowledge lack of awareness or interest in change, and yet regard the current rate of change as relatively stable. These participants were also likely to appraise change as presenting more substantial adaptability gaps, albeit not necessarily more threatening.

Influence on Response

Analysis of data collected in the present study also suggested that mindfulness influenced the responses of the participants' to change, as suggested in the Literature Synthesis discussion of "Behavioural Adaptability" resources in the van Dam (2013) model. Elements of mindfulness that were particularly relevant to adaptability in the present study were self-regulation, values clarification and flexibility (Shapiro *et al.*, 2006). It has been shown that in a study of psychology students that trait mindfulness was related with greater flexibility in self-regulation when dealing with stress (Kadziolka, Di Pierdomenico and Miller, 2016). Participants in the present study who demonstrated self-regulation were also more likely to respond to change by, for example, finding ways to relax or adjust their mindset in response to ataraxia or compartment gaps.

The ability to observe and assess one's own values (Brown and Ryan, 2003; Shapiro *et al.*, 2006), as well as cognitive flexibility are also features of mindfulness demonstrated by the participants that can aid adaptability (Good *et al.*, 2015). In particular, participants demonstrating the ability to clarify their own values would respond to change through reassessing their priorities and planning accordingly. Cognitive flexibility seemed related to their ability to seek alternatives or experiment with new ideas.

The coping literature is also relevant here, especially for those participants displaying less mindfulness (see, for example, Baer *et al.*, 2008; Weinstein, Brown and Ryan, 2009). In one case in particular, avoidance strategies such as distraction were employed to address change that had been appraised as threatening, or beyond the person's adaptability resources (Carver and Scheier, 1994; Folkman and Moskowitz, 2004). Deliberately distracting oneself is not only regarded as a maladaptive coping strategy, but also the opposite of mindfulness, which is about focusing attention. Greater mindfulness, therefore, can contribute not just to healthier appraisals of change and consideration of more potential responses, but also the selection of more adaptive responses.

Summary

The Literature Synthesis identified various ways in which mindfulness might aid adaptability, based on the work of Good *et al.* (2016). In particular, it was expected that

various mindful attributes would contribute to the adaptability resources in van Dam's (2013) model. In some ways, this was the case, although the experiences of participants did not fit as well as expected with the Good *et al.* (2016) framework, such that a separate framework has been used to interpret their responses.

Adaptability as a collection of resources was also shown to be just one way of looking at the subject. Analysis of the data showed that mindfulness had the most noticeable impact on the attitude toward change of the participants, and their responses to change. While it is suggested that equanimity, acceptance of impermanence, attention and awareness have more influence over attitude, and self-regulation, values clarification and flexibility have greatest influence over responses to change, the situation is also not so clear-cut. For example, equanimity could aid not just healthier appraisals of change, but also the selection of an appropriate response. Moreover, the elements of mindfulness are not mutually exclusive – it could be argued that self-regulation itself contributes to equanimity. Finally, it should be noted that not all aspects of their attitudes or responses could be explained by mindfulness, nor were they expected to.

7.1.7. Adaptive Processes

The Literature Synthesis did not originally focus on a process conception of adaptability, yet a process model proved to be the easiest way to understand and summarise the experiences of the participants in the present study. However, various process models were discussed in the Literature Review (Williams *et al.*, 2002; Bridges, 2009; Carnall, 2007; Lazarus and Folkman, 1984; Fugate and Kinicki, 2008), and the participants explicitly described elements of processes they experienced, while others were implied and understood through analysis of their responses.

An early form of adaptability is the Kubler-Ross grief cycle (1969, as described in Leybourne, 2016), which has been adapted to the work environment by several researchers, particularly in the context of resistance to change (Williams *et al.*, 2002; Bridges, 2009; Carnall, 2007). Research into stress-coping (Lazarus and Folkman, 1984; Lazarus, 1991) also implies a process: change prompting primary appraisal, leading to secondary appraisal, then choice of execution of coping strategy. In the adaptability literature, a simple process model has been presented by Fugate and Kinicki (2008), incorporating antecedents, explicit reactions and consequences. The

adaptability process presented by Ployhart and Bliese (2006) incorporates a coping cycle within a linear process model.

The participants in the present study discussed their own processes of adapting to change, either explicitly or implicitly. These processes often included a period of appraisal followed by consideration of response options to address specific dimensions that required attention. Based on the experiences of the participants and building on the literature, as well as incorporating the influence of mindfulness, a process framework was formulated to aid analysis and augment the concept of adaptability as a set of resources (van Dam, 2013), as show in Figure 7.1.

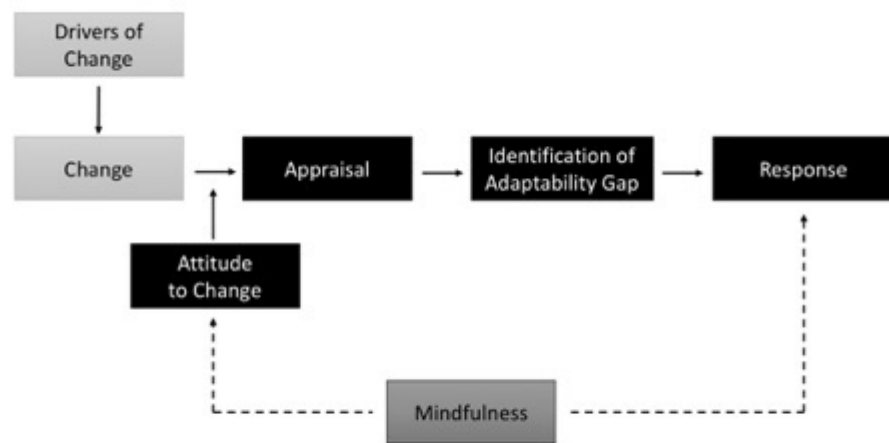


Figure 7.1 – Basic process model of adaptability based on data presented in Chapter 6

Source: Author

This process framework incorporates the elements of adaptability identified in the analysis of the results and the subsequent literature reappraisal. It is presented not as an improvement on other models, but simply as a way to understand and interpret the experiences of the participants in the present study. In this way, it aids interpretation of the data and provides transparency in how the data have been interpreted, supporting the credibility of the study (Lincoln and Guba, 1988; Saunders, Lewis and Thornhill, 2015) in keeping with the critical realist approach being taken for the research. This process model will be developed further in the Theory Development section.

7.1.8. Influence of Age and Experience

The research results found that several participants ascribed the increasing ease with which they approached change to their age and experience. Research suggests that psychological wellbeing is related with age, declining from adolescence until the mid-40s, before rising again (Blanchflower and Oswald, 2008). The experience of the participants in the present study, while not comparable with those in the Blanchflower and Oswald study, suggested that change was most difficult to deal with at the start of their careers, and got easier as they matured, reflecting some of the earlier research on psychological wellbeing that pointed toward a flat or mildly positive relationship with age (Diener *et al.*, 1999; Argyle, 2001). The literature also suggests that more mindful individuals will more readily face unpleasant experience, which if repeated will desensitise them to it (Shapiro *et al.*, 2006). Nevertheless, even less mindful participants seemed to benefit from greater experience of handling change. Previous research in this area found that older adults were both more mindful and psychologically healthier, but that more research was needed to understand the relationship between age, mindfulness and psychological wellbeing (Hohaus and Spark, 2013).

7.2. Theory Development

The Basic Theory was based on four belief statements, which will be reassessed in light of the new data and reappraisal of the literature.

7.2.1. Chinese knowledge workers are facing a great deal of change

It was expected, because of China's rapid growth, social evolution and technological progress, that the participants in the study would be experiencing substantial workplace change. The inquiry sought to understand the most salient changes and sources of change for the participants – specifically what is creating the need for adaptability.

The data analysis identified three main classes of change affecting the participants: i) nature of work; ii) relationships (home and work); and iii) organisational. Of these, changes in relationships seemed to generate the most negative valence, and was one of the most frequently mentioned changes. More specifically, changes in relationships with supervisors, colleagues, subordinates, third parties and family were identified in the study, with changes in supervisor being most salient. As a result of questioning about what was driving the changes, a further five-class categorisation of drivers, with some degree of overlap with the changes themselves, was generated: personal;

technology; society; organisation; and environment. Among these, technology was highlighted, in particular the social media platform WeChat, which had a significant influence over information flows and how the participants communicated with colleagues and third parties. Many of the participants also perceived change to be accelerating.

These results support the belief statement that some Chinese knowledge workers at foreign MNCs are facing a great deal of change, and go some way to filling a gap in the literature on the specifics of workplace change (Jundt, Shoss and Huang, 2015). By comparing the findings with the model of organisational performance and change offered by Burke and Litwin (1992), it can be seen that Chinese knowledge workers are undergoing not only major and frequent transformational changes, often in the form of organisational restructuring or role changes, but also continuous transactional change in how they do their jobs.

7.2.2. They will perceive and interpret these changes in various ways

The Basic Theory predicted that the participants in the study would have various approaches to change and appraise it in different ways. The results showed that the participants did indeed present a spectrum of attitudes toward change, largely based on their level of psychological comfort with it: dealing with change, accepting change, preferring change and creating change.

It was also expected, reflecting various models of organisational change and adaptability (Lazarus and Folkman, 1984; Kozlowski *et al.*, 2001; Ployhart and Bliese, 2006; Michel and Gonzalez-Morales, 2013), that the participants would conduct appraisals of the changes to understand their nature, how their new perceived situation compared with their desired condition, and what resources they could bring to bear in responding. Analysis of the data reveals an important output from this appraisal: specifically what it is that must be adapted to. Existing theoretical concepts lacked the explanatory power to fully capture the complexity of the experiences of participants in this study. Therefore, to overcome this weakness, the new concept of “adaptability gaps” was developed. It is a function of the type of change experienced by the individual and that individual’s attitude to change. This is the gap, after appraisal, between desired and actual situation, according to various dimensions. The present

study extends the research not only into appraisals, but also person-job fit (Muchinsky and Monahan 1987) by examining in detail the outcome of the appraisal in a small select group of individuals. Rather than appraising change as generally threatening or challenging, the participants appraised the specific ways in which the change should be addressed, often on some dimension of how their abilities could meet the evolved demands of their role. The present research identified 10 such gaps, or areas of poor fit. In contrast to various theories, especially in the resistance to change literature, that focus on grieving models of adaptability (Williams et al., 2002; Bridges, 2009; Carnall, 2007; Lazarus and Folkman, 1984), findings from this study suggest that addressing the adaptability gaps is not necessarily unpleasant, but does point toward some action required by the individual. These gaps, along with examples of the responses they prompted in the participants, are:

Knowledge – Change creates a desire to know something more, or different, from what is known now. A possible response is learning, for example by reading or keeping a dictionary of new terminology.

Comprehension – Change creates confusion, or at least a desire to reduce ambiguity. A response is to enhance understanding through enriching experiences, for example by more closely monitoring the way conversations are conducted.

Compartment – Change creates a dissonance of working styles. A response is to change behavioural habits, for example by following up emails with a phone call.

Rapport – Change can destroy the relational links between people, or create the need to establish new relationships. A response is to spend time and empathise with new contacts.

Creativity – Change can increase the need for creativity. A response is to increase curiosity and reflect more deeply on what is being learnt.

Attention – Increasing information overload and distractions undermine the ability to focus. A response is to remove the distractions and prioritise what is attended to, for example by putting away mobile phones and not reading unimportant information.

Values – Change can create a conflict among a person's values. A response is to reassess what is important, such as by leaving work earlier to spend time with the family.

Temporal – Changes require time to adapt to, and create the need for shorter reaction times. A response is to outsource or delegate tasks and improve efficiency.

Meaning – Change can undermine the meaningfulness of work. A response is to reframe work tasks or find meaning elsewhere.

Ataraxia – Change can create psychological discomfort. A response is to create some emotional distance from the change or embark on a process of adjustment.

There are some similarities between these gaps and the eight dimensions of adaptive performance identified by Pulakos *et al.* (2000). However, the weakness of the adaptive performance dimensions is that they are detached from the stimulus to adapt, meaning that they are more like general skills or abilities, rather than specific ways in which change can be adapted to. These gaps, therefore, are a practical interpretation of how change impacts the participants, leading to potential responses. In response to a change, participants could appraise it as creating one or more of the gaps. As discussed in the Literature Reappraisal, there is an element of overlap among some of the gaps, and the same is true of the responses, discussed in greater depth in the next section.

7.2.3. Chinese knowledge workers can draw upon various resources to adapt to change

The Literature Synthesis focused on van Dam's resource-based framework for individual adaptability (2013), which included cognitive, affective and behavioural elements. The utility of this model was demonstrated in the discussion regarding the attitudes toward change of the participants, and indeed the participants' responses to change suggested a resource-based conceptualisation. Many of the other resources in the van Dam model were also evident in the experiences of the participants, especially resilience, and the literature on coping (referred to as "behavioural tendencies" in the van Dam model) is particularly useful in understanding their responses. To a great extent, the results confirm previous studies in work and non-work settings by Folkman *et al.* (1986) and Robinson and Griffiths (2005). Nevertheless, this resources-based approach is only one way of viewing change and adaptability, and a process model more reminiscent of the coping research seemed to be a more appropriate way of understanding how workers adapted to change.

Returning to the results of the data analysis, the responses to change of the participants were classified as acquiring resources, resource organisation, internal adjustment, external adjustment, avoidance and rejection. Based on a coping process, these responses could also be seen as attempts to close adaptability gaps:

Change Response	Related Adaptability Gap
Learn	Knowledge
Gather information	Knowledge
Consult	Comprehension
Delegate	Temporal
Increase efficiency	Temporal
Reflect	Attention, Values
Prioritise	Attention, Values
Plan	Attention
Reframe	Meaning, Values
Identify biases	Ataraxia
Relax	Ataraxia
Adjust mindset	Comportment
Empathise	Rapport
Concede	Ataraxia, Comportment
Accommodate	Comportment
Negotiate	Comportment
Seek alternatives	Creativity, Meaning
Experiment	Creativity, Meaning
Adjust behaviour	Comportment, Values
Exercise	Ataraxia
Distract	Ataraxia
Reject	Values, Meaning

Table 7.1 – Change responses and related adaptability gaps

Source: Author

For example, those who perceive a “knowledge gap” will try to gather information and seek to learn from it. Those who aim to close a “comprehension gap” will consult with others. Perceived temporal gaps will prompt greater efficiency and delegation, and so on. Exercise and distraction responses would often be described as maladaptive, as they are used to avoid adapting or even appraising change, yet in the present study they are viewed as addressing the “ataraxia gap” by easing, often successfully, the psychological discomfort of change, especially when no other response is possible.

One unexpected discovery was the influence of age and experience. Many of the participants said they found handling change was getting easier, and frequently they credited their age and experience for the improvement. This supports earlier work on psychological wellbeing that suggests the possibility of a mildly positive relationship with age (Diener *et al.*, 1999; Argyle, 2001), as well as research showing that older adults were more mindful and psychologically healthier than younger ones (Hohaus and

Spark, 2013). More recent studies suggest declining happiness until the mid-40s (Blanchflower and Oswald, 2008), yet this seems to be distinct from psychological comfort and ability to deal with change as experienced by the participants in the present study. For them, experience and maturity were viewed as effective resources in responding to change.

7.2.4. The perception of change and the ability to adapt to it may be influenced by mindfulness

The Basic Theory showed the likely relationships between adaptability and mindfulness (van Dam, 2013; Good *et al.*, 2016), with mindfulness mechanisms contributing to individuals' adaptability resources. These included situational awareness of when change is taking place, cognitive flexibility in responding to it, optimistic adaptive orientation, emotion regulation and reduced reliance on automatic response to stimuli. The results show that indeed mindfulness in the participants contributed to their ability to adapt to change in their workplaces, mainly influencing their attitude to change and the responses to it.

To analyse the data, a hybrid of previous conceptualisations of mindfulness was developed that incorporated more of the fundamental elements (Dreyfus, 2013; Desbordes *et al.*, 2015; Sahdra *et al.*, 2010; Wetlesen, 2002) than the Good *et al.* (2016) model. In particular, the results show that acceptance of impermanence and equanimity contributes to a more adaptive attitude toward change. Acceptance of impermanence was especially important in the cases of some participants in moulding their approach to change. These people were likely to appraise change as presenting challenge rather than threat, and creating fewer and smaller "adaptability gaps." Attention and, especially, awareness were important influences in attitude toward change, with those measuring on the survey as being lower in mindfulness also showing less awareness of change and sensitivity to pace of change.

The participants also showed that, through self-regulation, values clarification and flexibility (Shapiro *et al.*, 2006), mindfulness influenced their responses to change. Participants in the present study who demonstrated these mindful attributes found it easier to more clearly identify adaptability gaps and how to close them with appropriate responses. This included, for example, their ability to seek alternatives or experiment with new ideas. For those participants displaying less mindfulness, avoidance strategies

such as distraction were more likely to be employed to address change that had been appraised as threatening, or beyond the person's adaptability resources.

The present study shows, therefore, that mindfulness did indeed augment the adaptability resources of the participants, but that it did so in ways that specifically influence their attitude toward change, and their response toward change.

7.2.5. Summary

We can summarise how the belief statements in the Basic Theory have been developed thus:

- Chinese knowledge workers are undergoing a great deal of change, driven by various factors and with a wide range of impacts.
- They interpret these changes according to various dimensions through appraisal of the "adaptability gaps" they create.
- A resources approach is just one way of viewing responses to change. Regarding adaptive responses as attempts to close adaptability gaps supplements this resources approach. Age and experience contribute to adaptability.
- Mindfulness contributes to the adaptability of individuals not only by fortifying their cognitive, affective and behavioural resources, but also through its influence on their attitudes and responses to change.

When taken together, these results are best displayed in a process framework, as shown in Figure 7.2 below.

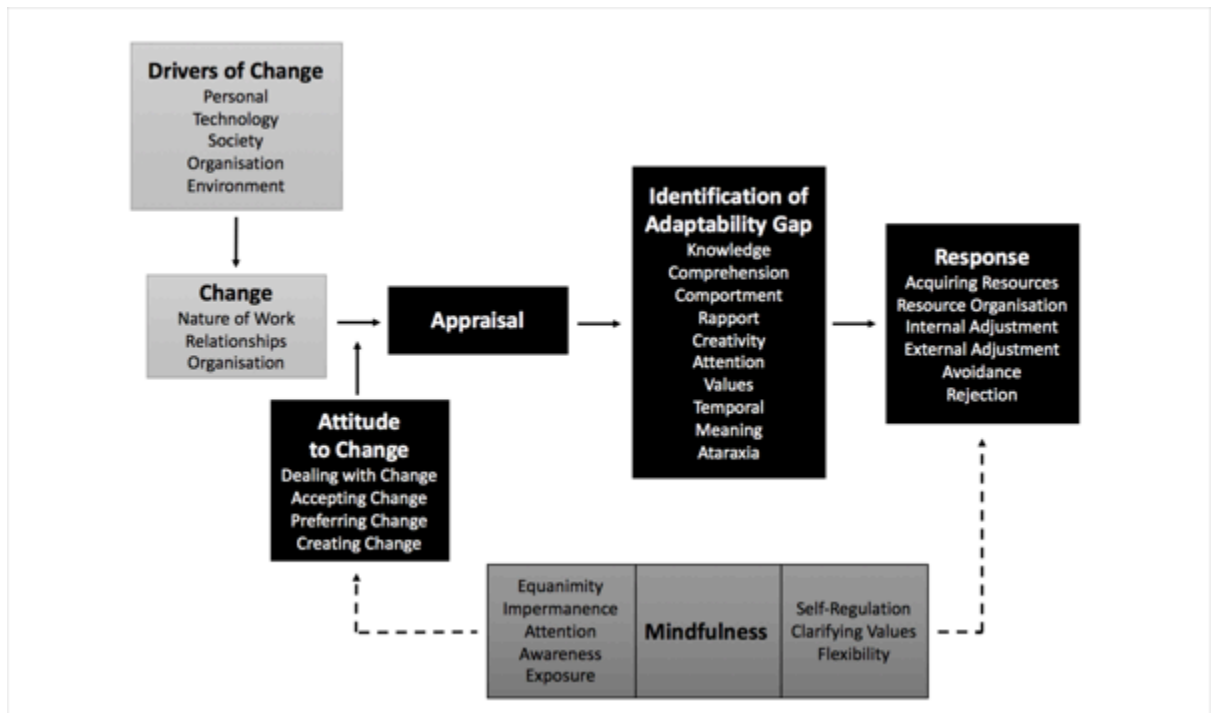


Figure 7.2 – Detailed process model of adaptability

Source: Author

According to this framework, change and the drivers of change provide the external input to the process. While many of the changes have been identified in the literature, the specification of the changes facing these Chinese knowledge workers goes into greater detail than previous studies, including specifics related to China in terms of social media and relationships. These changes are appraised with a certain attitude, which relates to the individual’s psychological comfort with change in general. This attitude may be influenced by the mindfulness of the individual, especially the extent to which they accept impermanence and the degree of equanimity they possess. This appraisal identifies an adaptability gap or gaps that the individual will feel need to be addressed. Ten dimensions or types of gap have been identified in this study, which are to some extent supported by and further build on the literature. The gaps are addressed through a set of responses, some of which are resource based and others influenced by mindfulness. Self-regulation, values clarification and flexibility are the main mindfulness mechanisms by which mindfulness influences the response to change and the “adaptability gap.”

Chapter 8: Conclusion

This chapter offers a discussion of the outcomes of the research, limitations, specific academic and professional practice contributions, and suggestions for further research.

8.1. Overall Outcomes

The study sought to explore the important aspects of change as they relate to Chinese knowledge workers at multinational corporations in China, how they adapt to these changes and the potential role of mindfulness in that adaptability.

The results show that indeed the Great Acceleration is being felt in China through rapid transitions in the economy and society, impacting the working lives of a sample of knowledge workers at MNCs in China. However, the participants in this study perceive the changes as having substantially different characteristics. Organisational change was most pervasive, but its impacts could be positive as well as negative, especially where they changed the nature of work. Changes to relationships, on the other hand, were more often viewed negatively, most notably when it was the relationship with a supervisor that had changed. Many of the participants perceived change to be accelerating, in particular organisational change, suggesting cycles of transformational changes may be shortening so that they more resemble transactional changes. Moreover, technological change, which had been viewed as driven by organisations (Herold, Fedor and Caldwell, 2007), is now being most keenly felt through personal mobile devices and social media such as WeChat. This suggests that accelerating change can blur previously identified boundaries, between major transformations and minor transactional change, and between work and personal lives, as both organisations and their employees become more fluid in their structures and relationships.

By focusing in depth on a small number of participants, and their perception of how change impacts work, the development of the concept of “adaptability gaps” suggests a more complex process is in play than that implied by the conventional stress-coping literature. Rather than simply being appraised as threatening or challenging, the impact of change was judged across several specific dimensions. Some of these dimensions are related to specific changes – for example, where a relationship is broken and a new one required, a “rapport gap” is created. Others may be applicable to most, if not all change. For example, change of any significance will most likely require the

acquisition of more knowledge and the ability to comprehend what has been learnt, although these may not be the primary responses to the change.

It can be seen therefore, that the first consideration might not be if the change is challenging or threatening, as suggested by the coping-stress literature (Lazarus and Folkman, 1984), but rather what elements of the change require a response. Only with this level of detail can the response(s) be assessed – perhaps manageable, or perhaps overwhelming – and tactical actions considered. The adaptability gaps also contrast with the taxonomy of adaptive performance developed by Pulakos *et al.* (2000) – which is really a set of abilities, some of which are related to the adaptability gaps – in that they are derived from change, and link change to responses. This approach is similar to that of van Dam (2013), who argues that adaptability resources are available in more or less adequate supply to everyone, rather than traits, which are often relatively fixed. Awareness of what has changed and its impact, therefore, is central to adapting to it.

Nevertheless, as with the concept of adaptive performance, this resources approach is a static one that fails to connect change with response. As a result, a process framework was developed to complement, rather than contradict, not only van Dam's model but also the other process models (for example, Ployhart and Bliese, 2006). The culmination of this process is a response or responses to close the adaptability gaps. Of course, this process model greatly simplifies a dynamic and overlapping set of considerations, with change experienced by the participants often being more of a turbulent flow than a neat series of events, with continuous assessment and reassessment of their relationships and potential outcomes based on forecasts of the future that need to incorporate the impact of current action with further change not yet experienced. It also makes no assessment of success – just because a gap is perceived, and a response selected, does not mean the gap really existed or that the response would adequately address it. Yet the experiences of the participants, in most cases, is of substantial change and confidence in the adaptability strategies they applied.

In fact, an interesting finding from the present research was the emphasis some of the participants placed on experience in adapting to change. Rather than becoming entrenched in their ways and inflexible, they rather become desensitised to change and better able to adapt to it. Previous research has been mixed on the impact of age on psychological wellbeing, and it is beyond the scope of the present study to explore it

further. Yet the apparent impact of age/experience on attitude to change and responses to it provide an interesting contrast to the influence of mindfulness on adaptability.

The challenge in studying mindfulness was to identify evidence of mindful attributes and actions on the part of the subjects, which would require a clear consensus on a conceptualisation of mindfulness that does not yet exist. A conceptualisation combining the philosophical underpinnings of mindfulness with key mechanisms and functional domains was generated to understand how the participants applied mindfulness at work. The result was demonstrations of mindfulness on the part of some of the subjects, which appeared to at least partly explain how they adapted to change. Some elements of mindfulness appear to be associated with the attitude toward change, most notably acceptance of impermanence. Awareness and acceptance of change as a fact of life for some was obvious, yet for a few change was more of something that had to be tolerated when it could not be ignored. Other elements of mindfulness seemed to have a greater impact on the choice of response to change, such as self-regulation and flexibility. Once again, however, this is a great simplification, as the influence of mindfulness on attitude to change will therefore influence how it is appraised and responded to, and the elements of mindfulness, to the extent they can be adequately distinguished, themselves overlap. Nevertheless, whether perceived by the participant or as a result of the analytical process, mindfulness appeared to support adaptability in the present study.

8.2. Academic Contribution

The present study makes several original contributions to the knowledge base.

First, it provides a rich account of workplace change in the lives of a select group of knowledge workers in China, which likely has more knowledge workers than any other country in the world. China's economy is expanding rapidly, and so the influence of Chinese knowledge workers in the world will likely to continue to grow.

Second, while the changes the participants are experiencing may not differ substantially from those experienced by knowledge workers elsewhere, the level of granularity offered by the data from the participants in the present study provided the opportunity

for a deeper level of analysis that sheds further light on exactly how they adapt to change.

Third, this study identifies “adaptability gaps” as a way people may perceive the impact of change following appraisal. That individuals adapt to change by responding to specific dimensions of deficit that they have identified is only alluded to in other theories on adaptability, so the present study makes useful extensions to simplistic notions that change produces simply positive or negative appraisals.

Fourth, the study demonstrates how elements of mindfulness can contribute to the ability of knowledge workers to adapt to changes in their working lives. While the possibility that mindfulness could aid in adaptability has been mentioned in the literature, this study strengthens the theoretical links and provides some empirical evidence of how specific mindful attributes can influence attitudes and responses to change.

Finally, while not the focus of this investigation, the results also revealed the importance of age and/or experience in the ability of individuals to adapt to change, a finding that has been addressed only tangentially in the literature on psychological wellbeing.

8.3. Professional Contribution

The results of the study have a number of potential implications for professional practice. This section will highlight the practitioner issues where the research has made a contribution, its implications for operations, procedures and training, as well as constraints on possible implementation.

For organisations, the research suggests implications in three respects: hiring, training and change planning.

First, companies that employ psychometric assessments as part of their hiring process could consider measurements of adaptability. This could include, for example, assessment of the ability to build rapport, as changes to relationships were found in the present study to be both prevalent and taxing. Exhibition of mindful traits such as

acceptance of impermanence could also be included. Such psychometric tests are inexpensive and straightforward to administer.

Second, training needs to provide individuals with not just skills, but the ability to transfer those skills to an increasingly broad range of situations. Such training, which need not be expensive, could include elements encouraging awareness of change, such as foresight or environmental scanning, so appraisal and consideration of responses can happen more promptly and efficiently. In this respect, mindfulness training could also be incorporated into training programs to promote elements useful to adaptability such as acceptance of change and self-regulation. Finally, as experience was viewed by participants as supporting adaptability, organisations can consider introducing intense “crucible” experiences as a way of accelerating adaptability in those who most need it, although creating such experiences is likely expensive.

Third, at a strategic level, organisational change should be conducted with greater consideration for the individuals concerned. This includes understanding the specific “adaptability gaps” that change will create, and where possible helping individuals close the gaps, by providing more knowledge, aiding in comprehension, facilitating the development of new relationships, and so on. This may also mean including in organisational change designs a step that helps individuals with the cognitive burden of appraisal, recognising the complex implications of change on them so that they will avoid binary assessments of change initiatives as being good or bad.

For individuals, adaptability will become an increasingly important skill. This means cultivating the resources, abilities and behaviours demonstrated by the most adaptable people in the present study. First is becoming more aware of change, its nature and its pace. This could include becoming more familiar with the prevailing trends affecting their industry, company and function so that they can better develop a sense of what might happen, what will likely happen and what they would prefer to happen. Developing such strategic foresight should not only allow for more effective decision-making, but also generate a greater sense of agency in environments made increasingly chaotic because of rapid change. Second is nurturing the ability to accept change, especially in those who might otherwise prefer relatively static working environments. Both increasing awareness and acceptance of change could be achieved through, for

example, mindfulness mediation practice, which is based on the acceptance of impermanence.

Third is the ability to identify “adaptability gaps” by analysing the nature of change. By taking a more granular approach to understanding the implications of change, individuals will be better able to take more specific actions to adapt to it. Related to this is the maximisation of response choice through resource acquisition and organisation. Participants in the present study in many cases responded to change by freeing up time or gathering information that they then harnessed through planning to respond to change. Ensuring access to these external resources and being able to organise them effectively when needed appear to be important complements to strategic foresight and adaptability skills. Finally, individuals should seek to learn more from their experiences, by having more and richer experiences and investing time in reflecting on how these experiences can be applied to future situations. While not the focus on this study, experience in many ways seemed to be at least as important as other resources in adapting to change among the participants in the present study.

8.4. Limitations

This section recognises the study’s limitations. As discussed in the Methodology chapter, demonstrating reliability in a qualitative study is challenging. A study of rapid change, in particular, makes standard demonstrations of reliability such as replication impossible. By being as transparent as possible, the study has aimed to achieve what Lincoln and Guba (1988) describe as dependability, yet limitations remain. These can be assessed by addressing the questions posed by Ritchie and Lewis (2003).

First, to minimise bias in sample selection, the survey was sent to all Chinese nationals of the American Chamber of Commerce in China. The biggest issue here, therefore, is non-response bias. Out of 2,002 invitations to complete the survey, 91 AmCham China members responded, for a response rate of 4.5 percent. Of these, 26 asked not to be contacted for interview – these were reasonably evenly distributed, with two in each of the high and low mindfulness categories, and the remainder in the “middle” sector. Finally, of the 10 people in the “low” mindfulness category, just two finally agreed to be interviewed, compared with six out of 11 in the “high” mindfulness category. The result of this is that the study excludes a large number of people who did not want to

complete the questionnaire, or for some reason did not receive the email invitation to participate. Even for those who participated in the survey, those with “low mindfulness” are under-represented in the interview stage because of non-response or reluctance to participate. It is quite possible that it is for these reasons that the sample does not include many people demonstrating low mindfulness or poor adaptability, as would be predicted by theories such as resistance to change (Oreg, 2003). Nevertheless, the participants offered credible and rich data that helped to generate new concepts that also contribute to existing understandings of adaptability and mindfulness.

Second, in all but a couple of cases, the participants were given adequate opportunity to share their experiences, covering all the ground identified in the Topic Guide. For the two exceptions (Delia and Maggie), time constraints meant the answers were more rushed than might otherwise have been the case.

Third, as demonstrated in the Analysis and Results chapters, the analysis was carried out in a systematic, detailed and comprehensive fashion through several iterations that built on understandings developed in previous iterations.

Fourth, where appropriate, specific examples have been provided to support the interpretation of the evidence, mainly in the form of quotes or paraphrases. Fifth, if anything, the design of the data collection was too broad, increasing the challenge of analysis. This was done to ensure the interviews were conducted with an open mind as to what the participants might have experienced, and how they understood those experiences.

In terms of bias, Saunders, Lewis and Thornhill (2015) highlighted three of particular concern in qualitative work. To address interviewer bias, the Subjectivity Statement and its post-data collection revision address as much as possible this issue. On interviewee, or response, bias, it is certainly possible that participants may have been reluctant to share certain details of their lives, but the often very personal stories they shared suggest this was not a major issue. The only area for concern is that those who did not know the interviewer tended to offer the most personal accounts of their experiences.

Regarding external validity, the design strategy and sample size limit the generalisability of the study. Ritchie and Lewis (2003) identify three types of generalisation relevant to qualitative research.

1. Representational: The size and nature of the sample mean it would be difficult to argue that the participants are representative of all Chinese knowledge workers.
2. Inferential: The production of a “thick” description aims to make it possible to infer the applicability of the results from the current setting to similar settings.
3. Theoretical: A transparent analytical processing of the data combined with a thorough review of the literature base aimed to enhance theory regarding change, adaptability and mindfulness, leading to the development of new concepts such as the “adaptability gaps” and the process model presented in the Results.

Nevertheless, despite these measures to boost what Lincoln and Guba (1988) describe as the “transferability” of analysis of this qualitative data, caution should be taken in applying the conclusions to other situations, for example to populations outside of China, or even those not working in MNCs. The critical realist approach taken in the present study recognises the complexity of processes and relationships that underlie the phenomenon observed in terms of the expressed experiences of the interviewees (Reed, 2005), but also that the identification of tendencies can offer explanatory power, imperfect as it may be (Easton, 2010).

8.5. Suggestions for Further Research

As well as contributing to the knowledge base regarding change, adaptability and mindfulness in the workplace, the present study also points to other areas of potentially fruitful research.

First, the concept of “adaptability gaps” should be explored further. There may be other gaps not identified in the present study or the literature, areas of conflation, hierarchies to be considered or weightings that could be applied. Quantifying the influence of these gaps in adapting to change could also lend weight to their applicability in the adaptability literature.

Second, there is still a great deal more to be known about how mindfulness influences adaptability. The present research suggests the avenues of influence are through attitudes and responses to change, but other conceptualisations may also be useful. What specific interventions might be useful in cultivating mindful adaptability is another avenue that could contribute not just to the understanding of adaptability, but also the effectiveness of mindfulness interventions in the workplace, which remains an area of uncertainty.

Finally, the issue of how age or experience, or both, influence adaptability and mindfulness needs to be examined further. If older people enjoy greater psychological health, is it because of age or experience? If experience, what specifically about experience aids their psychological comfort? Is mindfulness a mediator, or is it also somehow cultivated through the richness of experience? If so, can experience be accelerated, so younger people can enjoy the psychological health of older generations? These are just some of the questions the present research raises.

8.6. Concluding Remarks

Change is accelerating, testing the ability of humans to adapt. This study has investigated the experiences of a group of Chinese knowledge workers in a rapidly changing environment, seeking to deepen understanding of the types of changes they are facing, their approaches to change and their responses to it. By taking a critical realist approach, the inquiry also uncovered details of how change impacts them and how they adapt to it, as well as the role mindfulness plays. Beyond creating awareness of the importance of adaptability in an increasingly complex and turbulent world, it is hoped this study can contribute to understanding what people and organisations can do to cultivate adaptability, and in particular how mindfulness can contribute. By accepting inevitable change and more clearly identifying what is within their control, people will be better able to contribute to the debates over the future of work and create more preferable modes of work for themselves.

Appendices

Appendix A - Topic Guide Original

Prelude: Lunch, confidentiality agreements

1. Introduction

- Confidentiality; recording; introduce with one name; can withdraw at any time
- Open discussion – can speak freely, but not more than one person speaking at once; interested in hearing everyone's thoughts
- Language – English, but if certain words or phrases in Chinese are useful, let's explore those
- What we're talking about and why? Change, particularly in the workplace, but if changes in your personal life influence your work, also interested in those.
- People can introduce themselves: name, type of work you do

2. Types of change, and causes

- What kind of changes are they experiencing at work?
- How do they define change?
- What specifically is changing (examples)?
- What is prompting change?
- Are these changes new, or increasing in frequency?

3. Perceptions of change impact

- How does change impact them (examples)?
- How do they assess the impact (examples)?
- How do they feel about change?
- Does change come as a surprise?
- Do they take measures in anticipation of change?

4. Dealing with change

1. What do they do in response to change (examples)?
2. What kinds of changes do they find most difficult to cope with?
3. The tactics they employ to cope with change, to what extent are they successful?
4. Does dealing with change get easier over time? More tiring?

5. Wrap-up

- Thank participants

- Results of study released next year; will share with them
- In the meantime, any questions or concerns (including withdrawing from the study), please contact me

Appendix B - Mindfulness Questionnaire

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1	2	3	4	5
never or very rarely true	rarely true	sometimes true	often true	very often or always true

1. When I'm walking, I deliberately notice the sensations of my body moving.
2. I'm good at finding words to describe my feelings.
3. I criticize myself for having irrational or inappropriate emotions.
4. I perceive my feelings and emotions without having to react to them.
5. When I do things, my mind wanders off and I'm easily distracted.
6. When I take a shower or bath, I stay alert to the sensations of water on my body.
7. I can easily put my beliefs, opinions, and expectations into words.
8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.
9. I watch my feelings without getting lost in them.
10. I tell myself I shouldn't be feeling the way I'm feeling.
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.
12. It's hard for me to find the words to describe what I'm thinking.
13. I am easily distracted.
14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.
15. I pay attention to sensations, such as the wind in my hair or sun on my face.
16. I have trouble thinking of the right words to express how I feel about things.
17. I make judgments about whether my thoughts are good or bad.
18. I find it difficult to stay focused on what's happening in the present.
19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.
20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
21. In difficult situations, I can pause without immediately reacting.
22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.
23. It seems I am "running on automatic" without much awareness of what I'm doing.
24. When I have distressing thoughts or images, I feel calm soon after.
25. I tell myself that I shouldn't be thinking the way I'm thinking.
26. I notice the smells and aromas of things.
27. Even when I'm feeling terribly upset, I can find a way to put it into words.
28. I rush through activities without being really attentive to them.
29. When I have distressing thoughts or images I am able just to notice them without reacting.
30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.
31. I notice visual elements in art or nature, such as colours, shapes, textures, or patterns of

light and shadow.

32. My natural tendency is to put my experiences into words.

33. When I have distressing thoughts or images, I just notice them and let them go.

34. I do jobs or tasks automatically without being aware of what I'm doing.

35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

36. I pay attention to how my emotions affect my thoughts and behaviour.

37. I can usually describe how I feel at the moment in considerable detail.

38. I find myself doing things without paying attention.

39. I disapprove of myself when I have irrational ideas.

Have you ever engaged in any kind of mindfulness practice?

Regularly

I've tried it

Never

This survey is part of a larger research program into change and adaptability. It would be great to have you participate in further study of this very interesting topic, but I understand if you don't want to. Just let me know if this is as far as you want to go - you will still receive your mindfulness scores.

Please DON'T contact me again about further research.

*Nationality

Chinese

Other

*Confirmation of consent

I confirm that I have voluntarily consented to take part in this study.

Scoring Guide

Observe items:

1, 6, 11, 15, 20, 26, 31, 36

Describe items:

2, 7, 12R, 16R, 22R, 27, 32, 37

Act with Awareness items:

5R, 8R, 13R, 18R, 23R, 28R, 34R, 38R

Nonjudge items:

3R, 10R, 14R, 17R, 25R, 30R, 35R, 39R

Nonreact items:

4, 9, 19, 21, 24, 29, 33

Chinese Version

请根据以下给予的等级来评定每句话。把最符合您真实想法的等级数字填在下列的每句话前面的空白处。

1	2	3	4	5
一点也不符合	较少符合	有些同意	非常符合	完全符合

1. 在行走时，我会有意关注身体部位在行进中的感觉。
2. 我擅长于用言语描述我的情感。
3. 我为自己有不理智的情绪或不合适的情绪而责备自己。
4. 我感受到了我的情绪和情感，但我不必对它们做出反应。
5. 在做事的时候，我经常走神，而且很容易被干扰。
6. 在洗澡时，我会留心于水滴过身体的感觉。
7. 我能清晰表达自己的信念、观点以及期望。
8. 我没有注意到我在做什么事情，这是因为我在做白日梦，在担忧或分心于外界。
9. 我观察自己的情绪，而不迷失其中。
10. 我告诉自己，我不应该以我现在的这种方式来感受此时的情感。
11. 我留意到食物和饮料是如何影响着我的想法、身体的感觉和情绪的。
12. 我难以找到词语来表达我的所思所想。
13. 我很容易分心。
14. 我认为我的一些想法是异常的、不好的；我不应该那样想。
15. 我会注意我的一些感觉，比如：微风吹拂我的头发、阳光照在我的脸上的感觉。
16. 我很难用合适的言语来表达我对事物的感受。
17. 我会评判自己的想法是好的或是坏的。
18. 我难以把注意力集中在当前发生的事情上。
19. 当我有悲伤的想法或景象时，我会“退一步”，并去觉知那些想法或景象的存在, 而不被其所控制。
20. 我会注意一些声音，比如：时钟的滴答声、小鸟的唧喳声、或者汽车穿梭的声音。
21. 在困难的情境下，我会暂停一下，不马上做出反应。

22. 当我身体有种感觉时，我很难找到合适的词语来描述它。
23. 我好像是自动地在做一些事情，并没有完全意识到它。
24. 通常，当我有令人伤感的想法或者景象时，我能很快恢复平静。
25. 我告诉我自己，我不应该思考我此刻正思考的东西。
26. 我闻到了周围一些东西的气味或者芳香。
27. 即便是我感到非常地不安时，我也能找到词语来表达它。
28. 我草草地做完一些事情，而没有真正地集中注意力在其上。
29. 当陷入令人烦恼的情绪或情境中，我能做到只是去注意它们，而不做出相应反应。
30. 我想有些情绪是不对的或者是不合适宜的，我不应该体验到它们。
31. 我注意到了艺术品和自然界中事物的一些视觉元素，如：颜色、形状、纹理还有光和影子。
32. 我总是倾向于用词语来描述我的体验。
33. 当我有令人痛苦的想法或景象时，我通常只是去在注意它们，顺其自然。
34. 我总是自动地工作或完成某项任务，而没有意识到我在做什么。
35. 通常当我有些令人困扰的想法或者景象时，我会根据我当时所想的的内容或者脑海中出现的景象来判断自己是对还是错。
36. 我会去注意，我的情绪是如何影响我的想法和行为的。
37. 我通常能够非常详细地描述出我此刻的感觉。
38. 我发现自己做事情的时候，不专心在所做的事情上。
39. 当不理智的想法出现时，我会自我否决。

你之前有没有做过正念练习？

- 经常
- 试过
- 从不

此问卷是一个关于变化和适应性的更大研究项目的一部分。如果您不愿意参加进一步的研究，请勾选下面的文字框 - 您依然会收到正念问卷的分数。

- 有关进一步的研究请不要联系我。

*国籍：

- 中国
- 其他

*确认同意参加此问卷：

我确认我自愿参加此问卷调查。

Appendix C - Email Invitation to Participate in the Mindfulness Questionnaire

How mindful are you?

Improving mindfulness has been shown to raise **cognitive flexibility**, **regulation of emotions**, and **resilience**, and companies such as Google and McKinsey operate mindfulness programs to help improve the performance and wellbeing of their employees.

But how mindful are you?

You can find out as part of a study* being conducted of AmCham China members. The mindfulness survey will take you **7-9 minutes to complete**, and you will receive your scores based on several aspects of mindfulness, with explanations.

Simply click [here](#) to take part in the survey.

IMPORTANT: You can withdraw from the study at any time, even after you have submitted your survey responses. Your individual scores on the survey will be shared with you, and only you. By taking the survey, you accept that some or all aspects of your mindfulness score may be low. Those who complete the survey may be invited to participate in further interviews or group discussions – you can indicate in the survey if you don't wish to participate further, and you will be contacted again only to communicate your scores in the survey.

*Graham Norris, the senior director for Marketing & Communications at AmCham China, is conducting a study into the adaptability and mindfulness of Chinese knowledge workers. The study of AmCham China members will contribute to the research he is conducting for his Doctorate of Business Administration, and the overall results will be shared with members once the study is complete. You can read an information sheet about the research [here](#).

你有正念吗？

已经表明，正念能提高认知灵活性，调节情绪和恢复力，现在由谷歌和麦肯锡等公司用来帮助提高员工的表现和幸福感。

但是你的正念如何？

通过参与中国美国商会的测评，您将了解到你的正念成绩*。正念测评将花费 7-9 分钟完成，您的分数将通过正念的几个方面分别作出解释。

只需点击[这里](#)参加调查。

重要提示：即使在您提交答案后，也可以随时收回。您且只有您会得知您在测评中的成绩。完成测评的人员可能会被邀请参加进一步的访问或小组讨论 - 如果您不想进一步参与，您可以在测评中指出。我们可能会再次联系您以和您沟通在测评中的成绩。

*中国美国商会市场与传播高级总监 Graham Norris 正在研究中国知识工作者的适应性和正念情况。其中，对中国美国商会会员的研究将有助于他正在进行的工商管理博士进修。研究结束后全部研究结果将与会员分享。您可以在[这里](#)阅读关于研究的信息表。

Appendix D - Survey Information Sheet

Dissertation title: Adaptability and Mindfulness in Chinese Knowledge Workers
Researcher name: Graham Norris
Contact details: gnorris@amchamchina.org, +86 18610160690
Supervisor's name: Jane Nolan
Senior Supervisor: Professor Abigail Marks

Details of the study:

Numerous studies show that we are in the midst of a “Great Acceleration,” whereby the pace of change in our lives is increasing. People now produce and consume more data, walk faster and get more frustrated with delays. This is increasing pressure on people, especially at work, to be adaptable, defined as “employees’ underlying potential as derived from cognitive, affective, and behavioural resources that can be applied to effectively adjust and/or anticipate to task-related, environmental and vocational demands.”

China is of particular interest in this regard, because of its rapid economic growth, urbanisation, and access to technology. As China’s economy develops, the nature of work is changing and along with it demand for knowledge workers, who now number in the tens, if not hundreds of millions.

As the stresses of modern life increase, so has interest in the palliative effects of mindfulness, defined as “moment-to-moment, non-judgmental awareness, cultivated by paying attention in a specific way, that is, in the present moment, and as non-reactively, as non-judgmentally, and as openheartedly as possible.” This study will therefore examine the numerous areas where it seems mindfulness may aid adaptability among this large and growing group of knowledge workers in China.

The aim of the research is to find out how Chinese knowledge workers at multinational companies respond to their rapidly changing environment, and whether mindfulness is a useful way of understanding these responses.

By better understanding how Chinese knowledge workers make sense of change, and the role of mindfulness in this sense-making, the study hopes to contribute to the knowledge base of how people regulate their emotional response to change. In particular, it could have training/industrial-organisational psychology implications, and help inform how mindfulness interventions are deployed in Chinese white-collar populations working for multinational corporations, or even contribute to the development of new kinds of intervention.

The application of mindfulness in the workplace is already catching on, in companies such as Google and General Mills, and mindfulness programs designed for the workplace are being developed. This study aims to build on the current understanding of change and mindfulness so that it is applicable to the real-life situation Chinese knowledge workers find themselves in.

This study will adopt a phenomenological approach, and interpretive method to address the aims and objectives. Using the Chinese members of the American Chamber of Commerce in China as the sampling frame, the main data collection technique will be focus group discussions, validated with in-depth interviews. The participants for the focus group discussions and interviews will be selected based on their level of trait mindfulness, as measured in a survey.

Mindfulness survey:

The survey of mindfulness aims to identify groups with different levels of trait mindfulness. These groups will be studied further through focus group discussions or in-depth interviews. Therefore, those who complete the survey may be invited to participate in further interviews or group discussions – you can indicate in the survey if you don't wish to participate further, and you will be contacted again only to communicate your scores in the survey. All Chinese nationals who are members of the American Chamber of Commerce in China are being invited to participate in the survey, which consists of 39 multiple-choice questions. Each individual who completes the survey will be shown their own score – otherwise, the survey results will be completely confidential. Every effort will be made to keep the data secure until it is destroyed at the end of the study, but participants should be aware that malicious online attacks could compromise the integrity and security of the data. You may withdraw from the study at any time, even after you have provided data, until the thesis is submitted (estimated before the end of 2018). You agree to participate in this survey voluntarily, and submission of a completed questionnaire implies consent to participate.

Appendix E - Consent Form

Purpose of the Focus Group Discussion

You have been invited to participate in a group discussion about how your work is changing, and how you are adapting to those changes. The discussion is part of a pilot study being conducted by Graham Norris for his doctoral study. You can see more details of the study in the Information Sheet.

Procedure

The discussion will include 4-6 participants, all current or former members of the AmCham China Toastmasters Club, and a facilitator (Graham). The facilitator will stimulate discussion by asking participants questions according to the Topic Guide. You aren't required to answer any question or share information you don't want to.

Risks

The risks should be no greater than for a regular conversation, although you may withdraw your participation at any time if you feel uncomfortable.

Benefits

You may benefit from sharing and hearing experiences of change and adapting. And you'll get a free lunch.

Anonymity and Confidentiality

The discussion will be recorded for analysis, but personal information will be removed so that none of the participants can be identified in the results. You also agree to protect the privacy of the other participants by not disclosing what you have heard during the discussion.

How the Information will be Used

The information from this focus group discussion will be primarily used to test the effectiveness of the Topic Guide. Graham is also planning books about Chinese knowledge workers and adaptability, which may draw on information gathered during this focus group. As stated above, no personally identifying information will be disclosed unless agreed in a separate consent form.

By signing this consent form, you acknowledge that you:

- Understand the above information.
- Voluntarily agree to take part in the focus group discussion.
- Have been offered the Information Sheet and Topic Guide to review.
- Are aware that the discussion will be recorded.
- Are aware you may withdraw from the study at any time.
- Can amend this consent form if you wish.

Signed:

Name:

Date:

Demographic Details

Nationality:

Hometown:

Gender:

Age:

- Pre-80
- Post-80
- Post-90

Title:

Time in current position:

Company type:

MNC experience:

Meditation experience:

Appendix F - Topic Guide Revised

Prelude: Lunch, confidentiality agreements

1. Introduction

- Confidentiality; recording; introduce with one name; can withdraw at any time
- Open discussion – can speak freely, but not more than one person speaking at once; interested in hearing everyone's thoughts
- Language – English, but if certain words or phrases in Chinese are useful, let's explore those
- What we're talking about and why? Change, particularly in the workplace, but if changes in your personal life influence your work, also interested in those
- People can introduce themselves: name, type of work you do

2. Types of change, and causes

- What kind of changes are they experiencing at work?
- How do they define change?
- What specifically is changing (examples)?
- What is prompting change?
- Are these changes new, or increasing in frequency?

3. Perceptions of change impact

- How does change impact them (examples)?
- How do they feel about change?
- Does change come as a surprise?
- Do they take measures in anticipation of change?

4. Dealing with change

5. What do they do in response to change (examples)?

6. What kinds of changes do they find most difficult to cope with?

7. The tactics they employ to cope with change, to what extent are they successful?

How is success defined?

8. Does dealing with change get easier over time? More tiring?

9. For those participants who practice mindfulness, does it help?

5. Wrap-up

- Thank participants

- Results of study released next year; will share with them
- In the meantime, any questions or concerns (including withdrawing from the study), please contact me

Appendix H - Focus Group Information Sheet

Dissertation title: Adaptability and Mindfulness in Chinese Knowledge Workers
Researcher name: Graham Norris
Contact details: gnorris@amchamchina.org, +86 18610160690
Supervisor's name: Jane Nolan
Senior Supervisor: Professor Abigail Marks

Details of the study:

Numerous studies show that we are in the midst of a “Great Acceleration,” whereby the pace of change in our lives is increasing. People now produce and consume more data, walk faster and get more frustrated with delays. This is increasing pressure on people, especially at work, to be adaptable, defined as “employees’ underlying potential as derived from cognitive, affective, and behavioural resources that can be applied to effectively adjust and/or anticipate to task-related, environmental and vocational demands.”

China is of particular interest in this regard, because of its rapid economic growth, urbanisation, and access to technology. As China’s economy develops, the nature of work is changing and along with it demand for knowledge workers, who now number in the tens, if not hundreds of millions.

As the stresses of modern life increase, so has interest in the palliative effects of mindfulness, defined as “moment-to-moment, non-judgmental awareness, cultivated by paying attention in a specific way, that is, in the present moment, and as non-reactively, as non-judgmentally, and as openheartedly as possible.” This study will therefore examine the numerous areas where it seems mindfulness may aid adaptability among this large and growing group of knowledge workers in China.

The aim of the research is to find out how Chinese knowledge workers at multinational companies respond to their rapidly changing environment, and whether mindfulness is a useful way of understanding these responses.

Focus Group Discussion

The discussion will focus on three main topics, with greater emphasis placed on the later topics.

1. Types of change, and causes
 - What kind of changes are you experiencing at work?
 - What is causing these changes?
 - What specifically is changing (examples)?

- What else can you say about these changes: Are they new, or becoming more common?
2. How change impacts your working life
 - How does change affect your work (examples)?
 - How do they feel about those impacts?
 3. Dealing with change
10. What do you do in response to change (examples)?
 11. Do you act sometimes in anticipation of change?
 12. What kinds of changes to you find most difficult to deal with?
 13. Would you say the way you deal with change is successful? Why?
 14. How has your response to change evolved over time?

Appendix I – Pilot Study

It was decided that a pilot study would be useful to test whether the instruments and procedures identified in the research methodology would collect data that could adequately address the research question. Specifically, the objectives of the pilot study were to assess whether:

1. the questionnaire would be a suitable instrument to identify two groups of individuals demonstrating high and low levels of mindfulness, and if any refinements were required in the way it was administered.
2. the topic guide (Appendix 1) would be a suitable tool to gather the data needed to answer the research question, and whether refinements were needed to the questions or the way it was employed.

I.1 Respondent Details

To achieve the pilot study objectives, the characteristics of respondents needed to reflect as closely as possible those of the sample frame, namely Chinese members of the American Chamber of Commerce in China. However, it was decided not to draw from the sample frame itself to minimise the influence of the pilot study on the main study data collection, although this also meant that the pilot study results could not be included in the main study findings.

To recruit the respondents, the candidate first used a social group on a mobile phone messaging application popular in China called WeChat that was created by a Toastmasters public speaking club hosted by the chamber, which accepts as new members only employees of member companies, although they can keep membership of the club even if they switch jobs to a company that is not a chamber member. To ensure adequate participation in the focus group discussion, two former club members were also recruited. The participants therefore reflect the sample frame for the main study in that they:

- work or worked for multinational companies that are members of the American Chamber of Commerce in China
- are Chinese nationals
- can speak English, as that is the operating language of both the chamber and the Toastmasters club

However, the respondents were not chamber members. These respondents could therefore differ from the sample frame in certain respects, as there may be reasons why companies choose some employees to represent them as chamber members and not others. These reasons could include, for example, seniority or functional specialty. There may also be reasons why certain individuals choose to no longer work at one of the chamber's member MNCs that could influence their perspectives on change, adaptability and mindfulness.

The survey was taken by 13 people, all Chinese nationals and members of the Toastmasters club; 11 were women and two were men. They were mostly manager-level employees in their organisations. Six said they had no mindfulness practice experience, six had some experience, and one practiced regularly.

Everyone who took the survey was invited to participate in a focus group discussion, as this was the first-choice data-collection technique in the original research design. No one refused, but some were unavailable in the short-term, and finding a time when a viable group could meet was challenging. A weekday lunchtime was chosen when five of the participants agreed they could attend. As the group was only slightly larger than the four regarded as the minimum number required to conduct a focus group discussion (Barbour, 2001), two former members were also invited to participate whose profile matched that of the other participants. Both had been working at an MNC member of the chamber when they joined the club, one still was and the other was now working at a non-profit organisation. All seven participated on the day as planned.

	M /F	Nation-ality	Hometown	Age	Working at MNC?	Current position	Time in position	Mindfulness experience
A	F	China	Guangxi	Pre-80	Currently	Marketing Manager	6 months	None
B	F	China	Sichuan	Post-80	Previously	Marketing Manager	0.5 months	1-week course
C	F	China	Shandong	Pre-80	Currently	PR Manager	3 months	None
D	F	China	Shandong	Post-80	Currently	Marketing Manager	5 years	None
E	F	China	Beijing	Pre-80	Currently	Admin Team	N/A	N/A

						Leader		
F	F	China	Tianjin	Post-80	Currently	Researcher	N/A	Mindfulness-based therapy
G	F	China	Beijing	Post-80	Previously	VP Operations	16 months	Various courses

Table I.1 - Details of pilot study focus group participants

As can be seen from Table I.1, all the participants were female, which does not reflect the make-up of the chamber's members. While comprehensive data on the gender of the chamber's membership is not available, the information that is available shows substantial proportions of both men and women. The participants' hometowns were predominantly in the north of the country. To distinguish between generations, the participants were given three categories based on the popular way of discussing generation in China: pre-1980, post-1980, or post-1990. Three were born before 1980, meaning they were at least 37, and four were born between 1980 and 1990, making them between 27 and 37 years old. None were post-1990, or under 27. All were working or had worked at MNCs, although there was a high proportion involved in marketing. Most were manager level or higher, and just one of them had been in their present position for more than two years (although two participants did not provide this information). Three said they had had some meditation practice or training. Other potential sources of bias include that this group draws from those in the Toastmasters club who were interested in taking the mindfulness survey, those that work close to the American Chamber offices where the discussion was held, and those available at lunchtimes.

I.2 Methodology

As the pilot study aims to test the data collection instruments, the collection procedures closely reflected those of the main study. They will be summarised here.

Survey

The instrument used was a Chinese-language version of the Five Facet Mindfulness Questionnaire (Baer *et al.*, 2006) developed by Deng *et al.* (2011) (see Appendix B). The questionnaire was hosted on Survey Monkey, and invitations sent to participants by

email (see Appendix C). It was conducted in accordance with the ethical considerations discussed in Section 4.4.2.

Focus Group

The focus group was based on the discussion format defined by Boddy (2005) using the Topic Guide in Appendix A and the techniques described by Finch and Lewis (2003). One important difference from the main study is that, because of the small sample size, the focus group discussion included people with all levels of mindfulness, meaning that the pilot study would likely be unable to assess whether the Topic Guide would be adequate in distinguishing between high- and low-mindfulness groups. The participants were given the Consent Form (Appendix E), Information Sheet (Appendix D) and Topic Guide (Appendix A) to review the day before the discussion. On the day of the discussion, the participants were provided with lunch and drinks.

I.3 Results

Survey

The participants' feedback on the clarity of the questions and instructions was positive, with no one expressing confusion, although some detected that the survey had been translated from English. The feedback also uncovered a translation error in one of the demographic questions. Most of the participants completed the survey in under 10 minutes. Some of the participants asked for more information about mindfulness after completing the survey, and they were provided with details of *Wherever You Go, There You Are* by Jon Kabat-Zinn that had been translated into Chinese, and a mindfulness practice mobile application. They were given scores for the five facets and the total, along with descriptions of the facets and details of the Kabat-Zinn book. No further comparisons were offered regarding the scores, although one participant asked for it.

The minimum score achievable on the scale was 39 and the maximum was 195 (midpoint 117). The scores collected ranged from 112 to 143, with a mean of 128.08 and a standard deviation of 8.17. This suggested that, should enough respondents complete the survey, there may be enough variation to identify groups with different levels of trait mindfulness.

The only procedural problem was that some of the participants did not receive the email invitation sent through the Survey Monkey platform, so it had to be sent again using the American Chamber's Outlook account. As a result, Outlook was the tool used to invite participants to complete the questionnaire for the main study.

Focus Group Discussion

The focus group discussion was held at the American Chamber offices on a weekday lunchtime. The discussion concluded after 1 hour and 20 minutes, with all seven participants making substantial contributions and no evidence of reluctance to join in the conversation. One participant left after around 1 hour to attend another meeting, and most of the participants stayed for a few minutes after the end of the formal discussion to talk more about the doctoral study. Even towards the end of the discussion, gentle prompts would still elicit quite comprehensive responses, suggesting participants may have had even more to share than the time allowed. Nevertheless, all the main topic areas in the Topic Guide were covered. Many of the participants knew each other, and some were familiar with the facilitator. Interaction was natural, and the facilitator was able to easily move the conversation on while taking notes.

Although all participants were speaking in a second language, English, they expressed themselves comfortably.

The participants had been given the Topic Guide the previous day, which they said was useful in helping them understand what the discussion would be about, especially given the survey had been about mindfulness, whereas the discussion was more about change and adaptability. The overall discussion offered evidence to support several of the models covered in the literature reviews. For example, the participants identified various kinds of change, including: Leadership changes; Reorganisations; Technology implementation; Work process changes; Strategy changes; Downsizing. They identified the driving forces behind these changes as economic, technological and job-market-related.

The participants discussed the negative emotions related to change in terms of fear and anxiety, and how this could be exacerbated by lack of information. They also discussed various coping tactics, both adaptive and maladaptive, focused on both emotion regulation and problem solving (Folkman *et al.*, 1986; Carver and Scheier, 1994).

There was also substantial discussion of the importance of learning as a means to adapt, which to some extent relates to the work of Kozlowski and colleagues (Kozlowski, 1998; Kozlowski *et al.*, 2001; Baard, Rench and Kozlowski, 2013).

Discussion themes also included the adaptability resources of van Dam's framework (2013), and aspects associated with mindfulness. For example, in different contexts, two of the participants discussed awareness of change and the advantages early detection can bring. They also touched on topics such as emotion regulation, resilience, focusing on the present and reflection as it relates to the current situation or fear of the future. However, it was difficult for the participants to define the effectiveness of their adaptability tactics in terms such as those offered by the Pulakos *et al.* adaptive performance taxonomy (2000).

Facilitation

Based on the review of literature related to researcher reflexivity discussed in Section 4.2.4, this section focuses on my impressions of how I, as the facilitator of this discussion, interacted with the participants.

One important aspect to consider is my relationship with the participants. For example, the participants were all female, and I was male; they were all Chinese nationals, and I am British. In terms of age, there were no substantial differences, but in terms of the Toastmasters club, I am known as one of the founders of the club, and have reached the highest educational level in the club's program. Nevertheless, many of them had not met me before, the Toastmasters club did not come up during the discussion, and the tone of the discussion suggested no deference on the part of the participants with regard to me.

Nevertheless, this issue of how to maintain a healthy rapport with individuals and groups of participants will arise repeatedly during the main research phase. Oakley (1981) and Finch (1984), for example, have criticised approaches that emphasise building a rapport only to the extent necessary to extract information from interviewees as being in many cases impractical or undesirable. For both these researchers, they found that by building relationships based on their common characteristics – in their cases being a woman, mother, married to a clergyman, and so on – they were able to generate richer information and make the experience more satisfying for those being

researched. So while recognising that “objectivity and neutrality may ultimately be a chimera” (Legard, Keegan and Ward, 2003, p.160), part of the reflexive approach to the research project will be maintaining awareness of differences and commonalities between myself and participants, not only to identify areas of potential bias, but also to capitalise on shared knowledge and experience or, conversely, to bring out the teacher in participants where such commonalities are absent.

In general, the discussion produced a satisfactory result, both in terms of testing the Topic Guide for its ability to gather useful data, and in terms of the facilitation. The participants understood what was to be expected of the discussion, they were all given adequate opportunities to speak, and the resulting discussion took advantage of many of the benefits of focus groups, while minimising the drawbacks.

For example, more than once participants cut me off because they had a view they wanted to share, demonstrating the open nature of the discussion. They also demonstrated that they felt able to express contrary opinions. One interesting exchange involved attitudes toward change. While some participants embraced change in a proactive way, others described it more as something that needed to be coped with and reacted to. Participant D, having heard another participant talk about how they liked change, responded: “I’m a little bit on the other side. I’m definitely not the type of <Participant A>.” She went on to offer a model of different kinds of people based on how they respond to change as a way to compare herself with Participant A.

Important to the success of the discussion seemed to be sharing the Topic Guide the day before, to allow the participants to consider the themes in depth, and pressing for specific examples of their experiences. There could be concern over sharing the Topic Guide in that it would reduce the spontaneity of the discussion. However, when asked for their feedback, the participants thanked me for helping them understand what the discussion would be about, and there were many instances of spontaneous interaction between the participants. For example, one participant prefaced a comment by saying it was “inspired” by the sharing of one of the other participants.

The insistence on providing examples for assertions was also very effective in eliciting some of the most useful information, which also generated the most interactions. There

was little resistance to this probing, yet one of the most challenging aspects of the facilitation was when and how to probe for more information.

I also attempted to practice active listening without being obtrusive. At one point one of the participants said: “Maybe I didn’t describe this clearly, but you got me.” When verifying what I’d heard from a participant, I tried to avoid rephrasing, but in a couple of instances I found that I finished a sentence for the participant, or recapped what they’d said using a word they had not used. Occasionally, I sought confirmation from the group about the prevalence of certain phenomena, but tried to avoid encouraging “group think,” and as the example above shows, participants felt comfortable sharing contrarian views.

For the most part, the discussion was on topic, aided by the shared Topic Guide. However, one of the participants began discussing a decision she’d arrived at with her husband not to have children, and another participant responded about a similar decision she was pondering. In both cases, this personal decision was used as a point of comparison with how decisions are made about work and careers. As the facilitator, I’d said at the beginning that the discussion was about work, but that it was possible changes in personal circumstances could impact work and might be relevant. Discussion of this topic took me by surprise, as in my experience there remain high expectations in Chinese society for people to have children. As a result, I overlooked opportunities to further explore the relevance of this area to the broader discussion of adaptability and change.

Perhaps the most obvious shortcoming is bias I demonstrated in seeking to confirm existing theories and models. When writing a journal entry on my experience of the discussion based on my notes and listening again to the recording of the discussion, it became clear I was strongly influenced by the existing models I had already reviewed, and did not take full advantage of opportunities to uncover contradictory or new evidence that could provide different viewpoints. Now this issue has been identified, it will be easier to avoid in the main study.

Finally, the number of participants, seven, seemed to be at the top end of what I could manage. I expect six would allow for slightly greater depth of sharing and interaction.

I.4 Summary

The pilot study succeeded in its objectives. Specifically:

1. The questionnaire seems suitable, assuming enough respondents, to identify two groups of individuals with differing degrees of mindfulness. The only planned change to the way it is administered is to correct a translation error in the question on mindfulness experience, and to distribute the questionnaire using the American Chamber's email system, rather than Survey Monkey.
2. The Topic Guide was also basically effective in gathering the data needed to answer the research question, with some modifications, identified below.

The Topic Guide has been adjusted (Appendix F), particularly some of the English wording. For example, the term assess was used in the Topic Guide during the discussion on how people judge the impact of change on them, whereas the participants associated this word with performance assessments, requiring clarification.

The participants will be given an Information Sheet (Appendix H) ahead of the discussion that is a little more general than the Topic Guide, so that they know what topics to consider, but not so much that they "over-prepare" and reduce natural interaction or lead to long narratives.

Perhaps the biggest changes will be made to the facilitation. Rather than simply seeking to slot all the responses into existing frameworks, the facilitation needs to dig deeper into the how and why of participants' responses to better understand the nuances of their experiences with an eye to developing new theory, where appropriate. This was achieved to some extent during the pilot study, but reflecting on the experience, it is clear a lot more could be done to explore some of the issues that were raised.

Appendix J – Code List

Group	Types and causes of change
Objective	Identify the most salient forces of environment change to Chinese knowledge workers
Code Name	Types of change
Definition	Direct change experienced by the subject.
Example	“My job responsibility has been expanded to external affairs.”
Code Name	Drivers of change
Definition	The primary forces behind the changes that the subject feels.
Example	“The main kind of, uh, force that drives the changes, really, um, technology, I feel. Technology and how technology makes it possible to, uh, kind of connect people differently, uh, from, from previous years, that force actually drive everything else that we do.”
Code Name	Change timeframes
Definition	Mentions frequency of pace of change subject is experiencing, or refers to timeframe over which change is happening.
Example	“I think uh, for the biotech, the changes become I think it’s continually increase, the challenge is continue increase, but not just jumping up and down, it’s continuously increase the…”
Group	Perceptions of change impact
Objective	Examine how they perceive and interpret these forces
Code Name	Awareness of change
Definition	How change is detected, either specifically or in general.
Example	“Really, you’ve got to be very open minded, so you’re aware of what’s happening, and then bring that learning and bring that awareness into the work that you do.”
Code Name	Impact of change
Definition	How change affects the person, either practically or emotionally.
Example	“Oh, my team, so, I will have a new, all my, all my colleagues will be new. My, my previous team, we moved to somewhere else, team, so that’s a big change for me, I have to, I feel, I feel like I have to disconnect, still work together, but it’s, they will report to somewhere else. “
Code Name	Attitude toward change
Definition	Subject describes attitude toward the changes they are experiencing, or change in general.
Example	“I am very confident in myself, I think I can, I can adjust, I can adapt it, no problem for me.”
Code Name	Proactivity
Definition	Expression of attempts to either anticipate or even instigate change.
Example	“I think I will have an opportunity, my role would be changed, I am quite sure, because I have, stay, stay on this position for four years, I think I will have a good opportunity, that’s something I am looking for, I expect.”
Group	Dealing with change

Objective	Explore the resources they employ to adapt to change
Code Name	Responses to change
Definition	What the subject does in response to change.
Example	“I spend more time working, even early morning phone calls or late evening phone calls, so, so I have to manage my, myself, how to, manage you timing, to use the time more efficiency.”
Code Name	Tactics and tools to deal with change
Definition	Specific tools or activities that support responses to change.
Example	“I have to... write down everything, to do list, then the top priority.”
Code Name	Effectiveness
Definition	Subject offers assessment of efficacy of responses to change.
Example	“It’s, yeah, this kind of, um, group discussion, or lecture, makes me feel a fulfilment. And uh, a life meaningful.”
Code Name	Ease of dealing with change
Definition	Expression of ease or difficulty in dealing with change.
Examples	Example, positive: “It’s very easy for me, as a new person, if I, I just talk to them for a while, I feel like I have this capability, everyone like me, it’s easy.” Example, negative: “Because when I told them that, I will have a new job, so you will have a new boss, everyone, they cried. That’s why it’s difficult for me.”
Group	Mindfulness
Objective	Examine how mindfulness may influence the perception of change and the ability to adapt to it
Code Name	Knowledge of mindfulness
Definition	Comments on familiarity with mindfulness and its practice.
Example	“Actually I don’t, am familiar with this at all, but I just answer the question.”
Code Name	Demonstrations of mindfulness
Definition	Subject demonstrates application of mindful principles, knowingly or otherwise.
Example	“And I do, uh, I do reflection, uh, regularly. It’s like, uh, probably, like, monthly I would kind of think back whether I’m, I’m doing okay, um, kind of towards achieving, you know, what I wanted.”
Code Name	Demonstrations of mindlessness
Definition	Comments that reveal lack of mindfulness or existence of mindlessness.
Example	“I was not really paying attention to in the past few years.”
Ungrouped Codes	
Code Name	Connection with personal life
Definition	Relationship between work and personal life with regard to change and adaptability.
Example	“Yes, my team, and also I have some condition, when I talk to my husband, so probably my new job will, maybe I, maybe I will have to move to Singapore.”

Code Name	Personality traits
Definition	Self descriptions of personality traits.
Example	“I feel actually, I, I, I am an adventure person, I like learning new things.”
Code Name	Upbringing
Definition	Impact of upbringing on attitude or response to change.
Example	“It’s something that my, cos it’s, it was in my education. It’s like, you know, Confucius says that, you know, you know the Chinese word like, it’s like you’ve got to reflect on what you learned, you’ve got to reflect, so the reflection is part of, like, uh, the culture that I grew up in, so.”
Code Name	Comparisons
Definition	Comparisons made with other people.
Example	“Many people in our company also run full marathon, and I was influenced by them to start exercising.”
Code Name	Why participate in this research
Definition	Subject indicates why they agreed to take the survey and/or the interview.
Example	“Because it’s Graham, he asked me”
Code Name	Chinese phrases
Definition	Use of Chinese phrases and their definitions.
Example	“We say [fang kong], release yourself”

References

- Abu-Lughod, J. L. (1999) *New York, Chicago, Los Angeles: America's Global Cities*. s.l.: University of Minnesota Press.
- Adner, R. and Kapoor, R. (2016) 'Innovation ecosystems and the pace of substitution: Re - examining technology S - curves', *Strategic Management Journal*, 37(4), pp. 625-648.
- Allen, J., Jimmieson, N. L., Bordia, P. and Irmer, B. E. (2007) 'Uncertainty during Organizational Change: Managing Perceptions through Communication', *Journal of Change Management*, 7(2), pp. 187-210.
- Allen, P. (2011) 'The Singularity Isn't Near'. MIT Technology Review. Available at: <https://www.technologyreview.com/s/425733/paul-allen-the-singularity-isnt-near/> (Accessed: 24 February 2019).
- Altenburg, T., Schmitz, H. and Stamm, A. (2008) 'Breakthrough? China's and India's Transition from Production to Innovation', *World development*, 36(2), pp. 325-344.
- Alvesson, M. (1993) 'Organizations as rhetoric: Knowledge-intensive firms and the struggle with ambiguity', *Journal of Management Studies*, 30(6), pp. 997-1015.
- American Chamber of Commerce in the People's Republic of China (2018) *China Business Climate Survey Report*.
- Anderson, N. D., Lau, M. A., Segal, Z. V. and Bishop, S. R. (2007) 'Mindfulness-based stress reduction and attentional control', *Clinical Psychology and Psychotherapy*, 14(6), pp. 449-463.
- Aon Hewitt (2016) *China posts an average salary increase rate of 6.7% and turnover rate of 20.8% in 2016*. [press release]. Available at: <https://apac.aonhewitt.com/document-files/media/oct-nov-2016/china-human-capital-intelligence-survey.pdf>.
- Arch, J. J. and Craske, M. G. (2010) 'Laboratory stressors in clinically anxious and non-anxious individuals: The moderating role of mindfulness', *Behaviour Research and Therapy*, 48(6), pp. 495-505.
- Archer, M. S. (1995) *Realist Social Theory: The Morphogenetic Approach*. s.l.: Cambridge university press.
- Archer, M. S. (2000) *Being Human: The Problem of Agency*. s.l.: Cambridge University Press.
- Argyle, M. (2001) *The Psychology of Happiness*. Routledge.
- Armenakis, A. A. and Bedeian, A. G. (1999) 'Organizational change: A review of theory and research in the 1990s', *Journal of Management*, 25(3), pp. 293-315.

- Aronoff, J., Stollak, G. E. and Woike, B. A. (1994) 'Affect regulation and the breadth of interpersonal engagement', *Journal of Personality and Social Psychology*, 67(1), pp. 105-114.
- Arthur, S. and Nazroo, J. (2003) 'Designing fieldwork strategies and materials', in Ritchie, J. and Lewis, J. (eds.) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. s.l.: SAGE Publications, p. 336 (Chapter 5).
- Astin, J. A. (1997) 'Stress reduction through mindfulness meditation', *Psychotherapy and Psychosomatics*, 66(2), pp. 97-106.
- Baard, S. K., Rench, T. A. and Kozlowski, S. W. (2013) 'Performance adaptation - a theoretical integration and review', *Journal of Management*, pp. 48-99.
- Baer, R. A. (2013) 'Measuring mindfulness', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. s.l.: Taylor and Francis, pp. 241-261.
- Baer, R. A., Smith, G. T. and Allen, K. B. (2004) 'Assessment of mindfulness by self-report', *Assessment*, 11(3), pp. 191-206.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J. and Toney, L. (2006) 'Using self-report assessment methods to explore facets of mindfulness', *Assessment*, 13(1), pp. 27-45.
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D. and Williams, J. M. G. (2008) 'Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples', *Assessment*, 15(3), pp. 329-342.
- Bandura, A. (1977) 'Self-efficacy: Toward a unifying theory of behavioral change', *Psychological Review*, 84(2), pp. 191-215.
- Barbour, R. (2007) *Doing Focus Groups*. London: Sage.
- Bareil, C., Savoie, A. and Meunier, S. (2007) 'Patterns of discomfort with organizational change', *Journal of Change Management*, 7(1), pp. 13-24.
- Bargh, J. A. and Chartrand, T. L. (1999) 'The unbearable automaticity of being', *American Psychologist*, 54(7), pp. 462-479.
- Barney, J. B. and Zhang, S. (2009) 'The future of Chinese management research: A theory of Chinese management versus a Chinese theory of management', *Management and Organization Review*, 5(1), pp. 15-28.
- Bartol, K. M., Liu, W., Zeng, X. and Wu, K. (2009) 'Social exchange and knowledge sharing among knowledge workers: The moderating role of perceived job security', *Management and Organization Review*, 5(2), pp. 223-240.
- Batchelor, M. (2013) 'Meditation and mindfulness', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. s.l.: Taylor and Francis, pp. 156-164.

- Bayl-Smith, P. H. and Griffin, B. (2018) 'Maintenance of D-A fit through work adjustment behaviors: The moderating effect of work style fit', *Journal of Vocational Behavior*, 106, pp. 209-219.
- Bazeley, P. and Jackson, K. (2013) *Qualitative Data Analysis with NVivo*. s.l.: SAGE Publications.
- Beckman, H. B., Wendland, M., Mooney, C., Krasner, M. S., Quill, T. E., Suchman, A. L. and Epstein, R. M. (2012) 'The impact of a program in mindful communication on primary care physicians', *Academic Medicine*, 87(6), pp. 815-819.
- Bennett, R. (1991) 'How is management research carried out?', in Smith, N. C. and Dainty, P. (eds.) *The Management Research Handbook*. London: Routledge, pp. 85-103.
- Benson, C. and Magee, C. (2018) 'Data-driven investment decision-making: Applying Moore's Law and S-curves to business strategies', *arXiv.org*.
- Berg, J. M., Wrzesniewski, A. and Dutton, J. E. (2010) 'Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity', *Journal of Organizational Behavior*, 31(2-3), pp. 158-186.
- Bernard, B. and Hakeem, J. (1995) 'Culture, cognitive dissonance and the management of change', *International Journal of Operations & Production Management*, 15(8), pp. 14-33.
- Bernerth, J. B., Walker, H. J. and Harris, S. G. (2011) 'Change fatigue: Development and initial validation of a new measure', *Work & Stress*, 25(4), pp. 321-337.
- Bernstein, M. (2010) 'Knowledge Work 2020', *The future of knowledge work and what it might mean for each of you*.
- Beshai, S., McAlpine, L., Weare, K. and Kuyken, W. (2016) 'A non-randomised feasibility trial assessing the efficacy of a mindfulness-based intervention for teachers to reduce stress and improve well-being', *Mindfulness*, 7(1), pp. 198-208.
- Beugelsdijk, S., Maseland, R. and van Hoorn, A. (2015) 'Are scores on Hofstede's dimensions of national culture stable over time? A cohort analysis', *Global Strategy Journal*, 5(3), pp. 223-240.
- Bhaskar, R. (1978) *A Realist Theory of Science*. 2nd ed. edn. Harvester.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D. and Devins, G. (2004) 'Mindfulness: A proposed operational definition', *Clinical Psychology: Science and Practice*, 11(3), pp. 230-241.
- Blackler, F. (1995) 'Knowledge, knowledge work and organization: An overview and interpretation', *Organization Studies*, 16, p. 6.

- Blackwill, R. D. and Tellis, A. J. (2015) *Revising US grand strategy toward China*. Council on Foreign Relations.
- Blaikie, N. (2000) *Designing Social Research: The Logic of Anticipation*. Wiley.
- Blanchflower, D. G. and Oswald, A. J. (2008) 'Is well-being U-shaped over the life cycle?', *Social Science & Medicine*, 66(8), pp. 1733-1749.
- Blom, B. and Morén, S. (2011) 'Analysis of generative mechanisms', *Journal of Critical Realism*, 10(1), pp. 60-79.
- Bodhi, B. (2013) 'What does mindfulness really mean? A canonical perspective', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. Routledge, pp. 19-39.
- Bohlmeijer, E., ten Klooster, P. M., Fledderus, M., Veehof, M. and Baer, R. (2011) 'Psychometric properties of the Five Facet Mindfulness Questionnaire in depressed adults and development of a short form', *Assessment*, 18(3), pp. 308-320.
- Bordia, P., Hobman, E., Jones, E., Gallois, C. and Callan, V. J. (2004) 'Uncertainty during organizational change: Types, consequences, and management strategies', *Journal of business and psychology*, 18(4), pp. 507-532.
- Boston Consulting Group (2015) 'BCG Technology Advantage'.
- Boswell, W. R. and Olson-Buchanan, J. B. (2007) 'The use of communication technologies after hours: The role of work attitudes and work-life conflict', *Journal of Management*, 33(4), pp. 592-610.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77-101.
- Brewer, J. A., Worhunsky, P. D., Gray, J. R., Tang, Y.-Y., Weber, J. and Kober, H. (2011) 'Meditation experience is associated with differences in default mode network activity and connectivity', *Proceedings of the National Academy of Sciences*, 108(50), pp. 20254-20259.
- Bridges, W. (2009) *Managing Transitions: Making the Most of Change*. Da Capo Press.
- British Psychological Society (2014) *Code of Human Research Ethics*. s.l.: s.n. Available at: [https://beta.bps.org.uk/sites/beta.bps.org.uk/files/Policy - Files/Code of Human Research Ethics %282014%29.pdf](https://beta.bps.org.uk/sites/beta.bps.org.uk/files/Policy%20-%20Files/Code%20of%20Human%20Research%20Ethics%202014%20.pdf) (Accessed: July 29, 2017).
- British Psychological Society (2017) *Ethics Guidelines for Internet-mediated Research*. Leicester: s.n. Available at: <http://www.bps.org.uk/publications/policy-and-guidelines/> (Accessed: July 30, 2017).
- Brooker, J., Julian, J., Webber, L., Chan, J., Shawyer, F. and Meadows, G. (2013) 'Evaluation of an occupational mindfulness program for staff employed in the disability sector in Australia', *Mindfulness*, 4(122), pp. 122-136.

- Brown, K. W., Goodman, R. J. and Inzlicht, M. (2013) 'Dispositional mindfulness and the attenuation of neural responses to emotional stimuli', *Social Cognitive and Affective Neuroscience*, 8(1), pp. 93-99.
- Brown, K. W. and Ryan, R. M. (2003) 'The benefits of being present: Mindfulness and its role in psychological well-being', *Journal of Personality and Social Psychology*, 84(4), pp. 822-848.
- Brown, K. W., Weinstein, N. and Creswell, J. D. (2012) 'Trait mindfulness modulates neuroendocrine and affective responses to social evaluative threat', *Psychoneuroendocrinology*, 37(12), pp. 2037-2041.
- Bryman, A. (2016) *Social Research Methods*. Oxford University Press.
- Bränström, R., Kvillemo, P., Brandberg, Y. and Moskowitz, J. T. (2010) 'Self-report mindfulness as a mediator of psychological well-being in a stress reduction intervention for cancer patients—A randomized study', *Annals of Behavioral Medicine*, 39(2), pp. 151-161.
- Burke, W. W. and Litwin, G. H. (1992) 'A causal model of organizational performance and change', *Journal of management*, 18(3), pp. 523-545.
- Burnes, B. (2015) 'Understanding resistance to change – Building on Coch and French', *Journal of Change Management*, 15(2), pp. 92-116.
- Buttner, H. E. and Gyskiewicz, N. (1993) 'Entrepreneurs' problem-solving styles: An empirical study using the Kirton adaption/innovation theory', *Journal of Small Business Management*, (January), pp. 22-31.
- Cahn, B. R., Delorme, A. and Polich, J. (2013) 'Event-related delta, theta, alpha and gamma correlates to auditory oddball processing during Vipassana meditation', *Social Cognitive and Affective Neuroscience*, 8(1), pp. 100-111.
- Caldwell, D. F. and O'Reilly, C. A. (1982) 'Boundary spanning and individual performance: The impact of self-monitoring', *Journal of Applied Psychology*, 67(1), pp. 124-127.
- Campbell, K. M. and Ratner, E. (2018) 'The China reckoning: How Beijing defied American expectations', *Foreign Affairs*, 97(2), p. 60.
- Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E. and Farrow, V. (2008) 'The assessment of present-moment awareness and acceptance', *Assessment*, 15(2), pp. 204-223.
- Carnall, C. A. (2007) *Managing Change in Organizations*. Financial Times Prentice Hall.
- Carver, C. S. and Scheier, M. F. (1994) 'Situational coping and coping dispositions in a stressful transaction', *Journal of Personality and Social Psychology*, 66(1), pp. 184-195.

- Carver, C. S., Scheier, M. F. and Weintraub, J. K. (1989) 'Assessing coping strategies: A theoretically based approach', *Journal of Personality and Social Psychology*, 56(2), p. 267.
- Cascio, W. F. (2003) 'Changes in workers, work, and organizations', in *Handbook of Psychology*. s.l.: John Wiley and Sons.
- Cash, M. and Whittingham, K. (2010) 'What facets of mindfulness contribute to psychological well-being and depressive, anxious, and stress-related symptomatology?', *Mindfulness*, 1, pp. 177–182.
- Ch'en, K. K. S. (2015) *Chinese Transformation of Buddhism*. Princeton University Press.
- Chang, K.-C. (2011) 'A path to understanding guanxi in China's transitional economy: Variations on network behavior', *Sociological Theory*, 29(4), pp. 315-339.
- Chang, L. T. (2009) *Factory Girls: From Village to City in a Changing China*. Random House Digital, Inc.
- Chatman, J. (1989) 'Improving interactional organizational research: A model of person-organization fit', *Academy Of Management Review*, 14(3), pp. 333-349.
- Chen, L. and Gable, G. G. (2013) 'Larger or broader: performance implications of size and diversity of the knowledge worker's egocentric network', *Management and Organization Review*, 9(1), pp. 139-165.
- Chen, S. (2017) 'Science journal retracts 107 research papers by Chinese authors', *South China Morning Post*.
- Chen, X. and Wang, K. (2017) 'Zhèngniàn míngxiǎng xùnliàn duì dàxuéshēng xīnlǐ jiànkāng hé shuǐmián zhìliàng de gānyù zuòyòng', *Zhōngguó Jiànkāng Xīnlǐ Xué Zázhi*, 2, p. 6.
- Chen, X., Zhou, H. and Wang, Y. Y. (2017) 'Zhèngniàn fùmǔ xīn: Zhèngniàn jiàoyǎng lǐlùn, jīzhì jí gānyù', *Xīnlǐ Kēxué Jīnzhǎn*, 25(6), p. 13.
- Cheng, C., Feixue, W. and Golden, D. L. (2010) 'Unpacking cultural differences in interpersonal flexibility: Role of culture-related personality and situational factors', *Journal of Cross-Cultural Psychology*, 42(3), pp. 425-444.
- Child, J. (2009) 'Context, comparison, and methodology in Chinese management research', *Management and Organization Review*, 5(1), pp. 57-73.
- China Internet Network Information Center (2018) *Statistical Report on Internet Development in China*. Available at: <https://cnnic.com.cn/IDR/ReportDownloads/201807/P020180711391069195909.pdf> (Accessed: 23 February, 2019).
- Chung, G. H., Du, J. and Choi, J. N. (2014) 'How do employees adapt to organizational change driven by cross-border M&As? A case in China', *Journal of World Business*, 49(1), pp. 78-86.

- Chung, S.-H., Su, Y.-F. and Su, S.-W. (2012) 'The impact of cognitive flexibility on resistance to organizational change', *Social Behavior and Personality*, 40(5), pp. 735-745.
- Clegg, S. and Hardy, C. (1999) *Studying Organization: Theory and Method*. SAGE Publications.
- Coch, L. and French Jr, J. R. (1948) 'Overcoming resistance to change', *Human Relations*, 1(4), pp. 512-532.
- Collins, D. (1997) 'Knowledge work or working knowledge? Ambiguity and confusion in the analysis of the "knowledge age"', *Employee Relations*, 19(1), pp. 38-50.
- Colvile, R. (2016) *The Great Acceleration: How the World is Getting Faster, Faster*. 1st edn. s.l.: Bloomsbury Publishing.
- Colzato, L., Szapora, A. and Hommel, B. (2012) 'Meditate to create: The impact of focused-attention and open-monitoring training on convergent and divergent thinking', *Frontiers in Psychology*, 3(116).
- Connor, C. (1992) 'Staff training in libraries: The implications of automation', *Library Management*, 13(6), pp. 15-24.
- Cooley, F. E. (1986) "'Technofear" busting', *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 59(7), pp. 310-311.
- Cordata, J. (1998) *Rise of the Knowledge Worker*. Newtown, MA: Butterworth—Heinemann.
- Creswell, J. D. (2017) 'Mindfulness interventions', *Annual Review of Psychology*, 68, pp. 491-516.
- Creswell, J. D., Way, B. M., Eisenberger, N. I. and Lieberman, M. D. (2007) 'Neural correlates of dispositional mindfulness during affect labeling', *Psychosomatic Medicine*, 69(6), pp. 560-565.
- Crompton, R. (2008) *Class and Stratification*. s.l.: Polity.
- Dane, E. (2010) 'Paying attention to mindfulness and its effects on task performance in the workplace', *Journal of Management*, 37(4), pp. 997-1018.
- Danermark, B., Ekstrom, M., Jakobsen, L. and Karlsson, J. C. (2002) *Explaining Society: Critical Realism in the Social Sciences*. Routledge.
- Darwin, C. (1872) *The Origin of Species by Means of Natural Selection*. 6th edn. s.l.: Watts/John Murray.
- Davenport, T. H. (2005) *Thinking for a Living: How to Get Better Performances And Results from Knowledge Workers*. s.l.: Harvard Business Review Press.
- Davenport, T. H. and Beck, J. C. (2002) *The Attention Economy: Understanding the New Currency of Business*. Harvard Business School Press.

- Davenport, T. O. (1999) *Human Capital: What It Is and Why People Invest It*. s.l.: Jossey-Bass Inc Pub.
- Davidson, R. J. and Dahl, C. J. (2018) 'Outstanding challenges in scientific research on mindfulness and meditation', *Perspectives on Psychological Science*, 13(1), pp. 62-65.
- Davidson, R. J. and Kaszniak, A. W. (2015) 'Conceptual and methodological issues in research on mindfulness and meditation', *American Psychologist*, 70(7), pp. 581-592.
- Davis, G. B. (2003) 'Affordances of ubiquitous computing and productivity in knowledge work', *Workshop on Ubiquitous Computing Environments*. Cleveland, Ohio. Citeseer.
- De Graaff, N. and Van Apeldoorn, B. (2018) 'US–China relations and the liberal world order: contending elites, colliding visions?', *International affairs*, 94(1), pp. 113-131.
- Dekeyser, M., Raes, F., Leijssen, M., Leysen, S. and Dewulf, D. (2008) 'Mindfulness skills and interpersonal behaviour', *Personality and Individual Differences*, 44(5), pp. 1235-1245.
- Deng, I. (2018) *Tencent's WeChat hits 1 billion milestone as Lunar New Year boosts monthly active users*. Available at: <http://www.scmp.com/tech/apps-gaming/article/2135690/tencents-wechat-hits-1-billion-milestone-lunar-new-year-boosts> (Accessed: May 31, 2018 2018).
- Deng, Y.-Q., Liu, X.-H., Rodriguez, M. A. and Xia, C.-Y. (2011) 'The Five Facet Mindfulness Questionnaire: Psychometric properties of the Chinese version', *Mindfulness*, 2(2), pp. 123-128.
- Denzin, N. K. and Lincoln, Y. S. (2017) *The SAGE Handbook of Qualitative Research*. SAGE Publications.
- Derrida, J. (1988) *Limited Inc*. Northwestern University Press.
- Desbordes, G., Gard, T., Hoge, E. A., Hölzel, B. K., Kerr, C., Lazar, S. W., Olendzki, A. and Vago, D. R. (2015) 'Moving beyond mindfulness: defining equanimity as an outcome measure in meditation and contemplative research', *Mindfulness*, 6(2), pp. 356-372.
- Diaz, I., Chiaburu, D. S., Zimmerman, R. D. and Boswell, W. R. (2012) 'Communication technology: Pros and cons of constant connection to work', *Journal of Vocational Behavior*, 80(2), pp. 500-508.
- Diehl, M., Chui, H., Hay, E. L., Lumley, M. A., Grünh, D. and Labouvie-Vief, G. (2014) 'Change in coping and defense mechanisms across adulthood: Longitudinal findings in a European American sample', *Developmental Psychology*, 50(2), pp. 634-648.
- Diener, E., Suh, E. M., Lucas, R. E. and Smith, H. L. (1999) 'Subjective well-being: Three decades of progress', *Psychological bulletin*, 125(2), pp. 276-302.

- Dimeff, L. and Linehan, M. M. (2001) 'Dialectical behavior therapy in a nutshell', *The California Psychologist*, 34(3), pp. 10-13.
- Dobkin, P. L. (2008) 'Mindfulness-based stress reduction: What processes are at work?', *Complementary Therapies in Clinical Practice*, 14(1), pp. 8-16.
- Dreyfus, G. (2013) 'Is mindfulness present-centred and non-judgmental? A discussion of the cognitive dimensions of mindfulness', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. s.l.: Taylor and Francis, pp. 41-54.
- Drucker, P. (1994) 'The age of social transformation', *The Atlantic Monthly*, 274(November 1994), pp. 53-80.
- Duan, W. (2014) 'Zhèngniàn yánjiū de fēnqí: Gàiniàn yǔ cèliáng', *Xīnlǐ Kēxué Jìnzhǎn*, 22(10), p. 11.
- Dwyer, S. C. and Buckle, J. L. (2009) 'The space between: On being an insider-outsider in qualitative research', *International journal of qualitative methods*, 8(1), pp. 54-63.
- Easton, G. (2010) 'Critical realism in case study research', *Industrial marketing management*, 39(1), pp. 118-128.
- Edwards, R. and Holland, J. (2013) 'What are the power and emotional dynamics of qualitative interviews?', in *What is Qualitative Interviewing?* London: Bloomsbury Academic, pp. 77-88.
- Efimova, L. (2004) *5th European Conference on Organizational Knowledge, Learning and Capabilities*. Innsbruck, Austria. OKLC.
- El-Farr, H. K. (2009) 'Knowledge work and workers: A critical literature review', *Leed University Business School, Working Paper Series*, 1(1), pp. 1-15.
- Elder-Vass, D. (2012) *The Reality of Social Construction*. Cambridge University Press.
- Engle, R. W., Tuholski, S. W., Laughlin, J. E. and Conway, A. R. (1999) 'Working memory, short-term memory, and general fluid intelligence: a latent-variable approach', *Journal of Experimental Psychology*, 128(3), p. 309.
- Etherington, K. (2004) *Becoming a Reflexive Researcher - Using Our Selves in Research*. s.l.: Jessica Kingsley Publishers.
- Evans, A. M., Carney, J. S. and Wilkinson, M. (2013) 'Work–Life Balance for Men: Counseling Implications', *Journal of Counseling & Development*, 91(4), pp. 436-441.
- Farias, M. and Wikholm, C. (2016) 'Has the science of mindfulness lost its mind?', *BJPsych Bulletin*, 40(6), pp. 329-332.
- Festinger, L. (1962) *A theory of cognitive dissonance (2)*. Stanford university press.

- Finch, J. (1984) "'It's great to have someone to talk to": the ethics and politics of interviewing women ', in Bell, C. and Roberts, H. (eds.) *Social Researching: Politics, Problems, Practice*. London: Routledge and Kegan Paul.
- Fincher, L. H. (2016) *Leftover Women: The Resurgence of Gender Inequality in China*. Zed Books Ltd.
- Fish, E. (2015) *China's Millennials: The Want Generation*. Rowman & Littlefield.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A. and Gruen, R. J. (1986) 'Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes', *Journal of Personality and Social Psychology*, 50(5), p. 992.
- Folkman, S. and Moskowitz, J. T. (2004) 'Coping: Pitfalls and promise', *Annual Review of Psychology*, 55(1), pp. 745-774.
- Foucault, M. and Ewald, F. (2003) *"Society Must Be Defended": Lectures at the Collège de France, 1975-1976 (1)*. Macmillan.
- Foureur, M., Besley, K., Burton, G., Yu, N. and Crisp, J. (2013) 'Enhancing the resilience of nurses and midwives: Pilot of a mindfulnessbased program for increased health, sense of coherence and decreased depression, anxiety and stress', *Contemporary Nurse*, 45(1), pp. 114-125.
- Fox, K. C. R., Nijeboer, S., Dixon, M. L., Floman, J. L., Ellamil, M., Rumak, S. P., Sedlmeier, P. and Christoff, K. (2014) 'Is meditation associated with altered brain structure? A systematic review and meta-analysis of morphometric neuroimaging in meditation practitioners', *Neuroscience & Biobehavioral Reviews*, 43, pp. 48-73.
- Fried, Y., Tiegs, R. B., Naughton, T. J. and Ashforth, B. E. (1996) 'Managers' reactions to a corporate acquisition: A test of an integrative model', *Journal of Organizational Behavior*, 17(5), pp. 401-427.
- Fugate, M. and Kinicki, A. J. (2008) 'A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change', *Journal of Occupational & Organizational Psychology*, 81(3), pp. 503-527.
- Gard, T., Taquet, M., Dixit, R., Hölzel, B. K., de Montjoye, Y.-A., Brach, N., Salat, D. H., Dickerson, B. C., Gray, J. R. and Lazar, S. W. (2014) 'Fluid intelligence and brain functional organization in aging yoga and meditation practitioners', *Frontiers in Aging Neuroscience*, 6, p. 76.
- Georgsdottir, A. S. and Getz, I. (2004) 'How flexibility facilitates innovation and ways to manage it in organizations', *Creativity and Innovation Management*, 13(3), pp. 166-175.
- Gergen, K. J. (2009) *Realities and Relationships: Soundings in Social Construction*. Harvard University Press.
- Germer, C. K., Siegel, R. D. and Fulton, P. R. (2005) *Mindfulness and Psychotherapy*. s.l.: Guilford Publications.

- Giluk, T. L. (2009) 'Mindfulness, Big Five personality, and affect: A meta-analysis', *Personality and Individual Differences*, 47(8), pp. 805-811.
- Glaser, B. G. and Strauss, A. L. (2009) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine Transaction.
- Glick, W. H., Huber, G. P., Miller, C. C., Doty, D. H. and Sutcliffe, K. M. (1990) 'Studying changes in organizational design and effectiveness: Retrospective event histories and periodic assessments', *Organization Science*, 1(3), pp. 293-312.
- Global Leadership & Organizational Behavior Effectiveness (2004) *Results for China*. Available at: <http://globe.bus.sfu.ca/results/countries/CHN> (Accessed: August 28 2016).
- Glomb, T. M., Duffy, M. K., Bono, J. E. and Yang, T. (2011) 'Mindfulness at work', *Research in Personnel and Human Resources Management*, 30, p. 115.
- Goldstein, I. L. and Gilliam, P. (1990) 'Training system issues in the year 2000', *American Psychologist*, 45(2), pp. 134-143.
- Goldthorpe, J. H. (1960) 'Social stratification in industrial society', *The Sociological Review*, 8(S1), pp. 97-122.
- Goleman, D. (2006) *Emotional Intelligence*. s.l.: Bantam.
- Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., Baer, R. A., Brewer, J. A. and Lazar, S. W. (2015) 'Contemplating mindfulness at work: An integrative review', *Journal of Management*, 42(1), pp. 114-142.
- Good, I. J. (1966) 'Speculations concerning the first ultraintelligent machine', in *Advances in computers* (6). Elsevier, pp. 31-88.
- Goyal, M., Singh, S. and Sibinga, E. S. (2014) 'Meditation programs for psychological stress and well-being: A systematic review and meta-analysis', *JAMA Internal Medicine*, 174(3), pp. 357-368.
- Griffin, B. and Hesketh, B. (2003) 'Adaptable behaviours for successful work and career adjustment', *Australian Journal of Psychology*, 55(2), pp. 65-73.
- Griffin, M. A., Neal, A. and Parker, S. K. (2007) 'A new model of work role performance: Positive behavior in uncertain and interdependent contexts', *Academy of Management Journal*, 50(2), pp. 327-347.
- Gross, J. J. (1998) 'The emerging field of emotion regulation: An integrative review', *Review of General Psychology*, 2(3), pp. 271-299.
- Grossman, P. (2011) 'Defining mindfulness by how poorly I think I pay attention during everyday awareness and other intractable problems for psychology's (re)invention of mindfulness: Comment on Brown et al. (2011)', *Psychological Assessment*, 23(4), pp. 1034-1040.

Grossman, P., Kappos, L., Gensicke, H., D'Souza, M., Mohr, D. C., Penner, I. K. and Steiner, C. (2010) 'MS quality of life, depression, and fatigue improve after mindfulness training - A randomized trial', *Neurology*, 75(13), pp. 1141-1149.

Grossman, P. and Van Dam, N. T. (2013) 'Mindfulness, by any other name...: Trials and tribulations of sati in Western psychology and science', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. Taylor and Francis, pp. 218-239.

Gu, F. and Nolan, J. (2015) 'Performance appraisal in Western and local banks in China: the influence of firm ownership on the perceived importance of guanxi', *The International Journal of Human Resource Management*, pp. 1-21.

Guest, G., Bunce, A. and Johnson, L. (2006) 'How many interviews are enough?', *Field Methods*, 18(1), pp. 59-82.

Guo, Y. (2002) 'Zhi shi yuan gong de ji li xiao long fen xi', *Dang Dai Jing Ji*, (11), pp. 63-66.

Hafenbrack, A. C. and Vohs, K. D. (2018) 'Mindfulness meditation impairs task motivation but not performance', *Organizational Behavior and Human Decision Processes*, 147, pp. 1-15.

Hagel, J., Brown, J. S. and Davison, L. (2010) 'Are all employees knowledge workers?', *Harvard Business Review*.

Harré, R. (1961) *Theories and Things*. Sheed and Ward.

Harvey, D. (1996) *Justice, Nature, and the Geography of Difference*. Blackwell.

Hasenkamp, W., Wilson-Mendenhall, C. D., Duncan, E. and Barsalou, L. W. (2012) 'Mind wandering and attention during focused meditation: A fine-grained temporal analysis of fluctuating cognitive states', *NeuroImage*, 59(1), pp. 750-760.

Hassard, J. and Parker, M. (1993) *Postmodernism and Organizations*. SAGE Publications.

Heriot-Watt University (2017) 'University Research Ethics Policy'.

Herndon, F. (2008) 'Testing mindfulness with perceptual and cognitive factors: External vs. internal encoding, and the cognitive failures questionnaire', *Personality and Individual Differences*, 44(1), pp. 32-41.

Herold, D. M., Fedor, D. B. and Caldwell, S. D. (2007) 'Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change', *Journal of Applied Psychology*, 92(4), pp. 942-951.

Higgins, C., Duxbury, L. and Lee, C. (1994) 'Impact of life-cycle stage and gender on the ability to balance work and family responsibilities', *Family relations*, pp. 144-150.

Hilal, A. H. and Alabri, S. S. (2013) 'Using NVivo for data analysis in qualitative research', *International Interdisciplinary Journal of Education*, 2(2), pp. 181-186.

- Hilbert, M. and López, P. (2011) 'The world's technological capacity to store, communicate, and compute information', *Science*, 332(6025), pp. 60-65.
- Hofstede, G. (2001) *Culture's Consequences*. 2nd edn. s.l.: Sage Publications.
- Hofstede, G. and Bond, M. H. (1988) 'The Confucius connection: From cultural roots to economic growth', *Organizational Dynamics*, 16(4), pp. 5-21.
- Hohaus, L. C. and Spark, J. (2013) 'Getting better with age: do mindfulness & psychological well-being improve in old age?', *European Psychiatry*, 28, p. 1.
- Holsapple, C. W. and Jones, K. (2004) 'Exploring primary activities of the knowledge chain', *Knowledge and Process Management*, 11(3), pp. 155-174.
- Holt, D. T., Armenakis, A. A., Feild, H. S. and Harris, S. G. (2007) 'Readiness for organizational change', *The Journal of Applied Behavioral Science*, 43(2), pp. 232-255.
- Hou, J., Wong, S. Y.-S., Lo, H. H.-M., Mak, W. W.-S. and Ma, H. S.-W. (2014) 'Validation of a Chinese version of the Five Facet Mindfulness Questionnaire in Hong Kong and development of a short form', *Assessment*, 21(3), pp. 363-371.
- Hou, Z.-J., Leung, S. A., Li, X., Li, X. and Xu, H. (2012) 'Career Adapt-Abilities Scale—China Form: Construction and initial validation', *Journal of Vocational Behavior*, 80(3), pp. 686-691.
- Huang, J. L., Ryan, A. M., Zabel, K. L. and Palmer, A. (2014) 'Personality and adaptive performance at work: A meta-analytic investigation', *Journal of Applied Psychology*, 99(1), p. 162.
- Huebner, J. (2005) 'A possible declining trend for worldwide innovation', *Technological Forecasting and Social Change*, 72(8), pp. 980-986.
- Hunter, J. and Chaskalson, M. (2013) 'Making the mindful leader', in *The Wiley-Blackwell Handbook of the Psychology of Leadership, Change, and Organizational Development*. s.l.: John Wiley and Sons, pp. 195-219.
- Hyland, T. (2015) 'McMindfulness in the workplace: vocational learning and the commodification of the present moment', *Journal of Vocational Education & Training*, 67(2), pp. 219-234.
- Hädrich, T. (2008) 'Situation-oriented provision of knowledge services', *Information Systems*.
- Hölzel, B. K., Carmody, J., Evans, K. C., Hoge, E. A., Dusek, J. A., Morgan, L., Pitman, R. K. and Lazar, S. W. (2010) 'Stress reduction correlates with structural changes in the amygdala', *Social Cognitive and Affective Neuroscience*, 5(1), pp. 11-17.
- IDC (2018a) *Data Age 2025: The Digitization of the World From Edge to Core*. Available at: <https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagate-dataage-whitepaper.pdf> (Accessed: 24 February 2019).

IDC (2018b) *The China Datasphere: Primed to Be the Largest Datasphere by 2025*. Available at: <https://www.seagate.com/files/www-content/our-story/trends/files/data-age-china-idc.pdf> (Accessed: 24 February 2019).

IDC (2018c) *Worldwide Semiannual Robotics and Drones Spending Guide*.

Incitez China (2012) 'It Took Tencent Weixin 433 Days to Reach 100 Million Users'.

Jaeggi, S. M., Buschkuhl, M., Jonides, J. and Perrig, W. J. (2008) 'Improving fluid intelligence with training on working memory', *Proceedings of the National Academy of Sciences of the United States of America*, 105(19), pp. 6829-6833.

Jain, S., Shapiro, S. L., Swanick, S., Roesch, S. C., Mills, P. J., Bell, I. and Schwartz, G. E. (2007) 'A randomized controlled trial of mindfulness meditation versus relaxation training: effects on distress, positive states of mind, rumination, and distraction', *Annals of Behavioral Medicine*, 33(1), pp. 11-21.

Jamieson, S. D. and Tuckey, M. R. (2017) 'Mindfulness interventions in the workplace: A critique of the current state of the literature', *Journal of Occupational Health Psychology*, 22(2), pp. 180-193.

Jankowicz, D. (2016) *Special Issue of Personal Construct Theory and Practice: Proceedings of the XIIIth European Personal Construct Association Conference*. Padua.

Jankowicz, D., O'Farrell, P. and Wallace, W. (2016) *Introduction to Business Research I*. Edinburgh Business School.

Janssen, S. and Mohrenweiser, J. (2018) 'The Shelf Life of Incumbent Workers during Accelerating Technological Change: Evidence from a Training Regulation Reform'.

Jiang, L. (2011) 'Incumbent firm invention in emerging fields evidence from the semiconductor industry', *Strategic Management Journal*, 32(1), pp. 55-75.

Johnston, C. S. (2016) 'A systematic review of the career adaptability literature and future outlook', *Journal of Career Assessment*, pp. 1-28.

Judge, T. and Ferris, G. (1992) 'The elusive criterion of fit in human resources staffing decisions', *Human Resource Planning*, 15(4), pp. 47-67.

Judge, T. A., Locke, E. A. and Durham, C. C. (1997) 'The dispositional causes of job satisfaction: A core evaluations approach', *Research in Organisational Behavior*, 19, pp. 151-188.

Judge, T. A., Thoresen, C. J., Pucik, V. and Welbourne, T. M. (1999) 'Managerial coping with organizational change: A dispositional perspective', *Journal of Applied Psychology*, 84(1), pp. 107-122.

Jundt, D. K., Shoss, M. K. and Huang, J. L. C. J. O. B. R. (2015) 'Individual adaptive performance in organizations: A review', *Journal of Organizational Behavior*, 36(S1), pp. S53-S71.

Kabat-Zinn, J. (1982) 'An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results', *General Hospital Psychiatry*, 4(1), pp. 33-47.

Kabat-Zinn, J. (1994) *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. New York: Hyperion.

Kabat-Zinn, J. (2013a) *Full Catastrophe Living, Revised Edition: How to cope with stress, pain and illness using mindfulness meditation*. s.l.: Little, Brown Book Group.

Kabat-Zinn, J. (2013b) 'Some reflections on the origins of MBSR, skilful means, and the trouble with maps', in Williams, J. M. G. and Kabat-Zinn, J. (eds.) *Mindfulness: Diverse Perspectives on Its Meaning, Origins and Applications*. Taylor and Francis.

Kabat-Zinn, J., Lipworth, L. and Burney, R. (1985) 'The clinical use of mindfulness meditation for the self-regulation of chronic pain', *Journal of Behavioral Medicine*, 8(2), pp. 163-190.

Kabat-Zinn, J., Wheeler, E., Light, T., Skillings, A., Scharf, M. J., Cropley, T. G., Hosmer, D. and Bernhard, J. D. (1998) 'Influence of a mindfulness meditation-based stress reduction intervention on rates of skin clearing in patients with moderate to severe psoriasis undergoing photo therapy (UVB) and photochemotherapy (PUVA)', *Psychosomatic Medicine*, 60(5), pp. 625-632.

Kadtke, J. and Wells, I. (2014) *Policy Challenges of Accelerating Technological Change: Security Policy and Strategy Implications of Parallel Scientific Revolutions*. Center for Technology and National Security Policy, National Defense University.

Kadziolka, M. J., Di Pierdomenico, E.-A. and Miller, C. J. (2016) 'Trait-like mindfulness promotes healthy self-regulation of stress', *Mindfulness*, 7(1), pp. 236-245.

Kahneman, D. (2011) *Thinking, Fast and Slow*. s.l.: Macmillan.

Karkouljian, S. and Halawi, L. (2007) 'Women and work/life conflict at higher educational institutions'.

Karkouljian, S., Srour, J. and Sinan, T. (2016) 'A gender perspective on work-life balance, perceived stress, and locus of control', *Journal of Business Research*, 69(11), pp. 4918-4923.

Kassin, S., Fein, S. and Markus, H. R. (2013) *Social Psychology*. s.l.: Cengage Learning.

Kaufman, C. F., Lane, P. M. and Lindquist, J. D. (1991) 'Time congruity in the organization: A proposed quality-of-life framework', *Journal of Business and Psychology*, 6(1), pp. 79-106.

Kelly, E. L., Ammons, S. K., Chermack, K. and Moen, P. (2010) 'Gendered Challenge, Gendered Response', *Gender & Society*, 24(3), pp. 281-303.

- Keng, S.-L., Robins, C. J., Smoski, M. J., Dagenbach, J. and Leary, M. R. (2013) 'Reappraisal and mindfulness: A comparison of subjective effects and cognitive costs', *Behaviour Research and Therapy*, 51(12), pp. 899-904.
- Keng, S.-L., Smoski, M. J. and Robins, C. J. (2011) 'Effects of mindfulness on psychological health: A review of empirical studies', *Clinical Psychology Review*, 31(6), pp. 1041-1056.
- Kilduff, M. and Mehra, A. (1997) 'Postmodernism and organizational research', *The Academy of Management Review*, 22(2), p. 453.
- Kirton, M. (1976) 'Adaptors and innovators: A description and measure', *Journal of Applied Psychology*, 61(5), pp. 622-629.
- Kirton, M. J. (2003) *Adaption-Innovation: In the Context of Diversity and Change*. Psychology Press.
- Klatt, M., Norre, C., Reader, B., Yodice, L. and White, S. (2016) 'Mindfulness in Motion: a Mindfulness-based intervention to reduce stress and enhance quality of sleep in Scandinavian employees', *Mindfulness*, pp. 1-8.
- Klatt, M., Steinberg, B. and Duchemin, A.-M. (2015) 'Mindfulness in Motion (MIM): An onsite mindfulness based intervention (MBI) for chronically high stress work environments to increase resiliency and work engagement', *JoVE (Journal of Visualized Experiments)*, (101), pp. e52359-e52359.
- Klatt, M. D., Buckworth, J. and Malarkey, W. B. (2009) 'Effects of low-dose mindfulness-based stress reduction (MBSR-ld) on working adults', *Health Education and Behavior*, 36(3), pp. 601-614.
- Kornfield, J. (1979) 'Intensive insight meditation: A phenomenological study', *The Journal of Transpersonal Psychology*, 11(1), p. 41.
- Koszycki, D., Benger, M., Shlik, J. and Bradwejn, J. (2007) 'Randomized trial of a meditation-based stress reduction program and cognitive behavior therapy in generalized social anxiety disorder', *Behaviour Research and Therapy*, 45(10), pp. 2518-2526.
- Kozlowski, S., Toney, R. J., Mullins, M. E., Weissbein, D. A., Brown, K. G. and Bell, B. S. (2001) 'Developing adaptability: A theory for the design of integrated-embedded training systems', in *Advances in Human Performance and Cognitive Engineering Research*. Emerald Group Publishing Limited, pp. 59-123.
- Kozlowski, S. W. (1998) 'Training and developing adaptive teams: Theory, principles, and research', in Cannon-Bowers, J. A. and Salas, E. (eds.) *Making decisions under stress: Implications for individual and team training*. pp. 115-153.
- Kristof, A. (1996) 'Person-organization fit: an integrative review of its conceptualizations, measurement, and implications', *Personnel Psychology*, 49(1), pp. 1-49.

- Kristof - Brown, A. L., Zimmerman, R. D. and Johnson, E. C. (2005) 'Consequences of individuals' fit at work: A meta-analysis of person-job, person-organisation, person-group, and person-supervisor fit', *Personnel psychology*, 58(2), pp. 281-342.
- Kumar, S., Feldman, G. and Hayes, A. (2008) 'Changes in mindfulness and emotion regulation in an exposure-based cognitive therapy for depression', *Cognitive Therapy and Research*, 32(6), pp. 734-744.
- Kuo, C.-Y. and Yeh, Y.-Y. (2015) 'Reset a task set after five minutes of mindfulness practice', *Consciousness and Cognition*, 35, pp. 98-109.
- Kurpaska, M. (2010) *Chinese Language(s): A Look Through the Prism of The Great Dictionary of Modern Chinese Dialects*. De Gruyter Mouton.
- Kurzweil, R. (2000) *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*. Penguin Publishing Group.
- Kvale, S. and Brinkmann, S. (2009) *InterViews: Learning the Craft of Qualitative Research Interviewing*. SAGE Publications.
- KöNigsheim, C., Lukas, M. and NöTh, M. (2018) 'Individual preferences and the exponential growth bias', *Journal of Economic Behavior and Organization*, 145(C), pp. 352-369.
- Lai, H. H. (2005) 'The religious revival in China', *The Copenhagen Journal of Asian Studies*, 18, pp. 40-64.
- Laland, K. N. and Brown, G. R. (2011) *Sense And Nonsense: Evolutionary Perspectives On Human Behaviour*. s.l.: Oxford University Press.
- Langer, E. J. (2014) *Mindfulness, 25th Anniversary Edition*. s.l.: Da Capo Press.
- Langer, E. J., Blank, A. and Chanowitz, B. (1978) 'The mindlessness of ostensibly thoughtful action: The role of 'placebic' information in interpersonal interaction', *Journal of Personality and Social Psychology*, 36(6), pp. 635-642.
- Lau, M. A., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., Shapiro, S., Carmody, J., Abbey, S. and Devins, G. (2006) 'The Toronto Mindfulness Scale: Development and validation', *Journal of Clinical Psychology*, 62(12), pp. 1445-1467.
- Layder, D. (1990) *The Realist Image in Social Science*. Palgrave Macmillan UK.
- Lazarus, R. S. (1991) *Emotion and Adaptation*. Oxford University Press.
- Lazarus, R. S. and Folkman, S. (1984) *Stress, appraisal, and coping*. Springer Publishing Company.
- Le Pine, J. A., Colquitt, J. A. and Erez, A. (2000) 'Adaptability to changing task contexts: Effects of general cognitive ability, conscientiousness, and openness to experience', *Personnel Psychology*, 53(3), pp. 563-593.

- Legard, R., Keegan, J. and Ward, K. (2003) 'In-depth interviews', in Ritchie, J. and Lewis, J. (eds.) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. s.l.: SAGE Publications (Chapter 6).
- Lei, X. (2005) 'Lun zhi shi yuan gong xin li qi yue guan li', *Jing Ji Wen Ti*, (4), pp. 9-11.
- Lent, R. W. (2018) 'Future of work in the digital world: Preparing for instability and opportunity', *The Career Development Quarterly*, 66(3), pp. 205-219.
- Levy, M. R. and Tasoff, J. (2017) 'Exponential-growth bias and overconfidence', *Journal of Economic Psychology*, 58, pp. 1-14.
- Lewin, K. (1947) 'Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change', *Human Relations*, 1(1), pp. 5-41.
- Leybourne, S. A. (2016) 'Emotionally sustainable change: two frameworks to assist with transition', *International Journal of Strategic Change Management*, 7(1), pp. 23-42.
- Li, M. J., Black, D. S. and Garland, E. L. (2016) 'The Applied Mindfulness Process Scale (AMPS): A process measure for evaluating mindfulness-based interventions', *Personality and Individual Differences*, 93, pp. 6-15.
- Lian, H. (2014) 'The post-1980s generation in China: exploring its theoretical underpinning', *Journal of Youth Studies*, 17(7), pp. 965-981.
- Liao, J. and Wen, P. (2009) 'Review of the study on definition, characters and classification of knowledge worker', *Chinese Journal of Management*, Vol. 6(No. 2), pp. [In Chinese, with English summary.].
- Lincoln, Y. S. and Guba, E. G. (1988) 'Criteria for assessing naturalistic inquiries as reports', *Annual Meeting of the American Educational Research Association*. New Orleans. s.n.
- Luthans, F., Avolio, B. J., Avey, J. B. and Norman, S. M. (2007) 'Positive psychological capital: measurement and relationship with performance and satisfaction', *Personnel Psychology*, 60(3), pp. 541-572.
- Luthans, F. and Youssef, C. M. (2007) 'Emerging positive organizational behavior', *Journal of Management*, 33(3), pp. 321-349.
- Ma, K. (2003) 'Shi ying xing ji xiao', *Shang Ye Yan Jiu*, (22), pp. 15-17.
- Machlup, F. (1962) *The Production and Distribution of Knowledge in the United States* (278). Princeton University Press.
- Macik-Frey, M., Quick, J. C. and Nelson, D. L. (2007) 'Advances in Occupational Health: From a Stressful Beginning to a Positive Future †', *Journal of Management*, 33(6), pp. 809-840.

- Mackenzie, M. J., Carlson, L. E., Munoz, M. and Speca, M. (2007) 'A qualitative study of self-perceived effects of mindfulness-based stress reduction (MBSR) in a psychosocial oncology setting', *Stress and Health*, 23(1), pp. 59-69.
- Malinowski, P. and Lim, H. J. (2015) 'Mindfulness at work: Positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being', *Mindfulness*, 6(6), pp. 1250-1262.
- Mann, S. (2016) *The Research Interview*. s.l.: Palgrave Macmillan UK.
- Martin, A. J., Yu, K., Ginns, P. and Papworth, B. (2016) 'Young people's academic buoyancy and adaptability: a cross-cultural comparison of China with North America and the United Kingdom', *Educational Psychology*, pp. 1-17.
- Martin, G. N., Carlson, N. R. and Buskist, W. (2010) *Psychology*. 4th edn. s.l.: Allyn and Bacon.
- Martinsen, Ø. L. and Furnham, A. (2016) 'The Assimilator–Explorer styles and creativity', *Personality and Individual Differences*, 98, pp. 297-299.
- Masicampo, E. J. and Baumeister, R. F. (2007) 'Relating mindfulness and self-regulatory processes', *Psychological Inquiry*, 18(4), pp. 255-258.
- Maxwell, J. (2012) 'What is realism, and why should qualitative researchers care', *A Realist Approach for Qualitative Research*, pp. 3-13.
- McCosker, H., Barnard, A. and Gerber, R. (2001) 'Undertaking sensitive research: Issues and strategies for meeting the safety needs of all participants', *Forum: Qualitative Social Research*, 2(1).
- McCown, D., Reibel, D. and Micozzi, M. S. (2010) 'Teaching mindfulness', in *A Practical Guide for Clinicians and Educators*. s.l.: Springer.
- McCrae, R. R. and Costa Jr, P. T. (1999) 'A five-factor theory of personality', in *Handbook of Personality: Theory and Research* (2). pp. 139-153.
- McGrath, R. (2013) 'The pace of technology adoption is speeding up', *Harvard Business Review*.
- McSweeney, B. (2002) 'Hofstede's model of national cultural differences and their consequences: A triumph of faith - a failure of analysis', *Human Relations*, 55(1), pp. 89-118.
- McSweeney, B. (2013) 'Fashion founded on a flaw', *International Marketing Review*, 30(5), pp. 483-504.
- Michel, A. and Gonzalez-Morales, G. (2013) 'Reactions to organisational change: An integrated model of health predictors, intervening variables and outcomes', in Oreg, S. (ed.) *The Psychology of Organisational Change*. Cambridge (Chapter 4).

- Miller, J. J., Fletcher, K. and Kabat-Zinn, J. (1995) 'Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders', *General Hospital Psychiatry*, 17(3), pp. 192-200.
- Mindfulness All-Party Parliamentary Group (2015) *Mindful Nation UK*. s.l.: s.n. Available at: http://www.themindfulnessinitiative.org.uk/images/reports/Mindfulness-APPG-Report_Mindful-Nation-UK_Oct2015.pdf (Accessed: May 30, 2017).
- Modis, T. (2002) 'Forecasting the growth of complexity and change', *Technological Forecasting and Social Change*, 69(4), pp. 377-404.
- Moore, A. and Malinowski, P. (2009) 'Meditation, mindfulness and cognitive flexibility', *Consciousness and Cognition*, 18(1), pp. 176-186.
- Moore, G. E. (1998) 'Cramming more components onto integrated circuits', *Proceedings of the IEEE*, 86(1), pp. 82-85.
- Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B. and Schooler, J. W. (2013) 'Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering', *Psychological Science*, 24(5), pp. 776-781.
- Muchinsky, P. M. and Monahan, C. J. (1987) 'What is person-environment congruence? Supplementary versus complementary models of fit', *Journal of Vocational Behavior*, 31(3), pp. 268-277.
- Muir, P., Li, S., Lou, S., Wang, D., Spakowicz, D. J., Salichos, L., Zhang, J., Weinstock, G. M., Isaacs, F. and Rozowsky, J. (2016) 'The real cost of sequencing: scaling computation to keep pace with data generation', *Genome biology*, 17(1), p. 53.
- Murray, S. L. and Khan, Z. (2014) 'Impact of interruptions on white collar workers', *Engineering Management Journal*, 26(4), pp. 23-28.
- Nansen, B., Arnold, M., Gibbs, M. and Davis, H. (2010) 'Time, space and technology in the working - home: an unsettled nexus', *New Technology, Work and Employment*, 25(2), pp. 136-153.
- Ngai, P. (2005) *Made in China: Women Factory Workers in a Global Workplace*. Duke University Press.
- Nhat Hanh, T. (1975) *The Miracle of Mindfulness: An Introduction to the Practice of Meditation*. Boston: Beacon Press.
- Nugent, P., Moss, D., Barnes, R. and Wilks, J. (2011) 'Clear(ing) space: mindfulness - based reflective practice', *Reflective Practice*, 12(1), pp. 1-13.
- Näswall, K., Sverke, M. and Hellgren, J. (2005) 'The moderating role of personality characteristics on the relationship between job insecurity and strain', *Work & Stress*, 19(1), pp. 37-49.
- Oakley, A. (1981) 'Interviewing women: a contradiction in terms', in Roberts, H. (ed.) *Doing Feminist Research*. London: Routledge and Kegan Paul.

- Olsen, T. H. and Stensaker, I. (2014) 'A change-recipient perspective on training during organizational change', *International Journal of Training & Development*, 18(1), pp. 22-36.
- Olsson, A.-C., Enkvist, T. and Juslin, P. (2006) 'Go with the flow: How to master a nonlinear multiple-cue judgment task', *Journal of experimental psychology. Learning, memory, and cognition*, 32(6), pp. 1371-1384.
- Oman, D., Shapiro, S. L., Thoresen, C. E., Plante, T. G. and Flinders, T. (2008) 'Meditation lowers stress and supports forgiveness among college students: A randomized controlled trial', *Journal of American College Health*, 56(5), pp. 569-578.
- Oreg, S. (2003) 'Resistance to change: Developing an individual differences measure', *Journal of Applied Psychology*, 88(4), pp. 680-693.
- Oreg, S., Bayazit, M., Vakola, M., Arciniega, L., Armenakis, A., Barkauskiene, R., Bozionelos, N., Fujimoto, Y., González, L. and Han, J. (2008) 'Dispositional resistance to change: Measurement equivalence and the link to personal values across 17 nations', *Journal of Applied Psychology*, 93(4), p. 935.
- Orlikowski, W. J. (1996) 'Improvising organizational transformation over time: A situated change perspective', *Information Systems Research*, 7(1), pp. 63-92.
- Orr, L. M. and Hauser, W. J. (2008) 'A re-inquiry of Hofstede's cultural dimensions: A call for 21st century cross-cultural research', *Marketing Management Journal*, 18(2), pp. 1-19.
- Ostafin, B. D. and Kassman, K. T. (2012) 'Stepping out of history: Mindfulness improves insight problem solving', *Consciousness and Cognition*, 21(2), pp. 1031-1036.
- Patalas-Maliszewska, J. (2013) 'Introduction', in *Managing Knowledge Workers: Value Assessment, Methods, and Application Tools*. Berlin, Heidelberg: Springer Berlin Heidelberg, pp. 1-6.
- Patton, M. Q. and Fund, R. E. C. M. (2002) *Qualitative Research & Evaluation Methods*. SAGE Publications.
- Paulhus, D. L. and Martin, C. L. (1988) 'Functional flexibility: A new conception of interpersonal flexibility', *Journal of Personality and Social Psychology*, 55(1), pp. 88-101.
- Paus, E. (2018) *Confronting Dystopia: The New Technological Revolution and the Future of Work*. Cornell University Press.
- Pawson, R. and Tilley, N. (1997) *Realistic Evaluation*. SAGE Publications.
- Peng, H. (2012) 'Counterproductive work behavior among Chinese knowledge workers', *International Journal of Selection and Assessment*, 20(2), pp. 119-138.
- Pew Research Center (2012) *The Global Religious Landscape*. Washington: Pew Research Center's Forum

on Religion & Public Life. Available at: <http://www.pewforum.org/global-religious-landscape.aspx>.

Phillips, N. (2016) 'Rising stars', *Nature*, 535(7613), pp. S49-S49.

Pidgeon, A. M. and Keye, M. (2014) 'Relationship between resilience, mindfulness, and psychological well-being in university students', *International Journal of Liberal Arts and Social Science*, 2(5), p. 27.

Ployhart, R. E. and Bliese, P. D. (2006) 'Individual adaptability (I-ADAPT) theory: Conceptualizing the antecedents, consequences, and measurement of individual differences in adaptability', in *Understanding Adaptability: A Prerequisite for Effective Performance Within Complex Environments*. Emerald Group Publishing Limited, pp. 3-39.

Podsakoff, P. M. and Organ, D. W. (1986) 'Self-reports in organizational research: Problems and prospects', *Journal of management*, 12(4), pp. 531-544.

Potter, P. B. (2003) 'Belief in control: Regulation of religion in China', *The China Quarterly*, 174, pp. 317-337.

Powell, W. W. and Snellman, K. (2004) 'The Knowledge Economy', *Annual Review of Sociology*, 30, pp. 199-220.

Pratten, S. (2013) 'Critical Realism and the process account of emergence', *Journal for the Theory of Social Behaviour*, 43(3), pp. 251-279.

Pulakos, E. D., Arad, S., Donovan, M. A. and Plamondon, K. E. (2000) 'Adaptability in the workplace: Development of a taxonomy of adaptive performance', *Journal of Applied Psychology*, 85(4), pp. 612-624.

Pulakos, E. D., Schmitt, N., Dorsey, D. W., Arad, S., Borman, W. C. and Hedge, J. W. (2002) 'Predicting adaptive performance: Further tests of a model of adaptability', *Human Performance*, 15(4), pp. 299-323.

Purser, R. and Loy, D. (2013) 'Beyond McMindfulness', *Huffington Post*, May 30, 2017. Available at: http://www.huffingtonpost.com/ron-purser/beyond-mcmindfulness_b_3519289.html.

Rabenu, E. and Tziner, A. (2018) 'Adapting to the new era: Necessary steps for advancing a robust science', *Amfiteatru Economic*, 20(48), pp. 470-476.

Raes, F., Dewulf, D., Van Heeringen, C. and Williams, J. M. G. (2009) 'Mindfulness and reduced cognitive reactivity to sad mood: Evidence from a correlational study and a non-randomized waiting list controlled study', *Behaviour Research and Therapy*, 47(7), pp. 623-627.

Raes, F. and Williams, J. M. G. (2010) 'The relationship between mindfulness and uncontrollability of ruminative thinking', *Mindfulness*, 1, pp. 199-203.

- Ralston, D. A., Pounder, J., Lo, C. W. H., Wong, Y.-Y., Egri, C. P. and Stauffer, J. (2006) 'Stability and change in managerial work values: A longitudinal study of China, Hong Kong, and the U.S.', *Management and Organization Review*, 2(1), pp. 67-94.
- Random House (2001) 'Webster's Dictionary' 4th Edition. New York: Ballantine, p. 850.
- Rasmussen, M. K. and Pidgeon, A. M. (2011) 'The direct and indirect benefits of dispositional mindfulness on self-esteem and social anxiety', *Anxiety, Stress, & Coping*, 24(2), pp. 227-233.
- Reb, J., Narayanan, J. and Chaturvedi, S. (2014) 'Leading mindfully: Two studies on the influence of supervisor trait mindfulness on employee well-being and performance', *Mindfulness*, 5(1), pp. 36-45.
- Reed, M. (2003) 'The agency/structure dilemma in organization theory', in Knudsen, C. T., Haridimos (ed.) *The Oxford Handbook of Organization Theory*. Oxford: Oxford University Press, pp. 289-309.
- Reed, M. (2005) 'Reflections on the 'Realist Turn' in organization and management studies', *Journal of Management Studies*, 42(8), pp. 1621-1644.
- Rehman, S. and Azam Roomi, M. (2012) 'Gender and work-life balance: a phenomenological study of women entrepreneurs in Pakistan', *Journal of Small Business and Enterprise Development*, 19(2), pp. 209-228.
- Reinhardt, W., Schmidt, B., Sloep, P. and Drachsler, H. (2011) 'Knowledge worker roles and actions — Results of two empirical studies', *Knowledge and Process Management*, 18(3), pp. 150-174.
- Remenyi, D., Williams, B., Money, A. and Swartz, E. (1998) *Doing Research in Business and Management: An Introduction to Process and Method*. London: SAGE Publications.
- Renzetti, C. M. and Lee, R. M. (1993) *Researching Sensitive Topics*. Newbury Park, CA: Sage.
- Ritchie, J. and Lewis, J. (2003) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. s.l.: SAGE Publications.
- Ritchie, J. and Spencer, L. (1994) 'Qualitative data analysis for applied policy research', in Bryman, A. and Burgess, R. (eds.) *Analysing Qualitative Data*. Taylor and Francis, pp. 173-194.
- Robinson, O. and Griffiths, A. (2005) 'Coping with the stress of transformational change in a government department', *The Journal of Applied Behavioral Science*, 41(2), pp. 204-221.
- Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C. and Harrison, J. (2013) 'Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials', *Journal of Educational Psychology*, 105(3), pp. 787-804.

- Rosen, S. (2009) 'Contemporary Chinese youth and the state', *The Journal of Asian Studies*, 68(2), pp. 359-369.
- Rotter, J. B. (1966) 'Generalized expectancies for internal versus external control of reinforcement', *Psychological Monographs: General and Applied*, 80(1), p. 1.
- Sahdra, B. K., Shaver, P. R. and Brown, K. W. (2010) 'A scale to measure nonattachment: A buddhist complement to Western research on attachment and adaptive functioning', *Journal of Personality Assessment*, 92(2), pp. 116-127.
- Saunders, M. N. K., Lewis, P. and Thornhill, A. (2015) *Research Methods for Business Students*. 7th edn. s.l.: Pearson Education.
- Savage, M., Devine, F., Cunningham, N., Taylor, M., Li, Y., Hjellbrekke, J., Le Roux, B., Friedman, S. and Miles, A. (2013) 'A new model of social class? Findings from the BBC's Great British Class Survey experiment', *Sociology*, 47(2), pp. 219-250.
- Savickas, M. L. (2005) 'The theory and practice of career construction', in Brown, S. and Lent, R. (eds.) *Career Development and Counseling: Putting Theory and Research to Work (1)*. pp. 42-70.
- Sayer, A. (2005) 'Forward: Why Critical Realism?', in Ackroyd, S. and Fleetwood, S. (eds.) *Critical Realist Applications in Organisation and Management Studies*. Taylor & Francis.
- Sayer, A. (2010) *Method in Social Science: Revised 2nd Edition*. Routledge.
- Scarlett, H. (2016) *Neuroscience for Organizational Change: An Evidence-based Practical Guide to Managing Change*. Kogan Page Publishers.
- Schmidt, A. T. (2016) 'The ethics and politics of mindfulness-based interventions', *Journal of Medical Ethics*, 42(7), p. 450.
- Schneider, B., Goldstein, H. and Smith, D. (1995) 'The Asa Framework: An update', *Personnel Psychology*, 48(4), pp. 747-773.
- Schweller, R. (2018) 'Opposite but compatible nationalisms: A Neoclassical Realist approach to the future of US–China relations', *The Chinese Journal of International Politics*, 11(1), pp. 23-48.
- Scott, D. (2005) 'Critical realism and empirical research methods in education', *Journal of Philosophy of Education*, 39(4), pp. 633-646.
- Sellen, A. J. and Harper, R. H. (2003) *The Myth of the Paperless Office*. s.l.: MIT press.
- Sephton, S. E., Salmon, P., Weissbecker, I., Ulmer, C., Floyd, A., Hoover, K. and Studts, J. L. (2007) 'Mindfulness meditation alleviates depressive symptoms in women with fibromyalgia: Results of a randomized clinical trial', *Arthritis Care and Research*, 57(1), pp. 77-85.

- Shapiro, S. L., Astin, J. A., Bishop, S. R. and Cordova, M. (2005) 'Mindfulness-based stress reduction for health care professionals: Results from a randomized trial', *International Journal of Stress Management*, 12(2), pp. 164-176.
- Shapiro, S. L., Carlson, L. E., Astin, J. A. and Freedman, B. (2006) 'Mechanisms of mindfulness', *Journal of Clinical Psychology*, 62(3), pp. 373-386.
- Shapiro, S. L., Schwartz, G. E. and Bonner, G. (1998) 'Effects of mindfulness-based stress reduction on medical and premedical students', *Journal of Behavioral Medicine*, 21(6), p. 581.
- Shoss, M. K., Witt, L. A. and Vera, D. (2012) 'When does adaptive performance lead to higher task performance?', *Journal of Organizational Behavior*, 33(7), pp. 910-924.
- Sieber, J. E. and Stanley, B. (1988) 'Ethical and professional dimensions of socially sensitive research', *American Psychologist*, 43(1), p. 49.
- Siegel, D. J. (2007) *The Mindful Brain: Reflection And Attunement In The Cultivation Of Well-Being*. s.l.: WW Norton and Company.
- Smallwood, J. and Schooler, J. (2015) 'The science of mind wandering: empirically navigating the stream of consciousness', *Annual Review of Psychology*, 66(1), pp. 487-518.
- Smith, E. M., Ford, J. K. and Kozlowski, S. W. (1997) 'Building adaptive expertise: Implications for training design strategies', in Quiñones, M. A. and Ehrenstein, A. (eds.) *Training for a Rapidly Changing Workplace: Applications of Psychological Research*. Washington, DC: American Psychological Association, pp. 89-118 (Chapter 4).
- Smith, J. A., Jarman, M. and Osborn, M. (1999) 'Doing interpretive phenomenological analysis', in Murray, M. and Chamberlain, K. (eds.) *Qualitative Health Psychology*. Sage, pp. 218-240.
- Snape, D. and Spencer, L. (2003) 'The foundations of qualitative research', in Ritchie, J. and Lewis, J. (eds.) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE Publications, pp. 1-23.
- Somerfield, M. R. and McCrae, R. R. (2000) 'Stress and coping research: Methodological challenges, theoretical advances, and clinical applications', *American Psychologist*, 55(6), pp. 620-625.
- Soucek, R. and Moser, K. (2010) 'Coping with information overload in email communication: Evaluation of a training intervention', *Computers in Human Behavior*, 26(6), pp. 1458-1466.
- Specia, M., Carlson, L. E., Goodey, E. and Angen, M. (2000) 'A randomized, wait-list controlled clinical trial: the effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients', *Psychosomatic Medicine*, 62(5), pp. 613-622.

- Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O. and Ludwig, C. (2015) 'The trajectory of the Anthropocene: The Great Acceleration', *The Anthropocene Review*, 2(1), pp. 81-98.
- Steffen, W., Grinevald, J., Crutzen, P. and McNeill, J. (2011) 'The Anthropocene: conceptual and historical perspectives', *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1938), pp. 842-867.
- Strauss, K., Niven, K., R. McClelland, C. and Cheung, B. K. T. (2015) 'Hope and optimism in the face of change: Contributions to task adaptivity', *Journal of Business and Psychology*, 30(4), pp. 733-745.
- Sun, X., Tan, Y. and Luo, N. (2011) 'Zhi shi yuan gong ji li yin su shi zhen yan jiu', *Modern Management*, 1, p. 77.
- Tam, S. (2016) 'From understanding business guanxi to practising it: a golden rule for MNCs in China', *Journal of Chinese Human Resources Management*, 7(1), pp. 39-44.
- Tang, Y.-Y., Hölzel, B. K. and Posner, M. I. (2015) 'The neuroscience of mindfulness meditation', *Nature Reviews Neuroscience*, 16(4), pp. 213-225.
- Tang, Y.-Y., Ma, Y., Wang, J., Fan, Y., Feng, S., Lu, Q., Yu, Q., Sui, D., Rothbart, M. K., Fan, M. and Posner, M. I. (2007) 'Short-term meditation training improves attention and self-regulation', *Proceedings of the National Academy of Sciences of the United States of America*, 104(43), pp. 17152-17156.
- Taylor, V. A., Grant, J., Daneault, V., Scavone, G., Breton, E., Roffe-Vidal, S., Courtemanche, J., Lavarenne, A. S. and Beauregard, M. (2011) 'Impact of mindfulness on the neural responses to emotional pictures in experienced and beginner meditators', *NeuroImage*, 57(4), pp. 1524-1533.
- Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M. and Lau, M. A. (2000) 'Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy', *Journal of Consulting and Clinical Psychology*, 68(4), p. 615.
- Thach, L. and Woodman, R. W. (1994) 'Organizational change and information technology: Managing on the edge of cyberspace', *Organizational Dynamics*, 23(1), pp. 30-46.
- The Economist (2013) 'Looks good on paper', June 24, 2017. Available at: <http://www.economist.com/news/china/21586845-flawed-system-judging-research-leading-academic-fraud-looks-good-paper>.
- The Maddison-Project (2013). Available at: <http://www.ggd.net/maddison/maddison-project/home.htm> (Accessed: 24 April 2016).
- The Mindfulness Initiative (2014) *Mindfulness All-Party Parliamentary Group*. s.l. Available at: <http://www.themindfulnessinitiative.org.uk/about/mindfulness-appg> (Accessed: May 30, 2017).

- The World Bank (2017a) 'GDP Growth'. April 27, 2019. Available at: <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN-IN-GB-US-JP>.
- The World Bank (2017b) 'GDP Growth (annual %)'. 27 April, 2019. Available at: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=CN>.
- The World Bank (2017c) 'Population, total'. April 27, 2019. Available at: <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=CN-IN-GB-US-JP>.
- The World Bank (2017d) 'Urban population (% of total)'. April 27, 2019. Available at: <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=CN>.
- Thompson, B. L. and Waltz, J. (2007) 'Everyday mindfulness and mindfulness meditation: Overlapping constructs or not?', *Personality and Individual Differences*, 43(7), pp. 1875-1885.
- Thompson, P. (2000) *Voice of the Past: Oral History*. OUP Oxford.
- Tims, M., Derks, D. and Bakker, A. B. (2016) 'Job crafting and its relationships with person–job fit and meaningfulness: A three-wave study', *Journal of Vocational Behavior*, 92, pp. 44-53.
- Tsui, A. (2006) 'Contextualization in Chinese management research', *Management and Organization Review*, 2(1), pp. 1-13.
- Tung, R. (2007) 'The cross-cultural research imperative: the need to balance cross-national and intra-national diversity', *Journal of International Business Studies*, 39(1), p. 41.
- Tushman, M. L., Newman, W. H. and Romanelli, E. (1986) 'Convergence and upheaval: Managing the unsteady pace of organizational evolution', *California Management Review*, 29(1), pp. 29-44.
- Twohig, M. P. (2012) 'Acceptance and Commitment Therapy: Introduction', *Cognitive and Behavioral Practice*, 19(4), pp. 499-507.
- U.S. Bureau of Labor Statistics (2015) 'Employed persons by detailed occupation and age' Feb. 10, 2016 *Labor Force Statistics from the Current Population Survey*. Dec. 4, 2016.
- Vakola, M., Armenakis, A. and Oreg, S. (2013) 'Reactions to organizational change from an individual differences perspective: a review of empirical research', in Oreg, S. (ed.) *The Psychology of Organizational Change*. Cambridge University Press, pp. 95-122 (Chapter 5).
- van Berkel, J., Boot, C. R. L., Proper, K. I., Bongers, P. M. and van der Beek, A. J. (2014) 'Effectiveness of a worksite mindfulness-related multi-component health promotion intervention on work engagement and mental health: results of a randomized controlled trial', *PLoS ONE*, 9(1), p. e84118.
- van Dam, K. (2011) 'Cognitive resources of individual adaptability', *15th European Congress of Work and Organizational Psychology*. Maastricht, Netherlands.

- van Dam, K. (2013) 'Employee adaptability to change at work: a multidimensional, resource-based framework', in Oreg, S., Michel, A. and By, R. T. (eds.) *The Psychology of Organizational Change*. Cambridge University Press.
- van Dam, K. and Meeting, L. (2012) 'The role of approach and avoidance motives for unemployed job search behavior', *Journal of Vocational Behavior*, 80, pp. 108-117.
- van Dam, K. and Niklova, I. (2012) 'Adaptation to work through self-development and job crafting', *27th Annual Conference for Industrial and Organizational Psychology*. San Diego, CA.
- van Dam, K., Oreg, S. and Schyns, B. (2008) 'Daily work contexts and resistance to organizational change: The role of leader-member exchange, development climate, and change process characteristics', *Applied Psychology: An International Review*, 57.
- van den Heuvel, M., Demerouti, E. and Bakker, A. B. (2014) 'How psychological resources facilitate adaptation to organizational change', *European Journal of Work and Organizational Psychology*, 23(6), pp. 847-858.
- van Nimwegen, K. J., van Soest, R. A., Veltman, J. A., Nelen, M. R., van der Wilt, G. J., Vissers, L. E. and Grutters, J. P. (2016) 'Is the \$1000 genome as near as we think? A cost analysis of next-generation sequencing', *Clinical chemistry*, 62(11), pp. 1458-1464.
- Veehof, M. M., ten Klooster, P. M., Taal, E., Westerhof, G. J. and Bohlmeijer, E. T. (2011) 'Psychometric properties of the Dutch Five Facet Mindfulness Questionnaire (FFMQ) in patients with fibromyalgia', *Clinical Rheumatology*, 30(8), pp. 1045-1054.
- Venaik, S. and Brewer, P. (2013) 'Critical issues in the Hofstede and GLOBE national culture models', *International Marketing Review*, 30(5), p. 469.
- Vich, M. (2015) 'The emerging role of mindfulness research in the workplace and its challenges', *Central European Business Review*, (3), pp. 35-47.
- Walach, H., Buchheld, N., Büttenmüller, V., Kleinknecht, N. and Schmidt, S. (2006) 'Measuring mindfulness—the Freiburg Mindfulness Inventory (FMI)', *Personality and Individual Differences*, 40(8), pp. 1543-1555.
- Wanberg, C. R. and Banas, J. T. (2000) 'Predictors and outcomes of openness to changes in a reorganizing workplace', *Journal of Applied Psychology*, 85(1), pp. 132-142.
- Wang, C. (2016) 'Knowledge workers in China', in *The Subtle Logics of Knowledge Conflicts in China's Foreign Enterprises*. Wiesbaden: Springer Fachmedien Wiesbaden, pp. 107-129.
- Wang, K., Chen, C., Ai, J., Zhang, Y. and Li, X. (2017) 'Zhèngniàn jiǎn yā liáofǎ duì rǔxiàn ái huànzhě huàliáo qíjiān pífǎ jí shuǐmián zhiliàng de yǐngxiǎng', *Zhōnghuá Hùlǐ Zázhi*, 52(5), p. 5.

- Wang, M. O., Zhan, Y., McCune, E. and Truxillo, D. (2011) 'Understanding newcomers' adaptability and work-related outcomes: Testing the mediating roles of perceived P-E fit variables', *Personnel Psychology*, 64(1), pp. 163-189.
- Wang, Y. and Kong, F. (2014) 'The role of emotional intelligence in the impact of mindfulness on life satisfaction and mental distress', *Social Indicators Research*, 116(3), pp. 843-852.
- Watkins, E. R. (2008) 'Constructive and unconstructive repetitive thought', *Psychological Bulletin*, 134(2), pp. 163-206.
- Weber, M. (2009) *The Theory of Social and Economic Organization*. s.l.: Simon and Schuster.
- Weeks, W. A. and Fournier, C. (2010) 'The impact of time congruity on salesperson's role stress: A person-job fit approach', *Journal of Personal Selling & Sales Management*, 30(1), pp. 73-90.
- Wei, Y. (2011) 'The study of mental development of post-90s VSS and class management of post-80s headmasters [J]', *Heihe Journal*, 1, p. 52.
- Weinstein, N., Brown, K. W. and Ryan, R. M. (2009) 'A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being', *Journal of Research in Personality*, 43(3), pp. 374-385.
- West, D. M. (2018) *The Future of Work: Robots, AI, and Automation*. Brookings Institution Press.
- Westwood, R. and Linstead, S. (2001) *The Language of Organization*. Sage.
- Wetlesen, J. (2002) 'Did Śāntideva destroy the Bodhisattva Path?', *Journal of Buddhist Ethics*, 9, pp. 34-88.
- Williams, A. and Whybrow, A. (2014) *The 31 Practices*. s.l.: LID Publishing Limited.
- Williams, A. P. O., Woodward, S. and Dobson, P. (2002) *Managing Change Successfully: Using Theory and Experience to Implement Change*. Thomson.
- Williams, K. A., Kolar, M. M., Reger, B. E. and Pearson, J. C. (2001) 'Evaluation of a wellness-based mindfulness stress reduction intervention: A controlled trial', *American Journal of Health Promotion*, 15(6), pp. 422-432.
- Wu, X. and Yuan, D. (2010) 'Shi ying xing ji xiao: Yi ge shang xu shen ru yan jiu de ling ru', *Xin Li Ke Xue Jin Zhan*, 18(2), pp. 339-347.
- Xiao, Y. and Cooke, F. (2012) 'Work-life balance in China? Social policy, employer strategy and individual coping mechanisms', *Asia Pacific Journal of Human Resources*, 50(1), p. 6.
- Xu, X. and Chen, Y. (2009) 'An investigation and analysis about the interpersonal trust of the "90s Generation" college students', *Psychological Research*, 6, p. 17.

- Yan, M., Peng, K. Z. and Francesco, A. M. (2011) 'The differential effects of job design on knowledge workers and manual workers: A quasi - experimental field study in China', *Human Resource Management*, 50(3), pp. 407-424.
- Yin, E., Ansari, S. and Akhtar, N. (2017) 'Radical innovation, paradigm shift and incumbent's dilemma the case of the auto industry', *Future Studies Research Journal: Trends and Strategy*, 9(1), p. 138.
- Yun, H., Kettinger, W. J. and Lee, C. C. (2012) 'A new open door: The smartphone's impact on work-to-life conflict, stress, and resistance', *International Journal of Electronic Commerce*, 16(4), pp. 121-152.
- Zhan, H., Tang, T. and Zhang, Y. (2013) 'The research on characteristics of knowledge workers and their motivating factors: A review and comparison study', *American Journal of Industrial and Business Management*, 3(06), p. 557.
- Zhou, D.-c. (2011) 'Psychological and behavioral characteristics of the Post-90s college students and the strategies for educating and managing them', *Journal of Higher Education Management*, 5, p. 22.
- Zhou, M. and Lin, W. (2016) 'Adaptability and life satisfaction: The moderating role of social support', *Frontiers in Psychology*, 7, p. 1134.
- Zimbardo, P. and Boyd, J. (2008) *The Time Paradox: The New Psychology of Time That Will Change Your Life*. s.l.: Simon and Schuster.
- Švarc, J. (2016) 'The knowledge worker is dead: What about professions?', *Current Sociology*, 64(3), pp. 392-410.