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Affective Forecasts and the Introverted Leader

Thesis submitted for the degree of
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by

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Declaration

By signing below, I confirm that this portfolio is my original work. The portfolio is being submitted in partial fulfilment of the degree of Doctor of Psychology and no part of it has been submitted for any other degree or academic qualification.



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AFFECTIVE FORECASTS AND THE INTROVERTED LEADER

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Research Abstract

Literature Review:

Affective Forecasts and Individual Differences

The literature surrounding the process of affective forecasting (making predictions about one's emotions in the future) and its relationship with individual differences – cognitive, affective and personality – is explored. Sources of affective forecasting error are highlighted and studies that examine opportunities to reduce those errors are reviewed.

Research Project:

The role of affective forecasting in the situational preferences of introverted leaders

Three studies examine the relationship between affective forecasts and the decisions of organisational leaders. Study one examines how both the individual's personality and the type of situation are related to the feelings that individuals have leading up to situations. Study two looks at the impact those feelings have on the decisions that leaders take regarding whether or not to engage in particular situations. Study three examines one intervention to see whether affective forecasts can be managed in a way that helps people to be more comfortable with the decisions they make. Surveys and questionnaires were administered to 50 leaders from a range of commercial and government organisations. Results demonstrated differences in the emotional responses of introverts and extroverts to upcoming introverted and extroverted situation. A link between affective forecasts and intentions to act was also found. Finally, an attempt to alter affective forecasts through the use of a narrative intervention was not successful.

Service Evaluation:

Evaluating the practical application of a research model for organisational interventions

A case study approach is used to see how well a research-based model aligns with a practical consultancy project. The context of the study is the debate around the researcher-practitioner divide and recommendations are offered for practitioners who wish to use research studies more effectively.

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Thesis table of contents

Part A: Literature review	6
Part B: Research Project	41
Part C: Critical Appraisal.....	154
Part D: Service Evaluation.....	180

Part A: Literature review

Affective Forecasts and Individual Differences

CONTENTS

Abstract.....	8
1. Introduction	9
2. Affective Forecasts	10
2.1 Sources of Error in Affective Forecasts.....	12
2.2 Individual Differences in Affective Forecasting	14
2.2.1 Cognitive interpretations.....	14
2.2.2 Affect and Affective Forecasts	18
2.2.3 Personality	22
3. Managing affective forecasts.....	24
4. Behavioural Considerations.....	26
5. Opportunities for further research	26
6. Conclusion.....	29

Abstract

This paper reviews the literature exploring the links between individual differences and affective forecasting errors. The predictions people make about how they will feel at some future point play an important part in the decisions they make. However, people appear to be notoriously poor at making such predictions accurately. By examining the literature covering the relationship between affective forecasting processes and the cognitive, affective and personality differences of people, it is hoped to form a greater understanding of how forecasting errors are made. Further, literature exploring interventions designed to improve the accuracy of affective forecasts is also reviewed. Literature relating to affective forecasts, decision-making and individual differences was examined to see if clear patterns and links could be ascertained. While a clear model does not arise from the literature, progress observed within the research and opportunities for future studies do suggest that this is a fruitful field to explore. Some interventions are already being used to help people reduce affective forecasting errors and make more informed decisions. The literature suggests that more opportunities exist, targeting individual differences, to reduce affective forecasting errors.

1. Introduction

The decisions we take have a significant impact on the outcomes we experience. Of course, it can be said that circumstance, the decisions and actions of other people and a wide range of extraneous factors also have a role to play in how each person's life plays out. However, within those constraints, the choices one makes and the actions that sometimes (but not always) follow on from those choices will, to a large extent, determine how satisfying one's life is. Therefore, making good decisions is essential if people are to achieve the goals they set for themselves.

The question of whether people do make good decisions – however “good” may be defined – has occupied philosophers, psychologists and others for many years (Buchanan & Connell, 2006). Studies have shown that, even where a clear financial gain can be realised, people will sometimes decide in a way that is contrary to their economic interest (Kahneman & Tversky, 1979). In less clear-cut cases, even on an anecdotal level, most of us will know people who have made life choices which do not appear to be in their best interests and which, in many cases, they also know are not in their best interests. Take, for example, a person who claims to be seriously committed to losing weight but who openly and consciously chooses to eat something which they themselves announce will “break the diet”. Without doubt, there is some conflict going on here between short and long-term objectives but, in retrospect, many people who have made such choices express their regrets at having made the wrong choice for themselves. In addition to not only failing to lose any weight, they also find themselves carrying feelings of guilt and lower self-esteem.

This paper reviews the literature relating to one of the psychological mechanisms behind decision making – affective forecasting – and the individual differences related to that mechanism. The objective is to form a clearer understanding of the role of individual differences in affective forecasting which may, in turn, provide insight into

how such forecasts can be managed or altered. The ability to manage affective forecasts could potentially provide an opportunity for people to make decisions which lead to more positive outcomes for themselves.

2. Affective Forecasts

How we choose to behave and the decisions we take are, to some extent, dependent on our feelings (Mellers, Schwartz, & Ritov, 1999). This is true not just for how we feel at the time we make decisions but also how we anticipate we will feel once our choice is played out and an outcome realised. In other words, our forecasts of our future emotions influence our decisions. If these *affective forecasts*, as they are called, could be managed by an individual in a way that supports better decisions, then greater personal satisfaction could be achieved. Potentially, dieters could lose weight, patients could choose better medical treatment, vacationers could choose better holidays and so on. One area of the author's interest which may prove fertile ground for this subject is in leadership and management. So, for example, if a leader takes a decision to act (or not to act) based on how they predict they will feel at a future point (for example, deciding whether or not to attend a company social event), they are depending on the accuracy of their forecasts for a good decision to be made. If they feel that they are going to feel great by attending the event and subsequently find that they have a terrible time and feel awful then, unless there are other reasons for attending which are more compelling than their happiness, they have made a bad decision. Equally, not attending what may well have been a good event could be seen as a bad decision if a positive experience has been missed.

The term "affective forecasts" first arose in the literature in 1998 when Daniel Gilbert and others saw it as a distinctive aspect of the emotional landscape of an individual (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). However, the

construct had been under investigation some years earlier as Kahneman and Snell (1990) and Baron (1992) conducted research into hedonic forecasts – that is, the prediction that some outcome or other would make one happy or feel a sense of wellbeing. Affective forecasts have been defined as the prediction of the emotional consequences of decision outcomes (Gilbert et al., 1998). Its role in decision making has had an impact in the fields of psychology, economics, health care and marketing (Ayton, Pott, & Elwakili, 2007; Buchanan & Connell, 2006; Patrick & MacInnis, 2006; Shaffer, Focella, Scherer, & Zikmund-Fisher, 2016).

A great deal of the research looking at affective forecasts has focused on the inaccuracy of such forecasts and the many different types of error to which they are susceptible (Hoerger, Chapman, & Duberstein, 2016). This is so prevalent that the specific term "Affective Misforecasting" (AMF) has become familiar in its own right (Patrick & MacInnis, 2006). Indeed, some definitions of affective forecasts include the notion of error as a matter of course. As Schwartz and Sommers describe it, affective forecasting is "about the ways in which people make frequent and systematic errors when endeavouring to predict how they will feel" (Schwartz & Sommers, 2013, p. 705). The importance of emotions in decision making has been the subject of discussion for a very long time (Upham, 1861). Even so, rationality was considered the basis for making decisions for many years, especially where there were clear risks and rewards involved. Only in 1979 did the "expected utility theory", which until then had dominated the analysis of decision making, come into question with the introduction of *prospect theory* by Kahneman and Tversky (1979). This work ushered in the body of knowledge known as behavioural economics which tended to include a view that an element of irrationality or error was a feature of many decisions (Kurtz, 2016). Previously, the prevailing view was that people behaved rationally and generally made choices which would maximize their positive outcomes. Prospect theory effectively

questioned the ability of people to accurately evaluate the probability of various outcomes and suggested that the decision-making process was more complicated. Rather than choosing from a range of clear probabilistic options, people saw gains and losses differently. In addition, the relationship between the value that a person attributed to a gain or loss was not a straight-line function and was different for gains and losses. However, the first discussion of prospect theory restricted itself to prospects with “objective or standard probabilities” (Kahneman & Tversky, 1979). More subjective aspects of decisions were still seen as unexplained error.

Further theories have been put forward in attempts to demonstrate that such subjective components of decision making are more systematic and ultimately explainable than might first be imagined (Charpentier, De Neve, Li, Roiser, & Sharot, 2016; Herrnstein, 1990). The value in making informed decisions is clear, and an accurate knowledge of how one is likely to feel when an outcome is realised is an essential part of the salient information. Many personal choices may have little to separate them other than the impact they will have on one's happiness or well-being. Choosing who to spend time with, where to go on holiday, what music to listen to, what book to read – all these things – will have varied outcomes that cannot easily be measured in terms of extrinsic value but can certainly make a difference to how one feels. Failing to accurately predict those feelings can easily lead to choices which, in hindsight, may appear to be poor ones.

2.1 Sources of Error in Affective Forecasts

Wilson and Gilbert (2003) identify four components of affective forecasting that could, potentially, be subject to error. These are:

1. The specific emotions that will be experienced;
2. The valence or direction of those emotions – that is, positive or negative;

3. The intensity with which the emotions are to be felt; and
4. The duration or amount of time that the person will feel the emotion.

In general, studies show that people will correctly predict the first two of these (Wilson, 2003). It appears to be the case that much of the research focuses on quite clear emotions (such as anger, fear, joy, sadness, disappointment) and much less on those emotions that may have a wider range of expression (such as confusion, bitterness, indifference) (Loewenstein & Schkade, 1999). Although some studies do look at the prediction of specific emotions (Lerner & Keltner, 2000; Van Dijk, Dillen, Seip, & Rotteveel, 2012), it is probably fair to say that a clear understanding of how accurately the full range of emotions are predicted does not emerge readily from the literature. Greater clarity around how specific emotions are predicted and the impact of those predictions could help to inform more targeted interventions to alter forecasts.

Very few studies demonstrate inaccuracy in predicting the valency of emotions. People are generally good at predicting whether they are going to feel good or bad about an event although this is less true where an event could evoke mixed feelings, such as graduating from university (Loewenstein, 2007). This is understandable as one's emotional response to an event is likely to be informed by a range of robust personal (and societal) aspects such as beliefs, attitudes and personal values. Where people have found themselves "pleasantly surprised" or "unexpectedly disappointed", it is often because the event itself isn't as they imagined it, rather than any failure to correctly anticipate whether they will feel good or bad about an outcome.

It can be difficult to distinguish between errors of intensity and duration. A particular debate has arisen between researchers who feel that the bias relating to the intensity of emotions could not be systematically demonstrated (Levine, Lench, Kaplan, & Safer, 2012) and those who felt that it was a legitimate source of error (Wilson &

Gilbert, 2013). Either way, the important fact is that people tend to overestimate the impact that an event will have on their emotional lives (Wilson & Gilbert, 2003).

It is beyond the scope of this paper to provide an exhaustive list of the sources of affective forecasting errors. However, the literature examining the role of individual differences in affective forecasting will now be reviewed.

2.2 Individual Differences in Affective Forecasting

It is only recently that studies into individual differences in affective forecasting have appeared in the research literature (Hoerger, Chapman, Epstein & Duberstein, 2012). In essence, these studies have focused on three areas, namely; cognitive, affective – including emotional intelligence – and personality. These classifications mirror many modern texts covering the field so it is reasonable to focus on them here (Bertrand & Neilson, 2011; Maltby, 2013). As the body of research has grown, evidence has started to support the development of underlying frameworks for the affective forecasting process (Dunn, Forrin & Ashton-James, 2009; Hoerger et al., 2012; Hoerger et al., 2016). However, as will be seen, the sources of error do not fit discretely into one classification or another and a clear underpinning model is somewhat elusive.

2.2.1 Cognitive interpretations

Some cognitive interpretations of affective forecasting errors emerge naturally from the nature of the error. Take Wilson and Gilbert's (2003) first component, for example. Where people do misforecast the specific emotions they will experience, two sources of error are often involved. One of these is *miscontrual* – which involves failing to recognise that the event the person is imagining may be very different from the event that actually comes to pass. For example, a person may find that the “party” they attend is, in fact, a pyramid sales event accompanied by a glass of wine. The

second involves *inaccurate theories* which are about having an erroneous view about the link between an event and the emotions that will normally accompany such an event. A person may associate becoming wealthy with unbridled happiness only to find that it is accompanied by anxiety, guilt and other negative emotions. An individual's beliefs and attitudes as well as their available knowledge will have an impact on these errors. One evening spent at a "party" listening to a sales representative extolling the virtues of time-share vacations will, in many cases, lead to an attenuation of the excitement when invited to one of Tom or Sally's parties in the future.

It is less clear whether a cognitive interpretation can fully account for Wilson and Gilbert's (2003) third and fourth components. Impact bias is where people overestimate the intensity and/or duration of their emotional reactions to future events (Gilbert, et al., 1998). Studies demonstrating impact bias have shown its presence across a range of contexts (Buehler & McFarland, 2001) and for both positive and negative emotions although there are differences on the latter criterion. In general, people are likely to over-estimate negative emotions to a greater extent than they will over-estimate positive emotions. This is true for both intensity and duration (Finkenauer, Gallucci, W, & Pollmann, 2007).

One source of impact bias that lends itself, at least partially, to a cognitive interpretation is called focalism. This is the process of focusing on a particular event when predicting one's emotions and failing to consider other events that may occur simultaneously (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). It is also called the focusing illusion (Schkade & Kahneman, 1998). In practical terms, the process of focalism can be seen in how the influence of day-to-day concerns – e.g. making breakfast, dressing the children, getting to work, fighting the traffic – may be overlooked when contemplating a major event about which they may have predicted they would have strong feelings – e.g. a US Presidential vote, the outcome of the

“Brexit” referendum, the outcome of an international football tournament and so on. On each of these occasions, people may have predicted that they would be “devastated” by one or other outcome when, in fact, their attention turns quickly to more current concerns which reduces the impact of the major event on their happiness. A number of studies investigating focalism show that its effect can be reduced by inducing people to think more explicitly about non-focal events when considering how they will feel about a “main event”. Focalism, then, does not explain errors involving the prediction of the intensity of a person’s emotions but does provide some explanation for errors involving how long those emotions will be held. People may well still feel devastated but the feeling will diminish much more quickly than one may predict, as non-focal events requisition some of the individual’s attention. Focalism, then, is seen as a source of *durability bias* – described in the fourth of Wilson and Gilbert’s (2003) list of affective forecasting errors.

Cognitively focused interpretations of affective forecasting encapsulate a number of different processes. For example, the role of the limitations of working memory in distracting people from a focal event was shown to be related to reduced focalism (Hoerger, Quirk, Lucas, & Carr, 2010b). Dunn, Forrin, and Ashton-James, (2009) go further to suggest that most sources of systematic forecasting errors can be integrated through the unifying theoretical perspective provided by Seymour Epstein’s Cognitive-Experiential Self Theory. This theory suggests that two distinct systems – the rational and the experiential – operate to help people make sense of the world. Affective forecasts, the theory suggests, are made via the rational cognitive system whilst emotions are managed by the experiential system.

Consideration of this theory leads to another area where individual differences have been investigated. That is, how focalism is related to cultural differences. Some recent studies looking at the role of focalism in affective forecasting errors show a

difference between population samples in East Asia and those in Canada (Lam, Buehler, McFarland, Ross, & Cheung, 2005). The explanation provided for this difference is in how each group's thinking style affects the tendency to focus on specific information. The suggestion is that people who think more holistically (e.g. from eastern cultures) are more likely to consider background context when thinking about future events and less likely to make errors of focalism. In comparison, people who tend to engage in more linear, analytical thinking patterns (e.g. from western cultures) show a greater convergence on focal information. These findings offer some support for the Cognitive-Experiential Self Theory which suggests that the cognitive system works in an analytical way while the experiential is more holistic in approach (Epstein, 2003).

The focus towards or away from the context in which an event takes place, therefore, has a significant role to play in the accuracy of emotional forecasts. However, as can be demonstrated focalism can “cut both ways”. Focusing on the context at the expense of attention on the primary event can cause an under-estimation of emotional response, just as focusing on the primary event at the expense of the context (or other stimuli) can result in an over-estimation of emotional response (Lench, Safer & Levine, 2011).

Attention has also been given to the cognitive sense-making processes that drive people to position an event into a structure of order that they can understand. An example of this is Ordinization. Ordinization is characterised by significant events becoming increasingly “ordinary” or less special with time. Examples include people receiving much hoped for promotions/tenure at work, success in relationships and even, on the negative side, death, divorce etc. (Wilson & Gilbert, 2003). It is suggested that, with time, people make sense of events, incorporating them into their knowledge base and personal contexts. The emotional impact on the person is diminished as one rationalises the events. For example, a person who acquires celebrity status may find

that, eventually, it becomes natural or understandable that people look at them, want to be photographed with them or even copy them. Eventually, they may even find it tedious. Ordinization neglect, then, is the failing to consider this sense-making activity when predicting how one will feel in the future. It operates for both positive and negative emotions but, as part of the psychological immune system, ordinization has been described as being “turbo-charged” when events are negative and/or challenge a person’s sense of well-being (Wilson & Gilbert, 2003). Therefore, neglect of ordinization is likely to lead to greater error in affective forecasting when considering potentially negative events than when considering potentially positive ones.

The cognitive interpretations of affective forecasting error suggest that there may be opportunities to re-frame the way that people consider and attend to upcoming events, thereby leading to a more balanced view of the event in relation to all the many other events or activities with which the person will be involved. For some events, over which the person has no control, focalism may not be a particularly important issue. However, where the focus on an event may lead people to make significant life decisions, it is important that their predictions of the impact of the event on their lives is as accurate as possible.

2.2.2 Affect and Affective Forecasts

The role of positive and negative affect on affective forecasting is an area of increasing interest to researchers. In general, people who demonstrate negative state affect are more likely to predict more negative emotions when considering future events (Marroquín, Boyle, Nolen-Hoeksema, & Stanton, 2016) than those who demonstrate positive state affect. However, there is little reliable evidence to demonstrate that people with negative affect make greater errors in affective forecasting. Even in extreme affective states (e.g. dysphoria), it is debatable whether negative affect is more

likely to be associated with more or less accurate affective forecasts (Hoerger, et al., 2012; Wenze, Gunthert, & German, 2012). A confounding factor is that research into the relationship between state and trait aspects of affectivity and affective forecasting is relatively rare (Forgas, 2002). While some studies show relationships between mood and affective forecasts, others suggest a more interactive relationship between state affect, trait affect, affective forecasts and other contextual variables – for example, personal health (Kushlev & Dunn, 2012).

There is a body of research that looks specifically at the role of affect in focalism. Emich (2014) suggests that “positive affect should attenuate focalism because it allows individuals to recruit divergent information concerning a problem, assess the relationships between different aspects of it, and arrive at an appropriate solution” (p. 1384). This view, offered as part of an exploration of over-confidence, proposes a process whereby individuals who demonstrate positive affect are more likely to attend to information concerning the qualities of others than those demonstrating negative affect who are more likely to focus more narrowly on their own qualities. Among the explanations behind this difference is the possibility that those experiencing positive affect feel safer in considering their qualities in a more realistic way (Emich, 2014). What these studies appear to be showing is that individual differences in affect (positive/negative) are likely to be associated with a broader cognitive consideration of available information – leading to reduced affective forecasting error. The interplay between cognitive and affective processes appears to be a central feature of affective forecasting.

A clearer affective source of error in emotional forecasts has its root in the differing emotional states between when a forecast is made and when an emotion is experienced. For example, a person may predict an emotional reaction to a future event with the “cold” rationality of their reading of the situation, yet the actual event may

elicit “hot” emotions that they did not predict. Loewenstein and Schkade (1999) call these discrepancies “hot/cold empathy gaps” and attribute them to the way people remember emotions, drives and other visceral factors, which, they suggest, is qualitatively different from other forms of memory. Hot/cold empathy gaps can lead to either an under or overprediction of the intensity of emotional responses as the “hot – cold” differential in state can work in either direction. For example, a person in a hot state – e.g. anger – may overpredict how angry they may feel about an event the next day.

Dunn et al. (2009) suggest that the hot/cold empathy gap provides some evidence to support the two system Cognitive-Experiential Self Theory mentioned earlier. If two distinct information processing systems – the rational and the experiential – are at work, this could explain many affective forecasting errors. Already, an understanding of hot/cold empathy gaps has been used to assist people with pain management, drug use and sexual behaviour. There may well be further opportunities for applications in diet management, for example. However, as Loewenstein and Schkade (1999) note, hot/cold empathy gaps are somewhat resistant to cognitive interventions and an educational approach to minimising them may not be particularly promising.

One area that does offer encouragement in the improvement of affective forecasting error is emotional intelligence. Studies showing links between emotional intelligence measures and affective forecasting accuracy demonstrated the importance of emotional intelligence to improving forecasting error through experience (Hoerger et al., 2012). While the development of emotional intelligence may not be a ready solution, the practice of certain “emotionally healthy” activities may reduce certain errors – particularly immune neglect (Kong, 2015).

Immune neglect is another source of durability bias and involves a tendency for people to overlook or underestimate the influence that one's psychological immune system has on emotional wellbeing. It can be characterised as a passive process. That is, a person does not actively neglect the psychological mechanisms that operate to protect them. Rather, they simply fail to account for those mechanisms when predicting their emotional response to an event. Immune neglect tends to work in one direction only (Gilbert et al., 1998). While other mechanisms that contribute to durability bias may lead people to overestimate both their positive and negative emotional reactions, immune neglect tends to lead to an overestimation of the duration of negative reactions only. This makes sense as psychological defence mechanisms operate to protect one's emotional wellbeing. Only negative emotional responses would require its intervention. An example of immune neglect might be seen in the case of a person who may feel that they would be devastated by the break-up with a romantic partner. While the initial intensity of their feeling might well be as they expected, their psychological immune system may begin to protect them through rationalisation ("She was not the right person for me anyway"), self-affirmation ("I deserve better") or even through self-deception ("It won't take long for me to find another partner").

Further research on immune neglect highlighted what might, initially, be seen as a somewhat counter-intuitive finding. Individuals who report greater use of personal coping strategies are more likely to demonstrate higher levels of immune neglect (Hoerger, et al., 2010a). However, this makes sense as it follows that, if individuals fail to include the activity of their psychological immune system when making emotional predictions, then those with "stronger" immune systems are, in fact, making a bigger error than those whose coping strategies are less influential. In other words, these people cope better with negative emotions but do not predict that they will cope better – therefore overestimating the emotional impact the event will have on them.

This raises the question about how well individuals learn from their emotional experiences. People generally do not learn well from past emotional experiences due to the fact that they do not remember emotions in the same way or to the same level as other information (Ayton et al., 2007; Meyvis, Ratner, & Levav, 2010; Robinson & Clore, 2001; Wilson & Gilbert, 2003). Using holidays as an example, Kahneman provides evidence that individuals tend to remember mainly the most impactful moments or the final moments of an event rather than having a strong memory of their emotional experiences throughout an event (Kahneman, 2000). Emotional memory may well be an aspect of individual differences that is worth exploring as an opportunity for improving the accuracy of affective forecasts.

2.2.3 Personality

The relationship between affective forecasts and personality has not been widely investigated (Hoerger & Quirk, 2010). A search of the major research databases suggests that studies purely involving the relationship between affective forecasting and personality – as defined by the most recognised model of the construct, the “big five” – number less than a dozen in the past 20 years. This may well be an area which is ripe for further research. Indeed, Hoerger, Chapman, and Duberstein (2016) suggest that personality may well be the most appropriate of models to explain “logical and statistical” concordance between predicted and actual emotions. Of the big five personality traits, extraversion and neuroticism have been those most likely to show relationships with affective forecasting accuracy (Hoerger & Quirk, 2010; Martin & Quirk, 2015; Tomlinson, Carmichael, Reis, & Aron, 2010).

However, the relationships between personality traits and affect makes it difficult to distinguish the specific influence of personality traits on affective forecasting patterns. For example, the association between neuroticism and negative affect has been

documented in a number of studies as has the relationship between extraversion and positive affect (Canli et al., 2001; Costa & McCrae, 1980; Mroczek & Almeida, 2004; Zelenski & Larsen, 1999). So, when the specific, incremental variances in affective forecasts explained by neuroticism and extraversion were isolated, Hoerger et al. (2016) found them both to be between 3% and 5% - interesting but rather modest. Still, an investigation of how people with different personality attributes make affective forecasts may yield richer fruit in the understanding of the role of personality.

One study (Zelenski et al., 2013) found that introverts were more likely than extroverts to forecast negative emotional reactions but only when contemplating acting in an extroverted way. There were no significant differences between the two groups when considering future "introverted" behaviour. This is a potentially valuable finding. As introverts and extraverts have been shown to have similar experienced emotional responses to extraverted situations (Fleeson, Malanos, & Achille, 2002; Zelenski, Santoro, & Whelan, 2012), these results suggest strongly that introverts are making greater affective forecasting errors when contemplating acting in extroverted ways such as in social situations. If this is the case, specific interventions could possibly be designed to reduce the disparity between the groups if this was a desirable objective. Affective forecasting errors may still be observed by both groups but introverts could possibly view extraverted situations with the same level of positivity as extraverts. This may allow introverts to make decisions to act in more extraverted ways with greater confidence of a happy outcome.

An applied example of this could be introverted leaders who need to interact with others in a range of situations. Board meetings, presentations, customer liaisons and social functions can all give rise to negative emotions for introverts (Cain, 2012) and yet participation in each of these situations can be vital to executive success. If the affective forecasting processes, that either lead to individuals avoiding such situations

or experiencing great anxiety leading up to them, can somehow be checked, significant benefit can surely accrue from the attempt. Interventions that help to minimize affective forecasting errors can possibly be used to help align personality preferences and behavioural necessities.

3. Managing affective forecasts

Intuitively, it seems reasonable to suggest that possibilities for reducing affective forecasting error may arise from understanding the role that individual differences play. For example, if negative affect is found to have a causal relationship with an over-estimation of predicted negative emotion, then a shift toward a more positive affective state may result in more accurate forecasts. Similarly, if enhanced emotional awareness or mindfulness leads to greater affective forecasting accuracy, due to reduced focalism, then development in that area would likely help individuals make more realistic judgements about the likely emotional impact of events. However, personal attributes are not all easily altered. For example, there is a mountain of evidence pointing to the relative immutability of personality traits (Dalal et al., 2015; Hudson & Roberts, 2014; Hudson & Fraley, 2015).

Opportunities to manage affective forecasts via cognitive routes have demonstrated some evidence of success. In the healthcare field, where individuals often have to make significant, life-changing decisions, partly based on how they predict they may feel about different options, work has already been done on the use of narratives to change affective forecasts (Dillard, Fagerlin, Cin, Zikmund-Fisher, & Ubel, 2010; Shaffer et al., 2016). These narratives are in the form of previous patient testimonials and patients may be shown them alongside information about various drug outcomes. Some debate has arisen around whether such interventions should be neutral – that is, provide information only – or whether they may be directed, that is, designed to change

a person's feelings in one specific direction or another (Winterbottom, Bekker, Conner, & Mooney, 2008). Even so, these narratives are used in practice to reduce errors of misconstrual or the application of inaccurate theories.

Some other forms of affective forecast management centre around temporary changes in either cognitive or affective states. For example, self-affirmation has been shown to reduce focalism and improve the accuracy of forecasts (Pauketat, Moons, Chen, Mackie, & Sherman, 2016). While longer and more permanent changes in self-esteem and self-awareness may be the objective of positive self-talk, even momentary enhancements in these areas can reduce forecasting error and facilitate clearer decision making. For example, Kong (2015) puts forward a case for the role that mindfulness can play in reducing affective forecasting errors. There does not appear to be any literature available demonstrating whether simply highlighting the potential for such errors could bring about a more considered approach to emotional predictions and improve decision making.

While other interventions, such as video decision aids (Winston, Grederova & Rabi, 2018) and web-based decision aids (Hoerger, Scherer & Fagerlin, 2016), have been used in attempts to alter the behavioural choices of individuals, there is evidence that enhanced knowledge or information about a future event or process does not have a significant impact on affective forecasts (Norwick & Gilbert, 2004). From their studies, Hoerger, et al. (2016c) conclude that it is important that sufficient emotional content is included in any decision aids which are focused on increasing the accuracy of affective forecasts. Narratives which describe the emotions that others have felt after having chosen a course of action would convey such content and would be a suitable intervention to explore further.

4. Behavioural Considerations

A significant part of the literature dealing with the decision-making process focuses on the explicit choices that individuals make when faced with a finite range of options. This implies the calculated weighing-up of the potential costs and benefits of each option and then making a choice which optimises the outcome for the individual. In contrast, personality literature tends to describe behavioural choices in terms of preferences and the distinction between these “choices” and the explicit “option A versus option B” decisions described in much affective forecast literature is quite significant when considering how people behave. Preferences indicate a pattern of choices which is less than perfectly consistent (Bayne, 2013). While one may tend to act in a particular way, the likelihood of alternative behavioural choices will depend on the strength of the preference. Further, acting out a personality preference will not always relate to making an explicit choice between two or more alternatives. For instance, the preference for introverted or extraverted behaviour – includes the very significant possibility that rather than choosing between two clear alternatives, an individual, especially over time, will reduce their own options to those that meet their preferences. For example, rejecting party invitations consistently is likely to lead to a gradual reduction in the number of invitations forthcoming, unless one has particularly persistent friends.

5. Opportunities for further research

The above section already alludes to potential research opportunities within the affective forecasting domain. Further investigation into the use of external influencers, such as narratives or brochures could likely lead to a broader change in how information is presented to people so that they not only know the cognitive aspects of their decision but can also be fully informed about the potential emotional outcome of various

choices. In particular, identifying how narratives operate to influence health decisions would be beneficial as they are often used in conjunction with others “tools” without a full appreciation of the impact they may have (Dillard, Fagerlin, Cin, Zikmund-Fisher, & Ubel, 2010).

More broadly, we currently have national laws which are designed to ensure the accuracy of what might be called cognitive information (e.g. verifiable facts, comparisons, claims of outcome probabilities, etc.). However, inaccuracy in the prediction of emotional outcomes is almost the prevailing currency of the advertising industry. Perhaps the days of “*Make yourself feel great – come to Skegness*” would be over if it could be shown that such claims are essentially false and are deliberately leading people to make poor decisions (with due respect to Skegness). However, as much of the research in this area is focused from the perspective of the “seller” rather than the “buyer” – that is, how to measure and influence consumer buying patterns – there may be some wait for a recalibration in this area (Chaiken, Wood & Eagly, 1996; Coupey, Irwin & Payne, 1998). In addition, consumers have shown no real enthusiasm for advertising that is information heavy at the expense of being aspirational (Drolet, Williams & Lau-Gesk, 2007).

A greater understanding of the mechanisms through which people with different personality traits make affective forecasts is likely to be beneficial. Millions of people complete personality measures every year and information regarding how their personality affects their decision making and, more importantly, how they might change things should they want to, is still fairly rudimentary. Long involved reports detailing their preferences and approach can completely omit any reference to ways that the person may think or act in order to make decisions which may enhance their well-being.

The role of memory and, specifically, different memory functions, has been discussed as relevant to the way in which emotional predictions and emotional

experiences may differ. More research explicitly testing the Cognitive-Experiential Self theory could help to cement the role of memory in affective forecasting and potentially lead to interventions or practices that people could consciously use to help them make decisions. In addition, a clearer understanding of how emotion memories are coded, stored and recalled could help to facilitate greater learning in relation to emotional experiences.

Applications of affective forecasting findings to specific groups may also benefit from further research. In particular, those groups who habitually over-estimate their potential (and usually short-lived) joy regarding a very intensely desired outcome (drug takers and gamblers may be included in this group) but who fail to consider the totality of the emotional outcomes could possibly be helped through a judicious improvement in affective forecasting ability.

There may also be further understanding to be gained of the wider decision-making processes through the investigation of emotional predictions. The introduction of a “feelings” function into the decision-making algorithm was shown to increase the accuracy of outcome predictions in the studies conducted by Charpentier et al. (2016). The feeling function operated in a similar way to the value function in Prospect Theory (Kahneman & Tversky, 1979) and feelings related to losses and gains were weighted differently when it came to making decisions. It may well be possible to build on this to create a decision model that accurately demonstrates the rationality of factors such as risk, loss, gain (both comparative and absolute), immediate subjective value, longer-term personal utility, motivation, emotional awareness, personal disposition and so on. In effect, it may be a feasible ambition to demonstrate that error in judgement – that is, in terms of random and unexplainable error is less than may generally be accepted.

6. Conclusion

People do not always make decisions which will maximize their happiness or satisfaction. Part of the reason for this is that they make errors when predicting how they will feel when one or other outcome is realised. These affective forecasting errors can arise from several different sources and can have different effects on the quality of the decisions that people make. If mechanisms can be found that help people reduce these errors then, potentially, more informed decisions can be taken.

This paper has suggested that an understanding of the relationship between well-established individual differences – such as cognition, affect and personality – and affective forecasting errors can point the way towards interventions that could be used to reduce those errors. By examining how individuals may make affective forecasts in different ways based on, say their personality preferences, may lead us to a situation where individuals have greater control over the decisions and choices that impact on their lives.

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Part B: Research Project

The role of affective forecasting in the situational preferences of introverted leaders

Contents

Abstract.....	48
1. Introduction	49
2. Background to the study	51
2.1 Extroversion and Leadership	51
2.2 Affective Forecasts	53
2.3 Decision making	53
2.4 Affective forecasts and introversion/extroversion	56
3. Research Hypotheses.....	59
4. Method.....	64
4.1 Participants.....	64
4.2 Procedure	65
5. Study 1.....	67
5.1 Method	67
5.1.1 Materials	67
5.1.1.1 Personality Questionnaire	67
5.1.1.2 Affective Forecast Questionnaire	68
5.1.1.2.1 Developing the “situations” statements	68
5.1.1.2.2 Developing the “emotions” scales	69
5.2 Results and Discussion.....	71
5.2.1 Affective forecasts and personality type	71

5.2.2	Affective forecasts and type of situation	73
5.2.3	Affective forecasts and the interaction of personality and situation.	75
5.2.4	Incremental Affective Forecasting	80
6.	Study 2.....	89
6.1	Method.....	89
6.2	Results and Discussion	90
6.2.1	Affective forecasts and the intention to act	90
6.2.2	Affective forecasts and behavioural choices	94
7.	Study 3	96
7.1	Method.....	96
7.1.1	Participants	96
7.1.2	Materials	96
7.1.2.1	Emotional Prediction Questionnaire 2 (EPQ2).....	96
7.1.2.2	The feedback reports.....	97
7.1.3	Procedure.....	99
7.2	Results and Discussion	101
7.2.1	Dispositional Preferences	101
7.2.2	Feedback impact	102
8.	General Discussion.....	104
8.1	Affective Forecasts and Personality	104
8.2	Affective Forecasts and Behavioural Decisions	109
8.3	Interventions to manage affective forecasts	111

8.4	Potential for future research.....	113
9.	Conclusion.....	114
	References.....	116
	Appendices.....	128

List of Figures

<i>Figure 1.</i> Dependent and Independent variables for studies 1 – 3	66
<i>Figure 2.</i> Question extract from the EPQ1 Questionnaire.....	69
<i>Figure 3.</i> Mean affective forecast ratings by personality type	72
<i>Figure 4.</i> Mean forecasted emotions by personality and situation – this study and Zelensky et al. (2013)	79
<i>Figure 5.</i> Group Mean Centred Affective Forecasts by Situation and Personality	84
<i>Figure 6.</i> Frequency question extract from the EPQ1 questionnaire.	89
<i>Figure 7.</i> Frequency question extract from the EPQ2.	90
<i>Figure 8.</i> Graph provided to enhanced feedback group as part of the EPQ1 report	98
<i>Figure 9.</i> Feedback conditions for study 3	100
<i>Figure 10.</i> Mean affective forecast ratings (EPQ1 & EPQ2) by feedback group	102
<i>Figure 11.</i> A decision model for introverts and extroverts when considering introverted or extroverted alternatives	106

List of Tables

Table 1	<i>Research Hypotheses</i>	63
Table 2	<i>Mean Ratings of Individual and Grouped Emotions by Personality Type</i>	71
Table 3	<i>One-Way ANOVA Summary Results of Individual and Grouped Emotions by Personality Type</i>	72
Table 4	<i>Mean Ratings of Individual and Grouped Emotions by Situation Type</i>	74
Table 5	<i>Paired t-test Results for Individual and Grouped Emotions by Situation Type</i>	74
Table 6	<i>Group Means (and SDs) for Affective Forecasts (EPQ1) by Situation Type and Personality</i>	76
Table 7	<i>Within-subjects Results for Positive Affect Predictions by Situation Type and Personality</i>	76
Table 8	<i>Within-subjects Results for Negative Affect Predictions by Situation Type and Personality</i>	76
Table 9	<i>Within-subjects Results for Self-Consciousness Predictions by Situation Type and Personality</i>	77
Table 10	<i>Within-subjects Results for Pleasantness Predictions by Situation Type and Personality</i>	77
Table 11	<i>Personality Group Means (and SDs) for Group Mean Centred Affective Forecasts (centred by personality) for Affective Forecast and Situation Type pairings</i>	81
Table 12	<i>One-way ANOVA Results for Group Mean Centred Affective Forecasts (centred by personality) for Personality and Situation Type pairings</i>	82
Table 13	<i>Within-subjects ANOVA Results for Incremental Positive Affect Predictions by Situation and Personality</i>	83
Table 14	<i>Within-subjects ANOVA Results for Incremental Negative Affect predictions by situation and personality</i>	83

Table 15	<i>Within-subjects ANOVA Results for Incremental Self-Consciousness Predictions by Situation and Personality</i>	83
Table 16	<i>Within-subjects ANOVA Results for Incremental Pleasantness Predictions by Situation and Personality</i>	83
Table 17	<i>Personality Group Means (and SDs) for Incremental Affective Forecasts (against own averages) for Affective Forecast and Situation Type pairings</i>	87
Table 18	<i>One-way ANOVA Results for Group Mean Centred Affective Forecasts (centred by personality) for Personality and Situation Type pairings</i>	88
Table 19	<i>Means (and SDs) for Frequency Ratings (EPQ1) by Personality and Situation Type</i>	91
Table 20	<i>Pearson Correlation Coefficients for Frequency Ratings (Declared Intentions) and Affective Forecasts by Situation (EPQ1)</i>	92
Table 21	<i>Pearson Correlation Coefficients for Frequency Ratings (Reported Behaviours - EPQ2) and Affective Forecasts (Anticipated Emotions - EPQ1)</i>	95
Table 22	<i>Personality Type: Type Dynamic Indicator Preferences</i>	101
Table 23	<i>Group Means (and SDs) for Affective Forecasts (EPQ1 & EPQ2) by Feedback Group</i>	102
Table A1	<i>Reliability Estimates of Scales (EPQ1) Cronbach's Alpha Coefficients</i>	142
Table A2	<i>Reliability estimates of scales (EPQ2) Cronbach's alpha coefficients</i>	143
Table A3	<i>One-Way ANOVA Results of Individual and Grouped Emotions by Personality Type</i>	147

The role of affective forecasting in the situational preferences of introverted leaders.

Abstract

Many leadership roles require engagement in situations that may be more agreeable to extroverts than introverts. The emotional predictions (affective forecasts) people make are an important part of deciding whether or not to engage in a situation. Fifty-one leaders from five organisations completed a personality questionnaire and an affective forecasting questionnaire. The participants contemplated “introverted” and “extroverted” situations and rated their anticipated levels of specific emotions. Participants also indicated the level of their intention to engage in situations. In a second questionnaire, they rated the frequency with which they had been involved in the same situations. Between the two questionnaire administrations, participants received either standard feedback of their personality type results or an enhanced feedback which included information about their affective forecasts and some narratives (stories of others’ experiences). Differences were observed in the affective forecasts of introverts and extroverts when contemplating the different types of situations. How those forecasts related to intentions to engage in the situations also differed between extroverts and introverts. No significant differences were found to suggest that narratives changed affective forecasts. The implications for interventions for leaders who are required to face counter-dispositional situations are discussed as well as the role that affective forecasts can have in making decisions.

1. Introduction

Personality psychology suggests that there are many situations and activities which suit extroverts more than introverts and vice versa (Anders, 2008; Deards, 2011; Zack, 2010). Some situations are likely to require behaviours which are contrary to the preferences expressed by individuals. It follows, that people would be more likely to engage with situations which are not likely to require them to exhibit counter-dispositional behaviours (Ickes, Snyder & Garcia, 1997).

Leadership roles in occupational settings comprise a wide range of tasks. A significant body of literature has built up, examining the extent of leadership tasks (Stogdill, 1974; Wang, Oh, Courtright & Colbert, 2011), the contexts in which they take place (Parris & Peachey, 2013) and the capabilities required to complete them successfully (Hartley & Hinksman, 2003). An examination of several popular taxonomies of leadership activities reveals a number of activities which require the role holder (the leader) to engage, interact with and influence other people – often in group, informal and/or social settings (B. M. Bass & Bass, 2008; Boyatzis, 1982; Yukl, 1994). Just as in other everyday situations, introverts and extroverts will exercise their dispositional preferences when undertaking leadership tasks. Extroverts will be more likely than introverts to voluntarily interact in group situations, be more talkative in meetings and more readily engage in social events (Furnham, 1981). It is not surprising, then, that meta-analyses of leadership effectiveness suggest a strong positive correlation between an individual's level of extroversion and their leadership effectiveness (Bono & Judge, 2004; Judge, Bono, Ilies, & Gerhardt, 2002; Wang et al., 2011).

Recently, there has been an introvert's uprising in the form of several defences or even celebrations of the unique skills of the introvert leader (Cain, 2012; Kahnweiler,

2009). These works tend to argue for the power of the introvert leader by emphasising the introvert's strength in those activities which can readily be classed as "introverted" ones (Thomson 2017). In other words, it is suggested that the effective introverted leader is not one who uses their special introvert talents to handle "extroverted" activities but one who emphasises "introverted" activities to better effect. Rather than enhancing their effectiveness in the full range of leadership activities as defined by the taxonomies, the recent literature on introvert leaders suggests that they can become more effective by focusing their efforts on an "introverted" subset of the taxonomy activities (Kuofie, Stephens-Craig, & Dool, 2015). So, for example, an effective introverted leader may decide to concentrate their development efforts through one-to-one coaching rather than through group development sessions.

However, many leaders still must engage in what might be considered counter-dispositional activities (Bartol & Zhang, 2007) and many find those activities uncomfortable (Peters, 1996). This raises the question as to whether there is anything that leaders can do to make those counter-dispositional activities more tolerable or even comfortable for themselves? This does not mean that leaders must act in counter-dispositional ways in order to be successful. There are many ways to success and these are not the protected domain of any particular personality profile. However, the interactive nature of many aspects of leadership has been shown to lend itself to extroverts more than introverts, and an unwillingness to engage with those interactive activities may leave an introverted leader at a disadvantage (Farrell, 2017).

This study is designed to build on the knowledge of how introvert and extrovert leaders choose the activities and situations they engage with. Whilst no attempt is made to assess leadership effectiveness, efforts are made to understand how leaders – both extrovert and introvert – feel about a range of leadership situations. To this end, the construct of *affective forecasts* or emotional predictions is used to assess how

individuals feel about upcoming situations or activities. The relationship between a leader's affective forecasts and their intentions to engage in different activities is also explored. This will allow for a better understanding of why leaders decide whether or not to engage in particular situations. Finally, a feedback intervention is investigated to see if opportunities exist to enhance the comfort of leaders who must engage in activities which are contrary to their dispositional (introvert or extrovert) preferences. Whilst the study does explore the issues facing both extroverted and introverted leaders, a focus on the specific needs of introverts is palpable throughout the study. The reason for this becomes clear in study 3 where the desires of individuals to "change" their preferences is discussed.

2. Background to the study

Three bodies of literature are relevant to this study. These cover the relationship between personality and leadership effectiveness; the process of and errors in making affective forecasts; and some of the broader decision-making literature, particularly around the heuristics involved in choosing between alternatives and the processes that drive people to make situational choices.

2.1 Extroversion and Leadership

The link between extroversion and leadership effectiveness is one of the more enduring themes of personality and leadership research over the last 30 years (Hogan & Kaiser, 2005). Studies exploring the link between extroversion and leadership effectiveness tend to focus on those aspects of leadership which require the influencing of others, such as transformational leadership (Hautala, 2006) and charismatic leadership (Keller, 1999). Along with other "big 5" personality traits such as Openness and Adjustment, Extroversion has been shown to be linked with stronger performance

in many different leadership behaviours including transformational leadership (Judge & Bono, 2000), influencing (Bonner, 2000), charismatic leadership (Keller, 1999; Oreg & Berson, 2015) and others (Caligiuri & Tarique, 2009). There is also evidence that extroversion is linked to a wider range of leadership behaviours such as promoting change (Kornør & Nordvik, 2004). Exactly why extroverts make more effective leaders in these areas is not generally articulated in the research studies. However, references to differences in how extroverts and introverts recognise the needs of followers (Dilchert & Ones, 2008; Grijalva, Harms, Newman, Gaddis, & Fraley, 2015); their levels of overall activity (Judge, et al., 2002) and optimism (Joseph, Dhanani, Shen, McHugh, & McCord, 2015; Goh, Schlegel, Tignor, & Hall, 2016); as well as indications of different levels of ambition (Watson & Clark, 1997) are all offered as explanations. Despite the number of studies directed towards understanding how specific personality characteristics relate to specific leadership outcomes, a clear model of the role of personality in leadership effectiveness is not apparent in the literature.

One gap in the literature appears to be studies which offer any insight into actions, interventions or development which introverts may use to close the gap of leadership effectiveness between themselves and their extrovert colleagues. Whilst significant recognition is paid to the difficulties introverts face in negotiating the range of “extroverted” situations and activities which successful leaders must attend to (Kahnweiler, 2009), few studies offer deeper insight into those difficulties and, more importantly, what steps can be taken by introverts to enhance their effectiveness in those situations/activities. There almost seems to be an acceptance that introverts will struggle with certain leadership tasks but, hopefully, can make up for their deficiencies by excelling in other – more “introverted” – tasks. For example, it has been suggested that introverts are better placed than extroverts to exhibit the behaviours associated with authentic leadership (Johnson, 2015).

2.2 Affective Forecasts

One area, however, that has been explored recently (Zelenski, Whelan, Nealis, Besner, Santoro, & Wynn, 2013) and which may offer greater insight into the mechanisms by which introverts approach some leadership tasks is that of affective forecasting. A separate review as part A of this thesis explores the literature around affective forecasts and affective forecasting errors. It highlights the variety of causes of those errors and the relationship between affective forecasting errors and several personal constructs, such as cognitive functioning (Hoerger, Quirk, Lucas, & Carr, 2010), emotional intelligence (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2007), personality (Hoerger & Quirk, 2010) and general affect (Martin & Quirk, 2015; Tomlinson, Carmichael, Reis, & Aron, 2010). Affective forecasts have been defined as the prediction of the emotional consequences of decision outcomes (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). Their role in decision making has had an impact in the fields of psychology (Ayton, Pott, & Elwakili, 2007), economics (Buchanan & Connell, 2006), health care (Shaffer, Focella, Scherer, & Zikmund-Fisher, 2016) and marketing. A great deal of the research looking at affective forecasts has focused on the inaccuracy of such forecasts and the many different types of error to which they are susceptible (Hoerger, Chapman, & Duberstein, 2016). As Gilbert, Driver-Linn and Wilson (2002) said, errors in affective forecasting are likely to impact upon the decisions taken by individuals especially in terms of their pursuit of happiness.

2.3 Decision making

The broader literature around deciding between alternatives is also relevant to this study. It is beyond the scope of this paper to review the vast literature on decision

making. The decisions of interest in this study are the choices between engaging or not engaging with particular situations. Ickes, et al., (1997) offer a review of the literature (at that time) covering the relationship between personality and situational choices. Sufficient evidence existed for them to conclude that "...people actively gravitate towards some types of situations and avoid others, and their choices of situations are reflections of features....that are typically regarded as the defining characteristics of personality" (p186). The models they consider as being relevant to situation choice are:

- a. Goal motivation theories – which suggests that people are motivated to actively seek out situations that they believe will help them reach their goals;
- b. Cognitive representational theories – in which people use information about situations that they have encoded, stored and retrieved, to choose situations that are of interest to them;
- c. Affect congruence theories – which suggest that the probability of choosing a situation in the future will depend on how compatible a person's previous affective experiences of that situation were with their psychological dispositions.

Affect congruence theory is most relevant to the current study although all three models may help to explain why leaders in organisations may find counter-dispositional situations uncomfortable. On one hand, they may be motivated to engage in a situation as it meets the need of a particular goal – e.g. it satisfies the requirements of a job role – whilst, on the other hand, the person may consider that involvement in the situation is likely to result in unpleasant feelings due to its counter-dispositional nature. The conflicting messages ("I want to go...I don't want to go") are likely to cause dissonance which, if repeated, could result in stress or strain.

Whilst participants are not explicitly asked to make situational choices in this study, they are asked to consider various situations and offer an estimate of the likelihood that they would or would not engage in that situation in the immediate future. Whilst much

of the literature in choosing alternatives focuses on economic considerations (Herrnstein, 1990), the Prospect Theory of Kahneman and Tversky (1979) could lend itself to the personal choice of whether or not to engage in various situations. The key components of the prospect theory equations are:

V: The overall value deriving from a choice;

v: The positive or negative change in an individual's state; (which, in this study is depicted as emotional rather than financial);

p: The probability of the outcome; and,

π : The decision weight attached to the probability of the outcome.

While it is not intended to estimate values for any of the above, it should be feasible to identify how the variables compare for different groups of people – i.e. introverts and extroverts. This may further our understanding of why people make certain decisions.

How people feel about gains and losses is also relevant. Kahneman and Tversky (1984) found that losses and gains are not viewed equally by people. The relationship between gains and subjective value was different to the relationship between losses and subjective value (concave vs convex in terms of the mathematical value function).

Losses were seen to have greater subjective value than gains (i.e. the value function was steeper). Later research suggests that aversion to losses, rather than being an accurate reflection of the hedonic impact of such occasions, is partly an affective forecasting error (Kermer, Driver-Linn, Wilson, & Gilbert, 2006). Evidence suggests that negative events (e.g. losing £100) can have greater impact on happiness than “equivalent” gains (e.g. finding £100). More recent studies investigated this further and found that the pattern of emotional responses to losses and gains was not clear cut. For example, there appear to be differences in how individuals weigh feelings about losses compared to gains and these differences can be shown to have behavioural correlates (Charpentier, De Neve, Li, Roiser, & Sharot, 2016). Of course, the risk of losses and gains are not

confined to financial outcomes. There are elements of risk when considering social choices also (Martin & Quirk, 2015). For example, introverts may well see themselves as putting themselves at risk in social settings. The issue of risk was not raised in the Zelenski et al. (2013) study but, potentially, this may play a significant part in how people use affective forecasts to make decisions.

2.4 Affective forecasts and introversion/extroversion

Zelenski et al.'s (2013) study suggests that introverts and extroverts make different predictions about how they will feel in upcoming situations. The study provides evidence that, when faced with the prospect of having to behave in an extroverted manner, introverts are more likely to feel negative emotions and extroverts are more likely to feel positive emotions. Zelenski et al. asked a sample of university students to predict how they would feel about behaving in either extroverted or introverted ways. The scales used for the prediction of feelings were positive and negative affect, self-consciousness and pleasantness. These same emotional categories were used in the current study. A measure of trait introversion/extroversion was then compared by Zelenski et al. with the predictions made by the students which showed that, overall, extroverts had higher levels of positive and lower levels of negative affect. The study also showed that there were differences between extroverts and introverts on a number of emotional scales when anticipating their feelings about acting in extroverted ways but no differences between them when anticipating their feelings about acting in introverted ways. The conclusions drawn by Zelenski et al. were that introverts made unique affective forecasting errors when considering future extroverted behaviour and suggested that the differences in how extroverts and introverts make affective forecasts could explain the differences in their behaviour (Zelenski et al. 2013).

A key component of Zelenski et al.'s argument is that previous studies (Fleeson, Malanos, & Achille, 2002) have shown that even when introverts had expressed lower levels of positive affect when contemplating an upcoming event where they would be expected to behave in an extroverted manner, they generally reported the same levels of positive emotion as extroverts once they had actually experienced the event. In short, they made greater errors in their affective forecasts. Zelenski et al. does not specifically detail the type of affective forecast errors made by participants in his study. However, his suggestion that people "often mispredict the intensity and duration of future emotions" describes the *impact bias* defined by Wilson and Gilbert (2003).

The paper by Zelenski et al. (2013) is important as it describes how individuals with differing personality traits may differ in terms of their behavioural choices and the reasons why they may differ. This understanding is potentially helpful for people who find that they are required to behave in counter-dispositional ways. If a mechanism can be identified which steers one to choose to act in particular ways, it follows that there may be opportunities, within that mechanism, for altering one's choices if doing so is a desired outcome. However, there are some issues with the Zelenski et al. study. Firstly, looking at the chosen descriptions for extroversion and introversion. Zelenski et al. built on work by Fleeson, et al., (2002) who used adjective-based Big 5 scales to develop descriptors for Extroversion which included, *energetic*, *active* and *adventurous*. Zelenski et al. took these terms and supplemented them with polar opposites to arrive at a set of "introverted" descriptors which included *lethargic*, *passive* and *unadventurous*. It is not unreasonable to suggest that Zelenski et al.'s "introverted" terms are all likely to be considered less appealing by university students regardless of their personality dispositions. (One might be tempted to think that the study was designed by an extrovert.) If one is endeavouring to determine whether introverts and extroverts make different choices based on the relative level of "introversion or extroversion" inherent in

the behaviour, then removing what would appear to be a significant social desirability factor would be appropriate.

Secondly, although Zelenski et al. (2013) suggests that “introverts may act less extroverted or select less-social situations” (p1094), the study focuses entirely on behaviour and does not offer further analysis of the types of situations in which the behaviour takes place. This may well be a natural focus for such research as dispositional introversion and extroversion are typically defined in terms of behaviour. However, all of these behaviours can be utilised in a wide range of situations. One can be talkative in a group or in a one-to-one situation. These situations are very different, and it is this difference which is at the heart of the current study. In feedback sessions carried out as part of the professional work of this author, introverted leaders expressed misgivings about engaging in particular types of situations not about engaging in particular behaviours. They say that they “don’t like meeting people in large group settings” not that they “don’t like meeting people” (Confidential, Feedback Sessions with the author, September, 2017). It is the situational aspects that this study will focus on. How this aligns with the behavioural focus of Zelenski et al.’s study will be of interest. It is not clear whether there will be a natural crossover between the two studies. Does a desire to behave in an extroverted way translate to a desire to engage with situations where extroverted behaviour is more likely to be required? To some extent, the current study will explore that question.

A third observation regarding Zelenski et al.’s study is that it is very much a “laboratory” study. Students were asked to participate in situations that were described as “psychology lab settings” and the activities involved were all quite contrived such as “completing a jigsaw with three other people”. The current study is much more a “field” study. The participants are all established leaders within their respective organisations. The situations about which they will be making affective forecasts are all

very real and could easily form part of the participants' day-to-day activities. How aligned the field and laboratory studies are will be an interesting observation.

3. Research Hypotheses

In summary, the studies in this paper take the work of Zelenski et al. forward on three fronts:

Study 1 attempts to replicate parts of Zelenski et al.'s study but, instead of asking participants to imagine themselves acting in introverted or extroverted ways, they are asked to imagine themselves undertaking a series of common leadership tasks which can be classified into introverted or extroverted situations. It is felt that this design will add realism to the emotional backdrop that influences participant responses. The first two hypotheses for this study, then, are that extroverts will demonstrate higher affective forecasts for positive affect (H1_A) and pleasantness (H1_B) and lower affective forecasts for negative affect (H2_A) and self-consciousness (H2_B) than introverts when contemplating a range of leadership situations. The third and fourth hypotheses relate to the situations that are contemplated by the participants. Zelenski et al. found that behaving in an extroverted manner was generally forecast to be higher in positive affect and pleasantness than acting in an introverted manner. The differences between the different acting conditions for negative affect and self-consciousness were more equivocal and depended on personality type. In an effort to understand this relationship more fully, it is hypothesised that extroverted situations will elicit higher affective forecasts for positive affect (H3_A) and pleasantness (H3_B) and lower affective forecasts for negative affect (H4_A) and self-consciousness (H4_B) than introverted situations. Hypotheses five through eight relate to the differences in forecasts made by extroverts and introverts. Zelenski et al.'s results showed differences in affective forecasts between the two personality types when acting in an extroverted manner but not when

acting in an introverted manner. This study will explore the same relationships but with a different perspective. Zelenski et al.'s results confirmed previous work (Hoerger & Quirk, 2010; Martin & Quirk, 2015; Tomlinson, Carmichael, Reis, & Aron, 2010) which showed that extroverts and introverts make, overall, different levels of positive and negative affective forecasts. Extroverts tend to make more positive forecasts and introverts more negative ones. Therefore, comparing the absolute levels of their forecasts when exploring how they are feeling about different types of situations may not be the most appropriate comparison. How those situations influence their feelings relative to their "normal" level of affective forecasts is likely to be more enlightening when looking to understand the impact that different situations have on people. On that basis, there would appear to be no reason why introverted situations would not influence introverts in the same way that extroverted situations influence extroverts and vice-versa. It is therefore hypothesised that, allowing for their differences in positive and negative affective forecasts, extroverts will predict greater positive affect (H5_A) and pleasantness (H5_B) than introverts for extroverted situations; and introverts will predict greater positive affect (H6_A) and pleasantness (H6_B) than extroverts for introverted situations. It is also hypothesised that introverts will predict greater negative affect (H7_A) and self-consciousness (H7_B) than extroverts for extroverted situations; and extroverts will predict greater negative affect (H8_A) and self-consciousness (H8_B) than introverts for introverted situations. Expectations regarding the last hypothesis should be guarded. Self-consciousness, by definition, is related to feelings about the thoughts and perceptions of others. Introverted situations are less likely to involve others. Therefore, the potential for self-consciousness is likely to be restricted for both introverts and extroverts.

In study 2, the relationship between affective forecasts and participant intentions is explored with regard to the types of situations (introverted or extroverted) that

participants are considering when predicting their feelings. Zelenski et al. note that “the links among forecasts, decisions, and behavior are often assumed rather than explicitly tested....and it is worth reconsidering whether or how individual differences in forecasts predict subsequent differences in behaviour” (Zelenski et al., 2013, p. 1105). One of the areas of interest in this regard is the literature around decision making. In particular, the work of Kahneman and Tversky and the emergence of Prospect Theory provides a mechanism by which some of the elements that drive a person’s decision can be evaluated (Kahneman & Tversky, 1979). More recent studies (Charpentier, et al., 2016) explore how feelings may be considered as part of the decision-making equation and how individual differences affect the probability that a particular alternative is chosen. This is relevant to us here as we attempt to see whether the affective forecasts made by individuals affect their decisions to take part or engage with a situation. If they do so, this could improve our understanding of the mechanism by which personality characteristics influence decisions. Our first hypothesis in study 2 is that affective forecasts will correlate with the stated intentions of participants – with positive affective forecasts predicting an intention to participate more frequently (H9_A) and negative affective forecasts predicting an intention to participate in situations less frequently (H9_B). There will also be an opportunity in the study to see whether those intentions are actually played out and whether the affective forecasts taken at one point are related to the frequency with which participants do subsequently engage with activities. It is hypothesised that positive affective forecasts will be positively related to the reported frequency of engaging in activities (H10_A) and negative affective forecasts will be negatively related to that frequency (H10_B).

Finally, an attempt is made to examine the role that interventions may play in influencing the affective forecasts and behaviour of participants. Specifically, an experimental condition of feedback on affective forecasting behaviour and the provision

of narratives regarding introverted or extroverted behaviour was employed to see whether these made any difference to the ways that people felt about upcoming situations. Narratives are (often written) accounts of the experiences of individuals and they have been shown to have a role in the decisions that people take in relation to their health (Dillard, 2010) and their buying patterns (Wood & Bettman, 2007). Their use is based on the notion that people incorporate knowledge of the emotions of others when predicting their own emotions (Walsh & Ayton, 2009). In study 3, affective forecasts will be collected at two time points. Between those two points, some participants will receive information about their forecasts and will be instructed to read narratives which depict more positive emotions in counter-dispositional situations. That is, extroverts will be given narratives which describe positive feelings about more introverted situations, such as working alone or undertaking close, detailed work. Conversely, introverts would receive narratives which describe the positive emotions associated with activities such as socialising and networking. As a control, a group of participants will not receive the narratives and feedback about their affective forecasts until after the second collection of affective forecasts. This study attempts to answer the question as to whether information about the affective forecasts that people make and the use of narratives can influence the affective forecasts that people make in the future. It is hypothesised that participants who receive the extended feedback, which includes information on their affective forecasts and a set of narratives for them to read, will show a positive change in their later forecasts compared to those who receive standard feedback (H11_{A-D}).

Table 1
Research Hypotheses
 Study 1

1. Dispositional Extroverts will predict greater positive affect (H1_A) and pleasantness (H1_B) than dispositional introverts in total across all situations.
2. Dispositional Introverts will predict greater negative affect (H2_A) and self-consciousness (H2_B) than dispositional extroverts in total across all situations.
3. Extroverted situations will elicit greater positive affect (H3_A) and pleasantness (H3_B) than introverted situations in total across all participants.
4. Introverted situations will elicit greater negative affect (H4_A) and self-consciousness (H4_B) than extroverted situations in total across all participants.
5. For extroverted situations, dispositional extroverts will predict greater positive affect (H5_A) and pleasantness (H5_B) than dispositional introverts accounting for the group differences in positive affect and pleasantness.
6. For introverted situations, dispositional introverts will predict greater positive affect (H6_A) and pleasantness (H6_B) than dispositional extroverts accounting for the group differences in positive affect and pleasantness.
7. For extroverted situations, dispositional introverts will predict greater negative affect (H7_A) and self-consciousness (H7_B) than dispositional extroverts accounting for the group differences in negative affect and self-consciousness.
8. For introverted situations, dispositional extroverts will predict greater negative affect (H8_A) and self-consciousness (H8_B) than dispositional introverts accounting for the group differences in negative affect and self-consciousness.

Study 2

9. Affective forecasts for positive emotions (happy, pleased, interested, excited) will correlate positively with the frequency of the intentions of individuals to participate in situations (H9_A); and affective forecasts for negative emotions (nervous, anxious, self-conscious, embarrassed, distressed, upset) will correlate negatively with the frequency of the intentions of individuals to participate in situations (H9_B).
10. Affective forecasts for positive emotions (happy, pleased, interested, excited) will correlate positively with the frequency with which individuals participate in situations (H10_A); and affective forecasts for negative emotions (nervous, anxious, self-conscious, embarrassed, distressed, upset) will correlate negatively with the frequency with which individuals participate in situations (H10_B).

Study 3

11. People who receive enhanced feedback will demonstrate a more positive change in their predictions of positive (H11_A) and negative affect (H11_B), self-consciousness (H11_C) and pleasantness (H11_D) compared to people who receive standard feedback.

4. Method

Participants were asked to complete three questionnaires – a personality measure (TDI) and two Emotional Prediction questionnaires (EPQ1 & EPQ2) – which were handled via a controlled, online administration following the principles set out in the British Psychological Society Standards of Competence in Occupational Testing (2017). Feedback was handled on a one-to-one basis via telephone according to the schema described for study 3. Feedback was carried out by the author who is trained in providing feedback in a range of situations. Relevant reports were sent to participants at least 24 hours prior to the feedback session.

Ethical approval for the studies was obtained via the University's ethical approval process. Copies of letters relevant to obtaining that approval are provided in appendix A. No objections or alterations to the study design were required by the approval committee.

4.1 Participants

This study was designed as a work-based piece of research and participants were an opportunity sample based on availability and the willingness of client organisations to participate in the research. The key criterion for participant inclusion was that they needed to have a role as a leader in an organisation. This meant that they had to be responsible for the direct line management of other people or, as part of their role, led a team, such as a project team. Organisations with whom the author had previously worked were approached through a number of central gatekeepers and invited to participate in the study. No incentives were offered to the invited organisations although a commitment was made to share any overall findings from the study that may help them to better understand leadership behaviours within the organisation. No individual data including the names of eventual participants in the study was shared

with the organisation. Organisational gatekeepers were responsible for making the first offer of participation to individuals. The criteria they used in choosing individuals to whom the offer was made, beyond those specified by the research specifications, varied. Gatekeepers were all senior Human Resource professionals from within the organisation and, in general, the people they selected tended to be from cohorts who were undertaking or had recently undertaken some leadership training. At the least structured end, the criterion used was “those who would be likely to benefit from some further self-awareness”. All participants were seen as being likely to participate fully and enthusiastically in the study.

4.2 Procedure

Once the study had been introduced to potential participants and sanctioned by the organisation, individual emails were sent to each person providing details about the study and information about their potential involvement in the study with a request to voluntarily participate by sending a confirmatory email to the researcher (see appendix B:1). In total, 62 individuals were sent initial information and 46 agreed to participate – 74% of the total. Individuals who did not respond to the initial invitation to participate in the study were sent a second invitation which was accepted by 5 individuals bringing the total participant numbers to 51. At this point, individuals were sent further details about the study and the need to secure their informed consent as well as instructions for accessing the study questionnaires (see appendix B:2 & B:3). No further information regarding individual participation (or non-participation) was provided to the organisation. Figure 1 shows the overall design of the three studies outlining the independent and dependent variables for each study. An account of the decision-making process around the identification and operationalising of variables is provided in appendix C.

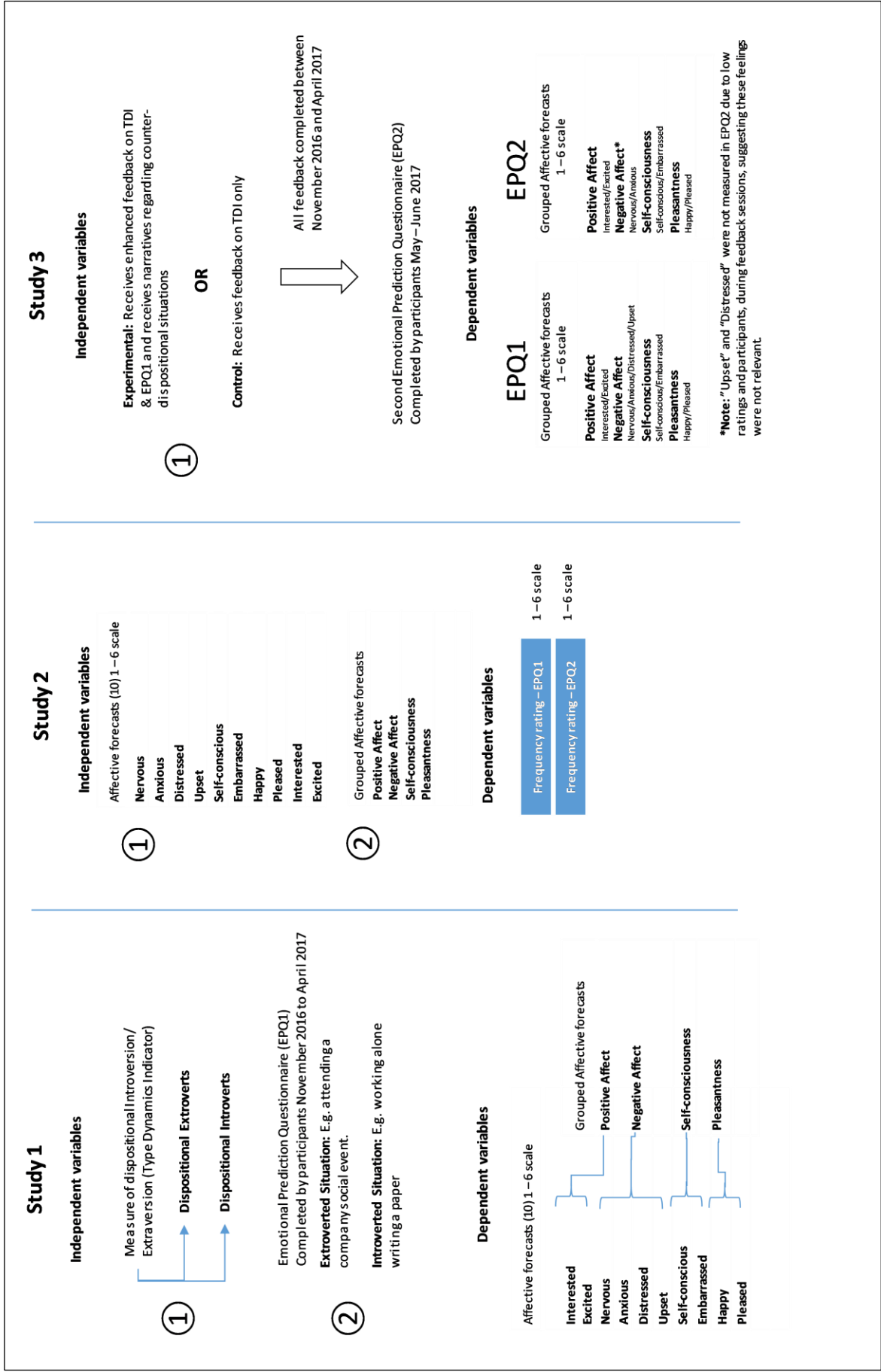


Figure 1. Dependent and Independent variables for studies 1 – 3

5. Study 1

5.1 Method

5.1.1 Materials

5.1.1.1 *Personality Questionnaire*

Dispositional introversion and extroversion have been reliably measured by a number of personality assessment instruments including the trait measures (e.g. 16PF as a second order factor, NEO, OPQ, Facet5 etc.) and the type measures (e.g. MBTI, Type Dynamics Indicator, Jung Type inventory etc.). Some of these instruments may utilise more idiosyncratic names or break down the E/I construct into more discrete dimensions. The choice between a trait and type-based questionnaire was not an issue from a measurement perspective as most type-based instruments offer a normative score as well as type preference. Conceptually, the choice was more difficult and the thought processes involved in this are contained in the Critical Evaluation submitted with this thesis. Ultimately, the study design was more focused on looking at the differences between extroverts and introverts rather than attempting to draw conclusions from the level of trait extroversion. Therefore, a type-based measure was chosen. The Myers-Briggs Type indicator is a widely used questionnaire for measuring dispositional introversion/extroversion (Cunningham, 2013; Psychometric Success Ltd., n.d.) and it was decided that an instrument such as this would provide a valid measure for this study. A similar instrument – the Type Dynamics Indicator – offers an additional measure that may be useful for further research. It collects respondent preferences as they see them now and then asks them to consider the preferences they would like to have. From a practical perspective, this additional dimension allows for a richer feedback discussion and may provide opportunities for research into the incentives of people to behave counter-dispositionally. Dispositional introversion/extroversion is, therefore, used as a categorical subject variable in this study.

5.1.1.2 Affective Forecast Questionnaire

Various questionnaires have been used in the past to ascertain respondent views of situations. Generally, these focused on general situations that may apply in many contexts – E.g. “being in a group” – (Furnham, 1982). This would not have been appropriate for the current study. Zelenski et al. (2013) developed a questionnaire which measured affective forecasts but his “situations” were actually acting conditions rather than contextual representations. Using Zelenski et al.’s questionnaire as a reference, an Emotional Prediction Questionnaire (EPQ1) – was developed for this study which asked respondents to rate their feelings about being involved in a range of situations in the future.

5.1.1.2.1 Developing the “situations” statements

To ensure content validity, a bank of statements describing organisational situations were broadly developed from the Taxonomy of Leadership Behaviours developed by Yukl (1994). To capture the situations more likely to relate to a preference for introversion or extroversion, emphasis was placed the more relationship-based behaviours such as networking, teambuilding and conflict management, informing, developing and mentoring, motivating and inspiring, and consulting. To create a basis for construct validity for the questionnaire, popular references (E.g. Cain, 2012) were explored to identify the types of situations that introverts and extroverts had demonstrated a preference for or an aversion to. Finally, a structured process was carried out to arrive at a final set of 30 statements (balanced with 15 extroverted and 15 introverted statements) which were chosen for the EPQ1 questionnaire. Information about the development and psychometric properties of the questionnaire is provided in appendix D.

To avoid the possibility that social desirability would play a role in participants’ responses, the introverted situations were deliberately styled to match the extroverted

situations in terms of the potential “positivity” of the situation. So, statements such as “staying at home alone” were not offered whilst statements such as “working in a library on a research paper” were. Both are likely to be fairly solitary endeavours but one clearly has a more positive timbre than the other.

5.1.1.2.2 *Developing the “emotions” scales*

To allow comparisons with Zelenski et al.’s work, the PANAS structure of emotions (Watson, Clark, & Tellegen, 1988) was used as the basis of the measurement of affect. Participants were presented with the series of 30 situations and asked to rate their likely feelings as they approached each situation. Figure 2 shows a typical question and the possible response options.

Situation 2:
Attending an after-work drinks evening with staff.

What emotions do you think you will have in this situation?

	Not at all	A little	Some	Quite a bit	Very	Extremely
Nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Happy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-conscious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Embarrassed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 2. Question extract from the EPQ1 Questionnaire

Participants were asked to rate 10 different emotions on a 6-point scale for each situation. Although 300 ratings (10 emotions x 30 situations) were asked of each respondent, completion rates were high (>95%) and the average time taken to complete

the questionnaire was under 30 minutes. Unfortunately, no randomisation of questions was possible with the version of the software used (Survey Monkey) without a significant cost implication. However, observation of the data showed no patterns of response fatigue. A full list of the situations included in the EPQ1 questionnaire is provided in appendix E. No restriction was placed on the order in which the TDI and EPQ1 questionnaires were completed by participants. The access details for the TDI were provided in the instruction email which is provided in full in appendix B:4.

Depending on the research questions being investigated, the specific emotions were sometimes grouped at various levels according to the schema shown in figure 1. It was decided to group the emotions for study 1 in the same way as Zelenski et al. (2013) did although an exploratory factor analysis suggested that a simpler two-factor (positive affect and negative affect) solution would more closely represent the data captured in this study. To align with the Zelenski et al. (2013) study, the combined average of Nervous, Anxious, Distressed and Upset ratings was used as an indicator of Negative Affect; the average of Self-conscious and Embarrassed ratings was used as a measure of Self-consciousness; Happy and Pleased became Pleasantness; and Positive Affect was calculated using the average of Interested and Excited ratings. The full range of ten emotions was used to check scale reliabilities, Cronbach's alpha reliability estimate coefficients for all emotion scales were above 0.8 for all situations (questions). Full reliability data is shown in appendix D. The TDI was administered through the proprietary test administration platform "*Profiling for Success*" and the EPQ questionnaires were administered via SurveyMonkey.

5.2 Results and Discussion

5.2.1 Affective forecasts and personality type

Table 2 shows descriptive statistics for the affective forecast ratings given by participants for each of the ten emotions and four groups of emotions across all 30 situations.

Table 2

Mean Ratings of Individual and Grouped Emotions by Personality Type

Emotion	All (N=50)		Extroverts (n=30)		Introverts (n=20)	
	Mean	SD	Mean	SD	Mean	SD
Positive Affect	3.74	0.73	3.95	0.59	3.43	0.82
Interested	4.20	0.70	4.37	0.64	3.94	0.72
Excited	3.29	0.88	3.53	0.70	2.92	1.01
Negative Affect	1.72	0.59	1.62	0.56	1.88	0.63
Nervous	2.02	0.67	1.81	0.52	2.34	0.76
Distressed	1.58	0.82	1.52	0.79	1.66	0.89
Anxious	2.10	0.88	1.94	0.85	2.32	0.91
Upset	1.20	0.38	1.21	0.45	1.19	0.26
Self-Consciousness	2.06	0.76	1.99	0.75	2.16	0.77
Self-Conscious	2.67	1.17	2.64	1.28	2.72	1.01
Embarrassed	1.45	0.59	1.34	0.48	1.60	0.71
Pleasantness	3.31	0.67	3.51	0.58	3.01	0.69
Happy	3.27	0.70	3.45	0.65	3.01	0.70
Pleased	3.34	0.67	3.56	0.56	3.01	0.71

A separate one-way analysis of variance was carried out on the data for each emotion to test differences between the group means. *F*-ratio values and associated *p*-values for differences between extroverts and introverts are summarised in Table 3 with significant statistics highlighted. The full ANOVA data is provided in appendix Table A3.

Figure 3 shows the average ratings in the context of the full rating scale available to respondents. It also demonstrates how introverts and extroverts differ in their emphasis of positive and negative emotions.

Table 3
One-Way ANOVA Summary Results of Individual and Grouped Emotions by Personality Type

Emotion	Sum of Squares	df	Mean Square	F	Sig.
Positive Affect	3.216	1,48	3.216	6.673	.013*
Interested	2.170	1,48	2.170	4.806	.033*
Excited	4.467	1,48	4.467	6.418	.015*
Negative Affect	.797	1,48	.797	2.322	.134
Nervous	3.447	1,48	3.447	8.802	.005*
Distressed	.235	1,48	.235	0.343	.561
Anxious	1.733	1,48	1.733	2.285	.137
Upset	.008	1,48	.008	0.050	.824
Self-Consciousness	.376	1,48	.376	0.652	.424
Self-Conscious	.078	1,48	.078	0.056	.814
Embarrassed	.894	1,48	.894	2.640	.111
Pleasantness	2.982	1,48	2.982	7.573	.008*
Happy	2.386	1,48	2.386	5.355	.025*
Pleased	3.644	1,48	3.644	9.363	.004*

Note: All are between groups

*Significant at $p < .05$

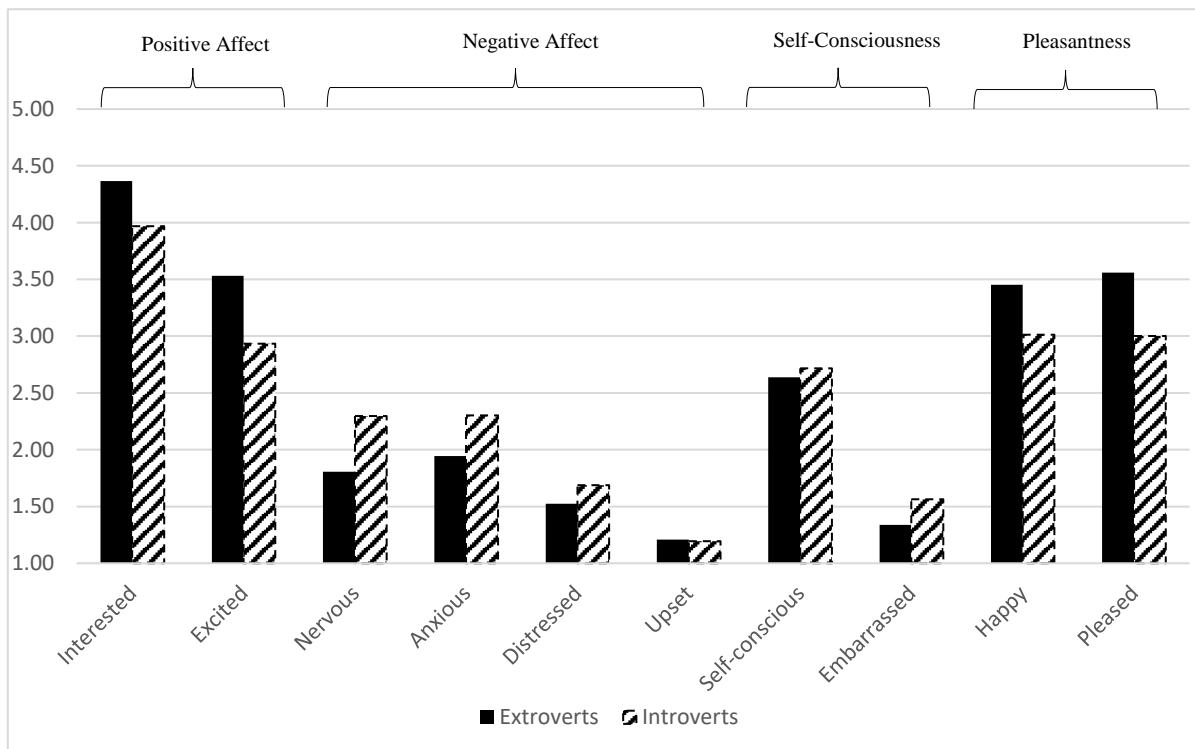


Figure 3. Mean affective forecast ratings by personality type

The results show introverts as having similar levels of predicted negative emotion to extroverts, whilst extroverts show higher levels of predicted positive emotions. The analysis of variance statistics show that means of all of the anticipated positive emotions are significantly different (at $p=.05$) for extroverts and introverts with extroverts anticipating higher levels of these emotions. Among the negative emotions, only the anticipation of feeling Nervous is shown to be significantly different between the two personality type groups with introverts anticipating higher levels of this emotion.

The results in Table 3 suggest that there are significant differences in anticipated emotions between dispositional extroverts and introverts on two of the combined scales – Positive Affect and Pleasantness. The direction of the differences support hypotheses 1_A and 1_B but hypotheses 2_A and 2_B are not supported by the results.

1. *Dispositional Extroverts will predict greater positive affect (H1_A) and pleasantness (H1_B) than dispositional introverts in total across all situations.*
2. *Dispositional Introverts will predict greater negative affect (H2_A) and self-consciousness (H2_B) than dispositional extroverts in total across all situations.*

It is, however, worth noting the actual value differences observed in Figure 3 to put into context the degree by which the two personality groups differ. Zelenski et al. (2013, p. 1106) suggest that “introverts do not want to be happy as much as extroverts do” which may conjure images of overtly miserable introverts content with their lot. The results above suggest that while these differences are definitely present, the behavioural manifestation of them is unlikely to be extreme.

5.2.2 Affective forecasts and type of situation

Table 4 shows the average positive affect, negative affect, self-consciousness and pleasantness, for all participants, by the type of situation. Paired *t-test* analyses were carried out for each grouped emotion by situation type. The results of these analyses are shown in Table 5.

Table 4

Mean Ratings of Individual and Grouped Emotions by Situation Type

Emotion	Situation Type					
	Both (N=50)		Extroverted (N=50)		Introverted (N=50)	
	Mean	SD	Mean	SD	Mean	SD
Positive Affect	3.74	0.73	3.83	0.83	3.69	0.76
Interested	4.20	0.70	4.15	0.79	4.27	0.72
Excited	3.29	0.88	3.52 _a	0.96	3.13 _b	0.94
Negative Affect	1.72	0.59	1.92 _a	0.69	1.54 _b	0.53
Nervous	2.02	0.67	2.46 _a	0.90	1.60 _b	0.56
Distressed	1.58	0.82	1.67 _a	0.91	1.49 _b	0.80
Anxious	2.10	0.88	2.36 _a	0.99	1.85 _b	0.83
Upset	1.20	0.38	1.19	0.42	1.20	0.36
Self-Consciousness	2.06	0.76	2.39 _a	0.85	1.75 _b	0.73
Self-Conscious	2.67	1.17	3.11 _a	1.13	2.27 _b	1.29
Embarrassed	1.45	0.59	1.68 _a	0.81	1.23 _b	0.43
Pleasantness	3.31	0.67	3.40	0.78	3.26	0.70
Happy	3.27	0.70	3.37	0.82	3.25	0.72
Pleased	3.34	0.67	3.44	0.79	3.28	0.72

Note. Means with differing subscripts within rows are significantly different at the $p < .05$ based on paired *t*-test analysis (shown in Table 5).

Table 5

Paired t-test Results for Individual and Grouped Emotions by Situation Type (Introverted – Extroverted)

Emotion	Paired differences (N=50)						
	Mean	SD	SE _{Mean}	<i>t</i>	<i>df</i>	Sig.	effect
Positive Affect	-.14	.58	0.08	-1.703	49	.095	0.24
Interested	.12	.57	0.08	1.428	49	.160	0.20
Excited	-.39	.66	0.09	-4.179	49	<.01**	0.51
Negative Affect	-.38	.33	0.05	-8.302	49	<.001**	0.76
Nervous	-.86	.62	0.09	-9.779	49	<.001**	0.81
Distressed	-.18	.47	0.07	-2.633	49	.011*	0.35
Anxious	-.51	.45	0.06	-8.006	49	<.001**	0.75
Upset	.01	.17	0.02	0.535	49	.595	0.08
Self-Consciousness	-.64	.50	0.07	-9.153	49	<.001**	0.79
Self-Conscious	-.84	.64	0.09	-9.301	49	<.001**	0.80
Embarrassed	-.45	.51	0.07	-6.161	49	<.001**	0.66
Pleasantness	-.14	.62	0.09	-1.595	49	.117	0.22
Happy	-.12	.65	0.09	-1.703	49	.095	0.24
Pleased	-.16	.64	0.09	1.428	49	.160	0.20

*Significant at $p < .05$ **Significant at $p < .01$

The results in Table 5 show that there are significant differences between extroverted and introverted situations in how participants rated their anticipated emotions on only two of the combined scales – Negative Affect and Self-consciousness. Therefore, hypotheses 3_A and 3_B are not supported. Despite the differences in affective forecasts of Negative Affect and Self-consciousness between introverted and extroverted situations, the direction of the differences do not support hypotheses 4_A and 4_B.

3. *Extroverted situations will elicit greater positive affect (H3_A) and pleasantness (H3_B) than introverted situations in total across all participants.*
4. *Introverted situations will elicit greater negative affect (H4_A) and self-consciousness (H4_B) than extroverted situations in total across all participants.*

The results suggest that extroverted situations elicit higher levels of virtually all of the anticipated negative emotions (except Upset) and one of the positive emotions (Excited). In no case was there evidence of introverted situations eliciting greater emotion – positive or negative – than introverted situations. This is an interesting finding as it seems to suggest that extroverted situations tend to elicit greater levels of emotion – both positive and negative. While the reasons why this might be the case is not clear, the implications of this finding for the way that people choose between extroverted and introverted situations may be quite significant. These implications are discussed in the general discussion section.

5.2.3 Affective forecasts and the interaction of personality and situation.

Table 6 shows the average forecasts for the four affect scales broken down by personality type and situation type. Separate mixed analysis of variance procedures were used to compare the means and the results of these analyses are highlighted in Tables 7 to 10.

Table 6
Group Means (and SDs) for Affective Forecasts (EPQ1) by Situation Type and Personality

Emotion scale	Extrovert personality (n=30)		Introvert personality (n=20)	
	Extroverted situations	Introverted situations	Extroverted situations	Introverted situations
Positive Affect	4.16 (0.61)	3.80 (0.66)	3.39 (0.89)	3.60 (0.90)
Negative Affect	1.74 (0.59)	1.49 (0.53)	2.22 (0.75)	1.66 (0.49)
Self-consciousness	2.24 (0.80)	1.74 (0.75)	2.65 (0.89)	1.83 (0.79)
Pleasantness	3.76 (0.59)	3.33 (0.66)	2.92 (0.75)	3.21 (0.76)

Table 7
Within-subjects Results for Positive Affect Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	.155	1	.155	1.206	.278	.024
SituationType * Personality	2.038	1	2.038	15.890	.000*	.245
Error (SituationType)	6.285	48	.128			

Between-subjects Results for Positive Affect Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	1380.026	1	1380.026	1371.838	.000*	.966
Personality	5.784	1	5.784	5.749	.020*	.105
Error	49.292	48	1.006			

*Significant at $p < .05$

Table 8
Within-subjects Results for Negative Affect Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	4.003	1	4.003	93.891	.000*	.657
SituationType * Personality	.587	1	.587	13.774	.001*	.219
Error (SituationType)	2.089	48	.043			

Between-subjects Results for Negative Affect Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	312.472	1	312.472	438.276	.000*	.899
Personality	2.520	1	2.520	3.534	.066	.067
Error	34.935	48	.713			

*Significant at $p < .05$

Table 9

Within-subjects Results for Self-Consciousness Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	10.792	1	10.792	94.108	.000*	.658
SituationType * Personality	.648	1	.648	5.649	.021*	.103
Error (SituationType)	5.619	48	.115			

Between-subjects Results for Self-Consciousness Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	442.851	1	442.851	377.149	.000*	.885
Personality	1.521	1	1.521	1.295	.261	.026
Error	57.536	48	1.174			

*Significant at $p < .05$

Table 10

Within-subjects Results for Pleasantness Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	.136	1	.136	1.071	.306	.021
SituationType * Personality	3.182	1	3.182	25.118	.000*	.339
Error (SituationType)	6.207	48	.127			

Between-subjects Results for Pleasantness Predictions by Situation Type and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	1079.071	1	1079.071	1334.999	.000*	.965
Personality	5.744	1	5.744	7.106	.010*	.127
Error	39.606	48	.808			

*Significant at $p < .05$

Graphs of these results somewhat reflect the findings of Zelenski et al. (2013). The graphs from both studies are presented for comparison in Figure 4. The results in Tables 7 to 10 show main effects for Situation Type on the two negative emotional scales – Negative Affect ($F_{1,48} = 93.89, p < .001, \eta_p^2 = .657$) and Self-consciousness ($F_{1,48} = 94.11, p < .001, \eta_p^2 = .658$). There are also main effects of Personality observed for the two positive emotional scales – Positive Affect ($F_{1,48} = 5.75, p = .02, \eta_p^2 = .105$) and Pleasantness ($F_{1,48} = 7.106, p = .01, \eta_p^2 = .127$). Interaction effects were observed for all of the emotional scales. The direction of the differences found in this study followed the pattern found by Zelenski et al. (2013).

The results shown in Figure 4 offer some support for the findings of Zelensky in terms of the patterns of predicted emotions between extroverts and introverts in the two types of situation. They also help to generalise Zelensky's findings to real situations faced by people who are very likely to face such situations. Many of the studies which have investigated affective forecasts have used simulated situations which may contain components of "real" situations but are quite hypothetical in nature. Although the situations in this study may not precisely reflect the tasks and activities in which each respondent would be involved, the general outline and emotional content of the situations resounded very clearly for the participants. Many of them, in feedback sessions, discussed the similarity of the depicted situations to ones in which they had found themselves. Additionally, this study replicates these results and patterns "in the field" as it were rather than in a laboratory. All of the participants in this study were organisational leaders who are constantly faced with situations such as those depicted in the study questionnaires and the fact that the patterns seen in this study so closely mirror those found in Zelenski et al.'s "laboratory" study suggest that studies such as Zelensky's are a valuable addition to understanding the role of affective forecasts in the decisions of the wider population.

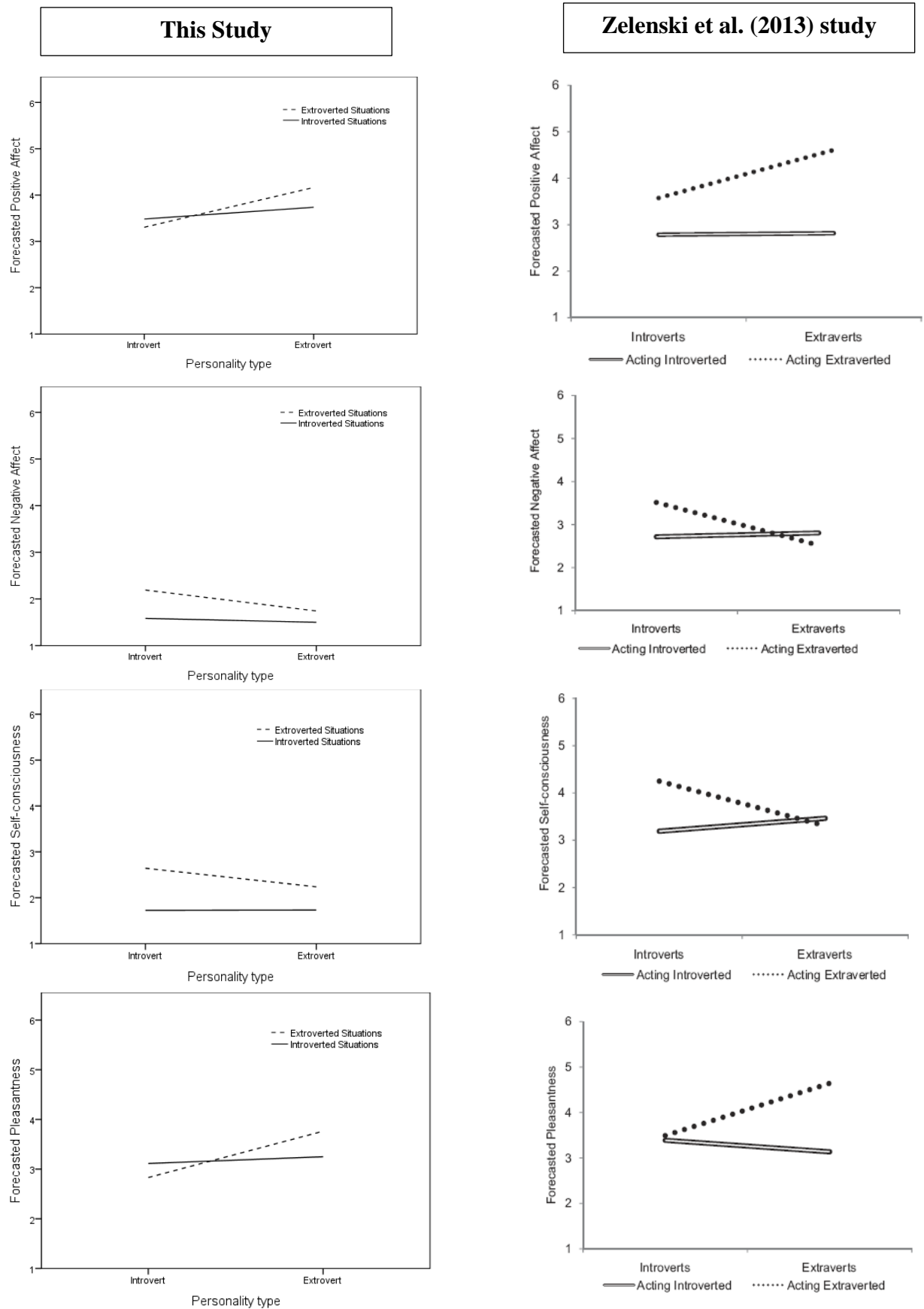


Figure 4. Mean forecasted emotions by personality and situation – this study and Zelensky et al. (2013)

5.2.4 Incremental Affective Forecasting

One issue which is raised by the results in Table 6 relates to the fact that, although there are some differences between introverts and extroverts in their affective forecasting patterns across introverted and extroverted situations, these results do not account for differences in their overall levels of the various emotions across all situations, which can be seen from Table 3. Table 3 shows significant differences between the two groups of people, with extroverts generally predicting higher levels of positive affect and pleasantness when considering all situations. If, in Figure 4, it is indicated that introverts and extroverts predict the same level of emotions in introverted situations, these results do not account for any underlying difference between the two groups. As introverts have been shown to predict generally lower levels of pleasantness than extroverts, the fact that introverts now show the same level of predicted pleasantness as extroverts suggests that introverts are positively affected (i.e. more anticipatory of feeling pleasantness) by the introverted situations they are considering.

An appropriate way of measuring the true effect of situation type on the affective forecasts of the two groups would be to account for each group's overall propensity towards either positive or negative emotions and partition this out of the analysis. This was done by centring each of the four variables against the group means. Centring means is a recognised way of improving the interpretability of regression coefficients (Schielzeth, 2010). Table 11 shows the means for each emotion – situation pairing. Table 12 shows the results of one-way ANOVAs carried out to compare the means of each personality group for each pairing.

Table 11

Personality Group Means (and SDs) for Group Mean Centred Affective Forecasts (centred by personality) for Affective Forecast and Situation Type pairings

Emotion - Situation pairing	Extrovert		Introvert		Both	
	Mean	SD	Mean	SD	Mean	SD
Positive Affect in Extroverted situations controlled for overall Positive Affect	0.21	0.61	-0.11	0.88	0.08	0.74
Positive Affect in Introverted situations controlled for overall Positive Affect	-0.15	0.66	0.09	0.89	-0.06	0.76
Negative Affect in Extroverted situations controlled for overall Negative Affect	0.12	0.59	0.42	0.87	0.24	0.73
Negative Affect in Introverted situations controlled for overall Negative Affect	-0.13	0.53	-0.24	0.56	-0.17	0.54
Self-Consciousness in Extroverted situations controlled for overall Self-Consciousness	0.26	0.80	0.48	0.90	0.34	0.84
Self-Consciousness in Introverted situations controlled for overall Self-Consciousness	-0.24	0.75	-0.39	0.73	-0.30	0.74
Pleasantness in Extroverted situations controlled for overall Pleasantness	0.26 _a	0.59	-0.14 _b	0.73	0.10	0.67
Pleasantness in Introverted situations controlled for overall Pleasantness	-0.18	0.66	0.16	0.76	-0.04	0.71

Note. Means with differing subscripts within rows are significantly different at the $p < .05$ based on one-way ANOVA analysis (shown in Table 12).

Table 12

One-way ANOVA Results for Group Mean Centred Affective Forecasts (centred by personality) for Personality and Situation Type pairings

	Source	Sum of Squares	df	Mean Square	F	Sig.
Positive Affect in Extroverted situations controlled for overall Positive Affect	Between Groups	1.252	1	1.252	2.352	0.132
	Within Groups	25.548	48	0.532		
	Total	26.800	49			
Positive Affect in Introverted situations controlled for overall Positive Affect	Between Groups	0.716	1	0.716	1.247	0.270
	Within Groups	27.568	48	0.574		
	Total	28.285	49			
Negative Affect in Extroverted situations controlled for overall Negative Affect	Between Groups	1.033	1	1.033	2.005	0.163
	Within Groups	24.725	48	0.515		
	Total	25.758	49			
Negative Affect in Introverted situations controlled for overall Negative Affect	Between Groups	0.155	1	0.155	0.531	0.470
	Within Groups	14.063	48	0.293		
	Total	14.219	49			
Self-Consciousness in Extroverted situations controlled for overall Self-Consciousness	Between Groups	0.595	1	0.595	0.841	0.364
	Within Groups	33.971	48	0.708		
	Total	34.566	49			
Self-Consciousness in Introverted situations controlled for overall Self-Consciousness	Between Groups	0.240	1	0.240	0.436	0.512
	Within Groups	26.402	48	0.550		
	Total	26.641	49			
Pleasantness in Extroverted situations controlled for overall Pleasantness	Between Groups	1.891	1	1.891	4.465	0.040*
	Within Groups	20.330	48	0.424		
	Total	22.221	49			
Pleasantness in Introverted situations controlled for overall Pleasantness	Between Groups	1.359	1	1.359	2.758	0.103
	Within Groups	23.649	48	0.493		
	Total	25.008	49			

*significant at $p < .05$

In addition to the one-way ANOVA analyses, separate mixed ANOVA analyses were used to test for main effects of situation and personality on group mean centred affective forecasts and for any interaction effects. Tables 13 – 16 show the results of these analyses.

Table 13

Within-subjects ANOVA Results for Incremental Positive Affect Predictions by Situation and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	.391	1	.391	3.457	.069	.070
SituationType * Personality	1.238	1	1.238	10.953	.002*	.192
Error (SituationType)	5.199	48	.113			

Table 14

Within-subjects ANOVA Results for Incremental Negative Affect predictions by situation and personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	3.413	1	3.413	101.362	.000*	.688
SituationType * Personality	.448	1	.448	13.308	.001*	.224
Error (SituationType)	1.549	48	.034			

Table 15

Within-subjects ANOVA Results for Incremental Self-Consciousness Predictions by Situation and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	8.713	1	8.713	108.573	.000*	.702
SituationType * Personality	.342	1	.342	4.261	.045*	.085
Error (SituationType)	3.691	48	.080			

Table 16

Within-subjects ANOVA Results for Incremental Pleasantness Predictions by Situation and Personality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SituationType	.270	1	.270	2.289	.137	.047
SituationType * Personality	2.354	1	2.354	19.950	.000*	.303
Error (SituationType)	5.427	48	.118			

*significant at $p < .05$

For all four emotions, no main effects of Personality were found, which is to be expected as the measure of incremental affective forecasts is pinned to the mean of each personality group.

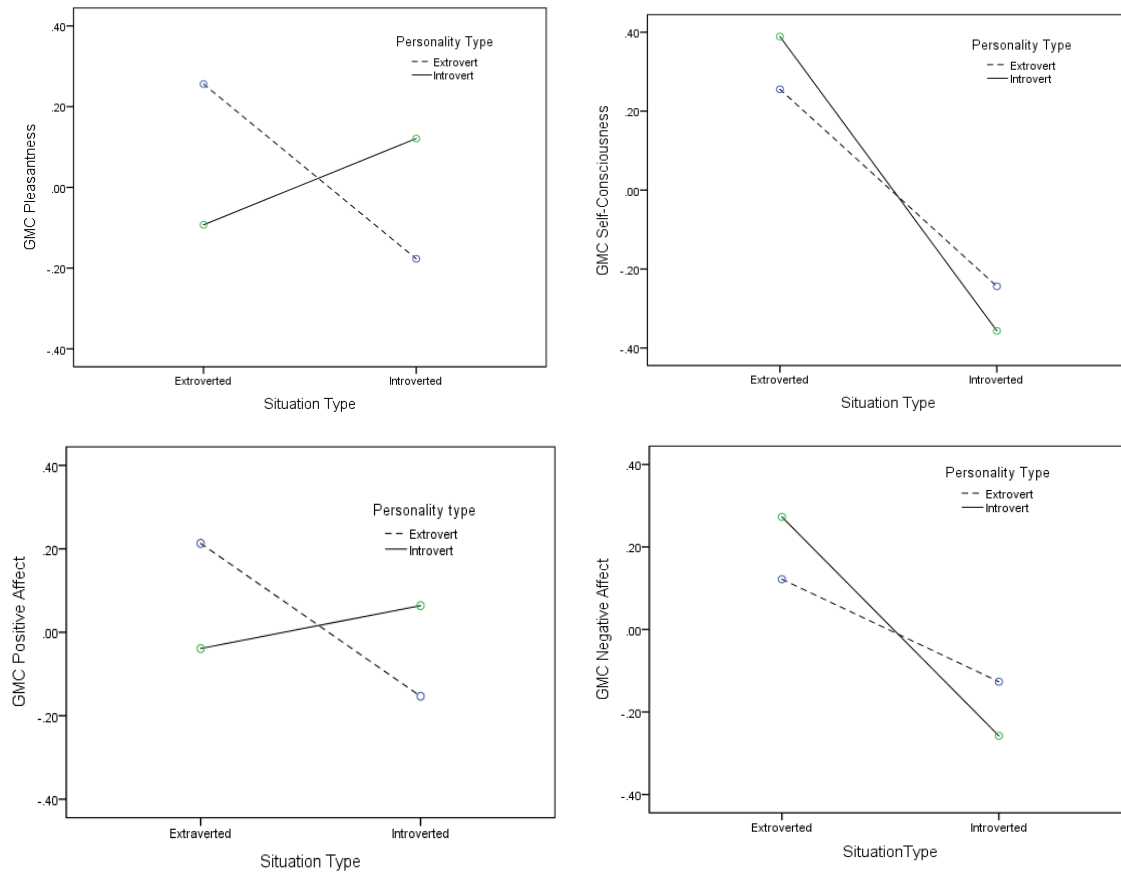


Figure 5. Group Mean Centred Affective Forecasts by Situation and Personality

The graphs in Figure 5 show the impact that each type of situation has on the predicted forecasts of the two groups of people. Please note that these graphs show values relative to the average predictions of each group not the absolute values of those predictions. The graphs in Figure 5 are enlightening as they show how the different types of situations are associated with higher and lower levels of predicted emotion relative to the group averages. What this means is that, for all four of the grouped emotions – Positive Affect, Negative Affect, Self-consciousness and Pleasantness – the type of situation a person is contemplating (Extroverted or Introverted situation) has a different impact on the anticipated emotions of Introverts and Extroverts. For example, compared to their average positive affect over all situations, extroverts predict higher than average Pleasantness when considering extroverted situations and lower than

average Pleasantness when considering introverted situations. The opposite is true for introverts who, compared to their average over all situations, predict they will feel less Pleasantness when considering extroverted situations and greater Pleasantness when considering introverted situations. The same pattern can be seen for Positive Affect.

For negative affect and self-consciousness, a different pattern is evident. For both groups, extroverted situations are likely to yield higher predicted levels of these emotions than the average for the group whilst introverted situations yield the opposite. In other words, both groups raise their anticipated level of the negative emotions for extroverted situations although introverts raise it relatively more than do extroverts. So, as seen in Table 2, although the average level of predicted self-consciousness is not significantly different for extroverts and introverts, the impact of the type of situation on the actual level of self-consciousness that each group feels is different. The results in Table 12, however, do not offer support for hypotheses 5, 6, 7 and 8.

5. *For extroverted situations, dispositional extroverts will predict greater positive affect (H5_A) and pleasantness (H5_B) than dispositional introverts accounting for the group differences in positive affect and pleasantness.*
6. *For introverted situations, dispositional introverts will predict greater positive affect (H6_A) and pleasantness (H6_B) than dispositional extroverts accounting for the group differences in positive affect and pleasantness.*
7. *For extroverted situations, dispositional introverts will predict greater negative affect (H7_A) and self-consciousness (H7_B) than dispositional extroverts accounting for the group differences in negative affect and self-consciousness.*
8. *For introverted situations, dispositional extroverts will predict greater negative affect (H8_A) and self-consciousness (H8_B) than dispositional introverts accounting for the group differences in negative affect and self-consciousness.*

Only hypothesis 5_B is supported as incremental Pleasantness is shown to be higher for extroverts than introverts in extroverted situations. All other comparisons showed no significant differences.

Upon reflection, this outcome may have been predicted as the hypotheses specifically state that the incremental affective forecasts were based on the *group* differences in each emotion, not on an individual difference. It is reasonable to consider what impact the type of situation has on each individual compared to their own “base level” of emotion. A person makes a decision based on the options available to them – does it make them feel better or worse? The hypotheses stated above are effectively asking whether it makes them feel better or worse than the average of how others feel. The decision to engage with a particular situation may make them feel better than they normally feel or better than other choices they may make but still worse than the average of how others might generally feel. To test out this concept, one-way ANOVAs were carried out on affective forecast scores centred around an individual’s average forecast score for that emotion over all situations. The means and standard deviations are shown in Table 17 and results of the analyses shown in Table 18.

The results in Tables 17 and 18 suggest that different types of situations do elicit different incremental anticipated emotions in extroverts and introverts. These differences follow an interesting trend in that extroverts feel more positive and more negative emotions in extroverted situations than they normally do and less positive and less negative emotions in introverted situations. Introverts feel less positive emotion but more negative emotion in extroverted situations and more positive and less negative emotions in introverted situations.

Table 17

Personality Group Means (and SDs) for Incremental Affective Forecasts (against own averages) for Affective Forecast and Situation Type pairings

Emotion - Situation pairing	Extrovert		Introvert		Both	
	Mean	SD	Mean	SD	Mean	SD
Incremental Positive Affect in Extroverted situations controlled for own Positive Affect score	0.21 _a	0.24	-0.09 _b	0.31	0.09	0.31
Incremental Positive Affect in Introverted situations controlled for own Positive Affect score	-0.15 _a	0.21	0.11 _b	0.28	-0.05	0.27
Incremental Negative Affect in Extroverted situations controlled for own Negative Affect score	0.12 _a	0.10	0.41 _b	0.46	0.24	0.33
Incremental Negative Affect in Introverted situations controlled for own Negative Affect score	-0.13 _a	0.11	-0.25 _b	0.15	-0.18	0.14
Incremental Self-consciousness in Extroverted situations controlled for own Self-Consciousness score	0.26 _a	0.19	0.45 _b	0.31	0.34	0.26
Incremental Self-consciousness in Introverted situations controlled for own Self-Consciousness score	-0.24 _a	0.19	-0.41 _b	0.27	-0.31	0.24
Incremental Pleasantness in Extroverted situations controlled for own Pleasantness score	0.26 _a	0.26	-0.14 _b	0.30	0.10	0.34
Incremental Pleasantness in Introverted situations controlled for own Pleasantness score	-0.18 _a	0.22	0.16 _b	0.25	-0.04	0.28

Note. Means with differing subscripts within rows are significantly different at the $p < .05$ based on one-way ANOVA analysis (shown in Table 18).

Table 18

One-way ANOVA Results for Group Mean Centred Affective Forecasts (centred by personality) for Personality and Situation Type pairings

Emotion - Situation pairing	Source	Sum of Squares	df	Mean Square	F	Sig.
Incremental Positive Affect in Extroverted situations controlled for own Positive Affect score	Between Groups	1.108	1	1.108	14.813	<.001*
	Within Groups	3.590	48	0.075		
	Total	4.698	49			
Incremental Positive Affect in Introverted situations controlled for own Positive Affect score	Between Groups	0.833	1	0.833	14.277	<.001*
	Within Groups	2.801	48	0.058		
	Total	3.634	49			
Incremental Negative Affect in Extroverted situations controlled for own Negative Affect score	Between Groups	0.974	1	0.974	10.834	0.002*
	Within Groups	4.316	48	0.090		
	Total	5.290	49			
Incremental Negative Affect in Introverted situations controlled for own Negative Affect score	Between Groups	0.179	1	0.179	11.427	0.001*
	Within Groups	0.753	48	0.016		
	Total	0.933	49			
Incremental Self-consciousness in Extroverted situations controlled for own Self-consciousness score	Between Groups	0.478	1	0.478	7.767	0.008*
	Within Groups	2.951	48	0.061		
	Total	3.429	49			
Incremental Self-consciousness in Introverted situations controlled for own Self-consciousness score	Between Groups	0.325	1	0.325	6.503	0.014*
	Within Groups	2.397	48	0.050		
	Total	2.722	49			
Incremental Pleasantness in Extroverted situations controlled for own Pleasantness score	Between Groups	1.890	1	1.890	24.364	<.001*
	Within Groups	3.723	48	0.078		
	Total	5.613	49			
Incremental Pleasantness in Introverted situations controlled for own Pleasantness score	Between Groups	1.360	1	1.360	25.248	<.001*
	Within Groups	2.586	48	0.054		
	Total	3.946	49			

*significant at $p < .05$

6. Study 2

6.1 Method

For Study 2, the participants and procedures are common with study 1.

Regarding materials, a separate question was asked for each situation as part of the EPQ1 questionnaire. This question and response options is shown in Figure 6.

Situation 2:
Attending an after-work drinks evening with staff.

What is the probability that you will be in this kind of situation within the next 4 weeks of work?

☐ Almost certainly not

☐ Very unlikely

☐ Fairly unlikely

☐ Quite likely

☐ Very likely

☐ Almost certainly

Figure 6. Frequency question extract from the EPQ1 questionnaire.

This question was designed to assess the respondent's view of the likelihood that they would be involved in situations such as that described in the question. The question specifically asks about the probability that they would be involved in specific situations, not whether they necessarily want to be involved in them. Responses were coded as 1 = Almost certainly not; 2 = Very unlikely; 3 = Fairly likely; 4 = Quite likely; 5 = Very likely; 6 = Almost certainly.

For studies two and three, a second emotional prediction questionnaire (EPQ2) was administered so that comparison data could be analysed. More details of the construction of this questionnaire are provided in the method section for study 3. However, for this study, two aspects of the EPQ2 questionnaire are relevant. Firstly, in the second questionnaire, respondents were asked how frequently they had actually engaged in each activity (situation) over the previous 4 weeks of work. This is different

to EPQ1 where their future intentions or expectations were sought. Secondly, the situations posed in the second Emotional Predictions Questionnaire (EPQ2) were slightly different to those in EPQ1. This was done in an attempt to reduce any response memory from administration of the first questionnaire. A full list of the situations presented in the EPQ2 is shown in appendix F:1. A check of the two questionnaires suggested that 18 of the situations contained in EPQ2 were sufficiently close enough to statements in the EPQ1 to allow comparisons of responses between the two questionnaires. The matching of statements between the two questionnaires is shown in appendix F:2. Figure 7 shows an example frequency question from EPQ2. “Almost never” was scored as “1” and “Very frequently” was scored as “6”.

Figure 7. Frequency question extract from the EPQ2.

Situation 1:
 Socialising, out of work time, with junior staff.

* How often were you in this kind of situation over the last 4 weeks of work?

- ☐ Almost never
- ☐ Very rarely
- ☐ Seldom
- ☐ Sometimes
- ☐ Frequently
- ☐ Very frequently

The EPQ1 questionnaire was completed by participants between November 11, 2016 and April 1, 2017. The EPQ2 questionnaire was completed by participants between May 19, 2017 and June 30, 2017.

6.2 Results and Discussion

6.2.1 Affective forecasts and the intention to act

Table 19 shows the average frequency ratings made by the participants on EPQ1 with separate statistics for each personality group and type of situation.

Table 19

Means (and SDs) for Frequency Ratings (EPQ1) by Personality and Situation Type

	Extrovert personality (<i>n</i> =30)		Introvert personality (<i>n</i> =20)		Both Personality Types	
	Extroverted situations	Introverted situations	Extroverted situations	Introverted situations	Extroverted situations	Introverted situations
Frequency	3.32 (0.69)	3.96 (0.64)	3.10 (0.53)	3.91 (0.64)	3.23 0.63	3.94 0.64
All Situations	3.63 (0.62)		3.50 (0.48)		3.58 (0.57)	

Responses in answer to the question “What is the probability that you will be in this kind of situations within the next 4 weeks of work?”

(A rating of 1 = Almost certainly not; 2 = Very unlikely; 3 = Fairly likely; 4 = Quite likely; 5 = Very likely; 6 = Almost certainly)

Analysis of variance showed a main effect for the different situation types on intended frequency to act ratings, $F(1, 48) = 80.22, p = <.001, \eta_p^2 = .626$. No main effect was shown for the difference between the average frequency ratings given by introverts and extroverts, $F(1, 48) = 1.05, p = .309, \eta_p^2 = .022$. No interaction effect between situation type and personality on intended frequency ratings was observed, $F(1, 48) = 0.67, p = .417, \eta_p^2 = .014$. Overall, the leaders suggested that they expected to be more frequently involved in introverted situations in the coming four weeks of work. One needs to be cautious in interpreting this finding. It may well be that the situations that are depicted in the “introverted” group are simply more representative of the kinds of situations that the participants may face on a regular basis. It may also be that, at certain times – e.g. end of the financial year – particular tasks are mandatory and managers do not really have a choice as to whether they perform them or not.

The relationships between the frequency ratings given by participants and their affective forecasts were analysed. Table 20 shows the Pearson correlation coefficients between frequency ratings (1 – 6) and predicted emotion ratings (1 – 6) for EPQ1. This is divided further by situation type.

Table 20

Pearson Correlation Coefficients for Frequency Ratings (Declared Intentions) and Affective Forecasts by Situation (EPQ1)

	Personality Type								
	Introvert (n=20)			Extrovert (n=30)			All (N=50)		
	Introverted Situations	Extroverted Situations	All Situations	Introverted Situations	Extroverted Situations	All Situations	Introverted Situations	Extroverted Situations	All Situations
Positive Affect	.329	.002	.196	.294	.094	.205	.301*	.109	.223
Interested	.488*	.097	.350	.107	-.042	.032	.267	.060	.176
Excited	.187	-.066	.069	.405*	.198	.321	.290*	.135	.233
Negative Affect	-.374	-.442	-.480*	.037	-.060	-.014	-.141	-.225	-.203
Nervous	-.218	-.333	-.316	-.081	-.120	-.109	-.149	-.249	-.221
Distressed	-.532*	-.465*	-.596** _a	.116	.147	.142 _b	-.160	-.087	-.136
Anxious	-.226	-.336	-.331	-.029	-.244	-.151	-.116	-.299*	-.232
Upset	-.366	-.534*	-.524* _a	.129	.044	.092 _b	-.003	-.078	-.043
Self-Consciousness	-.274	-.312	-.337	.172	.048	.116	-.011	-.093	-.053
Self-Conscious	-.234	-.144	-.217	.158	.029	.099	.023	-.026	.003
Embarrassed	-.261	-.473*	-.422 _a	.117	.072	.101 _b	-.073	-.185	-.142
Pleasantness	.600**	.386	.581**	.217	.111	.175	.369**	.254	.342*
Happy	.589**	.333	.545*	.209	.128	.180	.356*	.238	.326*
Pleased	.592**	.425	.597**	.210	.082	.155	.362**	.258	.340*

* $p < .05$ ** $p < .01$

Note: Indicators (a,b) against correlation estimates indicates a significant Fisher's Z transformation statistic for correlations for the two groups.

The results shown in Table 20 do not show a consistent trend in the relationship between affective forecasts and the declared intentions of participants to engage in particular activities. There is some evidence that the relationship between anticipated emotions and the frequency ratings is stronger for introverts than it is for extroverts. For introverts, some anticipated positive emotions (Interested, Happy and Pleased) are positively correlated with intentions to engage with introverted situations whilst some anticipated negative emotions (Distressed, Upset and Embarrassed) are negatively correlated with intentions to engage in extroverted situations. Distressed also correlated negatively with the intentions of introverts to engage with introverted situations. The only significant correlation observed for extroverts was between anticipated excitement and the intention to engage with introverted situations. Therefore, these results offer only partial support for hypotheses H9_A and H9_B.

9. Affective forecasts for positive emotions (happy, pleased, interested, excited) will correlate positively with the frequency of the intentions of individuals to participate in situations (H9_A); and affective forecasts for negative emotions (nervous, anxious, self-conscious, embarrassed, distressed, upset) will correlate negatively with the frequency of the intentions of individuals to participate in situations (H9_B).

It is reasonable to suggest that affective forecasts for positive emotions (happy, pleased, interested, excited) will correlate positively with the frequency of the intentions of extroverts to participate in extroverted situations; and affective forecasts for some negative emotions (embarrassed, distressed, upset) will correlate negatively with the frequency of the intentions of introverts to participate in extroverted situations.

A second observation derived from the results in Table 20 is that none of the anticipated emotions have a significantly different relationship with intentions to engage with introverted and extroverted situations. Fisher's r to z transformations were analysed for all correlation pairs (between introverted and extroverted situations) and none were shown to be significant at $p = .05$. This suggests that, in general, anticipated

emotions have similar relationships with intended actions across both introverted and extroverted situations.

There are significant differences between the personality types for the correlations of three of the six negative emotions with frequency intentions. Anticipated feelings of being upset, distressed and embarrassed all show significantly more negative correlations with the frequency of intention to act for introverts than for extroverts. This suggests that negative emotions play a bigger role for introverts when making their decisions about their planned activities. Some of these results are even more marked when considering only extroverted situations. Anticipated embarrassment is of particular interest as the correlation between this and the intention to engage in extroverted situations is virtually zero ($r = -.072$) for extroverts but significantly negatively correlated ($r = -.473, p < .05$) for introverts. This suggests that interventions focused on reducing self-consciousness may have a valuable impact on the behavioural intentions of introverts when they are considering extroverted situations.

6.2.2 Affective forecasts and behavioural choices

A further set of relationships is also of interest. While table 20 shows the relationship between affective forecasts and an individual's intentions, it does not provide any information about the actual behaviour of the person. Data from both emotional prediction questionnaires (EPQ1 and EPQ2) is used to investigate this relationship. The relationship between the intentions (frequency) ratings from EPQ1 and the reported action data (frequency - i.e. the participant reported having been in the situation) from EPQ2 is of interest. The correlation between the two ratings was .366 which was significant at the $p < .05$ level suggesting that people generally followed through on their intentions. However, the time difference between completion of EPQ1 and EPQ2 also means that the two time periods for which the participants were rating

their intentions and behaviour did not overlap for any of the participants. In other words, the intentions stated by participants when completing EPQ1 do not refer to the same period as that considered when participants indicated their behavioural actions when completing EPQ2. How this is likely to affect the correlations between the two measures is not clear. Possibly, an overlapping rating period would yield higher correlation coefficients than those observed with the available data. One advantage of the longer time between completing the two questionnaires is that it can be adjudged to be long enough for all participants to avoid any expectancy effects affecting ratings in the second questionnaire.

The relationship between reported behaviours (“I was in this situation”) and predicted emotions (“How I feel when contemplating this situation”) is shown in Table 21. Table 21 shows the Pearson correlation coefficients between frequency ratings (1-6) in the EPQ2 and predicted emotion ratings (1-6) from EPQ1.

Table 21

Pearson Correlation Coefficients for Frequency Ratings (Reported Behaviours - EPQ2) and Affective Forecasts (Anticipated Emotions - EPQ1)

Positive Affect	Negative Affect	Self-Consciousness	Pleasantness
.189	.122	-.014	.236

No significant correlations were observed between the affective forecasts made by people regarding an upcoming situation and their subsequent decisions to partake in that situation. These results do not offer support for hypotheses 10_A and 10_B.

10. *Affective forecasts for positive emotions (happy, pleased, interested, excited) will correlate positively with the frequency with which individuals participate in situations (H10_A); and affective forecasts for negative emotions (nervous, anxious, self-conscious, embarrassed, distressed, upset) will correlate negatively with the frequency with which individuals participate in situations (H10_B).*

7. Study 3

7.1 Method

7.1.1 Participants

For Study 3, participants from the original sample who had completed both the TDI and the EPQ1 and who made themselves available for feedback ($n=40$) were included. These were divided randomly into two conditions.

- a. An experimental condition consisted of those who received feedback of their TDI results, their EPQ1 responses and a set of narratives relating to their specific type (I/E) preference. This was called the *enhanced feedback* condition. Individuals who expressed a preference for introverted behaviour ($n=15$) were given narratives relating to extroverted situations and individuals with a preference for extroverted behaviour ($n=20$) were provided with narratives relating to introverted situations.
- b. A control group were provided with feedback of their TDI results only. This was called the *standard feedback* condition.

Differences between the two conditions are provided in the procedure section. The study required completion of a second emotional prediction questionnaire after feedback was completed. Only those who completed the feedback and this questionnaire were subsequently included in the study ($N=34$).

7.1.2 Materials

7.1.2.1 Emotional Prediction Questionnaire 2 (EPQ2)

To ascertain the impact of the enhanced feedback condition, it was necessary to gather further affective forecast data from participants. To enable the best possible comparisons with the EPQ1 data, participants were asked to complete a second, somewhat shorter, questionnaire – EPQ2. This questionnaire observed the same format

as the first emotional prediction questionnaire but with fewer situations (20 instead of 30) and fewer rating requirements (4 instead of 10). This was to reduce the time demand on participants and acknowledged the possibility that there may be little incentive for participants to complete a second EPQ questionnaire after they had completed their feedback session. To off-set this slightly, participants were offered access to two other personal development questionnaires if they did complete the EPQ2. The data from these questionnaires was not part of this research project.

It was decided that the measurements collected in the second affective forecast questionnaire should be similar to the grouped scales used for study 1 – that is, positive affect, negative affect, self-consciousness and pleasantness. However, to make the scales more understandable for respondents, the actual terms used in the questionnaire were nervous/anxious, happy/pleased, self-conscious/embarrassed, and interested/excited. The emotions “upset” and “distressed” were not offered as options in EPQ2 as they received very low ratings in EPQ1 and some participants suggested, during feedback sessions, that it was hard to reconcile those feelings with regular work situations. Reliability estimates for the EPQ2 questionnaire scales are shown in full in Table A2 in appendix D. All reliabilities were greater than 0.7.

7.1.2.2 The feedback reports

All participants who completed the TDI questionnaire were provided with a detailed narrative report titled *The TDI Type at Work with Team Roles Report* and was provided by the questionnaire publisher. The EPQ1 feedback report provided as part of the enhanced feedback condition included graphs showing the person’s summary ratings for each of the emotion scales in EPQ1. An example of the graph is shown as Figure 8. A full copy of the report is provided in appendix G. The other component of the report was a series of narratives designed to influence the affective forecasts of participants towards more positive emotional predictions.

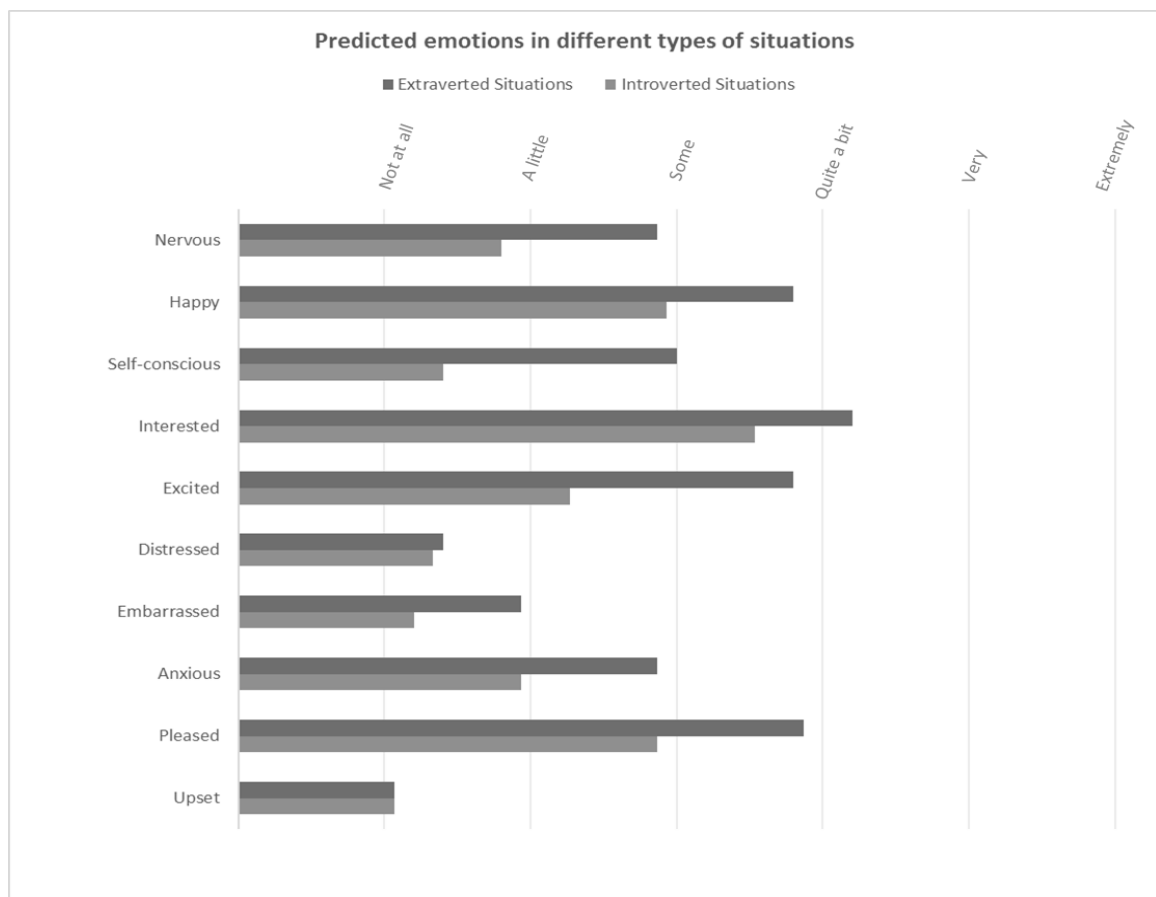


Figure 8. Graph provided to enhanced feedback group as part of the EPQ1 report

Narratives were developed specifically to relate to both the contextual and emotional characteristics of the situations described in the questionnaire. The use of narratives to influence affective forecasts has been studied in healthcare settings where patients are offered testimonies from previous patients which highlight the emotions that can be experienced when faced with treatment choices (Dillard, Fagerlin, Cin, Zikmund-Fisher, & Ubel, 2010). In some circumstances, narratives have been deliberately targeted in nature, attempting to encourage patients to decide in a particular way. Other uses of narratives have been more neutral and were offered as a representation of the range of possible experiences rather than in any attempt to influence the decision of the reader (Shaffer, et al., 2016). For study 3, narratives were developed either from “real-life” feedback sessions carried out by the author or from literature describing the emotional experiences of people (introverts and extroverts) who

were faced with having to behave in counter-dispositional ways (Bono & Vey, 2007; Cote & Moskowitz, 1998).

Each narrative was developed to a set structure. They contained the following elements:

- An expression of one or more of the emotions used in the EPQ1 questionnaire linking this emotion to a particular scenario (e.g. “I used to feel anxious when meeting new people”).
- An explanation of why a counter-dispositional behaviour would be beneficial for the narrator (e.g. “I realised that quite a lot of important work topics were discussed ‘after hours’ and I felt that I was missing out.”).
- A description of an intervention that the narrator engaged with in order to manage the emotion felt in the situation (e.g. “I decided to take some control over how I would socialise with my work colleagues.”).
- An expression of the narrator’s emotions regarding the situation since they engaged with the intervention.

Four narratives were developed for each of the Extrovert and Introvert groups. The full list of narratives is contained within the EPQ1 report (Appendix G).

7.1.3 Procedure

The feedback process was managed identically for all participants except for the content of the feedback. Once individuals completed the TDI and EPQ1 questionnaires, they were invited to book a 30-minute feedback session using an online diary.

Individuals who had completed just one of the questionnaires (either EPQ1 or TDI) were reminded to complete the other questionnaire before they were invited to book a feedback session. Individuals who did not complete both questionnaires, even after this reminder, were offered a feedback session but asked, for a final time, to complete the

other questionnaire. Those who did not complete both questionnaires did receive feedback, if they wished, on the questionnaire they completed although they were no longer included in study 3. Feedback sessions took place between February 3rd 2017 and April 15th 2017. Figure 9 depicts the conditions for both feedback groups.

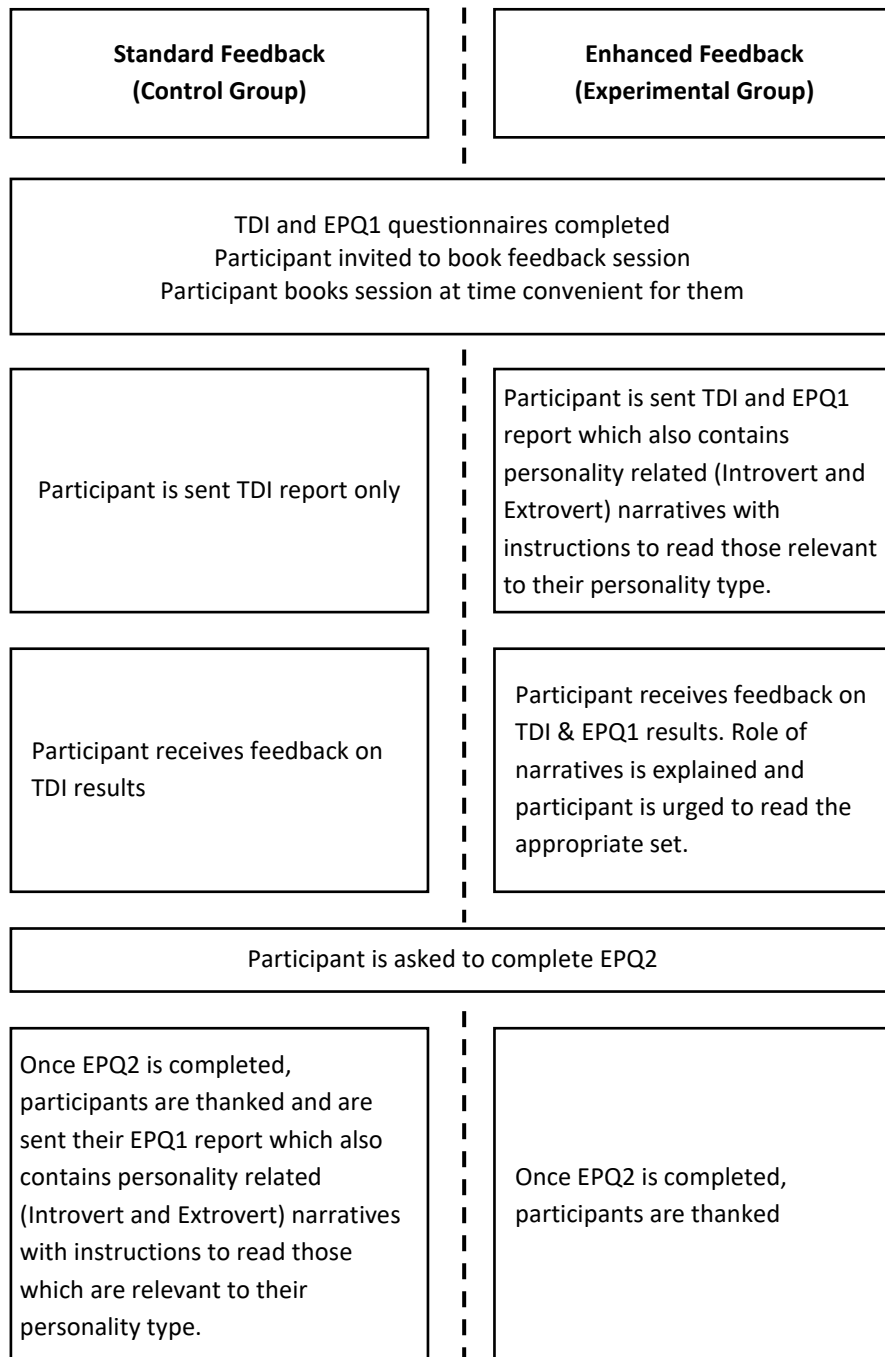


Figure 9. Feedback conditions for study 3

7.2 Results and Discussion

7.2.1 Dispositional Preferences

Table 22 shows the number of introvert and extrovert preferences for all of the participants who completed the Type Dynamics Indicator. As mentioned previously, the TDI provides a second measure showing the preferences that people say they would like to have or would like to develop.

Table 22

Personality Type: Type Dynamic Indicator Preferences

Preference	Extrovert	E → I	E ← I	Introvert
IS	30			20
People with different IS and WANT preferences		0	14	
WANT	44			6

It has been suggested that most people want to change their personality (Hudson & Fraley, 2015). Note the absence, in Table 22, of any participants declaring a desire to “change their type” from extrovert to introvert whilst 70% (14) of the introverts declared a desire to change their preference to extrovert. This is in line with previous research (Hudson & Roberts, 2014) who suggested that introverts found that their preference did not align with the goals that they wished to achieve. The results in Table 22 may indicate the extent to which a preference for introversion may not align with an individual’s needs. Leadership roles, in particular, require participation in a number of activities which would not naturally be the preferred choices of introverts. The IS/WANT figures, even from this small sample, suggest that there could be a widespread need for people to behave in counter-dispositional ways which, in turn, they may find uncomfortable. This finding suggests that studies such as the current one may well be tapping into a significant need.

7.2.2 Feedback impact

Table 23 shows the mean affective forecasts for feedback groups by situation.

Table 23

Group Means (and SDs) for Affective Forecasts (EPQ1 & EPQ2) by Feedback Group

Emotion scale	EPQ1		EPQ2	
	Control (n=13)	Feedback (n=22)	Control (n=13)	Feedback (n=22)
Positive Affect	3.63 (0.84)	3.82 (0.67)	3.76 (0.85)	3.83 (0.58)
Negative Affect	1.83 (0.54)	2.17 (0.80)	1.88 (0.48)	1.99 (0.49)
Self-consciousness	2.03 (0.67)	2.23 (0.89)	1.85 (0.65)	1.90 (0.74)
Pleasantness	3.34 (0.83)	3.38 (0.50)	3.53 (0.91)	3.56 (0.57)

Figure 10 shows the mean affective forecasts for each feedback group for both questionnaires.

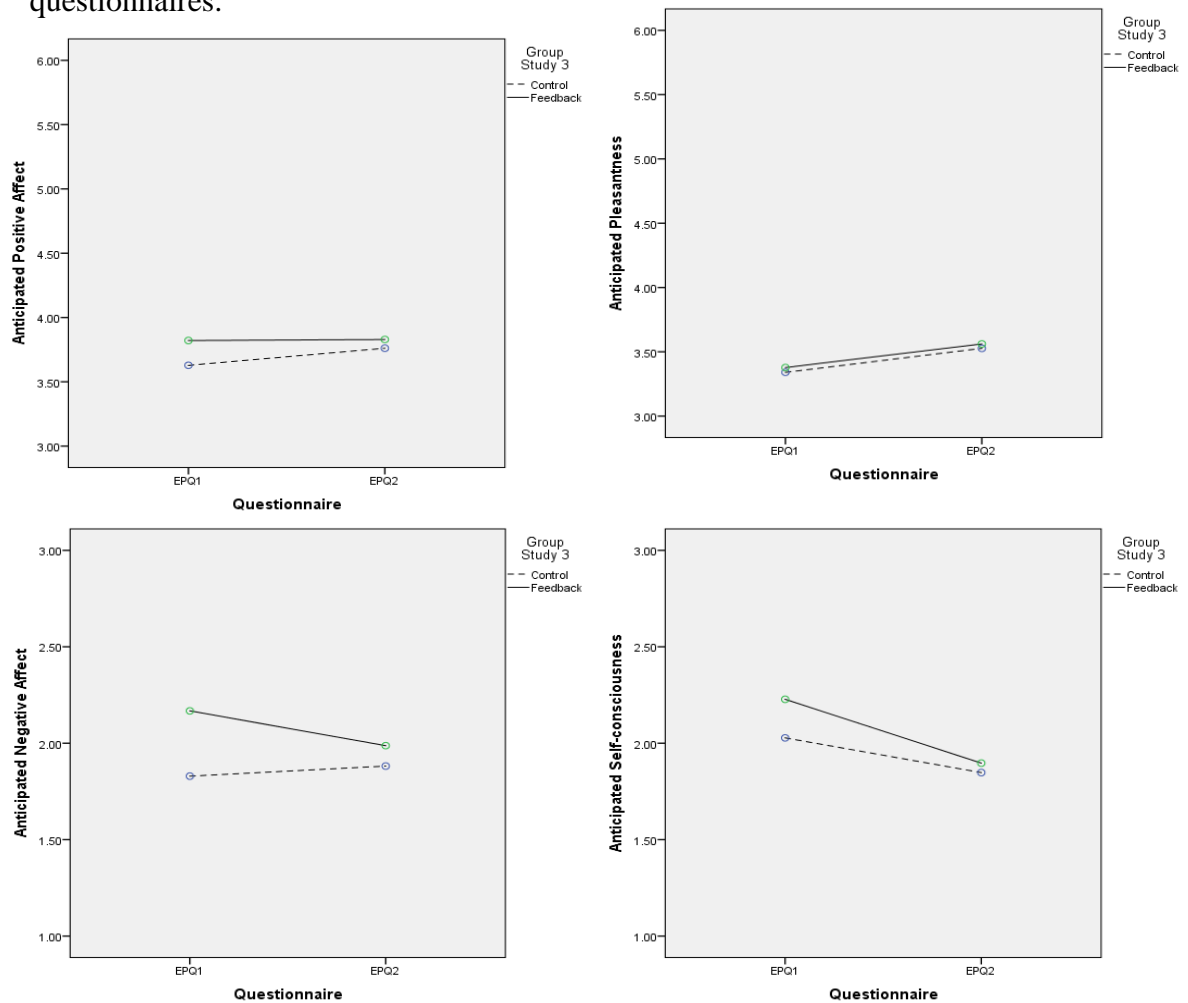


Figure 10. Mean affective forecast ratings (EPQ1 & EPQ2) by feedback group

Mixed ANOVA analyses on the means shown in Table 23 suggest that the Control group and the Enhanced Feedback group do not differ in the level of predicted emotions they expressed in the second Emotional Prediction Questionnaire compared to their predictions in the first questionnaire (Positive Affect – $F(1,33) = 0.354, p = .556; \eta_p^2 = .011$, Negative Affect – $F(1,33) = 1.274, p = .267, \eta_p^2 = .037$; Self-consciousness – $F(1,33) = 0.296, p = .590, \eta_p^2 = .009$; Pleasantness – $F(1,33) = 0.028, p = .869, \eta_p^2 = .001$). Tests on the interaction between the group membership and the predictions made in each questionnaire showed no significant differences. Certainly, for Self-consciousness, one can see that the lines showing the means for the two groups across the two questionnaires are very similar. Only on the Negative Affect emotion can any difference be discerned in the direction of change in the mean scores between the two questionnaires for the two groups. For the Control group, there is a very slight increase in the predicted level of Negative Affect between the first and second questionnaires. For the Enhanced Feedback group, the opposite is the case. Although the difference between the two groups is evident, the results are not statistically significant and, therefore, none of the research hypotheses related to this study ($H11_{A-D}$) are supported.

11. People who receive enhanced feedback will demonstrate a more positive change in their predictions of positive ($H11_A$) and negative affect ($H11_B$), self-consciousness ($H11_C$) and pleasantness ($H11_D$) compared to people who receive standard feedback.

8. General Discussion

8.1 Affective Forecasts and Personality

The results, in general, support the view that personality influences how people feel about future events. Firstly, it appears that introverts, on average, have differing levels of anticipated positive emotions and negative emotions than extroverts.

Notwithstanding these absolute differences, introverts feel incrementally more positive emotion than usual when contemplating “introverted” situations and incrementally less positive emotion than usual when contemplating “extroverted” situations. For extroverts, the opposite relationship is seen. Extroverts feel more positive emotion when anticipating the “extroverted” situations and less positive emotion when anticipating the “introverted” situations. Interestingly, both personality groups feel more negative emotion than their average levels when considering future “extroverted” situations.

The perceived difference, then, between how the two types of situations make people feel is likely to be relevant to their desire to take part in those situations. Regardless of the absolute level of an emotion that a person predicts they are likely to feel in a situation, the fact that they predict a significantly greater or lesser level of that emotion than they will feel in a different situation will surely be a factor in their decisions related to that situation. In particular, if situations are in competition with each other and one is weighing up the emotional cost of engaging in one situation or another, the relative standing of each situation is likely to have an impact on the individual’s decision.

For each group, then, there is an *incremental* emotional outcome concomitant with each situation choice. Regardless of one’s overall positive or negative emotional state, each situation will offer the person the probability that they will feel better or worse if they engage in the situation. This concept of incremental emotional outcome could be

seen as synonymous with the “value” function as defined by Kahneman & Tversky (1979) in their paper introducing Prospect Theory. It is potentially possible to substitute a number of the terms in the prospect theory equations with the constructs considered in this paper so that the processes described by Kahneman & Tversky’s operate for these choices as they would for economic or other choices. In other words, the person makes the judgement based on their own perceived outcome prospects which, in turn, would be “calculated” using their affective forecasting processes. In making these probabilistic calculations, individuals would need to have a view of the possible outcomes attendant with each situation and the probability with which each outcome might be realised.

The results in Table 4 suggest that extroverted situations are seen as having the potential to elicit more extreme emotions – both positive and negative – than introverted situations although this isn’t true for all of the positive emotions included in this study. In effect, the night at the town dance could turn out to be either great (a very positive experience) or awful (a very negative experience). A night at home reading the paper, however, is much more predictable and is likely to be either mildly enjoyable or slightly dissatisfying. The highs and lows are more likely to be felt at the dance. The results also suggest that introverts may not perceive the positive outcome possibilities as readily as do extroverts – whether or not they exist in reality. For introverts, as seen in Tables 17 and 18, the incremental positive emotion for an extroverted situation is negative. Added to this, as the graphs in Figure 5 show, they see the negative outcomes in the same way as the extroverts. If a judgement whether to attend the dance or stay at home reading the paper is assessed, introverts are more likely than extroverts to assess that the more positive outcome is to stay at home. Of course, some introverts, may find that the probabilities favour the night on the town and some extroverts may decide that a night at home is likely to yield the best outcome. In the main, however, the extroverts are more likely to choose the extroverted option than the introverts and both are likely

to use the same decision-making process to arrive at their conclusions. This decision model is shown in Figure 11.

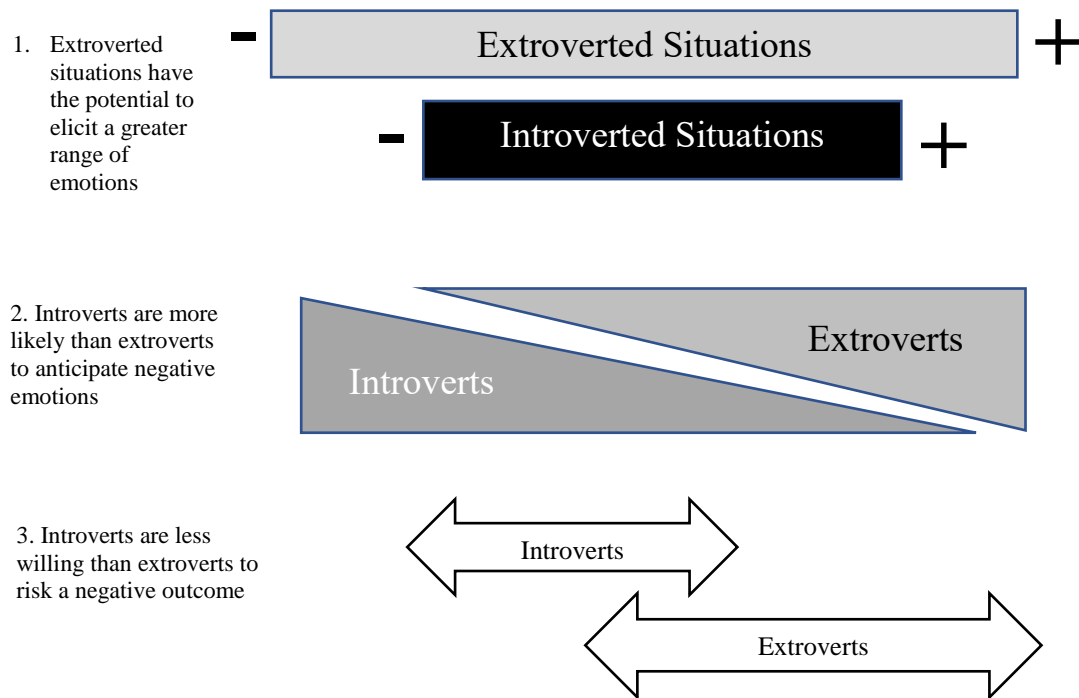


Figure 11. A decision model for introverts and extroverts when considering introverted or extroverted alternatives

One of the other parameters to consider is the individual's propensity to risk. The relationship between extroversion/introversion and risk has been documented (Nicholson, 2005) and it is suggested that introverts are less willing to take risks in social situations. Whether it be due to a natural risk aversion or due to psychological defence processes, introverts may well decide that their chances of a tolerable night are best met through the predictability of the night at home. The risk of an awful night which could damage them psychologically, although possibly slight, is still present and is best avoided. What is also attractive about this theory is that prior learning does not really have to play a role in the decision-making process. Much has been written about the apparent lack of emotional learning that takes place following events (Ayton, et al., 2007). Is it possible that a person may well take an instance of a good experience,

remember it well, but then discount it as irrelevant, as the next situation of a similar nature still holds the potential for extreme emotional outcomes? The remembered experience may add a little to the internal calculation of the probability of one or more outcomes but doesn't really alter the underlying risk equation that individuals face. Even if the parameters of the equation were the same for introverts and extroverts (which it is suggested is not the case), the introverts' willingness to take the risk and go to the dance is likely to be somewhat lower.

The way in which introverts and extroverts value gains and losses has also received attention (Bartussek, 1993). As Kahneman and Tversky say, "A salient characteristic of attitudes to changes in welfare is that losses loom larger than gains" (Kahneman & Tversky, 1979, p279). Bartussek (1993) continues that "For extroverts, the feedback of winning has a higher emotional significance than the feedback of losing, while for introverts the opposite holds true" (p573).

Figure 11 attempts to illustrate how introverts differ from extroverts in the way they view both introverted and extroverted situations. Reading down the model:

1. Extroverted situations are seen by both groups as potentially eliciting a wider range of emotions. The night at the ball may be excellent or awful but the night at home with a book may be good or slightly disappointing.
2. Introverts are more likely to focus their attention on the potential negative emotions that a situation may elicit whilst extroverts are likely to focus on the potentially positive outcomes. As the greatest positive and the greatest negative emotions are likely to be elicited by extroverted situations, extroverts are likely to be drawn to those positive possibilities whilst introverts will be repelled by the negative possibilities of the extroverted situation.

3. If introverts are less likely to take risks with their emotions, they will keep their chosen activities to those where the possibility of negative outcomes is lower. Although they are not focusing on the potentially positive outcomes of the extroverted situation, they are clearly recognising the potentially negative outcomes of extroverted situations. Therefore, they are more likely to choose the safer option of the introverted situation. The introverted situation maximizes the potential positive outcomes for introverts based on what they perceive as the possibilities of both types of situation.

If it is the incremental emotional outcome that drives decisions to engage or not engage in an extroverted situation **and** that increment is negative for introverts; **and** it is the losses that loom larger rather than the potential gains; **and** the fear of losing affects introverts adversely more than it does extroverts – if all these conditions are true, is it any wonder that introverts will make choices to “stay safe” and choose an “introverted” situation? Anecdotally, this pattern of thinking was seen throughout the feedback sessions held with participants in this study. When asked about upcoming extroverted events – e.g. conferences, extended team meetings, social gatherings – extroverts discussed the opportunities to meet people, their excitement at being a “part of something”, the chance to “be seen”. Introverts invariably offered highly emotional expressions of their “dread” at the prospect of being “exposed” and of “having” to introduce themselves to new people. The positive aspects of the extroverted situations were very deeply hidden for the introverts who, upon strong prompting, could concede that it “might be useful to network”. The implications for leaders in organisations are enormous. Of course, people can choose to lead in many different ways and, in some aspects of leadership, introverts are recognised as being more effective (Farrell, 2017). However, there is no getting away from the fact that many organisational leaders need

to take part and involve themselves in situations which could be termed “extroverted” according to the criteria used in this study. Failure to engage in such situations may reduce the leadership effectiveness of a person and could even be career limiting.

8.2 Affective Forecasts and Behavioural Decisions

Study 2 provides support for the view that the affective forecasts do have an impact on the frequency with which people engage in various situations. This supports the view that people not only determine their preferences based on their affective forecasts but they then make choices based on those preferences. These results help us to understand which emotions individuals may specifically focus on when choosing between different alternatives. In terms of the prospect theory equations, the relationships between affective forecasts and the intended frequency of engagement with a situation, provides information about the *decision weight* attached to alternatives.

Table 20 suggests that a wide range of emotions are related to the engagement decisions people make. The possibility of feeling upset, distressed or embarrassed is clearly a greater consideration for introverts when previewing extroverted situations than it is when they preview introverted situations. This could be due to the uncertainty surrounding extroverted situations (e.g. other people behaving in unpredictable ways); the possibility of a high or low emotional return on the investment of effort required in extroverted situations (e.g. spending time and money dressing up and then not having a good time); and, the higher range of potential emotional outcomes (remembering that extroverted situations are seen as having potentially higher positive and negative emotional outcomes). This latter is synonymous with the difference between placing a higher or lower financial bet. One might imagine that the level of anxiety waiting for the outcome of a £10,000 bet might well be far greater than when awaiting the outcome of a £10 bet.

The role of both the type of situation and the personality of the individual provides further insight into the impact of specific emotions on decisions taken. Table 20 also examines the role of personality when considering the relationships between affective forecasts and intentions to act. Only negative emotions showed any significant differences between the two personality groups in terms of these relationships. Introverts are more likely to consider the potential negative emotions when deciding upon different courses of action. In particular, self-consciousness is highlighted as an emotion that likely plays a part in the decisions of introverts whether or not to engage in activities but less so in the decisions of extroverts. The relationship between introversion and self-consciousness – particularly *public self-consciousness* – has previously been documented, although neuroticism is also a key correlate (Trapnell & Campbell, 1999). The relationship identified in the current study aligns fully with the anecdotal messages received from introverts in the feedback sessions. Even in situations where they would clearly not be under observation – e.g. the coffee session at a conference with over 1000 people – introverts have expressed their anticipation of feeling self-conscious. This includes feeling self-conscious about being alone whilst everybody else is talking in groups and also about being with others. They talk of feeling self-conscious walking into a room even when they are alongside everybody else walking into the same room. It appears that the possibility that they may be observed, rather than the actuality of being observed, is enough to trigger feelings of self-consciousness. One wonders whether specific work to help individuals manage self-conscious feelings could be used to alleviate some of the discomfort felt by introverts and enable them to make more positive affective forecasts when considering upcoming extroverted situations.

It is not clear from Table 21 that the emotions people feel about upcoming events play a role in their decisions as to whether or not to actually engage in such

events. However, the time gap between making their affective forecasts and reporting on their subsequent behaviour was both wide and variable and this may have reduced any potential correlation. The fact that the time gap between completion of the two questionnaires was not fixed and that the two frequency rating periods did not overlap is a significant methodological deficiency in this study. It is an important area to study, however. Although it is possible that introverts and extroverts self-select into leadership roles that differ in terms of the balance of “introverted” and “extroverted” situations the role entails, it is also possible that introverts and extroverts are making different decisions regarding activities that both are equally required to perform. Once again, this may have implications for their effectiveness as leaders and, potentially, the opportunity for advancement. Helping leaders to manage their affective forecasts in such a way that counter-productive decisions are avoided would be an enormous help to them.

8.3 Interventions to manage affective forecasts

Study 3 examined one attempt to influence affective forecasts via the issuing of narratives which presented a description of an emotion that an individual might feel in a counter-dispositional situation; an action or initiative that the narrator had planned in order to enhance their emotional outcome; and a description of their more positive feelings after undertaking the initiative. In this case, the results do not provide support for a conclusion that narratives are a viable tool for influencing affective forecasts. However, narratives may still warrant further attention in this area. Study 1 results showed that the biggest differences between introverts and extroverts is in how the nature of the situation affects their incremental predicted emotion was on the pleasantness scale. The narratives used in this study concentrated on attempts to reduce negative emotions. It is possible that focusing on the possibility of positive emotions in extroverted situations rather than on the “negatives” (as seen by the introverts) could be

more productive. The results suggest that endeavouring to move the individual's focus from negative (e.g. self-conscious) to positive (e.g. pleasantness) emotions may be more effective than simply trying to reduce the negative emotions. As study 2 showed, pleasantness has the highest correlation of all of the emotions with the intention to act, and efforts to alter the focus of introverts towards the potential pleasure in situations could yield significant benefits.

An alternative interpretation of the results of study 3 relates to the possible immutability of affective forecasts. Walsh and Ayton (2009) found that people discounted other people's experiences as a valid predictor of their own and imagined their happiness would be different to surrogates' happiness. Extrapolating to the current study, it may be that individuals feel that the relationship they have with each situation is relatively unique and, although another person may have had an experience which counters their gloomy predictions of the emotional outcome, they feel that this information doesn't change their own "risk outcome". People recognise that the fact that somebody else has won a bet on a horse race does not change the odds for themselves on the next race. Therefore, they choose the path that appears to give them the emotional outcome that is in their own best interests regardless of what others may say.

There are two methodological issues with study 3 that may have affected the results and ought to be avoided in future research. Firstly, the timing of the administration of the EPQ2 questionnaire was quite variable and depended on the availability of participants for feedback sessions. As a result, the time gap between the issuing of the EPQ feedback report containing the experimental narratives and the completion of the affective forecast ratings in the EPQ2 questionnaire was variable and, in some cases, may have been as long as 5 months. A shorter, fixed period between the reading of the narratives and the completion of the EPQ2 questionnaire may have

resulted in different results and certainly would have allowed for a more robust interpretation of any results.

The second methodological issue is possibly more salient. The issuing of the narratives as part of the EPQ1 report meant that participants were free to either read or not read the narratives. Although, participants were asked to tick a box, before completing the EPQ2 questionnaire, confirming that they had read the narratives, the study design did not allow for any actual confirmation that the narratives had been read. Drawing conclusions about the impact of reading the narratives depends on a reliable judgement that the narratives have been read and, as such, future studies should take additional steps to confirm that this has taken place. Examples for remote studies, where participants are not physically co-located with the researcher, might include short quiz asking questions about the content narratives or some questions asking participants of their opinions about the narratives.

8.4 Potential for future research

This study points to a number of areas where future research is warranted. A more forensic analysis of the impact that specific emotions have on decision making would help to clarify the role of affective forecasts. Whether there are more gains to be had from focusing on enhancing positive emotions or reducing negative emotions when helping people to make better decisions is of importance well beyond the domain of positive psychology.

The role of predictability in the decision making of introverts and extroverts would also be a valuable area for research. It is well documented that extroverts are more comfortable with ambiguity and this is potentially related to the risk profile of the two groups. Extroverts reported, in the feedback sessions conducted as part of this research, that they were often quite comfortable in what might be called extroverted situations when they had a clear role to play – such as the trainer on a course. It is possible that

such a role provides the person with a measure of control which increases the predictability in the situation. However, the fact that they have a viable role to play, which gives the person the “right” to participate in the situation, could explain their relative comfort in the situation. Certainly, it was clear from the feedback sessions conducted as part of this research, that introverted leaders were more likely to make contact with people they considered they had a reason for contacting than they were to engage in more classic networking.

9. Conclusion

Zelenski et al. (2013) suggests that perhaps introverts do not seek pleasure as much as do extroverts. The results of this study do not fully support that view. Rather the results paint a picture of introverts as people who do seek pleasure but who also recognise, rightly or wrongly, the potential for a negative emotional outcome – particularly when they engage in extroverted situations. Both groups of people make decisions that are logical for them and follow a coherent heuristic. Zelenski et al. (2013) claim that introverts make more affective forecasting errors than extroverts as they do tend to enjoy themselves at extroverted events more than they anticipate. The results of this study suggest that the factors involved are not so clear. The role of affective forecasts in making choices as to whether to engage in an extroverted or introverted situation is more complex, and introverts and extroverts make those choices in the same way but with different data. For introverts, the choices are just as likely to be valid as they are for extroverts.

Having said this, though, organisational leaders do not always have the luxury of choosing which situations they need to engage in if they are to be effective. Where their affective forecasts either influence their decisions to avoid tasks that might make them uncomfortable or where they simply have to endure the discomfort that some upcoming

situations can elicit, interventions to alter their forecasts may be well advised. The interventions explored in this study did not provide any indication that they may be able to help but there is likely to be merit in further research in this area.

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Appendices

Appendix A – Letter of Ethical Approval



University Ethics Sub-Committee for Psychology

09/09/2016

Ethics Reference: 8172-gcgd1-neuroscience,psychologyandbehaviour

TO:

Name of Researcher Applicant: Gerry Duggan

Department: Psychology

Research Project Title: The relationship of personality attributes to the affective forecasts of organisational leaders.

Dear Gerry Duggan,

RE: Ethics review of Research Study application

The University Ethics Sub-Committee for Psychology has reviewed and discussed the above application.

1. Ethical opinion

The Sub-Committee grants ethical approval to the above research project on the basis described in the application form and supporting documentation, subject to the conditions specified below.

2. Summary of ethics review discussion

The Committee noted the following issues:

N/A

3. General conditions of the ethical approval

The ethics approval is subject to the following general conditions being met prior to the start of the project:

As the Principal Investigator, you are expected to deliver the research project in accordance with the University's policies and procedures, which includes the University's Research Code of Conduct and the University's Research Ethics Policy.

If relevant, management permission or approval (gate keeper role) must be obtained from host organisation prior to the start of the study at the site concerned.

4. Reporting requirements after ethical approval

You are expected to notify the Sub-Committee about:

- Significant amendments to the project
- Serious breaches of the protocol
- Annual progress reports
- Notifying the end of the study

5. Use of application information

Details from your ethics application will be stored on the University Ethics Online System. With your permission, the Sub-Committee may wish to use parts of the application in an anonymised format for training or sharing best practice. Please let me know if you do not want the application details to be used in this manner.

Best wishes for the success of this research project.

Yours sincerely,

Prof. Panos Vostanis
Chair

Appendix B

B:1. Invitation email to participants

Dear (name),

Further to the recent email from (HR Partner), I'm writing to ask you if you would consider participating in a Leadership Research Study that I am conducting under the auspices of the University of Leicester. Specifically, I'm looking at the link between certain personality traits and certain leadership behaviours with a view to seeing how we can support those for whom certain behaviours don't come naturally. I'm trying to secure the participation of around 100 volunteers in total and I'm hoping that will include a group from within (Company). The main criteria for participation is that the person holds a management/leadership position within the organisation.

Participation in the study will not take much time and, in fact, all participants will certainly gain from taking part. They will be asked to complete a personality questionnaire and a couple of short questionnaires about their feelings/emotions. Full feedback will be provided on the questionnaires as well as some development tips and this, in itself, should be a rewarding and valuable experience. Finally, a short questionnaire will be administered some time later asking about the leadership behaviours that the person has engaged in. **In total, the time required of participants will be less than two hours** and all parts of the programme can be done online or over the telephone at times convenient to you. Participation in the study and all individual data arising from the study will be kept completely confidential and will not be seen by anybody other than me. Where outcomes from the group data will be useful for the organisation, I may share this with responsible people from within the organisation. However, nobody's individual data will be released under any circumstances.

As mentioned, I have discussed this study with (HR Partner) and the company has offered to support the project as its aims are in line with the organisation's development philosophy.

If you are willing to participate, simply reply to this email saying "yes" and I will send you further information about the specifics of the study and a consent form to complete. You can withdraw at any time you wish without needing to provide a reason. I'm hoping to begin collecting data for the study within the next 2 - 4 weeks so please respond as soon as you can.

I do hope you will consider joining the study.

Best wishes,

Gerry

Gerry Duggan
Postgraduate Researcher
Department of Neuroscience, Psychology and Behaviour,
University of Leicester,

Tel: (Number)

Email: gcgd1@le.ac.uk

B:2. Participant Information Sheet



This sheet is for those people who have volunteered to participate in a research study carried out by Gerry Duggan from the Department of Neuroscience, Psychology and Behaviour at the University of Leicester.

Title of the study and details of the research aims.

The study is titled "Leadership Behaviour and Personality."

The study will be looking some of the links between an individual's personality and the leadership behaviour they display. In particular, the study will focus on the way that people with different personality characteristics make choices about certain interpersonal behaviours.

Most people in leadership positions will recognise that some aspects of their role come quite naturally to them whilst it requires more effort, more concentration or more willpower to perform some other activities. Part of the reason for this is that we all have different personalities – different preferences, different likes and dislikes, different approaches and styles.

The assumption behind this study is that, if we understood more about the psychological processes that link our personalities to our behaviour, then we would possibly be able to broaden our choices of leadership behaviour even if those choices do not exactly align with our preferences and style. In other words, we should find it easier to do some of those things that we find either difficult or uncomfortable now.

The information we need to gather.

To conduct the study, we need to gather information, from each participant, about their personality and their behaviour. We will also collect some information about one's feelings or opinions regarding different leadership activities.

All of the information will be collected in the form of on-line questionnaires which you will be able to complete at a time convenient to yourself. The majority of the data will be collected at the beginning of the study and the remainder will be collected at two different stages later in the study. The questionnaires will be administered over a period of about 3 months but will take you, overall, about 1 to 1½ hours to complete.

Other aspects of the study.

In addition to the questionnaires, you will be invited to take part in a personal feedback session where your personality profile can be discussed with you. **This will take place over the telephone and will last for approximately 30 minutes.**

Finally, participants will be asked to view a short on-line presentation. **Viewing this will take approximately 15 minutes.**

How the information gathered during the study will be used.

All of the personal information gathered during the study will be kept **private and confidential** and no personal information will be shared with other participants or with your organisation.

The collated data will be analysed to see what trends emerge in terms of the relationship between personality and leadership behaviours. Only the anonymised, collated data will ever be used in any report, thesis or publication.

The benefits of taking part in the research study.

For participants:

Firstly, you will learn something about yourself, your personality and your behaviour. Part of the study will be looking at what stops people from behaving in ways that might be advantageous and, hopefully, an understanding of this mechanism will allow participants to make more informed behavioural choices in the future.

You will receive feedback, from a qualified psychologist, about your personality profile and what it means.

Finally, you will receive a summary of the research findings which should help you to better understand some leadership behaviours which may well be useful for yourself and for those for whom you may have a development responsibility.

For the organisation:

The organisation has agreed to support this study as the aims of the study reflect those of the organisation in terms of searching for information and ideas that facilitate leadership development. The organisation will receive a report covering the research findings and advice as to how these findings can add value to leadership development programmes conducted by the organisation.

Other key points.

- Before commencing the study, participants will be asked to complete a consent form which specifies all conditions relating to participation in the study.
- Any participant in the study can withdraw at any time.
- There is no cost (other than your time) to you or the organisation for any part of this study.
- This study was reviewed and approved by the University of Leicester Psychology Research Ethics Committee.

Contact details.**Principle Researcher:**

Gerry Duggan
Postgraduate Research Student
Department of Neuroscience, Psychology and Behaviour
University of Leicester

Telephone: +44 1608 730 157

Email: gcgd1@le.ac.uk.

Your organisation (internal) contact:**(HR Partner)**

B:3. Participant Consent Form

BACKGROUND INFORMATION

Title: Leadership Behaviour and Personality

Researchers: Gerry Duggan - University of Leicester Department of Neuroscience, Psychology and Behaviour.

Purpose of data collection: Doctor of Psychology research degree.

Details of Participation: In this study, I am looking at the relationship between an individual's personality and the ways in which they operate in leadership situations. To do this, you are asked to complete three questionnaires as well as having the opportunity to take part in a telephone feedback session. The questionnaires will be administered over a period of about 3 months but will take you, overall, about 1½ hours to complete. All questionnaires will be completed on-line.

The feedback session will take around 30 minutes and it is expected that every participant in the study will benefit from taking part by having a greater understanding of their personality attributes as well as receiving useful information regarding how the study outcomes relate to them.

To take part in the study, may I ask you to read the *Consent Statement* below and then tick the box at the beginning of the Emotional Prediction Questionnaire to indicate your willingness to participate.

CONSENT STATEMENT

1. I understand that my participation is voluntary and that I may withdraw from the research at any time without giving any reason. To withdraw, please email me at the above email address.
2. I am aware of what my participation will involve.
3. My data are to be held confidentially and only Gerry Duggan and his supervisor (Dr Catherine Steele) will have access to them.
4. My data will be kept electronically for a period of up to five years after the appearance of any associated publications. Any aggregate data (e.g. spreadsheets) will be kept in electronic form for up to one year, after which time they will be deleted.
5. In accordance with the requirements of some scientific journals and organisations, my coded data may be shared with other competent researchers. My coded data may also be used in other related studies. My name and other identifying details will not be shared with anyone.
6. The overall findings may be submitted for publication in a scientific journal, or presented at scientific conferences.
7. This study will take approximately 12 months to complete including analysis of the data.
8. I will be able to obtain general information about the results of this research in the form of an outline report which will be sent to all participants who complete the research.
9. My organisation has sanctioned this research and approved the use of my data for the purposes of this study. My data will not be made available to my organisation other than in an aggregated form from which my identity cannot be ascertained.
10. By ticking the box at the beginning of the Emotional Prediction Questionnaire I am giving my consent for data to be used for the outlined purposes of the present study. Any questions that I have had about the research have been satisfactorily answered.

If you have further questions about this study, you may contact Gerry Duggan at gcgd1@le.ac.uk or by telephone on +44 1608 730 157.

This study was reviewed by the University of Leicester Psychology Research Ethics Committee.

B:4. Access email to participants

Dear (name),

Thank you for offering to participate in this research study looking at the relationship between personality characteristics and leadership behaviours.

At this stage, taking part in this project requires you to do two things:

1. Complete the Type Dynamics Indicator questionnaire. This questionnaire is fairly similar to the Myers Briggs Type Indicator (MBTI) which you may have completed previously. It is slightly different in that it asks you what your preferences are now and, in addition, what you would like them to be. The comparison between those two things is interesting in itself and the report resulting from the questionnaire will highlight this comparison.
 - You will soon receive an email from the test publisher (profiling@profilingforsuccess.com) with a link to the questionnaire site. Please let me know if you haven't received this within 24 hours of this email – check your junk email folder just in case. That email will contain all the information you need to complete the questionnaire. However, the following may help if you get stuck.
 - Choose the language you would like to use to complete the questionnaire.
 - Choose the option to log-in with a licence number.
 - Enter the licence number and password **on the email from the test publisher**.
 - Follow all further instructions on the screen.
 - Begin the questionnaire
2. Complete an “Emotional Prediction” questionnaire. This questionnaire asks you to consider how you might feel in a number of different circumstances – the kind of situations you may experience as a leader. The thought of some situations may make you feel happy, some may make you feel excited and others may make you feel anxious or even upset. The questionnaire will detail each situation and ask you to predict how each situation is likely to make you feel. You will also be asked how likely it is that you will face that kind of situation in the next few weeks.
 - You can find this questionnaire at <https://www.surveymonkey.co.uk/r/gerryd>
 - Tick the consent box and complete your personal details. They will not be shared with anybody but I need them to match up with your personality questionnaire.
 - Begin the questionnaire.
 - Once you've completed all the questions, press “done” and exit the site.

Once you have completed the questionnaires and I have reviewed the information, I will email to invite you to book in a feedback session with me. This will be a phone conversation, up to 30 minutes long.

Before you begin your participation in the survey, I need to know that you have read the participant information attached and agree with the conditions attached to the study. You do not need to sign any document but, at the beginning of the Emotional Prediction questionnaire, you will be asked to check a box to indicate that you have read and agree with all of the study conditions.

I do appreciate that you are busy and your time is precious. Therefore, I will always endeavour to use your time efficiently and effectively throughout this study and keep your time commitment to a minimum. However, I'm sure you will find participating in the study valuable and that the time is well spent.

For now, please read the attached document and feel free to complete the questionnaires in any order you like.

Best wishes,

Gerry

Gerry Duggan
Postgraduate Researcher
Department of Neuroscience, Psychology and Behaviour,
University of Leicester,

Tel: (number)

Email: gcd1@le.ac.uk

Considerations regarding the identification and operationalising of variables.

Identifying variables

As introversion-extroversion was my research focus, the decision as to which variables to choose for the study could be narrowed quite quickly. As I was interested in people for whom introversion was a “life approach” rather than a transient feeling (e.g. shyness), the state-trait argument fell heavily in favour of the latter. A more difficult choice was whether to consider a type or trait definition of introversion-extroversion. In theory, extroversion and introversion are considered as a binary preference in the type model or two ends of a continuum in the trait model. It is widely accepted that people do differ in their level of introversion/extroversion so a trait model is conceptually more valid (Hughes & Batey, 2017). However, there is evidence that particular ends of the “Big 5” personality trait continua are recognised as being more socially desirable (Dunlop, Telford, & Morrison, 2012). Extroversion is seen as being more desirable than introversion. The type model specifically communicates a sense of equality around the two. In practice, questionnaires based on both models offer point scores which allow a placing on a continuum. So, in type-based questionnaires, the preference is binary but the strength of the preference is also reported. I decided that the strength of the preference was not as important in my study as the direction of it. My conceptual question was whether people who, overall, have a preference for introversion are different in the way they make affective forecasts from people who, overall, have a preference for extroversion. A binary type variable (E or I) was therefore chosen.

To assess affective forecasts, one needs to ask people to predict their emotions when considering some future situation. It may be possible to ask people how they felt retrospectively about a current situation but, as several papers have demonstrated, emotions are not always accurately remembered and the danger of the pre-situation memories being influenced by the actual emotions experienced only adds to the uncertainty about the accuracy of retrospective emotional reports (Meyvis, Ratner, & Levav, 2010; Wenzel, Gunthert, & German, 2012). A more straightforward method was to present participants with familiar situations and ask them how they felt about such situations. Rather than offer a random set of emotions for them to consider, it was decided to follow, in general, the PANAS model used by Zelenski et al., (2013) as this would allow some comparisons with data from that study. The PANAS model (Watson, 1988) provides a robust framework for defining positive and negative emotions. Generally, research studies have not focused on individual emotions when considering affective forecasts but rather the more general classifications of positive and negative affect. I decided to mirror this in my research although still capturing information about individual emotions for exploratory purposes.

The research variable for the study looking at the impact of narratives on affective forecasting was relatively obvious. Participants would either receive feedback about their emotional predictions or they would not. Equally, they would either be exposed to the situational narratives or they would not. Originally, this was conceived as a four (2 x 2) group design but, unfortunately, participant numbers meant that the cells would be too small to allow any kind of robust conclusions to be made (see section below on lessons learned). The feedback and the narratives had to be combined as a single experimental condition which was not ideal as it meant that any effect could not be attributed to one or other source. This was an unwanted compromise.

Operationalising variables

Operationalising affective forecasts was a fairly uncomplicated process, as the most direct way of asking people how they feel about an upcoming event is to present a description of the event and ask them how they feel about it. A self-report questionnaire appeared to be the most logical method of gathering this data. It is possible that people can respond differently to how they actually feel but as we were looking at predictions of emotions and not the experienced emotions themselves, a self-assessment methodology seemed appropriate. A 6-point scale was used, asking respondents to rate their likely emotions using 10 different emotional terms. These were derived from the PANAS framework and were designed to mirror those used by Zelenski in his study, so that suitable comparisons could be made between the two research studies. Although the 6-point scale was ordinal, there is evidence (although see Knapp, (1990) for a full discussion of this) that such scales can mimic the properties of interval scales during the use of certain statistical processes. Psychologically, it would be difficult for any respondent to reliably quantify their emotions on a truly interval or ratio scale any more than they could manage to do so on the ordinal scale used in this questionnaire.

Typical measurements for personality attributes are self-report inventories. Certainly, for any of the “Big 5” traits or for type measures, self-report questionnaires are readily available and are seen as the most appropriate instrument to use. There being no reason not to follow this convention, a suitable off-the-shelf questionnaire was sought. Although a continuous trait measurement of introversion and extroversion may allow for finer statistical analysis, the dichotomous type measure E or I was the basis of Zelenski’s work and was likely to provide sufficient discrimination for this study also.

Selecting measurement questionnaires

The choice of measurement questionnaires was based on the following criteria:

- The constructs measured;
- Scale/scoring information available;
- Psychometric properties;
- Personal familiarity with the instrument;
- Need for specialist training;
- Administration options/logistics
- Cost and availability;

As mentioned above, the questionnaire also needed to provide a type output.

Options available which satisfied the above criteria included the Myers-Briggs Type Indicator, the Type Dynamics Indicator (TDI) and the Jung Type Indicator. Ultimately, the TDI, published by Team Focus Ltd, was chosen as the measurement questionnaire as it also offered an "IS/WANT" measure which would likely provide information regarding a respondent's desire to "change" their type - a potentially useful measure when considering respondent goals, intentions and motivations.

In the Administrator report, the TDI provides scores as shown in Figure A1.

The Way It Is						
Scale	Type	Continuous score	Clarity of preference (percentiles in brackets)	Letter raw scores		Difference
Extravert - Introvert	I	57	Corridor (3)	E10	I11	1
Sensing - iNtuition	S	35	Very clear (91)	S24	N3	21
Thinking - Feeling	F	57	Corridor (3)	T11	F12	1
Judging - Perception	J	34	Very clear (83)	J24	P2	22

Figure A1. Score table from the Type Dynamic Indicator Administrator report

The graph shown in Figure A2 is provided in the TDI participant report showing the difference and direction between the respondent's IS and WANT preferences.

Raw score change indicator between IS and Want

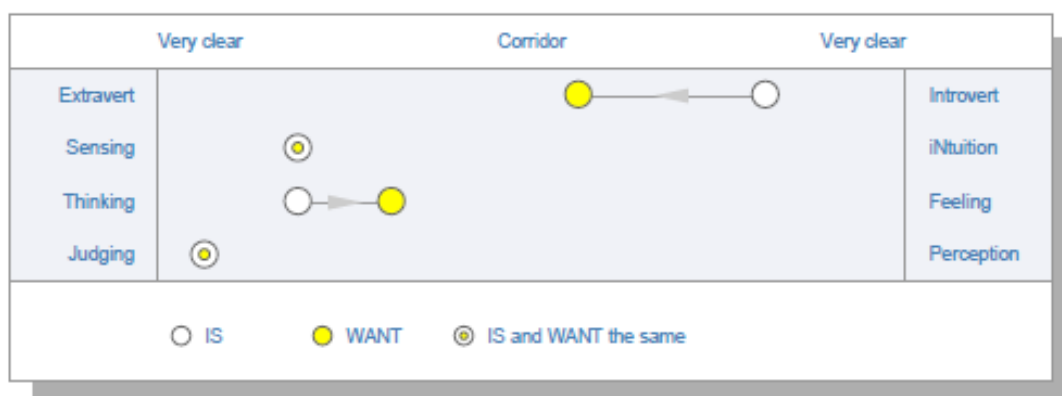


Figure A2. IS/WANT diagrammatic profile from the TDI participant report

There were also some practical reasons for selecting the TDI as the measure of dispositional introversion/extroversion. The publishers and distributors of less well-known tests are generally more likely to want free exposure for their instruments among potential customers than those who publish the more established questionnaires such as the MBTI. This study provided the test publisher with a welcomed opportunity to have their instrument used by senior managers in a number of large organisations. In addition, it was perceived that the publishers of newer instruments are also likely to be interested in research that may support the model upon which their test is based. In this instance, an offer to undertake some further research into the IS/WANT preferences of organisational leaders provided some incentive for the test publisher to provide TDI questionnaires to the research participants free of charge. This additional research is not part of this study.

An examination of the literature indicted that there were no readily available questionnaires which would allow the measurement of affective forecasts regarding specific leadership situations. A decision was taken, therefore, to construct a bespoke

questionnaire which allowed such measures to be gathered. As an experienced test and questionnaire developer, I felt that I possessed the skills to design a reliable and content valid questionnaire. Identifying the content posed a problem as there needed to be a strong theoretical base for choosing the scenarios that would be used to represent “extroverted” and “introverted” leadership situations. Most taxonomies of leadership behaviour concentrated very much on the “in-work” situations such as developing strategies or setting objectives. These situations, however, were not the ones that leaders had expressed to me as being problematic when working with them in assessment, coaching or other development programmes. It was often the “outside-work” situations which were deemed to be the most difficult – particularly for introverts who were much more likely to value and protect their personal time and space and keep them separate from their work. Yukl’s Taxonomy of Leadership Behaviours is recognised as a comprehensive framework (Yukl, 2002) and so it was used as the basis for the content development of the affective forecast questionnaire – which became known as the Emotional Prediction Questionnaire – as this was a more intuitive title.

Appendix D

Development of the Emotional Prediction Questionnaire 1

Questionnaire Design

As part of the questionnaire design, each of the situations, from the initial bank, was designated either as predominantly introverted or extroverted in nature. This is a matter of judgement but a structured process facilitated the distinction. Firstly, an examination of the TDI and MBTI questions was used to gather key words that were more likely to pertain to either introvert preferences or extrovert preferences. The language of each statement was checked to see which set of words it corresponded with. From this, a set of 40 statements were printed on cards (1 statement per card) and each rated by a small team (6) of consultant psychologists or HR professionals as being predominantly an introverted or extroverted situation. Where there was broad agreement (5 out of 6 chose the same option), the situation was designated “introverted” or “extroverted” status accordingly. A final 30 statements (balanced with 15 extroverted and 15 introverted statements) were chosen for the EPQ1 questionnaire after a short trialling process ($n=5$) revealed some misunderstanding of a few situations which were then adjusted.

Reliability Data

Table A1
Reliability Estimates of Scales (EPQ1) Cronbach's Alpha Coefficients

Scale	Extroverted Situations (15)	Introverted Situations (15)	All Situations (30)
Nervous	.927	.912	.948
Happy	.857	.850	.912
Self-Conscious	.959	.979	.983
Interested	.888	.870	.930
Excited	.901	.898	.939
Distressed	.955	.962	.976
Embarrassed	.928	.944	.958
Anxious	.941	.947	.970
Pleased	.869	.849	.907
Upset	.922	.883	.949
Average	.915	.909	.947

Table A1 shows scale reliability estimates for the EPQ1 questionnaire.

Cronbach's alpha reliability estimate coefficients for all emotion scales were above 0.8 for all situations (questions). When questions were separated into introverted and extroverted situations, the scale reliabilities were all 0.8 for the 15 question scales with the majority being over 0.85. These coefficients suggest that the scales were measuring fairly unitary constructs in a consistent manner. Cronbach alphas for the derived scales across situations were .943 for Positive Affect, .975 for Negative Affect, .975 for Self-Consciousness and .919 for Pleasantness with ranges between situation types of .864 to .974. Such high reliability coefficients are not always welcome as they can indicate a lack of variance in ratings and this is possibly true of some of the scales such as Distressed and Self-Conscious.

Table A2

Reliability estimates of scales (EPQ2) Cronbach's alpha coefficients

Scale	Extroverted Situations (10)	Introverted Situations (10)	All Situations (20)
Nervous/Anxious	.816	.700	.842
Happy/Pleased	.882	.784	.902
Self-Conscious/ Embarrassed	.914	.935	.945
Interested/Excited	.900	.808	.911
Average	.878	.807	.900

Appendix E

List of situations rated by participants in EPQ1

EPQ1 SITUATIONS

(Numbers refer to the question number in the online questionnaire)

Introverted		Extroverted	
3	Working on a strategy document whilst alone in a distant hotel room.	1	Working on a project with an unfamiliar group of people.
4	Working with 3 or 4 close colleagues on a detailed problem-solving task.	2	Attending an after-work drinks evening with staff.
8	Working late to finish important work when everybody else has gone home.	5	Giving a presentation to the Senior Management Team.
11	Meeting with a supplier to talk through contract details.	6	Meeting potential customers in a formal social setting such as a concert, dinner etc.
13	Travelling a long distance alone in order to visit another work location.	7	Hosting two overseas colleagues at your home for 4 days.
14	Working at home for a few days to catch up on some work.	9	Building your network by contacting a senior manager for the first time.
15	Doing research in a university library.	10	Making an impromptu speech at a company-wide event.
17	Spending a day alone in your office reviewing a pile of job applications.	12	Spending 3 days with the whole department on an outdoor training programme
18	Researching and writing a technical book or manuscript.	16	Attending a trade conference where you are expected to network with industry contacts.
20	Writing a report, as a subject matter expert, for a Board meeting.	19	Hosting customers and suppliers at a sporting event.
23	Going out for lunch or dinner with one close colleague.	21	Going out to dinner with the Senior Management Team and their spouses/partners.
25	Conducting performance reviews with staff members individually.	22	Informally chatting to staff members.
26	Handling a detailed technical problem raised by a staff member	24	Attending a “speed-dating” type networking event.
28	Listening to another person’s private troubles and problems.	27	Revealing personal information in a public setting.
29	Coaching others on a one-to-one basis.	30	Negotiating with unfamiliar people.

1. List of situations rated by participants in EPQ2

(Numbers refer to the question number in the online questionnaire)

Introverted		Extroverted	
3	Working alone, at home, on a strategy document.	1	Socialising, out of work time, with junior staff.
5	Conducting research into a specific issue.	2	Introducing yourself to people at a "meet-and-greet" networking event.
7	Travelling long distances alone.	4	Taking part in a senior management meeting.
8	Working through a full in-tray in the office without interruption.	6	Chatting informally to staff members in the office/factory.
10	Attending a training course as a participant (not the trainer).	9	Hosting customers or other stakeholders at a sporting or other social event.
14	Coaching a staff member on a one-to-one basis.	11	Conducting a training course (as the trainer).
16	Socialising with a close colleague.	12	Making contact with a senior manager for the first time.
17	Dealing with a complex and detailed technical problem.	13	Giving an impromptu speech at a company event.
19	Conducting individual performance reviews.	15	Working with an unfamiliar group of people.
20	Writing an article for publication.	18	Hosting some "out-of-town" colleagues over the weekend.

2. Linked statements EPQ1 & EPQ2

EXTRAVERTED SITUATIONS

(Numbers refer to the question number in the online questionnaire)

EPQ1		EPQ2	
1	Working on a project with an unfamiliar group of people.	15	Working with an unfamiliar group of people.
2	Attending an after-work drinks evening with staff.	1	Socialising, out of work time, with junior staff.
5	Giving a presentation to the Senior Management Team.	4	Taking part in a senior management meeting.
7	Hosting two overseas colleagues at your home for 4 days.	18	Hosting some "out-of-town" colleagues over the weekend.
9	Building your network by contacting a senior manager for the first time.	12	Making contact with a senior manager for the first time.
10	Making an impromptu speech at a company-wide event.	13	Giving an impromptu speech at a company event.
19	Hosting customers and suppliers at a sporting event.	9	Hosting customers or other stakeholders at a sporting or other social event.
22	Informally chatting to staff members.	6	Chatting informally to staff members in the office/factory.
24	Attending a "speed-dating" type networking event.	2	Introducing yourself to people at a "meet-and-greet" networking event.

INTROVERTED SITUATIONS

(Numbers refer to the question number in the online questionnaire)

EPQ1		EPQ2	
3	Working on a strategy document whilst alone in a distant hotel room.	3	Working alone, at home, on a strategy document.
13	Travelling a long distance alone in order to visit another work location.	7	Travelling long distances alone.
15	Doing research in a university library.	5	Conducting research into a specific issue.
17	Spending a day alone in your office reviewing a pile of job applications.	8	Working through a full in-tray in the office without interruption.
18	Researching and writing a technical book or manuscript.	20	Writing an article for publication.
23	Going out for lunch or dinner with one close colleague.	16	Socialising with a close colleague.
25	Conducting performance reviews with staff members individually.	19	Conducting individual performance reviews.
26	Handling a detailed technical problem raised by a staff member	17	Dealing with a complex and detailed technical problem.
29	Coaching others on a one-to-one basis.	14	Coaching a staff member on a one-to-one basis.

Appendix F - Additional SPSS Output

Table A3

One-Way ANOVA Results of Individual and Grouped Emotions by Personality Type

Emotion	Source	Sum of Squares	df	Mean Square	F	Sig.
Positive Affect	Between Groups	3.216	1	3.216	6.673	.013*
	Within Groups	23.134	48	.482		
	Total	26.350	49			
Interested	Between Groups	2.170	1	2.170	4.806	.033*
	Within Groups	21.674	48	.452		
	Total	23.844	49			
Excited	Between Groups	4.467	1	4.467	6.418	.015*
	Within Groups	33.412	48	.696		
	Total	37.880	49			
Negative Affect	Between Groups	.797	1	.797	2.322	.134
	Within Groups	16.474	48	.343		
	Total	17.271	49			
Nervous	Between Groups	3.447	1	3.447	8.802	.005*
	Within Groups	18.797	48	.392		
	Total	22.244	49			
Distressed	Between Groups	.235	1	.235	0.343	.561
	Within Groups	32.883	48	.685		
	Total	33.118	49			
Anxious	Between Groups	1.733	1	1.733	2.285	.137
	Within Groups	36.399	48	.758		
	Total	38.132	49			
Upset	Between Groups	.008	1	.008	0.050	.824
	Within Groups	7.247	48	.151		
	Total	7.255	49			
Self-Consciousness	Between Groups	.376	1	.376	0.652	.424
	Within Groups	27.664	48	.576		
	Total	28.040	49			
Self-Conscious	Between Groups	.078	1	.078	0.056	.814
	Within Groups	66.848	48	1.393		
	Total	66.926	49			
Embarrassed	Between Groups	.894	1	.894	2.640	.111
	Within Groups	16.262	48	.339		
	Total	17.156	49			
Pleasantness	Between Groups	2.982	1	2.982	7.573	.008*
	Within Groups	18.899	48	.394		
	Total	21.881	49			
Happy	Between Groups	2.386	1	2.386	5.355	.025*
	Within Groups	21.384	48	.446		
	Total	23.770	49			
Pleased	Between Groups	3.644	1	3.644	9.363	.004*
	Within Groups	18.680	48	.389		
	Total	22.324	49			

*Significant at $p < .05$

Appendix G

EPQ1 sample report (6 pages)

Leadership Research Study

Emotional Prediction Questionnaire Report

This report is for: SAMPLE SIMON
Report prepared by: Gerry Duggan

The Emotional Prediction Questionnaire was a research survey designed to assess your feelings about a range of situations which may arise as part of a senior role in an organisation.

Two types of situations were included in the questionnaire.

One type described situations that would require an individual to behave in more *extraverted* ways. These included meeting new people, engaging in social gatherings, and so on.

The other type described situations that would be more likely to require *introverted* behaviour. These included working alone or with just one other person, concentrating on one type of work for a long time, and so on.

Information about extraversion and introversion can be found in the Type Dynamics Indicator Report which accompanies this report.

On the following page are two graphs which summarise your answers to the questions.

One graph shows the average of your responses regarding your predicted emotions in each type of situation (that is, extraverted or introverted situations). You should examine this graph for any differences between the situation types to see whether you feel very different emotions in each type. This may help you to understand why you may be more likely to feel more comfortable in one type of situation.

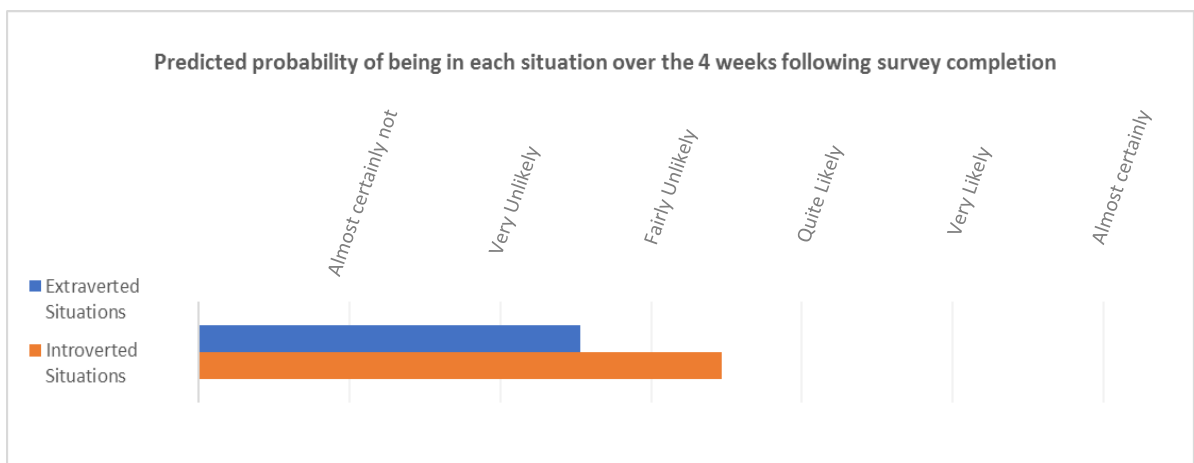
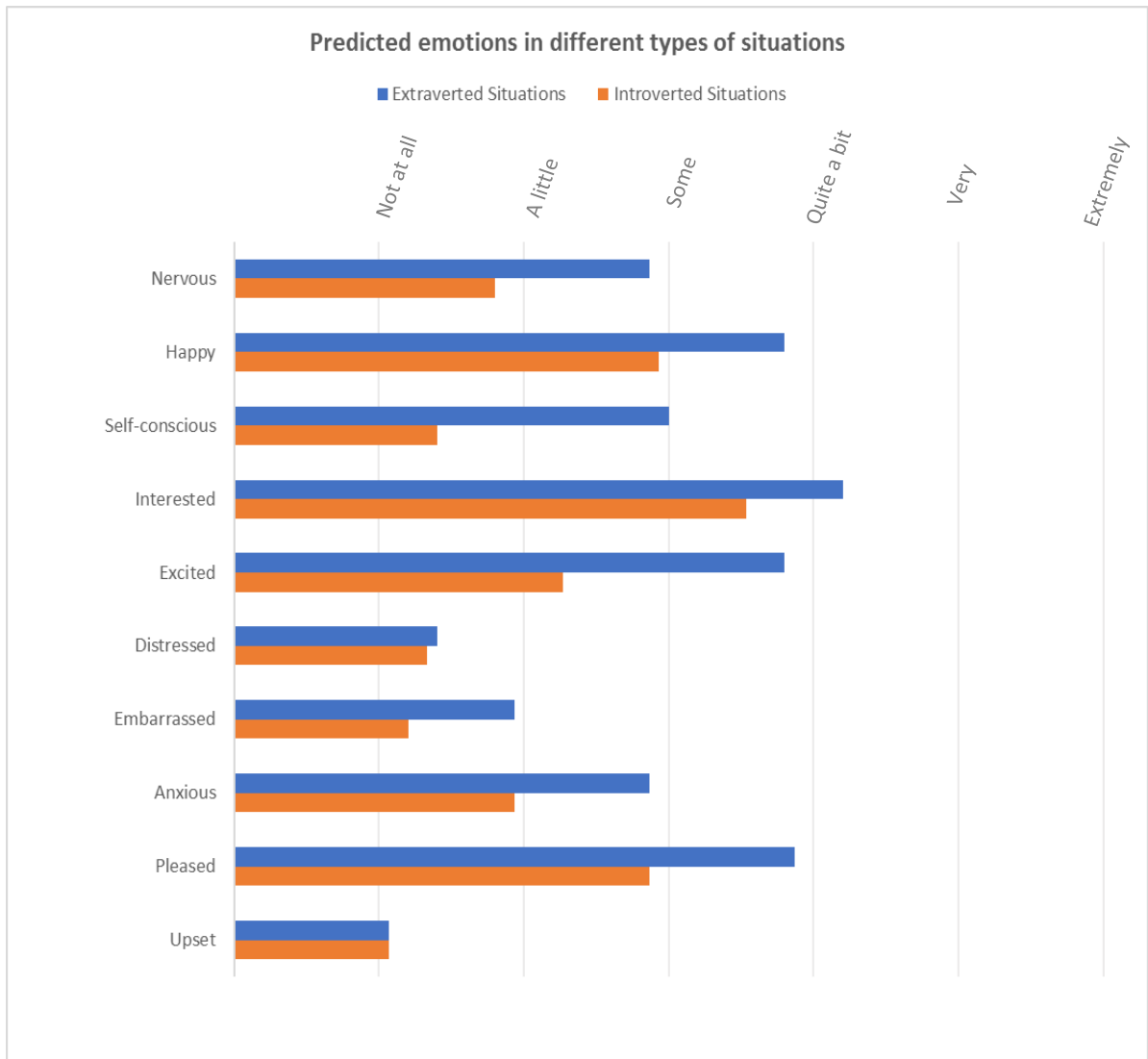
If there is one type of situation where you are likely to feel more negative emotions – for example, you have predicted you will feel more nervous, anxious, self-conscious, and so on, - you may find the narratives provided at the end of this report very helpful. These narratives may help you to put some of your more negative feelings into a different perspective and help you develop more positive feelings about such situations.

The narratives are provided for both extraverted and introverted situations. You should read those related to the type of situations about which you feel more negative and less positive emotions.

The second graph shows the how likely you felt it was that you would encounter the different types of situations. Obviously, this is just an average of your ratings over the whole range of the two types of situations.

It may be helpful to consider whether there is any difference between the two types of situations in this graph. If so, is it possible that you avoid either type of situation? If not, does this mean that you are required to face certain situations that you find uncomfortable?

REPORT GRAPHS



NARRATIVES FOR EXTRAVERTED SITUATIONS

Networking

I used to go cold at the thought of networking. It felt like such a false and insincere thing to do. It felt like I was using other people and their position to try and improve my own.

When my manager told me that my unwillingness to network would hold me back in the organisation and that I would need to develop networking skills, I honestly considered resigning my job – I felt so strongly that I didn't want to do this.

Three months later, my views are completely different. For me, the big change came about when I realised that other people actually wanted to network with me. Even very senior people, who I thought would see me as a bit of a nuisance were genuinely pleased when I took the time to contact them. As they said, "it can be difficult for senior managers to build relationships with people in other departments without it appearing somewhat threatening."

It is a skill. I learned how to identify people who I would benefit from knowing better and who would also benefit from knowing me better. It was this last bit that I didn't understand before. I also learned how to make contact, introduce myself in a professional way and offer to come and see them if they felt there might be some value in that. Nearly everybody I contacted was keen to meet or, if overseas, make contact by Skype or Facetime.

I followed up each meeting with a thank you email and said I would "touch base" in about 6 months. Every single person replied and nearly half said not to leave it so long to catch up again.

I don't think networking will ever come naturally to me but I now know I can do it and it won't hold me back in the future.

Socialising

I used to dread Friday evenings when somebody would suggest going out for a drink after work. It wasn't that I didn't want to have fun. I just wanted to go home. I needed time away from work and the people at work and socialising with them was not my idea of fun.

I'm not a big "party person" in any case. I'd rather have dinner with one or two close friends than go out with a big, noisy group. Even if it was just for an hour or so, I'd find myself looking at the clock wondering when would be a reasonable time to say my 'goodbyes' and leave.

However, I realised that quite a lot of important work topics were discussed "after hours" and I felt that I was missing out. I had to think of a way to be involved but not in a way that I wouldn't enjoy.

I decided to take some control over how I would socialise with my work colleagues. For a start, I suggested a quick meal after work with a few colleagues to discuss a project we were working on. I found that quite easy as we could focus on work rather than on personal stuff.

That blossomed by itself and became a regular fixture with a slightly larger group and sometimes we found ourselves not talking about work at all – and I grew to like that. I didn't feel exposed, like I used to in the big, Friday evening gatherings.

When I go to Friday drinks now (which I don't always do), I have some colleagues that I feel more relaxed with and that means I enjoy it more. I also find that I'm more "in the loop" about what is going on in the organisation and that is helping me in the workplace too.

Formal Occasions

The thing I used to absolutely dread was when I had to go to formal occasions for work purposes. I had a manager who just loved concerts and the opera and he would insist that his senior team (including me) would all go out together with selected “stakeholders” or customers for an evening.

I actually enjoy classical music so that wasn’t a problem. Even the whole dressing up thing was fine and I was used to going to such occasions with friends from college.

It was having to do this with work colleagues and with other people I did not know. Making small talk. Everyone trying to manage the impression they make on others. It was so tiring. I once even considered resigning my job rather than going to such an event.

Then I started to look at it differently. I simply decided to look at it as an opportunity rather than a chore. That wasn’t easy but I decided I had to do something.

I figured that I was being given an opportunity to see and hear some of the best performers in the country – if not the world. I wasn’t paying money to have this opportunity but I was paying with my time and my willingness to engage with work colleagues and others. It was really quite a small price to pay considering the benefits.

I decided that I would approach the “small talk” differently also. I would use the time to find out as much as I could about the other person, their work and their liking (or otherwise) of music. This meant that I didn’t have to reveal very much about myself, as I was asking the questions.

It worked brilliantly. I’m not a natural when it comes to conversing with people I don’t know but I can do it reasonably well now and I’ve seen and heard some amazing performances over the last year. I’ve also found the people I’ve met much more interesting than I ever thought they would be.

Conferences

You’ll recognise the situation. You walk into a soulless conference room where there are about 100 people all talking to each other in little groups. You register, get your name tag, grab a cup of coffee and then...you’re all alone with nobody to talk to. You open up your programme and start reading it (even though you already know the timetable) and you avoid catching the eyes of other “loners” who drift nearby.

This used to be me and I so disliked these moments that I started to avoid going to valuable conferences. I also avoided training courses, trade dinners, presentations and so on. In the end, I realised that I was missing out on a lot of learning and networking opportunities. So I decided to do something about it.

Working with a coach, I set myself goals for overcoming my dislike of the situations. My plan was this:

- Get information from the internet about making “small talk”. There is a lot on there.
- Set a goal of talking to at least three people during the breaks at a conference.
- Find out at least two pieces of information from each person I talk to.

Once I had achieved these goals, I set further goals:

- Collect the contact details of at least 50% of the people I meet at conferences.
- Agree to follow-up (send information, receive information, meet, etc.) with at least one person from every conference or course I attend.

I can’t say achieving these goals was easy. It took me 6 months to work through them but I can honestly say that I no longer have this dread of going to conferences. I feel that I have a purpose being there not just in the formal settings (lectures, presentations etc.) but also in the informal settings (breaks, meals etc.). I have really learned a new and valuable skill.

NARRATIVES FOR INTROVERTED SITUATIONS

Solitary downtime

I like being around people. I get a buzz from the energy that is created when a group of like-minded people are working together on a task or project that must be finished by a deadline.

I have always found it much harder when I'm forced to work alone to do those kinds of work tasks that I need to do by myself. The planning, the prioritising, the policy writing. I must admit; I find it quite boring and I am easily distracted. This became such a problem that I had to take steps to rectify it as I wasn't getting some of those important tasks done.

Firstly, I set aside particular time slots for what I called "Box 3" work – that is, those tasks which are very important but less urgent. I created a physical block to distractions with my office door closed, my email turned off and my phone diverted to my assistant. Everybody in the office was told what I was doing and they were told that they could interrupt me but only after trying to solve any problems themselves with the help of a colleague, if necessary.

I initially only put aside three hours per week for this work which was around 5% of my work time. However, I found it was so valuable that I extended that to five hours per week. What was amazing was how much other people appreciated solving their own problems and learning from the experience.

It took me a while to get used to my "solitary confinement". At first, I would find any excuse to come out of the office to see what was going on only to find that nothing was going on that was more important than the department strategy plans I was supposed to be working on. Eventually, I found that focusing on one specific piece of work for a duration of time without any distractions helped me to understand it better and my decision making has improved as a result.

I almost look forward to my downtime now.

Working remotely

I used to find it difficult having to work away from the centre of things. I always liked being around where the buzz was. However, my work required me to travel to more distant work locations and I found I was working alone quite a lot of the time...and I didn't like that.

Over time, however, I realised that there were benefits to this enforced solitude. For a start, I had time to organise my thoughts a bit more clearly than I used to do. I was always looking for others to make an input into my thinking or used them as a "sounding board". When you are on your own, you can't do that and, in a way, this helped me to be clearer about what I was thinking – what my opinion was.

I also found that I became more skilful at dealing with situations myself without needing the help of others. Solving a problem in the middle of the night in a strange town or country requires a kind of resourcefulness that I don't think I possessed previously. Now, though, I think I can manage quite a lot of issues without needing others to help me out.

All in all, I still prefer to work in a busy, energetic environment but I've learned to appreciate those times when I am forced to be distant from the centre of the action and rely only on my own resources.

Close, detailed work

If I'm honest, I hate detailed work. I like to think of myself as someone who does see the bigger picture and I get a real kick out of being able to bring a whole range of ideas together to create a vision for others to see. When it gets down to the details of implementation, then I prefer to let others take over – people who are good at that side of things.

The trouble is, sometimes, the way things turned out did not match my expectations. Part of the problem was that I was not on top of the details and I did not always know exactly what was taking place.

I think I have now solved this problem. For each major project, now, I have my staff provide me with what I call a "detail summary report". This sounds a bit contradictory but the idea is that I am given a very short list of the main details related to each part of the project. It is no longer than two pages.

I have also set aside specific "detail times" for each project. I use this time to go through the detail summaries. The detail time is usually made up of a 1 hour session per month through the life of the project. That is only 6 hours for a six month project. I tend to do the sessions on my own with no distractions.

I have found this new understanding of the details has helped me tremendously. Not only does it help in ensuring that my vision becomes a reality but it has also helped me to learn how to make my "big ideas" more realistic and practical.

Not sharing my thoughts

I prefer to let people know what I'm thinking or feeling. If something really good or bad is happening, I am not one to stand by and say nothing. I will praise people openly and I usually let people know when I'm not happy with what they are doing – although I try to do it nicely and without offence.

This has got me into trouble in the past. Some people don't like to hear the truth but I think it's more honest to be open and frank with others rather than keeping one's feelings hidden and secret.

Recently, though, I think I have learned to be a little more considered in what I say and to whom I say it. I've realised that, although I may want to get something off my chest, it might not be in other people's interests to hear it. It also might not be in my interests, sometimes.

I've learned to wait just a few seconds before giving my opinion. I say to myself, "Stop! Think!", and I sometimes find that I've avoided saying something that might not be appreciated.

I've also found that I have decided that it is not always a good idea to share things with everybody. As an example, I used to leave Boardroom meetings and complain loudly to anybody who would listen about outcomes from the meeting that I did not agree with. Although this made me feel better in the short term, I realised that it might be better to keep some of those things private. My "Stop! Think!" tactic has helped me to be more considered in who I say things to. If there is something to be communicated following a Board Meeting, I will now do it in a more considered and balanced way.

Part C: Critical Appraisal

This paper reflects on the completion of a research project but also, more broadly, on a programme of learning undertaken by an experienced practitioner who is also an equally inexperienced academic. I intend to offer a view of the reasons for undertaking the research project and the PsyD programme, the issues that arose during its progression and the learning that accompanied the journey throughout. Areas covered will be my background, the context that led to choosing a research area, specific difficulties and learning points in carrying out the research, limitations of the studies and suggestions for future research.

Background

Offering consultancy services to clients, as a psychologist, is varied, interesting, frequently exciting and almost invariably rewarding. Seeing people develop themselves, their teams and their organisations and their success (however that is measured), their enjoyment and/or their well-being, provides a great deal of satisfaction and meaning in one's work. Even so, consultancy work, especially in a small business like my current organisation, does not easily tick all the boxes for a full, professional life. Learning new skills or developing a knowledge base in new areas can often (and rightly) depend more on the needs of clients than the professional interests of the consultant. Academic/intellectual discourse with fellow psychologists can be limited both in frequency of opportunity and breadth of content. Academic rigour on some projects may have to be balanced against the needs of the client and the availability of resources – including time and money – and the outcome of the equation may not always be positive.

In an effort to fill some of these gaps, I have undertaken a number of activities in recent years. One is to take a role as a verifier for the Psychological Testing Centre of the British Psychological Society. This role requires me to keep abreast of the literature

and best practice in the field of psychological testing and to work with professional colleagues who wish to provide training to and accredit individuals to deliver testing services. I have also chosen to offer specific employment opportunities to psychology practitioners-in-training which encourages me to stay current across a broad range of psychological topics which might have otherwise remained in the background. I also decided to pursue a Doctor of Psychology degree with specific objectives to:

- Develop a knowledge base in a new area (for me);
- Build or strengthen skills in research practices;
- Seize opportunities to teach or support teaching at a tertiary level;
- Secure a useful qualification for my career going forward.

Choosing a subject area

I have often held an uneasy feeling when completing a feedback session following the administration of a personality questionnaire. Whilst I was able to help the person understand how their personality and behaviour were linked, the advice to people who wanted or needed to behave in counter-dispositional ways always seemed limited. I felt that I had left these sessions somewhat unfinished. Consequently, I began to read around the subject of the robustness of personality and considered the underlying psychological processes behind personality characteristics. My purpose was to understand the mechanisms available to people who wanted to make personal changes in order to be more aligned with their needs and wants – particularly their occupational needs, as this was my area of practice. Changes in “what”, was a key question. There were studies that investigated the plausibility of longer-term changes in “personality” however that was defined (Fleeson & Nofle, 2008; Hudson & Roberts, 2014; Violato & Travis, 1988). There was also plenty of advice for those who had particular personality preferences and who felt the need to either recognise and accept

the benefits of those preferences or adapt their environment to match the preferences (Cain, 2012). There were very few, if any, studies which looked at how a person could manage their personality-driven behaviour in a way that met their external needs without adversely affecting their internal equilibrium. For example, individuals may find themselves in job roles which require engagement in some behaviours which they find uncomfortable. If these behaviours are unavoidable, how might a person best manage them with a view to optimising their occupational success and personal well-being?

The choice of research topic

The bulk of situations where I felt least comfortable when concluding personality feedback sessions involved people who had expressed introvert preferences but who held occupational roles which required significant “extraverted” behaviour. Typically, these people had not self-selected into those roles initially but had found themselves in them through promotion or other opportunity. For example, they may have started their careers as scientists or engineers but now held roles as department leaders or even customer liaison professionals. These roles invariably involved the volitional interaction with other people, often in non-work settings. My clients would regularly cite these situations as being the most uncomfortable they faced (but note, not necessarily the most difficult). Therefore, I explored the mechanisms underlying some aspects of introverted and extroverted behaviour and it was in the area of judgement and decision-making where I found the most fertile seam of research.

Zelenski, Whelan, Nealis, Besner, Santoro & Wynn (2013) had explored the differing ways in which introverts and extroverts predict how they will feel when considering future situations. They asked both introverts and extroverts to predict their feelings when forced to behave in introverted or extroverted ways. Their conclusions

were that introverts made more affective forecasting errors when considering future instances of behaving in extroverted ways. Introverts tended to over-estimate the negative emotions they would feel when behaving in extraverted ways and under-estimate the positive feelings they would feel in the same circumstances.

Whilst recognising the value and relevance of this study to my own research interests, I also felt that the issue my clients faced was not fully represented by Zelenski et al.'s (2013) study. Their study assessed the emotions attendant on behaving in a particular way – that is, in an introverted or extroverted way. Many of my clients were clear that they could behave in introverted or extroverted ways regardless of their dispositional preferences. In line with Jung's type theory, they reported that it may require them to expend more energy behaving in such a way but they could do it quite comfortably without undue disequilibrium. Where they reported significant discomfort and, at times, stress was in contemplating the types of **situations** which may require extraverted behaviour. Once they had entered those situations, they reported less negative emotions than when contemplating them beforehand. This outcome is supported in the relevant research (Fleeson, Malanos, & Achille, 2002). My research, then, was designed to capture this kind of situation with a view to establishing whether introverts and extroverts differed in the way they made affective forecasts when considering, what I called, introverted and extroverted situations and whether anything could be done which allowed them to manage those forecasting processes.

On this latter point, I explored research which looked at different ways in which attempts had been made to manage affective forecasts and reduce the errors that seemed to consistently accompany them. The healthcare sector had used patient narratives as a device to manage the emotions that people felt when considering treatment options available to them (Dillard, Fagerlin, Cin, Zikmund-Fisher, & Ubel, 2010; Shaffer, Focella, Scherer, & Zikmund-Fisher, 2016). The model used attempted to reduce the

negative emotions that may accompany considerations of certain treatments by communicating the message that previous users of those treatments had also felt negatively about the treatments but had found, upon embarking on a treatment, that those negative emotions were somewhat unfounded.

I wondered whether the same process could be used to reduce the negative emotions that introverts felt in the time leading up to them engaging with extroverted situations. Could the narratives of people who had faced similar choices – that is, attending or not attending a particular event – reduce the negative emotions felt by introverts in those situations? Of course, a similar argument could be used for extroverts as well, when facing introverted situations. My decision to focus predominately on the issues introverts face was due, firstly, to the number of introverts who, in my work with them, had expressed discomfort when facing a number of leadership tasks and situations; and secondly, due to previous findings that introverts were much more likely to want to be “more extroverted” than vice versa (Hudson & Roberts, 2014).

Establishing a research question

I am grateful to the University of Leicester Postgraduate Centre for conducting a range of short courses and seminars which help to develop some of the practical research skills which may not be regularly exercised by those who work outside academic or research environments. One of these programmes focused on establishing a research question and it helped greatly in turning my idea into a formal set of hypotheses. Understanding the difference between research topics and research questions was key as it allowed me to better identify my target population, define the outcome and predictor variables and determine the type of study needed to achieve my

project goals. Prior to taking this course, my thinking on some of these factors was decidedly unformed.

It was important to understand whether the findings of Zelenski et al. (2013) could be generalised to include situations that could be classified as introverted or extroverted rather than focusing on an individual's behaviour. My first set of research questions, then, mirrored those from the Zelenski study, with hypotheses considering the relationship between an individual's self-reported level of dispositional introversion or extroversion with their levels of self-reported positive and negative emotion when considering a number of situations which could be viewed as potentially involving introverted or extroverted types of behaviours. A second study looked at whether affective forecasts affect the decision that people make in relation to “introverted” or “extroverted” work situation.

In a further study, I explored whether narratives, derived from statements made by introverts and extroverts, would have an impact on the affective forecasts made by people in these groups. The narratives effectively mirrored the situations that the research participants were asked to consider but suggested that the negative feelings they elicited were not good predictors of the actual feelings experienced when each situation was realised. Interestingly, during feedback sessions, when participants were asked if they had read the narratives, many people acknowledged that the contents of one or more narratives reflected feelings that they recognised and with which they identified. As part of this study, I also examined whether receiving feedback on one's affective forecasts altered how one made forecasts at later times.

Planning the literature search

An issue I faced, when planning my literature search, was that a doctoral research project is a far more extensive piece of work than might typically be found in a

practical setting. As an occupational psychologist who has endeavoured to support his practical work with a good theoretical base, I would regularly access the relevant and recent literature pertaining to the work I was commissioned to undertake. However, the subject matter in each case tended to be focused on a single area of interest or a limited set of questions. This study was multi-faceted and there were a number of diverse areas of psychology (and beyond) to consider. Personality and individual differences was central to the research questions with a specific focus on the nature of extroversion and introversion. The role of personality in leadership effectiveness was apposite as it was the underlying reason for pursuing this line of enquiry in the first place. Clearly, the literature regarding the role of affective forecasts in determining behaviour and the wider judgement and decision-making literature were both relevant. How relevant each area was and how far to delve into the literature was a significant issue for me to deal with. I had little or no background in the area of judgement and decision-making so could not even limit my search to those areas which I knew to be relevant. I was more fortunate in both personality and leadership domains as these were areas where I had more experience and a greater knowledge base.

In the end, I chose to concentrate on the area of affective forecasting as it was fundamental to the processes I was endeavouring to establish as potentially useful in managing behaviour. It was also an area where I had no prior knowledge and, though this was potentially a hindrance, it allowed me to approach the subject matter with no preconceptions or prior views. The literature search was constructed as a combined thematic and funnel approach with a broad view of affective forecasts and their place in the judgement and decision-making process being followed by an outline of each of the different forms of affective forecasting error. Contributions to each of those areas followed a thematic approach with personality, emotional and cognitive considerations being treated equally. Considering such a wide range of influences on affective

forecasting was not without its challenges. Following the myriad of tentacles of thought and research in each area began to generate a significant volume of literature to consider. At times, deliberate decisions were taken to truncate the number of avenues under consideration. Therefore, some areas, such as the role of emotional intelligence in affective forecasting, are less comprehensively covered than others. This does not signify that these areas are less important but suggests that a full coverage of them was not possible in this study.

Establishing a research design

Affective forecasting research has almost universally followed a between-subjects design due the possibility that predictions made by an individual could influence the emotions the person experienced at a later point. This was one of the key differences between affective forecasting theory and response expectancy theory (Cotet & David, 2016). In the latter, the influence of predicted emotions on experienced emotions was a central tenet of the theory. In affective forecasting theory, the research design was tasked with avoiding such influence and needed to show how experienced emotions differed from predicted emotions when the latter did not influence the former. However, the nature of study 3 required a repeated measure within subjects. I needed to see whether feedback on affective forecasting error and narratives focusing on that error would make a difference to the feelings that participants had when considering situations that were likely to require counter-dispositional behaviour. Ultimately, a mixed, repeated measures design emerged as the most appropriate for the two studies as this design would allow me to assess the change in affective forecasts for individuals in different groups.

Although it was always perceived as a quantitative study, a qualitative approach was considered when the research idea was first conceived. Indeed, the feedback

sessions have suggested that a qualitative investigation of the dynamics of individuals' feelings would be a rich and necessary piece of research if one is to fully understand the affective forecasting mechanism. However, before embarking on an exploration of how interventions bring about an effect on individual feelings, one has first to establish that such an effect exists. Therefore, a quantitative approach was a more appropriate choice at this stage.

Setting the criteria for selecting participants

As the study was focused on leadership and the issues that introverted leaders face in carrying out some of the requisite tasks of the role, it was natural to set a criterion that respondents should be leaders. Specifically, I was looking at leaders in the kinds of organisations that make up the occupational world, so a second criterion was that the participants should be leaders in commercial companies or organisations such as government departments, university faculties etc. As my consultancy work tends to take place in commercial/government organisations at about a 70:30 ratio, it was natural that this was about how the numbers of organisations who provided participants for the study panned out.

Building relationships with gatekeepers

Commercial organisations are sometimes wary of engaging in research projects unless they have either commissioned them themselves or they can see some clear benefit for them in a relatively short term. This study had the advantage that participants would gain the benefit of being assessed using a well-regarded personality instrument and receiving feedback on that instrument from an experienced occupational psychologist. The cost of such an assessment would run into the hundreds of pounds per person so there was a significant incentive for organisations to take part especially if

they produced a large number of participants. It was still important, however, to engage gatekeepers with the aims of the study so that they would recognise the value of supporting it throughout its duration. To do this, meetings were set up with gatekeepers preceded by an outline of the study aims and, in particular, the time involvement of participants. The time commitment issue was critical for some gatekeepers and this is understandable. The company is effectively paying their people to participate and they wanted to be sure also that the expectations on participants were not onerous.

There were varying levels of scrutiny by gatekeepers. Although all gatekeepers were keen that correct protocols were observed, some were keener that the study fitted with other development programmes that potential participants were undertaking. For one company, at least three meetings were required (involving a total of 600 miles travel) in order to secure the participation of about a dozen participants. For this company, it was important that a theoretical link could be established between the questionnaires used in the study and other assessments that the participants had completed. Assistance, in the form of PowerPoint presentations was offered to help convince senior leaders to support the study. Throughout the study, gatekeepers were informed of the various stages of the study and some broad findings from the study. They were not informed about the participation or non-participation of any individual. Also, they were asked not to issue any communication urging people to participate other than their initial introduction to the study.

Securing participation and participants

It was important that participation in the study was completely voluntary. Individuals were giving their time freely and I was keen to maintain a climate of gratitude and support and, therefore, communication was always personal (no mass emails) and positive in nature. Even reminder emails were couched in supportive terms

(“...offer you a reminder...”) and this seemed to yield positive results. To ensure that participants were participating voluntarily, a detailed introduction email was sent with the request that, should they wish to participate in the study, they responded to this email with their own email saying “YES” to participation. Only those who subsequently sent this email were included in the study.

Establishing ethical standards and issues of confidentiality and consent

Ethical approval for the study was obtained via the University’s ethics approval process and this, in itself, was a learning experience. It is lazy to offer a broad statement that ethical standards are in any way lower in commercial settings than they may be in university research contexts. However, the specificity required to apply for approval through the university’s process does focus the mind on details that may be overlooked in the pace of carrying out research in a commercial setting. For example, the issue of informed consent has sometimes been skimmed over during in-house assessment programmes as the assumption is that individuals will want to complete questionnaires as part of their development programmes. This is rapidly changing, however, with the introduction of new General Data Protection Regulations (European Parliament, 2016). The University’s ethical code of practice is much more exacting in its requirements (Committee for Research Ethics Concerning Human Subjects (Non-NHS) / Code of Practice, 2015). Even communicating how an individual may discontinue their participation in the study required careful thought as it was important that they felt they could do so without any adverse impact on them. For this study, consent was explicitly gathered from participants by sending them a detailed statement of consent and then asking them to actively acknowledge (by ticking boxes in an online questionnaire) that they had received and read the statement of consent and that they offered their informed consent accordingly.

One of the more delicate balances to maintain was endeavouring to meet the needs of gatekeepers whilst keeping to both the expressed and implicit ethics of the study. On more than one occasion, gatekeepers asked for information about individual participation or, more directly, for their personal reports. One gatekeeper insisted that such reports would need to be made available or the leaders would not be offered for participation in the study. Although handled very amicably, I decided not to include those participants on the basis that the culture set by their manager did not seem conducive to a positive climate for conducting the study. When assessing people, even for research purposes, one needs to be mindful of the wider context, as this can affect both the immediate assessment outcomes but also can impact how future assessment interventions are perceived by people.

Even requests as to whether individuals were completing the research questionnaires were rebuffed as being contrary to the agreements made between the participants and the researcher. I was happy to offer some overall company-wide, observations from the questionnaire reports and feedback sessions as these would be helpful for the organisation when considering their wider development programmes.

Methodological issues

One of the main methodological issues faced was the issue of sample size. Participants were not simply taking part in a research study. For most, it was also part of their internal organisational management development programme. Therefore, it was not possible to significantly increase the respondent numbers simply by offering participant places on the study to anybody in the organisation. The organisations would not have been happy had I done this as they wanted to control who had the benefits of the assessments offered.

A second methodological issue surrounded the length of time it took – firstly to secure participants and then to work with them through the questionnaire-feedback-questionnaire process. In truth, this could have been handled more efficiently as I waited for batches of participants to complete their first set of questionnaires before arranging feedback sessions. By interleaving questionnaire, feedback and second questionnaire phases with different groups of people, the data collection phase could have been shortened by several weeks. The learning I took from the study allowed me to do this with a commercial project I completed after the data collection phase of the study and over a hundred participants were handled in a much more efficient manner.

Statistical considerations

One of the key statistical considerations that I had to take into account was in the interpretation of significant results, particularly differences between groups. In some cases, relatively small differences in averages proved to be statistically significant. I felt it important to advise caution when interpreting these statistics. The direction of the coefficients was, I felt, very important as they needed to be in line with theoretical expectations. However, I felt it important to draw attention to the size of the observed statistics. With mean differences between groups of a magnitude of 0.25 on a 6-point scale being deemed significant at the $p < .01$ level, a measure of perspective is needed in order to interpret the relationship accurately. Although, the difference can be considered highly statistically significant, the practical interpretation of that difference needs to be highlighted. I did contemplate using multi-level modelling as the preferred statistical procedure and attended a course on that subject. This was the methodology used by Zelenski et al. (2013) so it would have allowed some direct comparisons to be made. However, issues with sample size at the higher levels and, I have to admit, some comfort with well-practised analytical methods governed the choices I made.

Limitations of the study

At a recent BPS Division of Occupational Psychology conference, Professor John Antonakis critiqued current research practices where a control group and an experimental group, distinguished by an independent variable, are compared on one or more dependent variables and conclusions drawn from the differences (Antonakis, 2018). His argument that insufficient attention is paid to other potential contributing variables applies to this study also. The study does not account for other personality characteristics – such as neuroticism, risk-taking and openness – which could also explain some of the outcomes found in this study. In some part, this limitation is due to the fact that a field-based study such as this is dependent on the good will of participants and gathering more data from them, especially if it might not be used in a practical way for their benefit, could be seen as onerous. There is also always the danger that more encompassing studies that look at many factors can become fishing trips for significant results. The theory regarding the role of affective forecasts in determining the behaviour of introverts and extroverts is sufficiently challenging without trying to capture and interpret the broader relationship with several personality variables. I was keen not to find myself in the position where I had posited a multitude of experimental hypotheses more in hope than on the basis of previous research findings and theoretical models.

A more obvious limitation to this study surrounds the limited use of interventions in study 3. Narratives were used in this study because they had been used in this arena previously and some evidence of their success in altering the affective forecasts of people was available. Other interventions are equally likely to be good candidates for evaluating in this manner. “Affective forecasting” training or coaching, behaviour modifications programmes, relaxation therapy and many more different types

of intervention could possibly be used to help people reduce their anxiety when contemplating upcoming events. Obviously, a better understanding of the affective forecasting process and the role it has in decision making will provide guidance in what kinds of interventions are likely to be the most effective in helping people make more satisfactory decisions.

Contributions the study makes to...

The subject area

A greater understanding of the role of affective forecasts in the behavioural choices of introverts and extroverts was a central objective of this study and some progress has been made in this area. Linking cognitive processes with personality preferences is a potentially fruitful area for investigation as it is these processes which lend themselves to personal management/manipulation more than the more robust personality preferences. If individuals can apply a cognitive heuristic which allows them to feel more comfortable in situations which, firstly, they currently do not look forward to and, secondly, cannot avoid as part of their role, then this must be a positive step for them. Of course, this is the basis of much of the cognitive-behavioural work of psychologists, so no claim is made here to significant leaps of psychological practice. However, the specific application of this process to leaders in situations which they find uncomfortable is less common. There has been some work on building resilience through the management of affective forecasts (Pauketat, Moons, Chen, Mackie & Sherman, 2016); and on the use of mindfulness techniques to increase the accuracy of affective forecasts (Emanuel, Updegraff, Kalmbach, & Ciesla, 2010) but nothing which directly addresses the disconnect between personal preferences and role specific demands.

The link between affective forecasts and behavioural intentions is also of interest. While causality in either direction is not assumed in this study, the fact that some pattern exists linking the feelings people have about upcoming situations and the likelihood of their participation in those situations means that there are potentially some opportunities available for helping people who find themselves avoiding situations and/or tasks which are an integral part of their job role. From a leadership development perspective, this may well provide a new opening in those situations where individuals have consistently avoided or only tentatively engaged in leadership tasks such as networking, engagement, external influencing and so on.

As Farrell (2017) says:

As a leader advances within an organization, expectations increase for the individual to engage with others as leaders spend more time working with colleagues and stakeholders to advance the organization. These expectations tend to favour extroverts in leadership roles but organizations may overlook the strengths of introverts as leaders losing out on the potential for effective management. (p. 436)

Providing some modest help to introverts to redress some of this imbalance is an aim of this study.

The participants

Although only anecdotal, the feedback from participants in the study has been overwhelmingly positive. Without any solicitation, several have written to express their thanks for allowing them to participate and offered heartfelt appreciation for the benefit they feel they have accrued from being involved. The nature of how participants were selected has meant that they have all been eager to benefit from taking part and have each had a desire to know more about their own personality preferences and how they

impact on their behaviour. However, the specific insight into their affective forecasts has been a new opportunity for all of the participants and several have expressed their appreciation of how this new information helps them to understand their personality and the behavioural/situational preferences they have recorded.

The use of the Type Dynamics Indicator (IS/WANT) version has been welcomed by many participants. The discussion around the differences between these two sets of preferences (those I feel describe me now and those I feel I would prefer to have in the future) has been very rich. Indeed, the content of those discussions will form part of another paper outside this study (all ethical considerations allowing). For example, many people aligned their IS/WANT differences with their career journeys and recognised that the roles they held now were increasingly requiring them to approach their world of work in different ways. As one participant said, “I feel the need to change my preferences to ensure that I remain comfortable doing the work that I enjoy.”

The participating organisations

I have made an undertaking to provide each of the participating organisations with a short report which highlights the overall findings from this study and implications for leadership development within the organisation. Participants were informed of this intention prior to seeking their consent to join the study and this was included in my ethical approval. Where there are specific findings (although not individual information) which relate to issues that an organisation could use to its and its people’s benefit, I will provide information regarding these. Ideally, the organisations will have a better understanding of the differing ways that introverts and extroverts approach and feel about everyday leadership situations and will be better equipped to help each group deal with those situations.

Managerial and leadership knowledge/practice

The relationship between leadership and personality has received a lot of attention but a lot of the academic studies in this field highlight links between particular personality characteristics and aspects of leadership without offering practical options to those who wish to be better leaders. As an example, a quick search of recent literature will easily yield a couple of hundred articles which provide support for a link between transformational leadership and emotional intelligence. Whilst not claiming any kind of systematic review of those articles, a scan of a generous sample of them yielded no practicable options for enhancing either of the constructs other than a suggestion in one article that “Emotional Intelligence Training” would be advisable for leaders (Lopez-Zafra, Garcia-Retamero, & Martos, 2012). My study does not offer much more in this space but, hopefully, it bridges some of the gap between drawing theoretical relationships and helping individuals who experience the emotions explored in the study to manage them in a more satisfying way. Affective forecasting is an essentially cognitive process related to an affective outcome. If changing the way we think can help us manage the way we feel, that would be a good outcome. It is my view that this study takes us a little closer to that point.

Potential for future research

The potential for future research sits in three areas. Firstly, an examination of the role of other aspects of an individual’s character, such as risk taking, neuroticism and so on would help to clarify the relationship between introversion/extroversion and affective forecasts. Secondly, a deeper exploration of the mechanism behind the affective forecasts depicted in this study would be helpful when considering possible interventions to help people manage their forecasts. For example, are forecasting errors

(if they are evident) caused by focalism, misconstrued theories, immune neglect or something else? Finally, a wider range of interventions can be tested to see if they impact affective forecasts and allow people to have more control over their feelings about upcoming situations. These interventions could, for example, include a component of emotional learning where people, who engage in counter-dispositional activities, could recall their feelings in real-time and revisit them when similar situations arise.

Lessons learned

One of the starkest lessons learned was that participant samples can dwindle very quickly and that one needs to be very cognisant of the factors that influence participant numbers. As an example, using a power test, I was aware of the group sample size that I would need for appropriate analysis of study outcomes. Working backwards from this, I calculated the total sample size I would need to ensure sufficient numbers when the sample was split into research groups. However, there were issues involved in this that I should have foreseen and accounted for. My assumptions were based on the simple arithmetic of numbers per group and number of groups. However, several (now obvious) factors were at play. Firstly, leaders in the operational arena in which I work tend to be more likely to be dispositional extroverts than introverts (about a 2:1 ratio). Therefore, immediately there is an imbalance in the group numbers and fewer introverts than required. The study required the completion of two affective forecast questionnaires separated by a period of time and a feedback condition. One group received a report regarding the first questionnaire and the other group did not. Not surprisingly, people who received the feedback report (and apparently saw the value in the questionnaire) were more likely to complete the second questionnaire than those who did not receive the feedback report (the Control group). This left a serious

shortfall in the number of introverts in the Control group which required the seeking of new participants and the requests for other participants to consider completing the second questionnaire.

Things that went well

One of the things I found surprisingly satisfactory was that my level of psychological knowledge was robust enough to allow me to make headway in this study without having to completely reframe all that I thought I knew. Certainly, there were many aspects of theory that I had either forgotten or maybe even hadn't been exposed to previously but, fundamentally, I felt that my previous studies and the subsequent years of professional practice left me reasonably well prepared to embark on this course of study. Having said that, the next thing that went well was the amount of new information I have learned whilst conducting this study. There were whole areas of decision-making theory that I had previously had little experience of and it was seriously enjoyable being able to read around a subject without the constraints that are almost always present when undertaking commercial projects. This process has helped me recognise that reading and learning in a professional practice context can be less than comprehensive and the focus can be too narrow. The entire "university" experience has been very positive. The structure of the professional doctorate – with a separate but related literature review, a thorough research project, a service evaluation that is focused on a practical issue and this critical evaluation – allows for a very focused approach to learning which closely mirrored my own objectives when setting out on this journey. Finally, it was very satisfying to hear from some participants how much the outcomes and the feedback process had helped them. Helping people to understand themselves and feel able to take steps to ensure their wellbeing is one of the main reasons why I have followed a path as a practising psychologist. To be able to offer that service to

people as well as adding to the rich body of knowledge that the discipline has built over the years has been a privilege.

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Part D: Service Evaluation

Evaluating the practical application of a research model for organisational interventions: A Case Study

Contents

Executive Summary	183
1. Introduction.....	185
2. Rationale/Aims	185
2.1 Literature Review	186
2.1.1 The researcher – practitioner divide	186
2.2 An organisational intervention model	188
2.2.1 Background to the model	188
2.3 Research Questions	194
3. Method	194
3.1 Study Design	194
3.2 Project Description	195
3.2.1 The service deliverer	195
3.2.2 The client.....	195
3.2.3 Engagement with consultant	196
3.2.4 Organisational Context.....	196
4. Results.....	197
4.1 Significant Observations	198
5. Discussion.....	204
The practical value of the Nielsen models.....	204
Researcher-Practitioner Divide.....	206
6. Recommendations for practitioners	207
7. Conclusion	208
References	209
Appendix	217

List of Figures

Figure 1: Model of occupational health interventions: reproduced
from Nielsen, Randall, Holten, & González, (2010). 190

Figure 2: Revised intervention model: reproduced from Nielsen & Noblet (2018) 191

List of Tables

Table 1: Criteria for evaluating organisational intervention methods. 188

Executive Summary

Much of the professional literature available to practicing psychologists is presented in the form of research studies. The findings of these studies and the models that arise from them can provide an underpinning for organisational interventions in practice. Sometimes, these interventions are designed and implemented on an individual basis without accessing the full benefits of the background research findings. Discussions around this subject are part of the debate regarding a practitioner-researcher divide in occupational psychology. One aspect discussed is whether the research literature could be written in more accessible ways. Less attention has been paid to what practitioners could do to utilise research findings more effectively.

In this paper, a case study examines issues which arise at the practitioner-researcher frontier. The utility of a model depicting the necessary steps and content of effective organisational interventions is evaluated within a consultancy project carried out for a small organisation in the health sector. The background to the model is discussed and key aspects of the model are referenced via a series of observations taken throughout the consultancy project. Recommendations are offered for practitioners who wish to maximise the utility of research findings when conducting organisational interventions.

Recommendations:

- Build time and a process into projects for literature reviewing and communicating relevant findings to clients.
- Utilise appropriate psychometric principles to measure organisational and personal contextual variables that are relevant to the intervention.
- Utilise best practice and evidence-based research from other areas of work into projects.

1. Introduction

The practitioner-researcher divide in occupational psychology has been the subject of many books, journal articles, conferences and discussions (Dunnette, 1990). Extreme views suggest that researchers are out of touch with practical necessities and, from the opposite perspective, that practitioners are content to engage in any kind of intervention regardless of its scientific credentials (Gelade, 2006). Other views suggest that the divide is non-existent (Florence, 2015). Clearly, researchers and practitioners have different pressures to face with different sets of stakeholders who sometimes hold mutually exclusive expectations. As Patterson (2010) says, “the reality for practising occupational psychologists is that few organisations are willing to resource interventions that require adherence to research principles and findings” (p. 894). Certainly, in our practice (TPS Developing Organisations Ltd) we are generally presented with a problem that needs a solution and the science behind that solution will only be as relevant as the immediate cost it represents.

2. Rationale/Aims

Many suggestions for reducing the divide between researchers and practitioners tend to revolve around bringing the two groups closer together. For example (Hyatt et. al., 1996):

- Invited addresses;
- Sabbaticals in industry;
- Involving practitioners in graduate education;
- Mutual research groups.

Another strand of thought suggests that researchers could do more to ensure that their research has a clear and communicated practical application. ‘Talking to practitioners’ and ‘spelling out the implications of research’ are mooted as positive ways in which researchers can engage practitioners in their work (Gelade, 2006). Suggestions for the ways in which practitioners may better utilise research evidence appear to be less prevalent.

This paper attempts to make a contribution towards closing that gap. Using a case-study approach, it describes a consultancy project conducted by an occupational psychologist. This project is examined alongside a research-based model for conducting organisational interventions – particularly for interventions designed to enhance the wellbeing of staff. Two sets of recommendations are put forward:

- A. Specific recommendations detailing how the selected research model could be used to greater effect in consulting projects such as the one described in this study;
- B. General recommendations suggesting steps that practitioners might consider when wishing to garner the benefits of a solid research base.

A judgement as to quality of this consultancy project is not offered and, in fact, is not the point of this study. Equally, no view is offered on the merits of the model which is highlighted. Instead, the focus is on how research findings and practical applications can be more closely aligned.

2.1 Literature Review

2.1.1 The researcher – practitioner divide

The concept of a researcher-practitioner divide is not unique to occupational psychology, and issues regarding the ways in which the two groups collaborate or

fail to collaborate are equally relevant to education (Mokher, 2016), social work (Özdemir & Giannotta, 2014) and the criminal justice system (Sullivan, 2017). Indeed, collaboration between research and practice is seen as one of the defining characteristics of the field of industrial, work and organisational psychology (Anderson, Herriot & Hodgkinson, 2001; Dunnette, 1991). Still, the value and relevance to practitioners of many research studies has been questioned (Gelade, 2006) and the role of professional journals in maintaining such a divide has been scrutinised (Gelade, 2006; Hodgkinson, 2006; Symon, 2006; Wall, 2006). Gelade's (2006) paper specifically targeted the *Journal of Occupational and Organisational Psychology* asking whether the articles were accessible and relevant whilst tackling the broader issue of how researchers communicated with practitioners. However, his views were quickly countered by Anderson (2007), who suggested that "a 'natural distance' quite reasonably exists between the two" (researchers and practitioners) and asserted a continued need for "complex, multifarious, conceptually challenging" research (p. 177-178). However, Anderson did propose that the relationship between research and practice should, in itself, constitute a new 'process domain' and, in an earlier paper, had offered suggestions as to what that domain might include, specifically citing the need for research studies to form the basis of organisational interventions (Anderson, 2005). In the main, this paper fits within that domain. If, as Anderson (2005) says, "it is not the responsibility of researchers to implement (their) findings in organizations on a day-to-day basis" (p. 8), then perhaps it is practitioners who need to take research outcomes and see how they can be applied to their own projects. This paper suggests that an opportunity may exist for both parties to align their respective efforts.

2.2 An organisational intervention model

An array of models, based on excellent research, is available to occupational psychologists. These cover diverse subject areas from ergonomic work design (Chim, 2014) to personal motivation (Batson, 1989). A wider review of research models is beyond the scope of this paper. This study examines the practical application of one model which looks at organisational interventions designed to enhance employee well-being and health. The purpose of this study is to see how this model, in its current format, aligns with a consultancy project.

2.2.1 Background to the model

The model focused on here is that proposed by Nielsen, Randall, Holten & Gonzalez (2010) and later revised by Nielsen & Noblet, (2018). The initial model was based on a set of seven criteria which had been formulated through discussion with members of a consortium which studied the working environment and members of a specialist taskforce which focused on the psychosocial working environment. Table 1 highlights these criteria which are, effectively, antecedents of the final model. A consideration of them may help to identify areas where alignment with practical activities may be critical.

Table 1

Criteria for Evaluating Organisational Intervention Methods

- | |
|---|
| <p>(1) Interventions should focus on organizational-level solutions (primary interventions) aimed at changing the way work is designed, organized and managed.</p> <p>(2) Participatory principles should be a core component of intervention.</p> <p>(3) Methods for conducting interventions should systematically consider all phases during an intervention project, from planning to evaluation.</p> |
|---|

- (4) Intervention methods should include considerations of how organizational-level occupational health programmes may be integrated with existing procedures and organizational cultures and the management of occupational safety and health within the organization.
- (5) Communication/education in and raising awareness of the risks posed by features of work design, organization and management should constitute part of the methods.
- (6) Methods should take into account the organization's existing experiences with dealing with psychosocial risk factors.
- (7) Small and medium-sized companies (SMEs) should be able to use the method.

Whilst the first criterion insisted that interventions should focus on organisational-level solutions, a later paper suggested that interventions may be legitimately focused on any one of four levels – namely; the individual, the group, the leader and the organisation levels. As all four levels have been shown to be related to employee wellbeing and performance, it was concluded that intervention at any or all levels was potentially beneficial (Nielsen, Nielsen, Ogbonnaya, Käsälä, Saari & Isaksson, 2017). Practitioners need to be aware of any limits to the organisational level at which an intervention model is targeted.

Nielsen's first model is shown in figure 1 and is built on the principle of employee participation. Employee participation was seen, by Nielsen et al. (2010), as important for a number of reasons. It helps to optimise the fit of the intervention to the culture and context of the organisation by utilising the employee's expertise and

knowledge; participation often had an intervention effect in itself; and, it smoothed the change process and increased exposure to the intervention (Nielsen, et al., 2010).

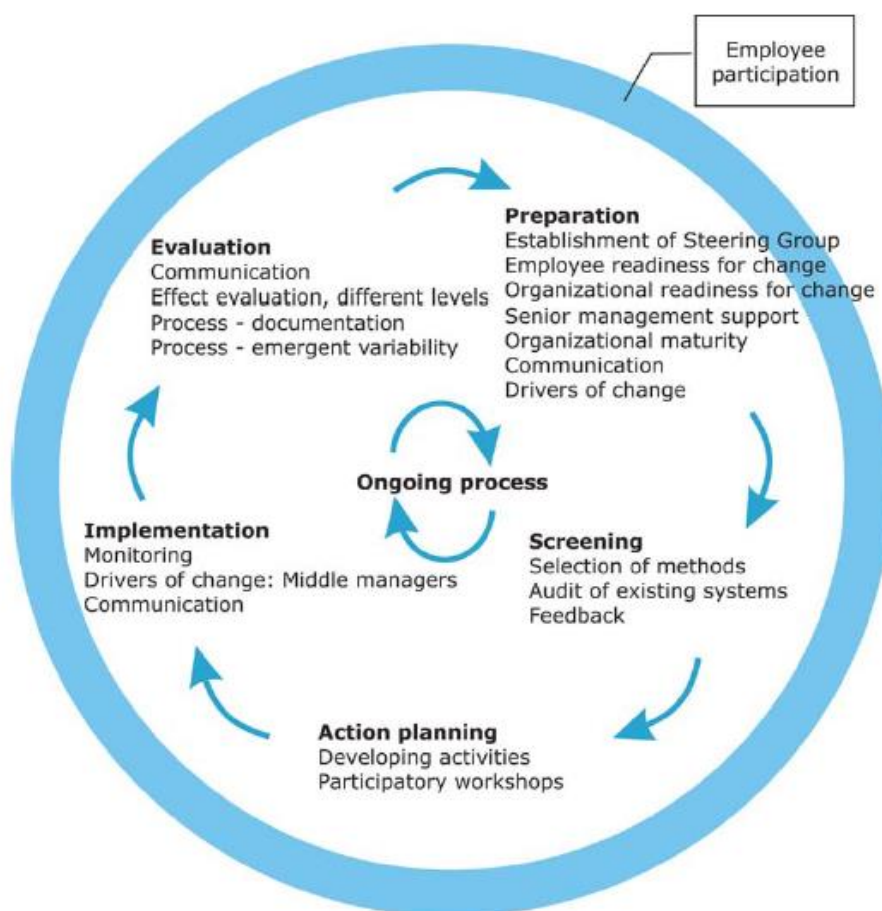


Figure 1. Model of occupational health interventions: reproduced from Nielsen, Randall, Holten, & González, (2010)

A revised intervention model (Nielsen & Noblet, 2018) broadened the scope of employee participation. This model, shown in figure 2, is built on three key principles – Participation, Management support and Intervention fit. Clearly, an effective utilisation of this model would require a practitioner to take steps to ensure that these principles are at the heart of any intervention based on this model.

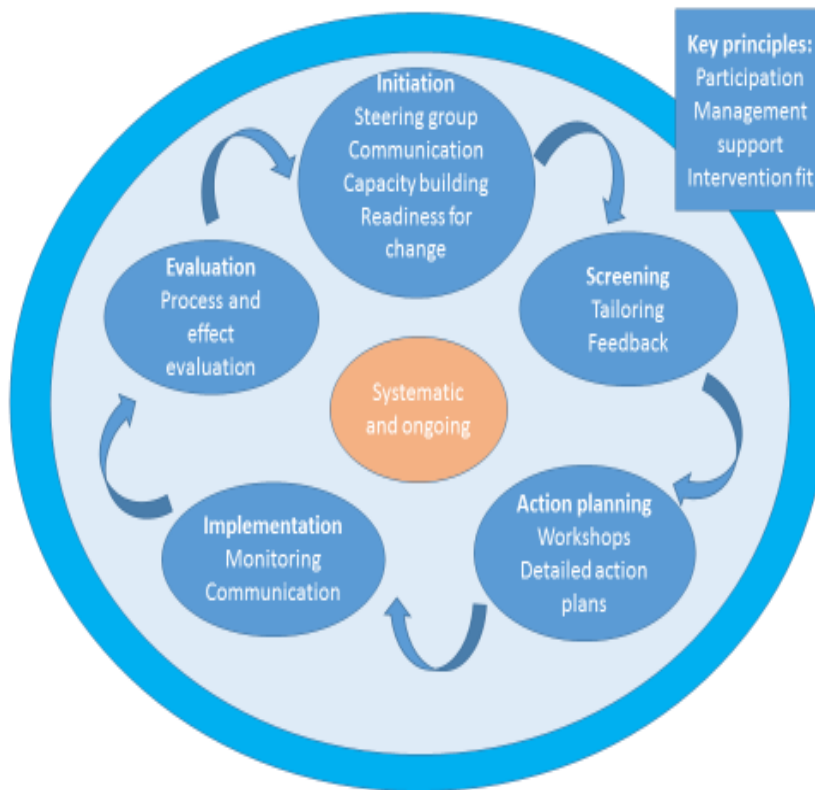


Figure 2. Revised intervention model: reproduced from Nielsen & Noblet (2018)

The issue of intervention fit was explored in more depth by Nielsen and Randall (2015) when considering what kinds of interventions work, for whom, why and how. They split the issue of fit into *person-intervention fit* and *context-intervention fit*. The former concentrates on how well the planned intervention process is aligned with the skills and capabilities of those for whom the intervention is designed. This focus is likely to include the capabilities of those who are tasked with implementing change as well as those who are affected by change. It would also need to include the individuals' readiness for change which will necessarily mean both a capability component (are they able to understand and intellectually adapt to changing processes?) and a psychological component (can they mentally adjust to new ideas, priorities and practices?). Bouckennooghe, Devos and Van den Broeck (2009) suggested a three-strand concept which included cognitive, emotional and intentional dimensions.

Context-intervention fit refers to the appropriateness of the planned intervention in terms of the setting in which it is proposed. This will include stable or broader issues such as the nature of the work, the systems in place within an organisation, the general level of demands on people and a range of other factors. This had previously been described as the *omnibus context* by Nielsen and Randall (2013) and Nielsen and Abildgaard (2013). There is also a *discrete context* to be considered which includes factors such as particular human resource issues which are current, competing programmes and sometimes broader concerns which may particularly affect the health sector such as government initiatives and limits on funding. Clearly, the issue of whether the intervention designed for the organisation fits with the people and the context is a key consideration within this model. How this can be assessed in a practical setting will be a point of interest in this study.

Management support was positioned in Nielsen's first model as one part of the first intervention phase –preparation. By the second model, management support had been “promoted” to be a key principle underpinning the model. Kirrane, Lennon and O'Connor (2017) demonstrate the role that management support plays in the readiness of employees to change and it is entirely sensible that it should be considered an important component of effective organisational interventions throughout the programme not just as part of the preparation phase. A gestalt approach to organisational interventions, proposed by Chidiac (2013) sees the concept of *supporting* as being a central tenet of successful change programmes. This broader concept is focused on creating the right conditions of change and includes the role that leaders take in maintaining momentum, fostering collaboration and managing risk. One of the key roles of leaders, according to Chidiac, is the ability to facilitate *emergence* so that a bottom-up change is brought about. This

circles back to the principle of participation and shows how the different key principles in Nielsen's model are related. The model is clearly stating that management support for an intervention must be present at the initial stages but must also be present and visible throughout the programme if change is to be realised. Interventions that have initial support but which are then left by management as being something that other people are responsible for delivering are likely to lose momentum. How the quality and strength of management support in a practical setting can be assessed or influenced will be of interest in the study.

The third criterion used by Nielsen to select intervention methods is also important to this study. It concerns how much the project plan considers all phases of the intervention. This resonates with consultants who report that many consultancy projects fail because the business solution is "thrown over the wall" for others to deliver. This is a well-known phenomenon particularly for Information Technology interventions (Workman, 2003). In this study, it is proposed to consider how (or if) the project plan agreed with the organisation, satisfies this "beginning-to-end" requirement. How much the organisation will be willing to plan in detail; how much they will be willing to allow consultant involvement through to implementation; how much they will be willing to evaluate the outcomes of the intervention. All of these will be of interest within this study.

The seventh criterion detailed by Nielsen is that the methods needed to be appropriate for small and medium sized enterprises. This is a key reason why this study is being undertaken. Many models of organisational interventions lend themselves to large scale processes (such as data gathering) which can be costly and time-consuming. When interventions are carried out in small organisations (and often **by** small organisations), such processes can be seen as cumbersome and

unnecessary. Even some basic human resource processes such as recruitment and performance management can be less than ideally structured and management data can be non-existent. It is a matter of interest whether the model proposed by Nielsen can truly be utilised for small organisations especially when the intervention under consideration has a limited scope.

2.3 Research Questions

The research questions for this study, then, are:

- What value does a well-researched model of organisational interventions bring to a consultancy project?
- What steps can a practitioner take to enhance the impact of a model of organisational interventions on the project outcomes?

3. Method

3.1 Study Design

A descriptive, single, case study design was selected as the appropriate method to use for this study. This choice was made based on the focus on contemporary events, the context of the study and the nature of the research questions (Yin, 2009). The context of the study was set as a “normal” or “standard” consultancy project and, to that end, it was felt that this would be unlikely to involve any control of behavioural events. In other words, the project would take place in a relatively typical style and the study would describe the relevant aspects of that project. The unit of analysis – the case – would be the link(s) between the project and the intervention model. As this is what the study intends to analyse (Baxter & Jack, 2008). Neither the model nor the project is being evaluated as part of this study.

The consultancy project was carried out according to the requirements of a client and the normal operating practices of the occupational psychologist providing the service. Throughout, and at the end of the project, observations were taken with reference to the research model with a view to identifying information relevant to the model and opportunities to alter consultancy practices in order to provide a better service in future. Interviews were carried out during and after the project with a view to identifying further information relevant to the model. The information gathered through the observations and interviews was then collated and referenced against the model components. Opportunities for consultancy process improvements were highlighted.

3.2 Project Description

3.2.1 The service deliverer

TPS Developing Organisations Ltd is a small, specialist consultancy offering a range of occupational psychology services to businesses and other organisations. All consulting psychologists in TPS are registered with the Health Care Professions Council and are Chartered members of the British Psychological Society.

3.2.2 The client

An area health centre with 65 FTE staff members approached TPS and asked if the company would be willing to assist with a staff job satisfaction survey that they were about to administer. The Practice Business Manager (PBM) invited TPS to discuss the project which they wished to move on “as a matter of urgency”. The health centre is an extended General Medical Practice with a pharmacy, nurse team, and other healthcare professionals. The medical partners are the owners of the

business. All staff are employed on either a full or part-time basis. As is common with many medical practices, the majority of administrative staff within the practice are female (Yar, Dix & Bajekal, 2006). The health centre is situated in a market town in England. The town is generally prosperous, although with fewer numbers of people in managerial or professional positions than the national average and there are pockets of disadvantage within the area with some income deprivation and social issues. An above average proportion of residents state that their daily activities are limited by a disability or long-term health issue (Office for National Statistics, 2011). Therefore, for some, the Health Centre is a vital part of the community.

3.2.3 Engagement with consultant

TPS were known to the health centre as we had been involved in the recruitment of the PBM previously. An initial meeting was held to discuss the staff survey project. The results of an earlier survey which had been carried out six months previously were provided. Results from that survey had highlighted some areas which, according to the PBM, would benefit from further exploration and intervention. This had already been discussed by the senior management of the health centre and a further survey had been agreed upon. A steering group had already been established to take this project forward. TPS agreed to provide consultancy services free of charge as the project formed part of a research study.

3.2.4 Organisational Context

The health centre was a relatively new organisation in a new building. Two medical practices had merged in early 2015 both moving into a purpose-built health centre at the same time. Teething problems with systems and processes were generally sorted

out relatively quickly whilst the merging of two quite different cultures took more time. An influx of new partners and the opportunity to build a health facility from the ground up saw a significant number of new projects instigated in a short period of time. Not all new ideas were well received and not all new processes worked well. Some staff indicated that they felt that the pace of change was unsustainable and several voiced dissatisfaction with their working environment.

Some partners took the view that many staff had enjoyed an overly “cosy” working environment when previously employed in the separate practices and that a move to a more “performance-based” culture was necessary to build a modern and efficient practice. Other partners felt that change programmes had been imposed on staff rather than implemented with full participation. In an effort to build harmony within the organisation, certain initiatives were put in place and full-team staff days were held to support these. One of these initiatives was a staff survey which canvassed staff views about their overall levels of satisfaction, among other things. Although around 80% of staff responded that they were “satisfied” or “really happy” (none stated that they were “unhappy”), job satisfaction topped the list of things that staff felt the centre should address during the next year. As such, the partners decided that they should investigate this further and it was decided that a more targeted survey would be the best option.

4. Results

The data from the study is in the form of contemporaneous notes taken during meetings and other communications. Documents relating to the project were also a form of data and these included questionnaires, presentations and internal (to the client) memoranda. Results from the staff survey are not offered as data for this

study. Observations by the project consultant (the author) are also included as data. The analysis of the data was a combination of pattern matching and explanation building, both as described by Yin (2009). A number of key observations were created in line with the phases of the research model. The practical realities of the project were compared with the model components and significant matches or misalignments are offered as the results to be discussed.

4.1 Significant Observations

Observations are arranged in relation to the three key principles or individual components of the Nielsen & Noblet, (2018) model. Each observation is followed by a comment (in italics).

Observation 1: (Participation)

The steering group was made up of the PBM, one GP partner, the assistant manager of the dispensary, a senior receptionist and one of the health care team. One member of the team appeared infrequently at meetings held to discuss the project and the GP partner was often late to meetings and needed to leave early.

The composition of the steering group is obviously important as it provides some measure of the representation of the staff for whom the initiative is designed and the initial support of senior management. It allows for some engagement of the staff with the survey design and avoids the possibility that staff see the initiative as something being “done to them”. However, the quality of the involvement in the steering group is also of relevance. Ensuring that all members of the group have an opportunity to participate and have sufficient time allocated to do so would be beneficial.

Observation 2: (Participation and Intervention fit)

One of the steering group members expressed opinions about, what they saw as, poor management practices. The use of the word “they” for managers and “us” for the staff betrayed a definite identification with one of two discrete groups. The position taken by this person was at odds with the other group members and at least partially reduced their effectiveness within the group.

Participation, in steering groups, from various parts of the organisation is likely to lead to differences of perspective and differences in opinions. Harnessing those differences in a structured and constructive way should be a visible part of the group process. To this end, time during the group’s “forming” could be spent in identifying these differences and then articulating how the different perspectives may be used in a positive way. Getting the group members to feel comfortable airing differing views and using their unique perspective for the benefit of the intervention should be the goal. This observation also relates to the discrete context that was current in the organisation at the time. If the incidence relates to a more global issue regarding staff-management relations, some preliminary work in this area may be advisable.

Observation 3: (Communication)

Although the group was called a “steering group”, the steering was mostly done by the PBM. Her view was that she would like the group to drive the initiative but felt that there was little chance that the individuals within the group would all demonstrate the energy to do so. The level of contact between the project consultant and the steering group members was not equal with the PBM acting as a conduit.

When two of the other group members separately established communication channels with the project consultant, communication with them was greatly enhanced. One aspect of Nielsen and Noblet's (2018) revised model is communication and it would appear that establishing an effective and democratic communication arrangement is important if all members of the steering group are to be fully involved in the design and implementation of the intervention.

Observation 4: (Action Planning)

The steering group focused mostly on the content of the job satisfaction survey. Previous survey findings were rightly considered and the design of the new survey reflected the new questions that needed answering rather than revisiting old ground. The focus for the group was on the delivery of survey findings at an “all-team” day 6 weeks in the future. The timing, therefore, was tight as the survey needed to be designed and drafted, reviewed, trialled, administered and the results analysed in that time. The group, therefore, did not consider what opportunities existed for change and the timescales in which such change might happen.

Many consultancy projects are delivered according to time constraints. Whilst this is not ideal, it is often a reality. Focus, then, naturally falls on the more immediate tasks inherent to the project. The models proposed by Nielsen et al. (2010) and Nielsen & Noblet (2018) show a clear programme cycle from initiation to evaluation. Making all of the components of that cycle visible to the steering committee and working through some kind of “to-do” list will ensure that all project tasks are kept in focus and completed. Opportunities to prepare the ground for delivering on the survey results were available even at the early stages of the project.

Observation 5: (Readiness for Change)

Anecdotal evidence was provided of “an appetite for change” but statements by some steering group members suggested that some obstacles to change existed. Chief among these statements was the claim that the staff were too busy to go through “any more change” despite assurances from other members of the group that one of the objectives of the survey was to see how the pressures on staff could be reduced. Contrary to previous interventions with “busy” staff in health settings (Dahl-Jørgensen & Saksvik, 2005), there was no suggestion that staff would not engage with the job satisfaction survey. However, there were hints that their responses to the survey may reflect a view that nothing positive would come from completing the survey.

Assessment of the individual, group and organisation readiness for change was informal. Understanding where the staff sat on Bouckenoghe’s (2009) three-strand concept of cognitive, emotional and intentional dimensions would have been very helpful in structuring the intervention more appropriately.

Observation 6: (Management support)

While a GP Partner and the PBM were both involved in the steering group, many sections of the Health Centre were not represented. How much involvement department managers had in either the design of the intervention or the implementation of any outcomes was not identified – certainly in early stages. While two of the steering group were assistant managers in their departments, no communication with the department managers throughout the centre was observed.

Nielsen & Noblet (2018) recognises that effective interventions require both initial promotion from senior managers as well as support from line managers to

ensure that intervention activities were given sufficient priority. Secondly, the continued support of senior managers throughout the project was identified by Ipsen, et. al. (2015) as being essential for intervention success.

Observation 7: (Screening - Tailoring)

The second job satisfaction survey was already partially designed at the time of engagement with the project consultant. Other potentially useful intervention approaches were briefly considered but comparisons were always made mindful of the investment that had already been made in the survey process.

This is not an uncommon situation and the consultant has to walk a fine line between being a trusted adviser and being an obstacle to the organisation's plans. Clients sometimes "self-diagnose", identify their preferred treatment option and then call upon the services of an occupational psychologist to implement their choice. Suggesting further diagnostic work or a consideration of different intervention options can be seen as being counter-productive. Nielsen et al. (2010) suggest that, in some circumstances, survey approaches may not be appropriate in small and medium sized enterprises and, had the client contacted the consultant earlier, a different approach may well have been offered as one of a range of alternatives.

In addition, no structured analysis took place of the fit between the intervention and the organisation or the people involved. A clear assessment of both "omnibus" and "discrete" context would provide confidence in the chosen intervention process, identify obstacles to the success of the intervention and raise other issues which may be relevant to the intervention outcomes.

Observation 8: (Implementation – Communication)

Once the results of the survey were communicated to the senior management, the steering group was disbanded. The senior management took it upon themselves to devise interventions which addressed some of the issues raised by the survey. When such interventions were announced, no link back to the job survey was made and staff were not made aware that these interventions were the result of their own requests. As such, some of the interventions were met with resistance from the very staff who had highlighted the need for them.

Nielsen's models identify communication as an essential part of the implementation phase as well as the preparation phase but perhaps this should be taken further with communication being "promoted" to a key principle. Organisations have an opportunity throughout the lifecycle of an intervention to promote the value of the intervention and communicate the outcomes arising from it. A communication strategy designed as part of an intervention should "link-back" to the intervention when changes are implemented.

Observation 9: (Effect evaluation)

Interviews held six months after the presentation of the job satisfaction survey results revealed that a number of initiatives had been implemented which were attributed to the survey intervention. Among these were more efficient work processes, enhanced communication methods, an increase in the use of technology as a working aid, and induction training for new staff. When discussing whether the intervention had been a success, it was suggested that the real measures of success are that staff are now more engaged in making workplace changes, people feel that they can communicate with managers more openly and that there is a greater sense of

there being an organisation-wide team. Interestingly, it was felt that job satisfaction, were it measured now, could possibly have decreased as people are increasingly busy implementing the new initiatives which, ideally, will provide longer term wellbeing benefits.

The Nielsen models very clearly identify both process and effect evaluation as being important components of an intervention. Some of their corresponding literature deals with process intervention in some detail (Nielsen & Randall, 2013) but less focus is apparent on effect evaluation. When this is considered, the model offered is undoubtedly valid in its conception but likely to be extremely difficult to execute. This model suggests the analysis of a “chain of effects” to see whether changes in attitudes lead to changes in how work is organised and managed which, in turn, lead to better wellbeing outcomes for people (Nielsen & Noblet, 2018).

5. Discussion

The practical value of the Nielsen models

When conducting small scale organisational interventions, it is often hard to find a model that offers practical guidance throughout the project. Many models detailing organisational change or development are high level, strategic models which undoubtedly add to the knowledge-base of the project consultant but provide little in the way of checks which offer a comparison against best practice (See the NHS OD Toolkit (n.d.) for a review of “approved” models for use within the NHS). The Nielsen models are also relatively high-level but the mix of process and conceptual content should permit the creation of project documents and/or processes which could enhance the intervention effectiveness. Whilst it is beyond the bounds

of this paper to provide a comprehensive list of those documents or processes, some suggestions have been offered in the Recommendations for Practice detailed below.

Where the Nielsen models provide value above standard consultancy process models is that they are directed towards a specific change that adds value to the organisation. Some models focus on enacting an already determined outcome (E.g. West, 2002). Other models focus on ensuring consultancy “best practice” but the focus can drift from the organisational outcomes towards the consultancy outcomes (E.g. Schein, 1988). The Nielsen models are focused on an outcome – employee wellbeing – but recognise the possibility that this outcome may take many forms. Therefore, the emphasis is very much around understanding what the organisation can sustain and building an intervention that takes this into account. For example, issues with employee readiness for change has been identified by many researchers as a potential blocker to organisational change (Azra et.al., 2017; Kirrane et. al., 2018; Watson, 2018). Indeed, Schein (2003) has argued that the reason so many change efforts run into resistance or fail completely can be traced to the organisation’s inability to create positive levels of readiness for change before attempting an intervention. The Nielsen models specifically position *readiness for change* in the initiation/preparation phase, intimating that some assessment of this variable is advisable at that early stage and should be used to design or adjust the intervention accordingly. Jones, Jimmieson & Griffiths (2005) provides evidence of the benefits of doing this, in that a positive environment of change readiness can be shown to be related to capability building and eventual performance outcomes.

A possible criticism of the Nielsen models is that little detail is provided as to how each of the components of an effective intervention may be brought about. A consultant may use their understanding of each unique situation to determine how to

“intervene in the intervention” but guidance from the extant research would be beneficial. There are suggestions available in many papers which, if pulled together, could form a blueprint for best intervention practice. For example, Dalmau and Dick (1991) offer a framework for selecting interventions together with “diagnostic maps” which can guide the consultant and the organisation through many of the “non-rational, unconscious and underlying issues of corporate life in groups and organisations.” Similarly, the NHS OD Toolkit (n.d.) provides a set of clear prompt questions for each of Burke’s (1994) seven phases in his consultancy model. A similar set of practical prompts would bring the Nielsen models to life and position them squarely at the centre of intervention best practice.

Researcher-Practitioner Divide

Reflecting on this study, it becomes clear that there is more that practitioners can do, on a general level, to take advantage of research findings. In a study carried out by Bartlett & Francis-Smyth (2016), only around 2% of practitioners felt that research evidence was irrelevant to their work but 48% claimed that they did not have time to read the relevant research. 49% of respondents cited a lack of client interest as being a reason why research findings were not being used as a basis for projects. If practitioners could find an efficient way of keeping themselves updated and disseminating relevant information to clients, this is likely to pay dividends in terms of intervention outcomes. In this study, for example, an alignment with research evidence may have suggested that a resource-based approach to the job satisfaction survey would have allowed for the identification of specific outcomes (e.g. maintenance time, process control, etc.) which, in turn, would have informed the actions to take after the survey results were collated (Briner & Walshe, 2015).

There were a number of opportunities, throughout the project, to gather information which would have fed into the intervention model. An example might be employee readiness. This tended to be handled in an informal way when a more structured process would have, firstly, provided more reliable information; and secondly, would have highlighted the importance of such contextual aspects. For practitioners, then, applying the most rigorous measurement methods they can throughout the project is likely to be beneficial.

There were also opportunities throughout the project to apply principles and processes that may be commonplace in other situations. For example, the steering group is a team which may have benefitted from the application of some team development activities before beginning its project duties. Identifying the purpose of the team, establishing whether it was representative, specifying roles, agreeing communication and establishing team processes, would all have helped to ensure that the team operated at a high performing level and delivered on its remit. As this wasn't a "team-building" project, these activities were not pursued despite the consultant being experienced in such areas. Practitioners, therefore, should look to bring best practice and evidence-based research from other areas of their work into their projects.

6. Recommendations for practitioners

A full set of recommendations specifically relating to the project described in this study are provided in the appendix. The following are general recommendations for practitioners.

- Build time and a process into projects for literature reviewing and communicating relevant findings to clients.
- Utilise appropriate psychometric principles to measure organisational and personal contextual variables that are relevant to the intervention.
- Utilise best practice and evidence-based research from other areas of work into projects.

7. Conclusion

There is unlikely ever to be a universally accepted model of organisation intervention which will be applicable to all kinds of interventions and all sizes and structures of organisations. The models put forward by Nielsen et al. (2010) and Nielsen and Noblet (2018) do not satisfy this expectation either. However, the models do allow practitioners to view their project through an informed lens and concentrate on organisational, group and personal variables that are likely to impact on the effectiveness of a wide range of interventions. Practitioners can do more on both a general and specific (to the project) level to better avail themselves of the excellent research undertaken by their colleagues.

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Appendix

Specific recommendations relating to the consultancy project described in the study

- I. A structured and visible steering group team forming process should be introduced as part of any initiative. This should include helping the client to build organisational representation, set the criteria by which people will participate, work with the group to establish “starting points” and “essential differences” and agree the roles and responsibilities of the group members throughout all of the defined steps of the project. A “democratic” communication process should be established so that all members of the group have equal opportunities to communicate with all other members of the group and with the project consultant. Social media communication options should be able to enable such a process and shared document repositories should help to keep all members engaged and informed.

- II. A structured individual, group and organisational assessment of readiness for change should be an integral part of interventions. A brief analysis of each department on its cognitive, emotional and intentional readiness would be beneficial to identify any obstacles to change. Also, a “heat map” of who is feeling the pressure in the organisation would provide much needed guidance as to which groups may need greater support in engaging with the intervention. Whilst the project consultant did undertake a less formal readiness for change assessment, more specific focus could be paid on the areas of empowerment, attitude, atmosphere, learning & development and leadership style.

- III. As part of the intervention communication process, a managers' progress summary could be distributed to all departmental managers. Where several change programmes are being undertaken at the same time, these short summaries (e.g. 100 words) could form part of a weekly/monthly "Change Report".
- IV. Even where a particular intervention approach is already established by the client, the project consultant should highlight options which could also be appropriate. Aspects of those approaches may be suitable for inclusion later in the project or on future projects. In addition, providing options for interventions allows clients to recognise the value the consultant can bring to this and other projects and may help to change the relationship from a "deliverer" to an "adviser" who is consulted earlier in the intervention process.
- V. A structured process for assessing the fit of the context with the organisation should be developed. This would allow for an analysis of the omnibus context – e.g. the level of job demands, the alignment of the intervention with the prevailing culture, the capacity of the organisation to conduct interventions and the history of interventions within the organisation. It would also allow for an assessment of the discrete context – e.g. any conflicting priorities in operation within the organisation, the availability of funds for the intervention, the national mood (very relevant within the NHS currently) and other relevant issues. Schein (2003) insists that a scientific

analysis of an organisation's culture is not essential and often not advisable. Discussing the fit of the intervention with somebody who knows the culture is likely to be a more enlightening and useful approach. However, ensuring that this is addressed is likely to be an important part of the intervention process.

- VI. A running "scorecard" should be created in which key evaluation criteria can be highlighted and assessed throughout the intervention. The content of this scorecard could be operational items such as workplace efficiency, staff workload, errors in the workplace; personal items such as perceived level of harmony, staff attitudes (to whatever is identified), stress levels; and process items such as engagement with the project and levels of communication. The scorecard data could be collected in the form of the subjective views of the steering group members following each phase of the intervention or more frequently, if appropriate. The scorecard would act both as an aide memoir for the group regarding areas for consideration and as evidence of the intervention's achievements both during and after the project.