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Employees' Emotional Reactions to Digitally Enabled Work Events

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ABSTRACT

Digital technologies have become a ubiquitous and increasingly dynamic presence in our lives. Their omnipresence is creating new social challenges in that employees can find themselves under a constant bombardment of email, phone and social media messages, leading to challenges such as work overload, feelings of uncertainty and invasion, and burnout. Employees and organisational leaders are faced with multiple decisions every day in technology-pervasive environments. Even in the early 1980's it was recognised that decision-making environments, and the technology within these environments, were having a large impact on decisions and how they are made (Huber, 1981). This paper presents a scoping review exploring current thinking on the emotional reactions of employees to digitally enabled work events. Utilising the Affective Events Theory as a lens, we uncover specific factors such as Emotional Dissonance, Support & Connectedness, Task-Technology Fit, Outcome Beliefs, Personality-Technology Fit, Motivators, and Work Environment Changes, all of which play an important part in shaping the emotional reactions of employees using digital technologies. Our results should be kept in mind by both researchers and practitioners as the effectiveness of digital technology usage both affects, and is affected by, employees' emotions.

KEYWORDS
Employee; Emotions; Technology; Decision-making; Affective Events Theory.

1. Introduction

Digital technologies have become a ubiquitous and increasingly dynamic presence in our work lives (Charlier, Guay & Zimmerman, 2016). Digital technologies have permeated organisations and have unified the physical and digital world more than ever before (Schwarzmüller, Brosi, Duman & Welpe, 2018). These changes have facilitated the introduction of new work designs by enabling telecommuting, flexible working arrangements, and adaptable work schedules (Ragu-Nathan, Tarafdar, Ragu-Nathan & Tu, 2008). The result is that workforces are becoming more dispersed and mobile, with employees becoming more productive through completing some or all their work outside of the traditional office, and outside of standard hours (Goepel, 2014). While these changes can offer employees more flexibility and autonomy to manage home and work demands (Steidelmuller, 2018; Hoeven & Zoonen, 2015), there are also negative impacts from the use of these technologies.

The pervasiveness of applications and devices is blurring the lines between personal life and work life (Chen & Karahanna, 2014). On one hand, an increase in flexibility can benefit not only employees by improving work-life balance, but also employers by improving productivity, staff morale, staff retention and workforce adaptability (Potter, 2003). On the other hand, technology's omnipresence also creates new social challenges in that employees can find themselves under a constant bombardment of email, phone and social media messages, leading to work overload, negative feelings, and burnout (Korzynski, Florent-Treacy & De Vries, 2016). Through the (oftentimes mandated) use of mobile technologies, employees are continuously connected and 'always on' (Park, 2013, Turkle, 2008). They are bombarded with large volumes of information resulting in a challenge for decision-making, which sometimes must be done under conditions of information overload rather than information scarcity (Van Knippenberg, Dahlander, Haas & George, 2015). In addition, being constantly connected can

result in employees' workdays extending beyond regular hours, as they feel obliged to respond when contacted (Ragu-Nathan, Tarafdar, Ragu-Nathan & Tu, 2008).

Emotions are an important aspect of everyday work environments, as they both influence employees' experiences and shape their behaviours (Briner & Totterdell, 2002). These experiences and behaviours emerge through the flow of organisational events. Weiss & Cropanzano (1996) propose that organizational events are proximal causes of affective reactions. "Things happen to people in work settings and people often react emotionally to these events. These affective experiences have direct influences on behaviors and attitudes" (Weiss & Cropanzano, 1996, p. 11). The introduction of digital technologies into the work environment is likely to give rise to both positive and negative affect-producing events. For instance, technology-enriched work environments can lead to discrete events involving heightened engagements, collaboration, feedback, which may then lead to positive emotions such as pride, happiness, and enthusiasm (Basch & Fisher, 1998; Weiss & Cropanzano, 1996). However, on the other hand this same environment may also lead to negative emotions such as frustration, anger and unhappiness (Basch & Fisher, 1998). Decisions that are based on momentary emotions can lead employees to make judgements about their situations and in turn those situations can influence future decision-making (Andrade & Ariely, 2009).

For research to progress further it will be necessary to develop a better understanding of the affect-producing events and emotions in the workplace (Basch & Fisher, 1998). Stam & Stanton (2010) suggest that employees' responses to new technology, such as rejection or resistance are rooted in the emotional experiences around events both leading up to and following implementation of the technology. This was true in previous decades but is even more acute now when one considers the advent of increasingly powerful and pervasive digital technologies (Ortet, Dantas, Machado, Tageo, Quintas & Haansen, 2019). In the Information Systems (IS) domain, Beaudry & Pinsonneault (2010) note that research on the relationship between technology use and emotions is a relatively unexplored area. Fisher & Noble (2004) recommend further research on the momentary antecedents of real-time emotions while working. It is acknowledged by Briner (1999, p. 339) that "a great deal of theoretical work, which attempts to specify how work might cause specific emotions and in turn how these emotions may affect work behaviours, will be required". Our research, therefore, answers these perennial calls in exploring how employees react emotionally to digitally enabled work events or situations. This paper analyses current literature (both from within and outside of the IS domain) to *identify the factors that influence employees' emotional reactions to digitally enabled work events*. From an applied perspective, it would be useful for practitioners to know which factors are associated with producing positive or negative emotions in digitally enabled work events, so that the incidence of the former can be enhanced, and the latter reduced.

With this in mind, we now begin by outlining the current literature on employee reactions to work events. This leads us to advocate the extension of the Affective Events Theory (AET) to the study of digitally enabled work events. Next, we outline the research methodology for exploring the factors contributing to this phenomenon. We discuss the factors identified from our scoping review and how they relate to and can extend the AET. Finally, we close the paper with some concluding remarks and suggestions for further research.

2. Employee Reactions to Work Events

There are many definitions in literature for the term 'event'. Weiss & Cropanzano (1996) define an 'event' as a change in circumstances or a change in what one is currently experiencing. More specifically, Brief & Weiss (2002) refer to work events unfolding in the workplace which generate emotional reactions. Basch & Fisher (1998, p. 3-4) therefore define an 'affective

event' as "an incident that stimulates appraisal of and emotional reaction to a transitory or ongoing job related agent, object or occurrence". For example, an employee may appraise a business downturn which then triggers an emotion of worry. Russell-Bennett, Hartel & Beatson (2011) describe a 'positive affective event' as something that produces a positive emotional response and a 'negative affective event' as something that produces a negative emotional response. For example, negative affective work events are defined by Parker, Sonnentag, Jimmieson & Newton (2020, p. 84) as "impediments that happen in work settings to which employees react emotionally".

Basch & Fisher (1998) note in their research that only a few studies explore specific events that might lead to emotional reactions at work. However, a review ten years later by Grandey (2008), notes a resurgence in research leading to the late-2000's becoming the age of the 'affective revolution'. There are many examples of research from this period that are of interest to this study. For example, Ashton-James & Ashkanasy (2009) put forward the argument that strategic decision-making processes can be significantly affected by managers responses to positive and negative workplace events. Fisher (2010) explores the causes and consequences of emotions (such as happiness) at work on the basis that momentary happenings can provoke concurrent emotions or mood. The relationship between emotional salience and workplace events related to technology is explored by Stam & Stanton (2010). There are other examples of studies examining this same phenomenon. The potential causes and consequences of affective experiences in a call centre are explored by Wegge, Van Dick, Fisher, West & Dawson (2006). The affective reactions induced by the introduction of a new payment system can in turn influence employee's subsequent behaviours and attitudes (Tenhiala & Lount (2013). More recently Stein, Newell, Wagner & Galliers (2012) explore how the characteristics of an IT stimulus event can provoke both single affective responses and ambivalent affective responses. Digital technology events such as ICT-based (Information & Communication Technology) communication events can induce strain when the demands of the events exceed the employee's resources (Reinke, Gerlach, Tarafdar & Stock, 2016). These events are likely to become more common; for example, workers in areas such as medicine rely more on their phone for decision-making (Leon, Fontelo, Green, Ackerman & Liu, 2007).

Different features of the work environment can have an impact on the type of events experienced (Wegge, Van Dick, Fisher, West & Dawson, 2006). The use of technology in the workplace can bring a wide variety of responses from the intended users, which include a range of behaviours including avoidance, workarounds and user engagement, and various emotions including fear, scepticism, excitement and indifference (Bhattacherjee, Davis, Connolly & Hikmet, 2018). For example, the use of technology can negatively influence the attitudes of users; technology-related interruptions and technology overload can reduce the satisfaction employees feel from using the technology (Tarafdar, Tu & Ragu-Nathan, 2011). Some employees can have a stressful or negative reaction to email misfit (receiving too little or too much email) which is associated with employees' experiences of workplace stressors such as job control, work relationships, and job conditions (Stich, Tarafdar, Stacey & Cooper, 2019). An employee can react negatively if they are overloaded with information and communication or perceive a task or job as being too complex (D'Arcy, Gupta, Tarafdar & Turel, 2014). Conversely, technology, specifically mobile phone apps, can also reduce stress (Villani, Grassi, Cognetta, Toniolo, Cipresso & Riva, 2013). Some employees prefer to have uninterrupted connectivity, affording them flexibility in how, when, and where they work (Sarker, Xiao, Sarker & Ahuja, 2012). However, being constantly connected can lead to a blurring of boundaries between personal and work life, and work-related interruptions can cause work-life conflict inducing a negative reaction such as stress (Chen and Karahanna, 2011).

It is therefore clear that there is a wide range of often conflicting emotional responses of employees to changes in work environments (Beaudry & Pinsonneault, 2010; Bhattacherjee & Premkumar, 2004; D'Arcy, Gupta, Tarafdar & Turel, 2014 and Fisher, 2010). What is less clear are the factors that contribute to the emergence of these emotions and how these emotions emerge through specific work events. One approach advocated by Stam & Stanton (2010), is to refocus research more towards the interplay of emotions and events. Exemplars of such an approach can be found in the work of organizational theorists Weiss (2002), Weiss & Cropanzano (1996), and Brockner & Higgins (2001), who suggest that emotions and events both play an important role in influencing employees' behaviour and attitudes. The following section introduces the Affective Events Theory (c.f. Weiss & Cropanzano, 1996), which deals with affective experiences in the workplace and emphasises how work events are causes of affective reactions.

3. Affective Events Theory

The Affective Events Theory (AET) is a model that focuses on affective experiences and notes how events are the proximal causes of a person's affective reactions, where an event or 'shock' happens to a person in the workplace and they have an emotional response to that event (Weiss & Cropanzano, 1996). Weiss & Beal (2005) emphasize that AET represents a different way to study emotional reactions at work and that it offers a roadmap for future research.

Writing in the IS domain, Stam & Stanton (2010, p. 27) cite several studies that support the use of AET in examining workplace events, employee emotions, job attitudes, and behaviour responses. These include: Fisher (2002), who explores antecedents and consequences of real-time emotional reactions at work; Fuller, Stanton, Fisher, Spizmuller, Russell & Smith (2003) who investigate processes by which job stress and satisfaction unfold over time by examining the relations between daily stressful events, mood, and these variables; Weiss, Nicholas & Daus (1999) who examine the joint effects of emotional experiences and job beliefs on job satisfaction and variations in emotional experiences over time; and Wegge, Van Dick, Fisher, West & Dawson, (2006) who explore the assumptions of AET in call centre work.

AET, as visualised in Figure 1, consists of eight factors, namely: Work Environment Features, Work Events, Dispositions, Affective Reactions, Work Attitudes, Affect Driven Behaviours and Judgement Driven Behaviours. Descriptions of each of these factors are included in Table 1.

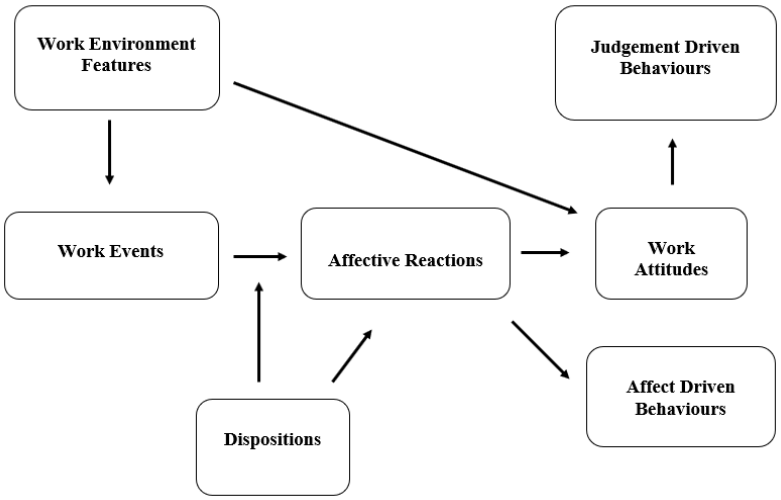


Figure 1. Affective Events Theory: Macro Structure (Weiss & Cropanzano, 1996, p. 12).

Factor	Description
Work Environment Features	Environmental features influence affective reactions primarily through making affective events (or the recall or imagination of affective events) more or less likely.
Work Events	Work events are the proximal causes of affective reactions. Things happen to people in work settings and people often react emotionally to these events.
Dispositions	Dispositions concern people's personality traits and their current mood states, which influence how they react to work events.
Affective Reactions	Affective reactions are the emotional reactions of people to work events.
Work Attitudes	Work attitudes stem from evaluation in the 'cognitive' judgement part of satisfaction and indirectly through their influence on the likelihood of various events.
Affect Driven Behaviours	Affect driven behaviours are the behaviours that follow directly from affective reactions and are not mediated by overall attitudes. They are influenced by processes such as coping or mood management or by direct effects of affective reactions on cognitive processing or judgment biases.
Judgement Driven Behaviours	Judgement driven behaviours are the behaviours that follow from affective reactions and are mediated by satisfaction. They are the consequences of decision processes where one's evaluation of one's job is part of the decision matrix.

Table 1. Descriptions of Affective Events Theory Factors (after: Weiss & Cropanzano, 1996).

Therefore, having proposed AET as a suitable lens for this study, we move to the research methodology which is outlined in the next section.

4. Research Methodology

The study uses a scoping literature review to explore the factors that influence employees' reactions to work events involving the use of digital technology. The scoping review is conducted using an approach outlined by Templier & Paré (2018) and Levac, Colquhoun & O'Brien (2010). A scoping study can be used for a number of reasons, including to examine the nature, extent and range of research activity, determine the value of undertaking a full systematic review, summarise and present research findings, or to identify gaps that may exist in current literature (Levac, Colquhoun & O'Brien, 2010). Scoping reviews should provide a profile of the studies included, which includes research methods, overall number of studies, years of publication, context of the studies and research methods (Templier & Paré, 2018).

We identify papers from the AIS (Association for Information Systems) College of Senior Scholars 'Basket of 8' (AIS, 2020). Five Boolean searches (as outlined in Table 2) were conducted, searching abstracts for the terms: 'emotion', 'affect', 'employee' and 'technology'. A total of 84 papers were returned from these searches. After a thorough review of the abstracts, 55 papers were discarded to leave a total of 29 papers for further analysis.

Search #	Step	No. of Papers
1	Searching abstracts for search terms: Employee AND technology AND emotion	21 papers returned
2	Searching abstracts for search terms: Employee AND Technology AND affect	8 papers returned
3	Searching abstracts for search terms: Employee AND affect	24 papers returned

4	Searching abstracts for search terms: Employee AND emotion	5 papers returned
5	Searching abstracts for search terms: Emotion AND technology	26 papers returned
	Total Papers Selected	**84**
	Papers discarded as duplicates (16), non-English language (1), research in progress (6), full version not available (1), no results (10) or outside of scope (not workplace or employee focused) (21)	**55**
	TOTAL PAPERS FOR ANALYSIS	**29**

Table 2. Summary of Paper Search Results for Scoping Review

The authors reviewed the remaining papers by reading each paper in full, and a concept centric matrix is used to identify and analyse the factors influencing employees' emotional reactions to digitally enabled work events. The following section presents the identified factors.

5. Discussion of Factors

A scoping review of the literature revealed the following seven main factors that influence the emotions of employees during digitally enabled work events: **Emotional Dissonance** which occurs when an employee's displayed emotions do not match the actual emotions that they are feeling; **Support & Connectedness**, which relates to whether an employee feels supported by their leader in facilitating a digital workplace, and connected through digital collaboration technologies; **Task-Technology Fit**, which relates to an employee's work and job design and the suitability of technology for the tasks being performed; **Outcome Beliefs**, which relates to an employee's beliefs about the consequences of using digital technology; **Motivators** which relates to an employee's motivation to use digital technology; **Personality-Task Fit** which relates to the match between an employee's personality and the technology's personality; and **Work Environment Changes**, which relates to changes in the employee's work environments that may trigger digitally related work events or situations for the employees. These factors are presented in Table 3 and discussed in detail below.

Concept	**Definition**	**Authors (years)**
Emotional Dissonance	Occurs when an employee's displayed emotions do not match the actual emotions that they are feeling.	Moqbel & Bartelt (2018); Rutner & Riemenschneider (2015); Rutner, Hardgrave & McKnight (2008)
Support & Connectedness	Relates to whether an employee feels supported and connected, and their work life boundaries.	Dery, Sebastian & Van der Meulen (2017); Feng, Zhu, Wang & Liang (2019); Moqbel & Nah (2017); Sarker, Xiao, Sarker & Ahuja (2012); Sykes & Venkatesh (2017); Sykes, Venkatesh & Johnson (2014); Tsai, Compeau & Meister (2009); Tu, Adkins & Zhao (2019); Wu, Wang, Mei & Liu (2017); You & Robert (2018)
Task-Technology Fit	Relates to work and job design and the suitability of technology for the tasks being performed.	Beaudry & Pinsonneault (2005); Beaudry & Pinsonneault (2010); Issa & Bahli (2018); Moqbel & Bartelt (2018); Ortiz de Guinea & Webster (2013); Sykes (2015); Yang, Kang, Oh & Kim (2013)

Outcome Beliefs	Relates to an employee's beliefs about consequences of using digital technology.	Bulgurcu, Cavusoglu & Benbasat (2010); Paluch, Egbert & Blut (2015)
Motivators	Relates to motivators to encourage an employee's use of digital technology.	Kankanhalli, Tan & Wei (2005); Kettles, St. Louis & Steinbart (2017); Liu, Li & Santhanam (2013)
Personality-Task Fit	Relates to how an employee perceives a similarity between their personality and the technology's personality.	Al-Natour, Benbasat & Cenfetelli (2011)
Work Environment Changes	Work environment changes that will result in a digitally related work event or situation for the employee.	Au, Ngai & Cheng (2008); Beaudry & Pinsonneault (2010); Bulgurcu, Cavusoglu & Benbasat (2010); Dery, Sebastian & Van der Meulen (2017); Feng, Zhu, Wang & Liang (2019); Moqbel & Bartelt (2018); Rutner & Riemenschneider (2015); Tu, Adkins & Zhao (2019); Yang, Kang, Oh & Kim (2013)

Table 3. Factors Influencing Emotional Reactions to Digitally Enabled Work Events

5.1. Emotional Dissonance

Emotional dissonance is the conflict between employees actual felt emotion and their emotional display in the workplace; this is particularly relevant for overworked professionals where the need to amplify or supress emotions combined with job pressures can result in problems (Rutner, Hardgrave & McKnight, 2008). Emotional dissonance can result in conflicted feelings and can create a person-role conflict when an employee complies with an organisation even though they do not want to comply (Moqbel & Bartelt, 2018). Emotional dissonance can be a predictor of work exhaustion, which reduces job satisfaction and in turn can increase an employee's turnover intentions (Rutner, Hardgrave & McKnight, 2008). How an employee perceives an organisation's display rules, which control emotional demeanours in the workplace, can influence their conflict management style; using an asserting or competition conflict-management style can increase an employees work exhaustion (Rutner & Riemenschneider, 2015).

5.2. Support and Connectedness

Responsive leadership and employee connectedness are two related workplace dimensions identified in digital environments; responsive leaders can help to facilitate digital workplace design and employee connectedness can be aided through collaboration technologies such as enterprise social media platforms, videoconferencing and mobile technologies (Dery, Sebastian & Van der Meulen, 2017). Different leadership styles can result in leaders behaving differently in how they support their employees; the strength of the social bond formed by the employee, and the resulting intention to comply, can depend on how the leader behaves (Feng, Zhu, Wang & Liang, 2019). Employees have different perspectives on the relationship between their work and their personal life; perceiving work as overlapping with their personal life, personal and work life as two separate domains, and both work and personal life being integrated. For example, in order for the use of mobile technologies to be effective these differing work-life balance perspectives must be recognised and understood (Sarker, Xiao,

Sarker & Ahuja, 2012). While Bring Your Own Devices (BYOD) can increase efficiency, flexibility, productivity and convenience for an employee, when the employee uses their BYOD in a work context, there are a number of factors that can affect an employee's intention to comply with the organisations work practices (e.g. security policies) (Tu, Adkins & Zhao, 2019). These include an employee's threat appraisal which is the perceived severity (employees perceive that the negative consequences from risks are severe to both them and the organisation) and perceived vulnerability (employees perceive that they may be exposed to an unfavourable threat), and their coping appraisal of perceived effectiveness, self-efficacy and perceived cost of preventing a threat (Tu, Adkins & Zhao, 2019). Negative or adverse effects can include blurring of personal and work boundaries, continual expectations to be available, more complicated coordination with work colleagues and feeding an employee's personal compulsions; this can lead to constantly feeling stressed and negatively impacts on their personal lives (Sarker, Xiao, Sarker & Ahuja, 2012). The experience of techno-invasion can increase an employee's job anxiety, however perceived organisational support and computer self-efficacy can moderate this impact; self-efficacy in computers in turn has a bigger moderating effect when the employee perceives a lower level of organisational support (Wu, Wang, Mei & Liu, 2017). Technology usage in the use of enterprise social media (ESM) can help increase employee integration in the workplace, which in turn can enhance their performance through positive emotions (e.g. joy, pride, caring, interest, contentment, love and affection), by extending and expanding an employee's available resources (Moqbel & Nah, 2017). The content and source of social network ties can influence employee job performance and deep structure use (behaviour of user in employing system features in support of their tasks) during the post implementation or shakedown phase of an enterprise system (ES) implementation; instrumental advice influences deep structure use however expressive advice is not a significant influence, whereas social network constructs i.e. facilitating conditions and behavioural intention benefit job performance (Sykes & Venkatesh, 2017). Post implementation employee get-and-give advice networks can contribute positively to an employee's job performance; different types of get-and-give advice, such as software advice and workflow advice, can have a positive effect whereas having access to a single type of advice i.e. workflow get-advice can be harmful (Sykes, Venkatesh & Johnson, 2014). Anxiety is alleviated for employees when they look for social support in the form of emotional and instrumental aid (Tsai, Compeau & Meister, 2009). EPA (embodied physical action) robots are increasingly being adopted as collaboration technology for teams. Research by You & Robert (2018) found that teams who are emotionally attached to their robots are more viable and can perform better; team and robot identification can aid in increasing a team's emotional attachment to its robot.

5.3. Task-Technology Fit

The alignment between ICT and work design can influence an employee's social, psychological and physical well-being (Issa & Bahli, 2018). Technology implementations can change an employees work or job which can lead to increased uncertainty on how to do the job; this in turn can lead to job stress (Sykes, 2015). The reaction to stress can be a positive experience (i.e. eustress) or a negative experience (i.e. distress) (Issa & Bahli, 2018). A moderate level of techno-stressors is shown to obtain best outcomes as the employee will evaluate them as challenges rather than hindrances; this in turn can lead to a higher performance outcome and inner stimulation resulting in lower levels of exhaustion (Issa & Bahli, 2018). Positive emotions can in turn further help increase job satisfaction and decrease work stress where an employee perceives a situation to be challenging or difficult (Moqbel & Bartelt, 2018). Users adopt different adaptation strategies to manage specific situations, depending on

their appraisal of new technology; adaptation strategies help the user to restore their emotional stability, improve their efficiency and effectiveness, and minimise the threats they perceive from the technology (Beaudry & Pinsonneault, 2010). Both primary appraisal, a user's assessment of possible consequences, and secondary appraisal, a user's assessment of their control of the situation, form the basis for choosing a particular adaptation strategy (Beaudry & Pinsonneault, 2005). Emotions experienced by a user in the early stages of a new IT implementation can have subsequent implications for the users, and, in researching four main emotions (happiness, excitement, anxiety, anger) as drivers of behaviours, Beaudry & Pinsonneault (2010) found that happiness and excitement are both directly and positively related to IT use. While anger is not directly related to IT use, it is positively related to seeking social support which in turn is positively related to IT use. Technology is a resource that is crucial to an organisation's success, and Task-Technology Fit is an outcome of the allocation of resources; perceptions of supply and fit of these resources by the user can affect task performance and perceived IS use findings suggest that achieving Task-Technology Fit results in optimum levels of IT-enabled task performance and IS use (Yang, Kang, Oh & Kim, 2013). IT use patterns, namely emotions (affect/physiological arousal), behaviours (adaptive or exploitive behaviours) and cognitions (computer and non-computer related thoughts) can change together as a response to IT events occurring in the user's environment. These patterns can appear and disappear due to both expected (ordinary events) and discrepant (unexpected negative events) (Ortiz de Guinea & Webster, 2013).

5.4. Outcome Beliefs

An employee's belief about the consequences of whether or not they comply with proposed work practices (e.g. information security policies) can influence their attitude towards those practices; the impact of the cost of complying (taking time from other work activities) is as strong as the cost of not complying (embarrassment and shame) and the benefit of complying (feelings of accomplishment, fulfilment and satisfaction) (Bulgurcu, Cavusoglu & Benbasat, 2010). Emotional conviction (evaluating and perceiving as beneficial) can be impacted by a social media systems content control, information sharing and customer feedback and dialogue (Paluch, Egbert & Blut, 2015).

5.5. Motivators

Unless extrinsic benefits are provided in an appropriate context, they are not necessarily motivators for technology usage, however intrinsic benefits alone may be sufficient motivators for employees to use digital technology (Kankanhalli, Tan & Wei, 2005). For example, enterprise social media users who believe that sharing knowledge is important, and the right thing to do, have been found to contribute more than users who do not share that belief; paying users to share knowledge further increases the quantity of contributions (Kettles, St. Louis & Steinbart, 2017). In addition, when users are confident in their ability to share knowledge and find enjoyment in helping others, they can significantly impact positively electronic knowledge repositories (EKRs) with their contributions (Kankanhalli, Tan & Wei, 2005). Employees who have a high level of intrinsic motivation can have more positive moods, less anxiety and spend more time on organisational tasks (Liu, Li & Santhanam, 2013).

5.6. Personality-Technology Fit

Perceived personality similarity (users perceives similarity between their personality and technology personality) and perceived decision process similarity (user perceives a similarity

between their decision-making and their technology's decision-making) can act as precursor to a user's belief (ease of use, enjoyment, usefulness trust and social presence) about information technology (Al-Natour, Benbasat & Cenfetelli, 2011).

5.7. Work Environment Changes

Work environment changes can include new or proposed work practices such as the introduction of information security policies or BYOD (Bring Your Own Device) (Bulgurcu, Cavusoglu & Benbasat, 2010 and Tu, Adkins & Zhao, 2019), introduction of organisations internal social networking sites (Moqbel & Bartelt, 2018), an organisations display rules (Rutner & Riemenschneider, 2015) and collaboration technologies (Dery, Sebastian & Van der Meulen, 2017). The implementation of a new Information Technology System can change an employee's work environment (Au, Ngai & Cheng, 2008 and Beaudry & Pinsonneault, 2010). The allocation of technology resources can influence an employee's work environment (Yang, Kang, Oh & Kim, 2013). Differing leadership styles are another factor in an employees work environment which can have an impact on employees' emotions (Feng, Zhu, Wang & Liang, 2019).

6. Findings, Conclusions and Further Research

The following diagram (Figure 2) indicates how the factors identified in this scoping review (from Table 3) can be tied to the elements of the Affective Events Theory. Work environment changes can result in Work Events which impact on an employee's emotions. The employee's outcome beliefs, motivation and personality-technology fit can also influence the employees emotional or affective reaction. This finding suggests that no one factor can stand alone. Each factor has an impact on or influences the other factors, which should be taken into account for any workplace environment changes. The Affect Driven Behaviours and Judgement Driven Behaviours fall outside the focus of our research objective as they do not have a direct impact on emotional reactions.

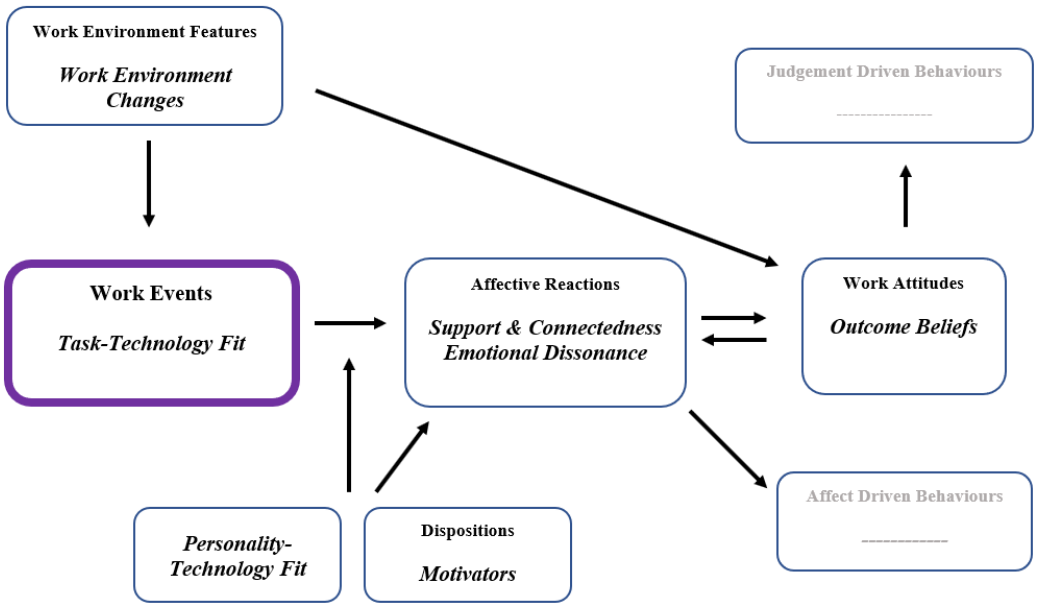


Figure 2. Concepts matched to Affective Events Theory factors

Overall, most of the studies reviewed demonstrate both the positive and negative sides of digital technology. However, very few studies identify and explore the specific emotions that are experienced by employees or the specific work events that cause an emotional reaction. It is clear that as technology has evolved, the emotions and reactions that employees have will also change. The first experimentation with Decision Support Systems involved large mainframes – initially an IBM 7094 (Power, 2008). Now we have examples of mobile phones being used as decision support systems (Mussa & Yonah, 2014). With such huge advances in technology, the emotional impact on employees becomes even more relevant. The AET model has been refined in this research to take account of such changes. For example, Personality-Technology Fit has an influence on the employee's affective reactions in how they perceive a similarity between their personality and a technology's personality. Motivators, such as intrinsic benefits, can encourage an employee to use digital technology. Outcome beliefs relate to an employee's beliefs about consequences of using digital technology and can also result in affective reactions.

This research is not without limitations. We stress that this is a scoping review, and therefore is based on a sample of literature. Papers sourced were taken from the AIS (Association for Information Systems) College of Senior Scholars eight mainstream IS (Information Systems) journals (AIS, 2020). After rejecting some of the papers due to being outside of scope, or not relevant to the topic being explored, we were left with a relatively small batch of papers (29 in total) to review. Further research will yield richer results. Additional papers could be sourced by (1) using the concepts identified in this paper, (2) repeat the AIS search using synonyms, and (3) widening the scope of the search to beyond the AIS domain.

Nonetheless the scoping literature review has yielded interesting results. First, we have identified some additional factors not included in the original AET model. Our analysis suggests that outcome beliefs (sub-component of work attitudes) have a direct influence on affective reactions. Personality-technology fit and motivators can also cause an affective reaction. Second, there are both positive and negative emotions resulting from the usage of technology. Third, how an employee is expected to act compared to how they feel can cause emotional dissonance which can have a negative outcome. Fourth, specific components such as communication and support networks can play an important part in the decision-making of the employee as to whether they will use technology provided.

Our research objective was to identify the factors that influence employees' emotional reactions to digitally enabled work events. We identified the Affective Events Theory as an interesting lens that ties these concepts together in exploring affective experiences of employees in the workplace and emphasises how work events can be causes of affective reactions. Our findings should be kept in mind for future research, particularly in the decision-making arena, as the effectiveness of digital technology introduction and usage both affects, and is affected by, an employee's emotions. Based on our findings above, we see the value in validating the extended AET model (in Figure 2) through gathering empirical evidence, for example, through tracking employees in their day-to-day digitally enabled work activities.

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