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**Affective Events Theory, Institutional Theory, and Feral Systems: How do they
all fit?**

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Feral Systems: How do they all fit?

Abstract: *This paper is an outflow of semi-structure interviews conducted in 2012 that investigated why members of organizations using institutionalized software, such as AGRESSO, create feral systems. We use Institutional Theory (Selznik, 1948; Zucker, 1977) as a broad theory to understand why software programmes like AGRESSO are institutionalised. We then nest Weiss and Cropanzano's (1996) Affective Events Theory into Institutional Theory in order to understand how these institutionalised software programmes tend to create 'hassles' for the organisation's member, which, in turn seem to create affect driven behaviour. We use the interpretive lens to understand the emotional process that the member's experience in order for us to understand why feral systems exist and are inherently institutionalized.*

The intention of this paper is to understand how emotions have a role in why feral systems exist within institutions. Feral systems is a colloquial term that is defined as “an information system (computerised) that is developed by individuals or groups of employees to help them with their work, but is not condoned by management nor is part of the corporation's accepted information technology infrastructure. Its development is designed to circumvent existing organisation information systems” (Houghton & Kerr, 2006). In short, an organisation's member will create feral systems within his/her work processes in order for him/her to fulfil his/her job performance and to meet internal operational needs/demands that an organisation has. For example, SAP software programme is used for the financial demands of an organisation's budget management, employee remuneration, and other human resource based benefits. Institutions assume that by implementing these types of software

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programmes work processes will become 'slick' and 'seamless' creating fluidity in their day-to-day operations. In saying that, in order for organisations to have fluid daily operations, they must employ members who can make structural arrangements and production processes (i.e. software programmes) 'slick' and 'seamless' in order to meet the demands of specific that is set before them by the industry that are a member of (see Scott & Meyer, 1983). However, these software programmes do not always integrate as promised (see Figure 1). Quite often they can result in emotional hassles (Basch & Fisher, 2000). As per Figure 1 these 'hassles' (or the workflow) can lead to responses to the system being perceived as infective and inefficient and can lead to the creation of feral information systems.

Insert Figure about here

Lazarus (1981) defined hassles as being petty annoyances, frustrations and unpleasant surprises that are experienced in every day, which have a tendency to accumulate into a negative life experience for an individual. For example, a hassle can be having an argument with a colleague, losing a mobile phone, or being late for a meeting. In this instance, we refer to ineffective software that is sanctioned by institutions as hassles. Opposing hassles are referring to uplifts that include satisfying experiences, such as: receiving a job promotion, eating an appetising meal, or having an effective workout session. As such, uplifts create an emotional better against the hassles that have the potential to impact on an individual's psychological social well-being.

To explain Figure 1 even further, such systems are seen to create an emotional pressure on employees because they directly interfere with the daily processes of work life. Large-scale process driven ERP (Enterprise Resource Planning Systems) are used by Institutions to create standardised work processes. In creating standardised work processes, workers are faced with an abnormal

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pressure to conform to the pressures of the system by following the 'standard' or to invent 'workarounds' to cope with the rigidity of the new process (Kerr & Houghton, 2008). This rigidity creates a hassle for employees, as they need to learn ways to workarounds the systems to solve novel problems as they occur.

To make sense of this from the organisational side we introduce Affective Events Theory (Weiss & Cropanzano, 1996) and Institutional Theory (Selznick, 1948) compliment each other and serves a vehicle to explain why members step away from organisational norms (e.g. sanctioned work processes using specific software) and create feral systems as our first line of discussion. Institutional Theory is used to explain these technological pressures (Zucker, 1987) that create a 'hassle' for the individual users and the 'uplifts' (Basch & Fisher, 2000) that they experience when creating feral systems within their organisation to meet the demands of exchange for goods and services. We make reference to Affective Events Theory (Weiss & Cropanzano, 1996), as it contends that it is these types of hassles that give rise to an individuals negative emotions, which, turn shapes an individual's behaviours and attitudes, as an appropriate keystone for understanding why feral systems are created (Frijda, 1994; Michalak & Ashkanasy, 2013; Weiss & Beal, 2005). Therefore, our second line of discussion will be to understand how institutions create technological pressures for their members by institutionalising ineffective and inefficient software. We argue that it is these ineffective/inefficient software programmes that negatively impact the emotions and job satisfaction of the individual who use them. Our last line of discussion is to apply the two theories to the specific types of affective driven behaviour that members, which result in the creation of feral systems. We intend to illustrate our arguments by using empirical data that was collected using a grounded theory approach and employing the semi-structured interview technique to collect, analyse and interpret data (see Corbin & Strauss, 1990). The sample was drawn from across various European and British industries serving the British Defence Force, in areas such as logistics, electronics and so forth. Therefore, the guiding research question to this paper is:

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RQ: *To what extent do hassles and uplifts influence an individual operator's need to create feral systems within his/her organisation in order to work at his/her maximum efficiency to meet the demands of an organisation?*

Methodology: An exploratory study

This study was exploratory in that the hope to understand why feral systems are created and integrated into work processes. Semi-structured interviews were conducted throughout 2012 and the respondents comprised of male (16) and female (2) using formalised systems within his/her organisation. The theory that is underpinning our research methodology is Grounded Theory (Glaser & Strauss, 1967; Corbin & Strauss, 1990), where we believed the understanding of the 'why' and 'how' with regard to feral systems would be 'grounded in the data' (see Corbin & Strauss, 1990). That is, we formulated our research question, conceptual model, and the appropriate theoretical framework (Institutional Theory and Affective Events Theory, see, Selznick, 1947; Zucker, 1977; Weiss & Cropanzano, 1996) after coding the interviews.

In this way we used the above model to make sense of our findings and to reflect on the coding process. In that vein, in our interviews we coded everything and anything as per the direction that Corbin and Strauss (1990) prescribe when employing grounded theory, which allows for themes to emerge but used our guiding framework to help us understand the findings. We argue that this is relevant here because while themes emerged we are not looking to build a theory about feral information systems, instead we are looking to understand their influence on momentary affectivity. Instead of having a more open process, we found it more useful to use the theoretical framework as guide to understanding these emergent themes. We found that the respondents of this study report that it is institutionalised work process that elicited his/her (negative) affect driven behaviours, which in

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turn, resulted in him/her creating feral systems. For these reasons, we used both theories as a guide instead of just studying the phenomena of feral information systems in isolation.

Theoretical Background: Institutional theory and affective events theory explained

Institutional theory is a broad and expansive theory that provides a comprehensive, but complicated view of organisations (Hatch & Cunliffe, 1997; Zucker, 1987). The theory is underpinned with the notion that normative (internal and external) pressures are what make organisations conform and 'behave' within the society that they exist within, and industry in which it is a member of (Tolbert & Zucker, 1999; Zucker, 1977, 1987). That is, these internal and external normative pressures are placed upon organisations in order for them to meet the demands that they are face with, such as: technical/economic demands and social/cultural demands (Hatch & Cunliffe, 1997). The technical/economic demands are specific to the exchange of an organisations good and service they provide with certain markets that they operate within (e.g. office suppliers, computer component suppliers, etc., see: (de la luz Fernández-Alles & Valle-Cabrera, 2006; Hatch & Cunliffe, 1997; Zucker, 1987). The social and cultural demands are specific to the societal demands that the organisation exist within (Hatch & Cunliffe, 1997). It would be unfitting in the paper if we were to discuss the social and cultural demand at ad nauseam, as we are speaking specifically to the pressures that sanctioned technological processes create for members of an organization and not focusing on cultural issues. However, we do acknowledge that organisations have roles to social and cultural roles to play within society, therefore, have to maintain certain outward appearances that reflect the society in which they live (Hatch & Cunliffe, 1997). Our intention is to focus more succinctly on the technical/economic demands that can either enhance or impinge on a member's job satisfaction. Affective Events Theory (AET) considers the structure of emotional reactions of an individual as equally important as the structure of the environment that he/she works within. While social and cultural norms are important, and could form the basis of a future study, our focus is on understanding the momentary affectivity that people experience and not cultural norms per se. However,

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Institutional theory does address normative aspects to some extent and the micro-processes that people must follow.

Weiss and Cropanzano (1996) argue that time is an important parameter to consider when looking at affect and satisfaction an individual experiences within his/her work life. To understand the fluidity of emotion and mood is to consider that it is time that creates that fluidity, as neither mood nor emotions are static. Weiss and Cropanzano (1996) distinguish mood and emotion from one another with their theory as they impact an individual in different way. As such, emotions are shorter lived and are directed at something or someone specific. They categorise emotions into six specific categories, which are: love, joy, surprise, anger, fear, and sadness. In contrast, mood is a state that is distinguished from emotions, which are three characteristics: intensity, duration, and diffuseness. Mood last for longer periods of time and are not directed at anything or anyone. However, mood and emotions are only one part of what makes the core of AET; the other half of the core are the affective events that happen within an individual's working life. The term 'affective events' was broken down into user-friendly colloquial terms, which are 'uplifts' and 'hassles' (Basch & Fisher, 2000). Uplifts and hassles are what systematically determine affective states (positive and negative affectivity), which, in turn, drive behaviour.

AET asserts that affect driven behaviour is unpredictable (Weiss & Beal, 2005), which can lead an organisational member to being rash in his/her behaviour. Morgan and Heise (1988) explain the structure of emotions are classified in how they are elicited, arousal and activation potential with more activating emotions such anger or fear are more likely to result in behaviours, With respect to anger (an activating, negative emotion), Lemer and Keltner (2001) found that it is the emotions that are most likely to lead individual s to risk seeking choices (see also Michalak & Ashkanasy, 2013). These risk seeking choices typically outside of the acceptable norms of organisation (e.g. creating feral systems at the possible security risk of organisation). We suggest that when individuals are

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faced with inefficient software programmes (a hassle) that directly impact on an individual's work performance, that anger and its subset frustration are elicited.

Data Analysis: Pressures, inefficiencies, and the lack of effectiveness

Azad and King (2011) acknowledge that individuals either bypass organisational rules to make his/her day to day work processes fluid or bypass the system (i.e. creating feral systems) that is embedded by the institution's rules. The creation of the feral systems are seen as a way to continue to work effectively given the normative pressure of the system and the work environment. It's not to say that actors are deliberately setting out to break rules, create anarchy or even be deviant, though that may be a reason. These systems are created to enable workers to reach performance goals so that they can find ways to achieve set tasks. To restate, we argue that affect and stress play an important role in the creation of these feral systems as it is the inefficiencies that a drivers to job dissatisfaction. In the following section, we break down these responses and example some examples of this kind of behaviour.

The first example of an employee of at Vesta Control Systems (a military contractor for electronics) here is speaking about bypassing the formal system because it is time consuming and his organisation does not have the resources to implement a more capable system. Instead the company replaces an ineffective system with another ineffective system. To illustrate:

The formal system is not capable, capable but maybe it's like they don't have the resources or the - they just want to make something quick. And instead of spending a lot of resources and developing their formal system and they know they're going to remove it with SAP.

Institutionalised formal systems that are immobile software systems for members who need to transport with them to go to job sites create a hassle. Keith talks about how his job is not fixed to one spot, needing him to be able to have a mobile system that will enable him to do his job. Keith says

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that the formal system may have the tools that he needs, but is ineffective in the way that it is not transportable, forcing him to work off of a laptop:

This official system, whilst no question about it, provides me most of the tools that I need, has limitations in terms of it's in this office and I'm the lecturer and I've got to go from here to others. You could say well then you can log in everywhere. But it is not - I'm being asked more and more and more to lecture in places where this is not available.

Keith suggests that it is hassles such as immobility that members of organisations create feral system in order in order for him to do his job effectively, further:

That's also to do with the old business that regardless of whether or not you subscribe to the view that knowledge has power, it's still, this is my thumbprint.I think there's a degree to which systems will always suffer from the needs of the individual versus the need of the enterprise.

What we can summarise from the example above is that Keith experiences a hassle when the immobility of system fixes or controls both his individual performance and the way in which he, as in individual worker does he job. Keith speaks of the uplift experienced by creating feral systems to enable jobs to be completed. He also makes the interesting point that the uplift stems from a conflict of individual performance expectations versus the normative pressure of the institution and it's 'system'. This example demonstrates how the hassle, leads to the uplift through the creation of the feral system.

Similarly, Allistair, an ex-military member, speaks about the operating systems that parallel each other in which he has been using as a military member and now as a civilian employee of the British Defence Force. As such, he does not see the operating systems that are operating in conjunction of one another the formal system and the feral system, simply, he see them as parallel system working together in order him to perform in his role. To illustrate,

...But I wouldn't say that that's - we're operating on an independent parallel system, I guess we're just operating - I certainly operate something that gives me the flexibility to move around.

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He believes that the operating systems serve a purpose and can streamline information for him, but when reporting the information to his high echelon he has to use a feral system to be able to put context around it. He uses the example of the database he used as a commanding officer to track the fitness of his soldiers, however when reporting it his chain of command, he had to report in alternative software, because his primary software would lose context. To illustrate:

I kept data for my squadron, which was accurate, and I kept data that I want to present to my brigadier because I knew that if I gave him the correct information that he would misunderstand it. He wouldn't necessarily look at the assumptions that were underneath the data. Indeed the database often did not allow for assumptions as to why you got behind in the data.

In the same vein of software keeping context of the information that is needed to report, Anastasia speaks about her experiences with Agresso. This software was introduced to enhance efficiencies within her workplace, but she believed that it was not introduced by her organisation properly, leaving it up to her to learn and understand. Anastasia explains that as a result people were more hesitant to try the system because it wasn't introduced properly:

...25% will be always negative if you are lucky 50% will be [like] let's give a try maybe and 25% (if you are lucky) will say yes change is good ...sometimes it is the issue of transparency how they are introduced and why they are introduced explain that and then be consistent instead of having different answers as to why things are done...

It is these types of inefficiencies in the software that are integral to a member's work process and institutional pressures that he/she work within that elicit affective reactions. In the example of Alastair above, the institution is putting pressure on him to perform but the systems do not adequately support him in this work. His immediate superior wants information to be clear, concise and presented in a way in which the conditions of its collection or not are not necessarily important. The 'hassle' expressed by Alastair leads him to create feral systems to present 'accurate' data to his boss because the institutional system does not have clear goals or data to support his work. In the subsequent example, we see a similar 'storytelling' idea that speaks to the nature of sensemaking in this situation (Houghton and Mackrell 2013). Needing different answers for different purposes creates the need to

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tell different stories to different people. In the following section we focus on the kinds of emotional responses elicited by the creation of feral systems.

Affect driven behaviours and feral systems

It is Affective Events Theory that “focuses on the structure, cause, and consequences at work” (Weiss & Cropanzano, 1996, p. 11). With that said, this is how we believe AET could be related to Institutional Theory as it focuses specifically on affect driven behaviours and judgement driven behaviours that institutionalised work processes can elicit within the individual of an organisation. Affect driven behaviours are a result of affective events, whereas, judgement driven behaviours are mediated by job satisfaction. Institutionalised work processes, such as the use of specific software (e.g. Oracle, PeopleSoft, SAPR3, Agresso, etc.) can create hassles that elicit negative emotions, which in turn, creates feral systems. Perversely, feral systems have the propensity to elicit ‘uplifts’ within individual and possibly increase job satisfaction, if an individual deems certain software work processes (e.g. Agresso, Oracle, PeopleSoft, SAPR3, etc) as inefficient and a ‘hassle’ (see also Spierings 2013).

Mark’s situation with the Agresso operating system and the overall formal information systems within his organisation that he was using to track equipments and supplies was flawed in that it, “was not reflective of reality in this instance the indication to me was the vehicles were going backwards instead of doing a 100,000 it was doing 96”, leaving him with feelings that range between despair and apathy. For example when he speaks about the formal information systems that is implemented in his organisation, Mark is very clear in how believes it is inefficient:

...The IT systems in this place are bad – they drive me to despair...

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This ineffectiveness has led Mark to a feeling of apathy toward the formal processes that are in place within his organisation, as he is more concerned about meeting the expectations of job performance:

...I don't care – it didn't work, it didn't do what I wanted it to do - I didn't have faith in it or confidence in the information that was being fed to me...

As a result of the software not working, Mark felt justified in creating a feral system because it reported accurate data compared to the formal system, which is a clear example of affective driven behaviour. His justification is based on his desire to remove the hassle of an inadequate institutional system. Anastasia is explicit about how introducing new software into the repertoire of her job is frustrating because of the learning curve this involved:

For me personally what frustrates me for instance if I take Agresso one of the things I really need to do is to breakdown my day to half an hour or so the problem for me is when there are not codes that it can really express what I have been doing.

Teri feels challenged by the formal processes that he/she had to work within, as a ward manager within a hospital setting. Teri says that the centralised system CARDEX replaced the old process of, “nurses used to go around with scrappy bits of paper in their pocket”. However, the hassle of the inability to write patients information on the spot created a problem for nurses. That is, with CARDEX being a centralised reporting system for nurses, having to walk over to the centralised system was not only a hassle, but also it interrupted their workflow as well.

...so we talk about the nurses with paper in their pocket they have that information on them rather than having to go back to the central point to look at the CARDEX...

This hassle became a security as it was the ‘scrappy pieces of paper’ that were a concern for privacy and patient confidentiality, as nurses would then input the information from their scrappy pieces of paper into their own personal data bases (e.g. Microsoft Excel):

...but people were maintaining private records on computers that were not designated – some had it on their own laptop or PC's at home and that was a contravention of the data protection

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act because that is expressly forbidden – you don't keep personal details electronically without consent

Having this particular type of feral system, not only circumvents the organisations formal processes, but its risk taking behaviour, in that, it become a breach of security. Therefore, it can be interpreted that it these centralised formal computer software programmes that create affect driven behaviour, so much so that members will disregard the negative outcomes for all stakeholders involved.

Discussion

The cost of creating feral systems to the organisation has yet to be calculated, however, it is enough of an issue for us to explore. As such, a noteworthy contribution that this paper gives is an understanding of how emotions drive decisions in creating feral systems. This, in itself, has not had an in-depth exploration, as the information systems literature has been more about the mechanics of software vice instead of about the humanness of users. Weiss and Cropanzano's (1996) Affective Events Theory gives us the latitude to explore the humanness that is emerging from the data that has been collected through the semi-structured interviews, which, in turn, helps us to 'fill in the gaps' of understanding the 'why' and 'how' of members of organisations create feral systems.

This work is in its early stages but it provides some insights into how some employees are handling the hassles of poorly fitting software in their workplace. The software industry could not afford to produce individually tailored software solutions as they attempted to in the past and have moved towards a more generic approach by producing software that is meant to integrate IT resources across the organization through the production of a universal standard. Unfortunately for many employees this universal standard does not fit into their work situation leading to frustration and anger and a perception that it is a "hassle" to work with the corporately condoned software product. For suitably skilled employees this has led to the development of feral systems as a workaround in order to reduce the hassle and get their work done. The lesson for management here may be finding ways to

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reduce the hassle of poorly fitting software for employees through better software and more streamlined, contextually relevant work processes.

Finally we future research could explore the connections between workflow technologies and momentary affectivity to learn more about the problems discussed here. In particular, what kind of emotional responses and institutional pressures do we see emerging from the interconnection of workflow technologies and people? These questions need fair attention in future research.

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Figure 1: Conceptual model of workflows, momentary affectivity, and feral systems.

