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Writing by academics: a transactional and systems approach to academic writing behaviours

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ABSTRACT
The literature on academic writing in higher education contains a wealth of research and theory on students’ writing, but much less on academics’ writing. In performative higher education cultures, discussions of academics’ writing mainly concern outputs, rather than the process of producing them. This key component of academic work remains under-theorized, and the exact nature of the challenge of academic writing is understated at best and misunderstood at worst. This paper offers a new approach to academic writing, based on a transactional and a systems model, which aims to understand academic writing practices. This paper offers a new explanation of the challenge of academic writing, defining factors that enable and inhibit academics’ writing.

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Introduction
Performance-based research funding systems are used in many countries to inform the allocation of research funding to universities and act as a benchmarking exercise for efficiency and productivity (Auranen & Nieminen, 2010; Hicks, 2012). Performance in this context is by and large based on research outputs, by means of publication rates. As writing is essential to research output, one would expect that writing is an essential activity for academics and central to workload planning and strategies. However, while university policies represent research output as a core activity, some academics are more productive in writing for publication than others. Several studies explored reasons for levels of staff research output, and some explored the characteristics and behaviours of those who are more productive (e.g., Boice & Johnson, 1984; Grant & Knowles, 2000, Mayrath, 2008). While there is a body of research and theory on students’ writing, there has been less theorizing on why and how writing practices develop for academics (e.g., Lea & Stierer, 2011; MacLeod, Steckley, & Murray, 2012; Moore, 2003; Murray, 2013; Murray & Cunningham, 2011). This paper presents two models which should be considered when addressing this issue: a transactional and a systems model of academic writing. The aim of this paper is to make sense of the process whereby academics produce research output.
Academic writing as a form of behaviour

Although writing can be viewed in many ways, the act of writing, in other words generating text, requires the academic to take deliberate action. Academic writing is therefore a behaviour (Hjortshoj, 2001; Murray & Thow, 2014). As such, it lends itself to models of behaviour and behaviour change. When considering how to theorize this behaviour, it is useful to consider the historical ontological debate regarding the origins of behaviour (e.g., Pepitone, 1981). This debate is concerned with the question: does behaviour originate in the individual, or does the individual act out a role as a result of the structures in which they operate? Sociologists traditionally considered ‘structure’ to be the determinant of behaviour: behaviour is not determined by the individual but by the patterned arrangements of the economic and cultural structures of the society where the individual lives. Psychologists traditionally considered behaviour to be sited within the individual: the individual has agency or free will, as they are able to behave differently from the society of which they are a part.

The debate has evolved. The concepts are not considered mutually exclusive, and the importance of both structure and agency is recognized. In more recent debates, an individual’s behaviour is viewed as grounded in the structure of their society, but the individual has the choice to alter the structures of society, as they are considered an active participant.

Although this paper is not a debate about ontological positions regarding the determinants of behaviour, it is important to clarify our ontological stance, as it is the foundation for the approach we propose. We accept the importance of both a writer’s social structures and their free will or agency to act within and influence these structures. In relation to academic writing, this means that any proposed approach must give consideration to the role of agency of the writer in their writing, but equally must consider the structure in which the writer is embedded.

However, when considering the determinants of behaviour, we also need to consider that agency and structure only refer to the balance of the locus of decision-making (individual and society); they do not explain the internal and external processes that determine an academic’s writing behaviour. Deci and Ryan (1985) explained this in relation to agency, often referred to as control:

There are very important differences between the concepts of control and self-determination. Control refers to there being a contingency between one’s behavior and the outcomes one receives, whereas self-determination refers to the experience of freedom in initiating one’s behavior. (p. 31)

In other words, there is a difference between agency, which refers to the potential to act wilfully, and the control beliefs the agent holds over the different domains of behaviour. These are the individual’s beliefs regarding the behaviour required to achieve a desired outcome, about the characteristics of the individual to perform the behaviour and that the situation on which the behaviour will act is susceptible to change. This is also true for structure. Knowing that the external world helps to shape the individual’s behaviour does not mean we know how this world is constructed; nor have we fully accounted for how it influences behaviour.
A transactional systems model

The purpose of this article is to propose an approach that considers both the internal and external processes that determine academics’ writing practices. The approach presented draws on three existing models. Firstly, the transactional model of stress (Lazarus & Folkman, 1984) provides an overarching framework within which to view writing as a coping behaviour, which includes the interaction between person and environment. Secondly, the behavioural model of coping by Van Egeren (2000) provides a model for exploring the individual’s internal processes by considering control beliefs as a concept of cognitive appraisal. Thirdly, the ecological systems theory of Bronfenbrenner (1979) provides an approach to understanding external influences on the person. We will discuss each model in turn, suggest how they can be integrated into a functional approach of writing behaviour and explain how this provides an enhanced understanding of the challenges academics face in writing. It should be noted that an attempt to combine positions of structure (external processes) and agency (internal processes) are not new, and we do not claim that this has not been attempted before (Lillis, 2001). However, writing approaches to date have mainly focused on students’ writing, whereas the approach presented in this paper focuses on academics’ writing.

Transactional model of stress

Lazarus and Folkman (1984) argued that stress is not a constant, but should be viewed as a process where several independent but associated aspects of the stress process can be identified. This model is based on the premise that the experience of distress (the outcome of the stress process), and the individual’s behaviours to deal with a trigger for the stress process, that is, a specific person–environment relationship (also called the ‘stressor’ or ‘demand’), is dependent on the individual’s cognitive appraisal of this trigger. This includes primary cognitive appraisal of a situation, a unique relationship between the person and his or her environment, and secondary cognitive appraisal involving cognitive appraisal of the resources available to the person to cope with this relationship. Primary cognitive appraisal of the relationship can be classed as either harmful, threatening (potentially harmful) or challenging, which leads to a stress process. Conversely, the relationship can be classed as non-threatening, which will not evoke a stress process. Only a primary cognitive appraisal of harm, threat or challenge will initiate a secondary cognitive appraisal of the person’s resources to cope. Primary cognitive appraisal of stressors as harmful or threatening is suggested to be associated with negative affect, whereas challenge is associated with positive affect, as a challenging cognitive appraisal will allow the individual potential for growth and gain.

We suggest that the process by which an academic commits to producing research output depends on the primary cognitive appraisal of the need to write. In other words, it depends on the appraisal of the demand to produce academic writing, whether writing is perceived as benign, non-harmful, harmful, threatening or challenging. If the academic perceives the absence of writing to be non-threatening, why would they behave differently? This means that writing will not be prioritized, no matter how much the individual is encouraged, coaxed or coerced to write. Any intervention should therefore prompt a primary appraisal of harm, threat or challenge, or a change in
be behaviour will not occur. However, if the individual perceives the absence of writing, when the demand is not met, as potentially or actually harmful (e.g., poor performance review, job loss or financial loss), a stress process occurs when secondary cognitive appraisal takes place. The difference in the positive or negative affective cognitive appraisal of a demand depends on this secondary cognitive appraisal.

Secondary cognitive appraisal is concerned with the appraisal of the individual’s coping resources to deal with the demand identified in the primary appraisal. The individual’s coping resources in the context of writing refers to the behaviour, and all its antecedents, required to produce writing. Primary and secondary appraisal will determine an academic’s coping strategies. Coping strategies are those behaviours that aim to moderate or mediate the stressor – in this case, any behaviours performed by the academic to enable them to produce writing (problem-focus coping), or any cognitive/behavioural strategies that aim to reduce negative feelings associated with cognitive appraisal (emotion-focused coping). Lazarus and Folkman (1984) suggested that a positive secondary appraisal of the person’s coping resources is more likely to lead to a cognitive appraisal of challenge, whereas negative or ambiguous secondary appraisal is more likely to lead to the perception of threat or harm.

We will use the concept of ‘perceived control’ to expand on the concept of ‘secondary appraisal’ within a stress process model. Perceived control refers to the beliefs of the individual, regarding their ability to influence an outcome, a concept that originates in the field of personality and social psychology (e.g., Bandura, 1989; Rotter, 1966; Skinner, 1996; Van Egeren, 2000).

**Perceived control within a transactional model**

There are many concepts in the psychology literature that describe perceived control. A wide variety of terms is used to describe an individual’s beliefs regarding the ability to influence the outcome of a situation: personal control, sense of control, locus of control, cognitive control, outcome control, primary control, secondary control and proxy control (Skinner, 1996). Other constructs that do not explicitly use the word control but appear closely related include helplessness, efficacy, agency, mastery, effectiveness, competence, contingency, causal attributions, explanatory style, responsibility and outcome expectancy (Skinner, 1996).

Established frameworks such as Bandura (1997) propose three domains of behaviour. A framework of perceived control was further developed by Van Egeren (2000), who proposed a fourth domain. In terms of secondary appraisal of coping resources, he argued that a behaviour does not produce an outcome directly, but that this outcome is achieved by performing a behaviour that manipulates a particular situation. He proposed that the agent has beliefs not only about the behaviour required, and the outcome this behaviour may result in, but also about the potential for change. Furthermore, he proposed that the agent holds beliefs about the relationship between the outcome and the agent. In other words, how does the agent benefit from the outcome, if it is produced? In Figure 1, each arrow represents one of four beliefs held by the agent about the relationship between each of the domains. Van Egeren argued that the agent must have sufficiently strong beliefs in each of these relationships for coping behaviour to occur. Should any of these beliefs be insufficient or negative, coping behaviour would not occur, and the
individual experiences increased distress and negative emotions. For the lack of belief in each domain, he attributed specific negative emotions.

It is therefore posited that if the person–environment relationship is perceived as harmful or potentially harmful, a secondary appraisal of the person’s coping resources takes place. When we apply this to academic writing, we assume the scenario where the academic perceives the need to write or produce research output to avoid potential or actual harm (e.g., poor performance appraisal or lack of progression in a doctoral degree). When we then look at the process of secondary appraisal, we need to consider the academic’s beliefs about performance, process, prospect and profit.

This means that in relation to performance belief, the situation must be perceived by the individual as solvable. This would include the academic’s beliefs regarding their internal capacity and motivation to perform these behaviours. For example, this includes their ability to compose an article (Lillis & Curry, 2010), to come up with an idea for a research project and the discipline to write. Boice and Johnson (1984) found that productive writers appeared to be writing regularly rather than sporadically and also had little anxiety about writing, portraying strong performance beliefs. A negative belief regarding the academic’s ability would result in negative thought patterns regarding performance of ‘not being good enough’. Negative or weak performance beliefs would also lead to feelings of inadequacy, wounded pride, shame, embarrassment or humiliation. These feelings are recognized in the concept of writer’s block (Hjortshoj, 2001).

The second concept is the process belief that a situation can be manipulated to achieve a desired outcome. The individual must have sufficient belief that they know what is required to produce the desired outcome. This assumes knowledge of the process of writing from conception, to submission, to successful publication. In addition, this can refer to the balancing of academic duties and fitting writing into daily work commitments. This is one of the reasons frequently identified by academics as a barrier to writing (MacLeod et al., 2012; Moore, 2003), when teaching commitments are prioritized over

![Figure 1. A behavioural model of coping (adapted from Van Egeren, 2000).](944) L.E. KEMPENAAR AND R. MURRAY
scholarly activity. The perception that the academic has no control over the time that may be dedicated to scholarly activity – that is, a negative process belief – is likely to lead to emotions associated with the experience when personal will or imposition of control of a situation is blocked, such as irritability, anger, resentment, hostility or rage. In contrast, the ability to prioritize time and energy to writing is a characteristic of many productive writers (Mayrath, 2008).

The third belief is **prospect belief**, the belief that an outcome is predictable. In relation to academic writing, this can, for example, be in relation to the unpredictability or lack of transparency regarding the decision to accept, or reject, an article by a journal or conference organizer, or the submission of research outputs for research assessments (Reidpath & Allotey, 2010). For example, Murray (2012) found that some academics used the word ‘traumatic’ when an article had been rejected by a journal. On the other hand, Boice and Johnson (1984) found that productive writers had no anxieties about the ‘editorial process’ (strong prospect belief). Another area of ambiguous prospect beliefs can be the lack of clarity around the task that is expected to have primacy within an academic’s workload at a specific time. A negative or weak prospect belief can lead to emotions associated with uncertainty about the future, and this can include anxiety and fear, as was found by Leisyte and Westerheijden, when reviewing the impact of research assessment frameworks (2014). This was also recognized by Grant and Knowles (2000) when female academics expressed fears and anxieties about their writing, with the fear of being exposed as frauds when their writing was published. Furthermore, some academics described perfectionism as an obstruction to writing (MacLeod et al., 2012). Perfectionism can be characterized as setting unachievable high standards and is likely to lead to anxiety (Flett & Hewitt, 2002), as the person becomes overly self-critical and concerned with other people’s evaluations.

The fourth belief is **profit belief**, and this relates to the academic’s belief that the positive outcome of academic writing will lead to a particular benefit, whether this be improved academic status, financial benefit, career progression or personal gratification. A negative profit belief can lead to emotions associated with loss of an anticipated outcome, such as grief or bitterness. This can occur, for example, when completion of a doctoral degree or increase in publications does not lead to career progression or promotion.

As described, a negative or insufficiently strong belief in any of the domains may lead to negative emotions, resistance or writer’s block. This is particularly likely if the negative emotions associated with writing outweigh the negative emotions of not meeting the demand for research output. Rather than addressing a single aspect of the academic’s beliefs about their writing abilities, a model of perceived control as a means of appraising coping resources could, therefore, be helpful in identifying where barriers and opportunities for interventions might lie.

Having looked at the processes within the individual, we will consider the social and contextual aspect in which the individual is situated. For example, to understand why someone is not writing we need to break the problem down into its social and psychological constituent parts. It is not helpful to look at the problem as either, when it is likely to be both.

We propose to apply a transactional model of behaviour to academics’ writing which uses primary appraisal, as the process by which the individual determines whether or not a demand requires a change in behaviour (Lazarus & Folkman, 1984). In terms of
determining the resources and resultant behaviour, as a means of coping with the appraised demand, we propose the control belief model by Van Egeren (2000). However, while this may be helpful in understanding writing behaviour, we indicated in the introduction that the authors take a stance between agency and structure. This means that while the process of appraisal takes place within the individual, the individual is situated in an academic context. Furthermore, the transactional theory of stress recognizes that demand is produced by a relationship between the individual and the environment, and the appraisal of the demand is informed and shaped by the structure in which the individual is embedded. Bronfenbrenner’s (1979) ecological systems theory can be used to analyse the different domains of the writer’s structure and how these may influence them. We first introduce Bronfenbrenner’s theory, before discussing in more depth how we view the relationship between the academic and their context.

**Ecological systems theory**

Bronfenbrenner defined a ‘human ecology’, intended for application in child development. He proposed five interlinking systems to help us understand the systems in which the individual is sited: the microsystem, mesosystem, exosystem and macrosystem and later added the chronosystem to reflect the influence of time.

At the centre of the system, the individual (Figure 2) is sited in a microsystem. For an academic, this refers to their academic work environment, but could also include their home situation. The immediate academic environment in which the person is situated can include the individual’s department and colleagues, immediate line management and other groups with whom the individual relates directly, who all value writing in a particular way. This may include supportive colleagues, mentors and sponsors who provide individual encouragement. Interestingly, successful and prolific writers have been described as creating or positioning themselves in supportive microsystems by working in centres of excellence and surrounding themselves with teams of students with whom they consistently and effectively collaborate in research activity and output (Kiewra & Creswell, 2000; Mayrath, 2008).

![Figure 2. Bronfenbrenner’s five systems (adapted from Bronfenbrenner, 1979).](image)
The mesosystem refers to the interconnections between people in the microsystem. In the academic setting, this refers to relationships and interactions between colleagues and peers and their relationships with line management. A department may have a culture where colleagues give each other space, time and support to achieve their writing goals. Then again, there may be competition between colleagues in terms of the number of publications or impact factors achieved, which may mean that peer support is not considered helpful for achieving individual goals. At the mesolevel, line managers may or may not be supportive of an individual to publish, as they determine workloads with different priorities assigned to individuals, because line managers have their own goals and demands that must be achieved within departments: teaching, administrative activities and balancing the needs of all members of the department to perform across the different roles of academics. These goals and demands are likely to be informed by the exosystem.

The exosystem is concerned with the links between a social setting in which the individual does not have an active role and the individual’s immediate context. In an academic context, this refers to the relationship between line management and the university’s higher levels of management, targets, policies and strategies. The academic writer would not directly be influenced by these, but indirectly would be influenced by the boundaries within which line managers and universities function. For example, the influence of the exosystem is considered in studies that explored the multitude of roles that academic staff fulfil, which create competing demands within their workload (Acker & Armenti, 2004; Clegg, 2008; MacLeod et al., 2012).

The fifth element of the model is the macrosystem. This describes the culture in which individuals are embedded. It includes developing and industrialized countries, socioeconomic status, gender, poverty and ethnicity. All aforementioned systems are embedded within the macrosystem, as we are all part of a larger cultural context. Members of a cultural group share and contribute to a common identity, heritage and values. In an academic setting, this can refer to several cultures, such as academia and its values and history, but it also includes the larger society in which universities and individuals are embedded (Ainley, 2003; Ball, 2003; Jones & Thomas, 2005). Furthermore, universities are embedded in national and international political structures and economies which determine policies and values, as can be seen in the development of theories regarding academic capitalism and globalisation (e.g., Kauppinnen, 2012; Butler, Delaney and Sliwa, 2015).

A later addition by Bronfenbrenner was the chronosystem, which referred to the occurrence of environmental events and transitions over the life course, as well as sociohistorical circumstances. In an academic context, this could refer to the changing status of universities, as many colleges were transformed into universities, or to the professionalization of many occupations.

Although this model was developed with child development in mind, adults and their writing practices can be viewed as being somewhere along a continuum of life-long learning. This makes this model highly applicable to academics and the developing nature of their writing practices.
A transactional and systems approach of academics’ writing

Aforementioned models are traditionally represented in diagrams (Figures 1 and 2), which convey linear relationships and defined concepts. What we are proposing is that while this is a helpful way to depict the separate models, to combine the two diagrammatically would artificially impose linear relationships on the academic writing process. We need to consider both models when addressing the issues of low publishing rates and non-publishing academics. We propose that both internal and external processes must be explored when considering academics’ writing behaviours and practices, because interactions of internal and external processes are multidirectional and ‘messy’.

We suggest that the relationship between the academic writer and the demand of the person–environment relationship to produce writing is appraised internally by the academic in terms of a potential or actual threat, or challenge posed by this relationship. This triggers an internal, secondary appraisal process which determines the academic’s resources to write, which can be broken down into a set of control beliefs about the different domains of behaviour required to write productively and successfully. This means that the individual’s appraisal of the resources, opportunities and barriers, and the environment to meet the demand for writing subsequently determines the behaviour performed, that is, to write or not to write; when to write; and the extent to which the academic is committed to and invested in writing.

We have proposed that the intensity and nature of these control beliefs determines if and how the academic moves into action, that is, addresses the demands for publications in terms of their writing behaviour. While this process appears to be linear, and has been represented this way, when we consider where the individual’s structure fits in this model it becomes tricky. We did consider a number of ways of illustrating this. For example, we envisaged the internal process to be embedded in the structure, by means of placing the internal process within the microlevel, like the centre of an onion or Russian doll. However, within the control belief model one of the domains is concerned with the appraisal of a situation as being solvable. This would mean an inversion of the visual representation, that is, the system as represented by the onion, as a corner of the cycle of control beliefs. This in turn has its limitations, as the other control beliefs have been shaped, in part, by the academic’s structure. In other words, control beliefs are informed by the individual’s biological characteristics and experience, but they are also shaped by the system or ecology in which the individual is located in both past and present.

Conclusion

Performance-based research funding systems are likely to continue to be used across the globe, for many years to come. We should, therefore, continue to find ways to understand and subsequently support academics in their writing efforts. The transactional and systems approach to academic writing presented in this article provides a new perspective on academics’ writing behaviours. This renewed understanding of the complexity of determinants of whether or not to write and how to write, shows that – and explains why – it is far from straightforward. Rather than addressing a single aspect of academics’ beliefs about their writing abilities, a model of perceived control as a means of appraising coping resources, while considering their structure could, therefore, provide a way of
exploring where barriers and opportunities for intervention might lie. The pros and cons of integrating the two models, which we argue would oversimplify the issues and invite linear thinking, is an issue for future debate.

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