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An information behavior theory of transitions

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Abstract

This paper proposes a theory of life transitions focused on information behavior. Through a process of meta-ethnography, the paper transforms a series of influential theories and models into a theory of transitions for use in Information Science. This paper characterizes the psychological processes involved in transitions as consisting of three main stages, Understanding, Negotiating, and Resolving, each of which have qualitatively different information behaviors and which require different types of information support. The paper discusses the theoretical implications of this theory and proposes ways in which the theory can be used to provide practical support for those undergoing transitions.

1 | INTRODUCTION

We all face challenging times at some points in our lives. Major events such as illness, bereavement, or new parenthood may require us to seek out information at a time when we are stressed, frightened, or psychologically vulnerable (Ruthven et al., 2018a). Alternatively, we may come to feel that our current life is no longer satisfying and we need to create a more meaningful existence (Ruthven, 2019) or a new opportunity may become available and we need to work out how to make best use of it (Jablin, 2001). Some life transitions are more difficult than others and the information behaviors we use in everyday life may not be appropriate for obtaining useful information during a significant life change. Information, however, is critical in tackling these changes.

Life changes mean disruptions to how we normally live our lives. Often these take place within what Clemens and Cushing describe as "deeply meaningful and profoundly personal contexts" (Clemens & Cushing, 2010); areas of our lives that are not routine or every day and therefore may require new and specialized ways of finding information. In his work on *Everyday Life Information Seeking*, Savolainen talks about the established ways we have of interacting with our information worlds. He

refers to these as contributing to a perceived "mastery of life," a sense of ownership, and meaning that gives coherence to one's life (Savolainen, 1995). During a life transition, this sense of mastery and coherence may be challenged, resulting in the need for information to help adjust to a new life. Dealing with these complex life transitions has led to a recent growth of Information Science interest in the general area of life transitions, including significant work on migration (Bronstein, 2018; Lloyd, 2017; Oduntan & Ruthven, 2019), parenting (Greyson et al., 2017; Ruthven et al., 2018b), work transitions (Willson, 2019), language learners (A. Hicks, 2021), getting a new job (Jablin, 2001), and gender transition (Haimson, 2018; Huttunen et al., 2020).

While there is useful theoretical work in other disciplines regarding life transitions, they are often shallow in their descriptions of the information behavior involved in transitions. In contrast, Information Science research has provided many detailed descriptive accounts of transitions, usually in the form of models that describe important stages, variables, or barriers within a specific transition. However, these models rarely reach the level of theory. More often, theory is used to explain findings rather than to create research questions that develop theory, and the problem-specific origin of these transition

models, arising from studies of specific transitions, limit the models' generalizability into theories of transitions.

In this paper, I propose a new theory of transitions for information behavior. This is achieved by performing a theory synthesis on major theories of transitions and then using this theory to provide an information behavior perspective on life transitions.

2 | BACKGROUND

Information Science researchers have studied a wide range of life transitions but only a few have done this from a transitions' perspective. Recent work, however, has seen a move toward using formal theories and models of transitions to underpin Information Science studies. Many other disciplines are also interested in transitions and, as Hicks perceptively notes, transitions have most often been studied by disciplines that mediate change (A. Hicks, 2021). Information Science is arguably one of these disciplines and many authors have reported the value of appropriate information support during transitions.

Studying transitions from an information behavior perspective can uncover new and distinct information behaviors (A. Hicks, 2021), help us understand how emotions and contextual factors influence our information behavior during transitions (Willson & Given, 2020), and thereby how useful information might be provided. In her influential *Transitions Theory*, Meleis discussed how information providers might support transitions through "the conveying of information or experience necessary to bring the role incumbent and significant others to full awareness of the anticipated behaviour patterns, units, sentiments, sensations and goals involved in each role" (Meleis, 1975), showing that transitions often involve a whole-body adjustment.

Transitions are psychologically and emotionally disruptive to the way we experience life. Definitions of what constitutes a transition are loose (Willson, 2019) and transitions can be studied from many angles (A. Hicks, 2021). Some authors try to provide workable descriptions of what it feels like to be in a transition, for example, "The nature of a crisis is that it compresses and heightens stress and at the same time it impacts the individual's focus, priorities, and perspective" (Westbrook, 2008) whereas others simply list information and support needs arising from the situation. Most studies, however, see transitions as movements between two stable life states that involve changes to identity, relationships, and behaviors. As will be discussed in more detail later, there are many open questions as to who labels what is and what is not a transition, as to the difference between

subjective and objective views on a transition, and how best to represent the process of transitions (A. Hicks, 2021; Kralik et al., 2006).

Meleis' *Transitions Theory* is particularly valuable as a framework for information provision, contrasting against most Information Science studies which focus on information seeking. The comprehensive nature of the work by Meleis and colleagues has led to a significant body on research on the nature and characteristics of transitions and her theory has been expanded with formal information behavior concepts (Willson, 2019).

An alternative approach, and one that is probably the dominant approach to transitions, is to investigate transitions as a process: To explore behaviors, feelings, and experiences in qualitatively different parts of a transition. While these theories and models can appear idealistic, appearing to assume linear and clearly defined transition phases, they provide useful abstractions to understand what information behaviors are being attempted at different points in a transition, what barriers may be present, and when information interventions may be most useful, and in what form they should occur. Given the predominance of these theories they are taken as the basis for this paper's attempt to construct a new Transitions Theory for information behavior.

3 | METHODS

The approach taken in this paper is to: (a) Use qualitative theory synthesis to create a general qualitative theory of transitions (b) use this intermediate theory as the framework for a theory of information behavior during life transitions and (c) validate this theory against other transitions theories and models not used in the creation of the original theory. The focus is on the psychological stages of a transition and so the descriptions of the contributing theories will emphasize these aspects, but, as will be shown, the sociological environments in which transitions take place also are important in determining the nature of individual transitions.

Qualitative research synthesis refers to a wide set of approaches that can be used to integrate or contrast qualitative research studies (Barnett-Page & Thomas, 2009). The process followed in this paper is Noblit and Hare's meta-ethnography (Noblit, 2018; Noblit & Hare, 1988), in particular, their approach of reciprocal translational analysis. Reciprocal translational analysis works across multiple studies, translating concepts from one study to another in order to elicit commonalities and thereby develop "overarching concepts or metaphors" (Barnett-Page & Thomas, 2009). As meta-ethnography works at the conceptual rather than the data level, it is a process

of interpretation rather than aggregation (Dixon-Woods et al., 2006). Theory development is one of meta-ethnography's key strengths (France et al., 2019) and the approach has been widely used across social science, with particular success in education, social care and nursing theory (France et al., 2019; Noblit, 2018).

There are seven phases to a meta-ethnographic study (France et al., 2019; Noblit & Hare, 1988). The first phase is determining the core area of inquiry that may be informed by qualitative research, in our case understanding the nature of transitions in a way that is suitable for studying information behavior. Next is deciding what is relevant to this interest, gathering studies to be used in the synthesis and developing methods of study selection. This may take the form of a systematic review but Noblit points to the value of purposive samples.

The data for this study were gathered as part of a major review of life transitions consisting of over 1,000 articles from multiple disciplines. The selection criteria were diversity, quality, and explanatory power. The studies come from different disciplines and, in most cases, each covers a range of transitions. Using them as the basis for a new theory offers the power to generalize across transitions. They also have different foci so are not overly similar from the outset, leading hopefully to better explanatory power from the final theory. These studies have typically been well-received within their own disciplines, arguing to them possessing some underlying value. Most are at the level of theory in that they can provide explanation and a degree of prediction; others are at the level of model providing description of a specific area of life transition.

Generally, they are sketchy on information behavior, focusing more on the psychological aspects of transition, but are clear that information is essential. Some are lighter on detailed descriptions of their concepts but come from extensive practitioner experience and contain concepts not appearing in academic studies. These have been retained following Noblit's advice that we should focus on quality and not exclude on grounds of genre (Noblit, 2018).

The next phase is a process of repeated reading of the original texts to elicit key concepts and meanings. The theories selected all have key phases identified as core elements. These were useful as anchor points for reading the texts and relating them to each other. Then is a phase of determining how the studies are related: Are they comparable to each other, in opposition, or dissimilar but related (France et al., 2019; Noblit & Hare, 1988). In our case, repeated readings and comparisons led to the conclusion that the studies were essentially comparable and therefore this synthesis follows the reciprocal translation analysis approach.

Then follows a phase of translation of the studies into one another by systematically comparing the meaning of the concepts, metaphors, and themes across the studies. In one sense, this is a process of alignment, identifying similar phases in the individual studies, and aligning the phases under common constructs. As a process of interpretation, however, it is more than simply agglomeration, which could lead simply to renaming existing concepts and mirroring dominant themes within the original studies. Instead, the alignment comes from deep and iterative reading across the studies. Although an act of interpretation, translation should respect the original conceptual organization of the studies (Britten et al., 2002): As Noblit puts it, translation is "the translation of the whole interpretations (we like to think of these as storylines) of each study (not the individual themes, concepts, or elements) into one another." (Noblit, 2018). I often worked between text and diagrams: Diagrammatically, using schematic interpretations of the original studies as abstractions of the theories, and textually to clarify, refine, and distinguish what the diagrams were representing. This form of iteration between methods is highly characteristic of the meta-ethnographic approach (Barnett-Page & Thomas, 2009).

These diagrams were then synthesized into a single diagram containing the overarching components and textual explanations of these components. This phase also iterated with the previous one as the synthesis led to new questions about the original studies. Not all theories and models contribute equally to this process and some are focused more on specific parts of a transition. All, however, offered unique insights that, taken as a whole, provide a broad perspective on transitions.

This intermediate theory was then used as a scaffold for creating an information behavior theory by incorporating what is known and what can be predicted about information behavior during transitions. Finally, other transitions models and theories, ones not used in the creation of this framework, were then compared against it to test the new theory.

4 | THEORIES AND MODELS OF TRANSITIONS

The theories and models used within the synthesis are in three groups: Ones that describe responses to events (Crisis Decision Theory, Transitions Curve, and Transitions Cycle), ones that are primarily driven by a desire to change an existing life (Religious Conversion Model, Role Exit Theory) and a model of meaning-making through transitions (Translocal Meaning-Making). Below I shall sketch the main points of each contribution and represent its stages by a schematic diagram.

4.1 | Sweeny's Crisis Decision Theory

Drawing on coping theory but strongly influenced by decision-making, Sweeny proposed a three-stage theory known as Crisis Decision Theory to describe how we respond to negative life events and the factors that predict how we will respond. (Sweeny, 2008), Figure 1.

First, she claims that we *appraise* the severity of the event, seeking information on the causes and consequences of an event. This phase is critical in determining how much cognition and emotion is devoted to responding to the event: Larger threats involve more cognition, take longer to deal with, and involve more complex decision-making. Information seeking for comparison is common as comparisons with our own experiences and comparisons with others' experiences can be used to better estimate the severity of an event.

Then, we determine possible *response options*. If an event appears manageable then Crisis Decision Theory predicts that we are more likely to generate feasible response options. This stage may also lead to a re-evaluation of the original event, either discovering that it is more or less severe than originally envisaged.

Finally, we *evaluate* the response options. The general rule is to minimize time, effort, and change. We also seek information on the direct consequences of a response, preferring to minimize negatives rather than aiming for positives. It may be that much of this decision-making is unconscious and that we have little time to create or evaluate responses.

4.2 | Straus' Religious Conversion Model

Straus's model of religious conversion (Straus, 1979) deals with changes of religious affiliation but generalizes to other life changes that involve seeking a new community of belonging, Figure 2.

Straus proposes that religious conversion is often motivated by the failure of an existing life to provide a sense of meaning and coherence (Straus, 1979). Although he does not describe it as such, there is the sense in his description of something having changed, something we can loosely call an event that encourages reflection on an individual's life. Then, he proposes, people follow a series of stages to conversion. The first stage is simply being receptive to information that may help change a difficult situation, of which religion may be one of several possibilities. There is little strategic information work, rather people act by "groping through opportunities as they turn up" (Straus, 1979). Individuals may not necessarily see themselves as active information seekers but rather as people who are newly *aware* or *sensitized* to information in a particular area of life.

As individuals gain information, they become more aware of new information needs and engage in more *strategic information interactions*. They focus on evaluating sources of information, prioritizing good sources, start interacting with formal groupings and to learn about social norms and practices. This process leads, if they progress this far, to a moment of change—what Straus called "*doing it*"—a conscious act to make a transition definite, even, as Straus claims, many still see the transition as experimental. Then follows a phase which I call "*making it real*" in which the convert "works to make the conversion behaviorally and experientially real to self and others" (Straus, 1979).

Finally, they move into a deeper *maintenance* phase of belonging. The rules and practice of religion are important here to construct a framework for this new identity as is active information use, for example, in the form of reading scripture, to keep the transition alive.

4.3 | Ebaugh's Role Exit Theory

Many transitions are expressed as entering a state or taking on a role, a position, such as patient or parent, with a set of behaviors expected of that role. However, exiting
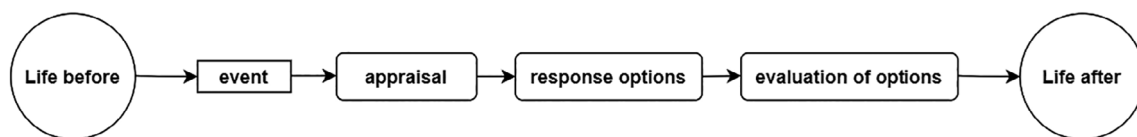

FIGURE 1 Crisis Decision Theory

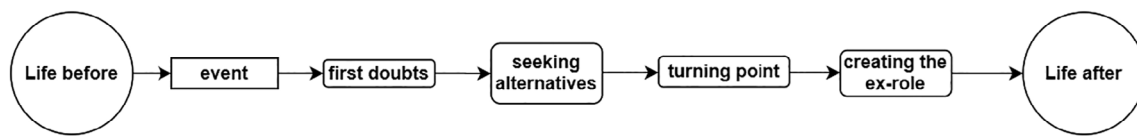**FIGURE 2** Straus's model of religious conversion

FIGURE 3   Role Exit Theory

from roles can also be important and the loss of critical roles can lead to "a sense of utter loss and annihilation" (Ebaugh, 1988). While transitions may be described as "becoming somebody" (McKenzie & Willson, 2019) they can also involve un-becoming somebody. Reporting on the experiences of people including former nuns, former alcoholics, former sex workers, and former doctors Ebaugh investigated this un-becoming process in what she referred to as "role exit" (Ebaugh, 1988), Figure 3.

Unlike other "entry" models, which focus on socialization and new beginnings, Ebaugh's Role Exit Theory focuses on disengagement and endings. In the first stage, *first doubts*, the individual reinterprets a situation that was "previously taken for granted" (Ebaugh, 1988). This starts in a vague way, eventually becoming more specific and conscious. This doubting often happens due to external change or events: Important components of a life context, such as organizational values or interpersonal relationships, have changed and the individual feels no longer able to sustain their current way of living. A loss of idealism and disillusionment is common among those exiting.

The second stage is *seeking alternatives*, searching for, and evaluating alternative roles. A common theme is comparison with previous lives as well as looking for alternatives to one's existing life. Our lives are often difficult to change because so much is invested in them, so individuals usually need to reach a tipping point to change. The *turning point* stage is when something forces the final decision to exit.

The final stage is creating a new identity as an ex, *creating the ex-role*, and learning how to be an "ex." This phase may involve learning new norms and practices of new social groupings, creating new information networks, and deciding how to relate to former members of the "ex" community. This phase can contain specific types of uncertainty. As Light explains, "social roles serve as important resources for self-knowledge," so when roles are exited, the concept of our own self-knowledge can become vague and harder to validate because we lack sources of feedback and comparison (Light & Visser, 2013).

4.4 | The Transition Curve

Many researchers working in organizational change are interested in transitions. A good example, is Young and
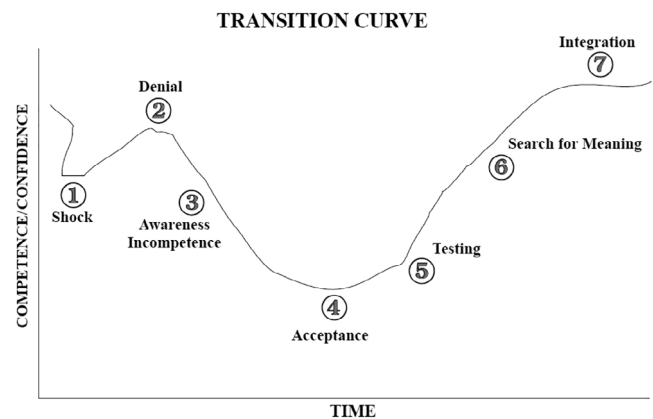

FIGURE 4   The Transition Curve (Young & Lockhart, 1995)

Lockhart's description of the Transition Curve (1995), based on Kübler-Ross's influential Change Curve (Kübler-Ross, 2011), but adapted to organizational environments, Figures 4 and 5.

This curve expresses seven phases of change, starting with *shock*, the initial reaction to encountering a change event. This is an appraisal stage: A discrepancy over how things are and how they were perceived to be causes a dip in an individual's self-perceived competence. Then follows a period of *denial* in which the individual tries to minimize the dissonance about the event to regain some sense of competence. This emotionally useful minimization can block difficult but necessary change.

An *awareness* of the real level of competence causes a drop in confidence. This is when individuals become emotionally engaged in the change process, including negative feelings of frustration or confusion about how to change. The phase labeled *acceptance* is the lowest point. This phase requires letting go of old, comfortable behaviors and attitudes and their replacement by new ones.

Having identified new behaviors, the individual needs to *test* and experiment with them. This phase involves increased confidence as the individual gains knowledge. They can start questioning why new behaviors are effective, *searching for meaning*, and how to use new strategies, taking more control over their changed life. Finally, individuals take ownership for the new behaviors and *integrates* them into their own world view.

4.5 | Williams' Transitions Cycle

An equally informative model is presented by Williams, also based on Kübler-Ross, (Williams, 1999), Figures 6 and 7. This is distinct in several ways, in particular, that it acknowledges that positive events can also cause transition challenges, and thereby compensating to a degree for the traditional social science focus on negative events (Baumeister et al., 2001), and it recognizes that transitions do not always have positive outcomes.

Transitions start with a disrupting *shock* that leads to a process of temporary *adjustment*, then a stage where dissonance is recognized, leading to negative emotions, including *contradictions*, and to a point of *crisis*. Thereafter, is a process of potential *reconstruction and recovery*: Positive change is about accepting the need to change and having the ability and circumstances to do so, or partial recovery, or living a life in which the crisis is never resolved.

4.6 | Allard and Caidi's Translocal Meaning-Making

Allard and Caidi posited a five-step process of what they referred to as Translocal Meaning-Making: The process of making meaning out of the information that migrants encounter or are provided with as they move to another locale. They describe the five stages as (a) *imagining*, using available information including others' narratives, to imagine a new life in a different place and to develop expectations of what that new life might feel like; (b) *dissonance* in which migrants realize the gap in their knowledge and how their imagined destination does not match reality; (c) *increasing sophistication* as personal experiences lead to greater understanding of local practices and context, alongside an ongoing process of reflection on the original imagined life; (d) *reimagining* their new *location* through evaluating their own experiences, and (e) *reimagining* their migration *experience* as they become sources of advice for would-be-migrants to develop their own migration expectations (Allard & Caidi, 2018), Figure 8.

5 | UNIFIED THEORY

The result of the theory synthesis is shown in Figure 9, which expresses an intermediate theory of transitions. This theory proposes transitions as consisting of three stages (Understanding, Negotiating, Resolving) that are characterized by qualitative differences in the psychological states of
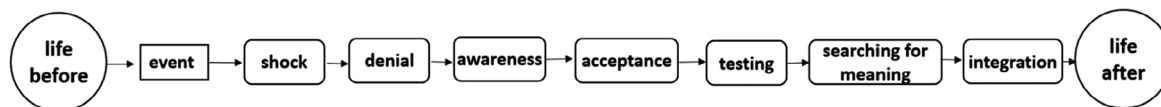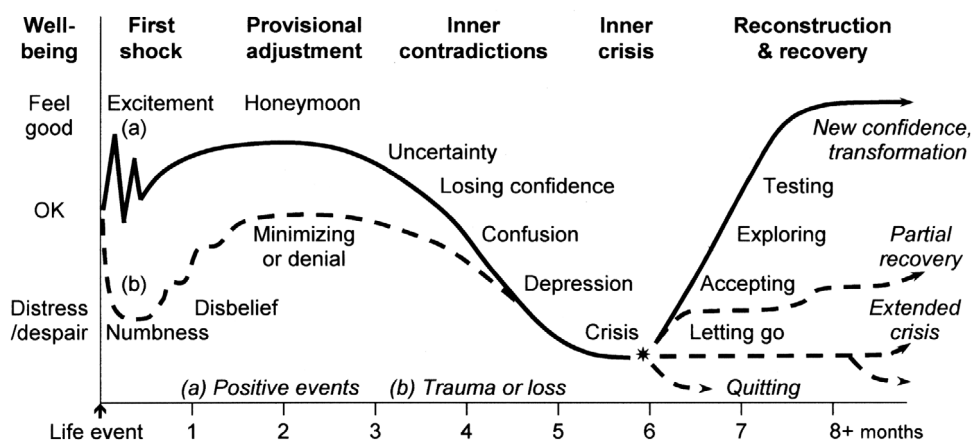
FIGURE 5   The Transition Curve as schematic

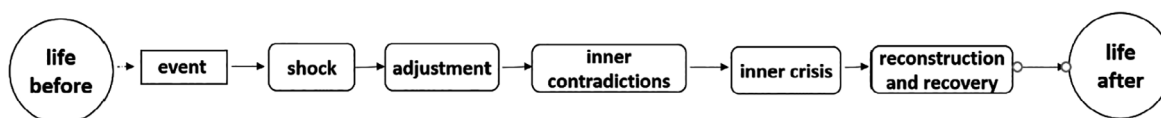FIGURE 6   Williams' Transition Cycle (Williams, 1999)

FIGURE 7   The Transitions Cycle as schematic
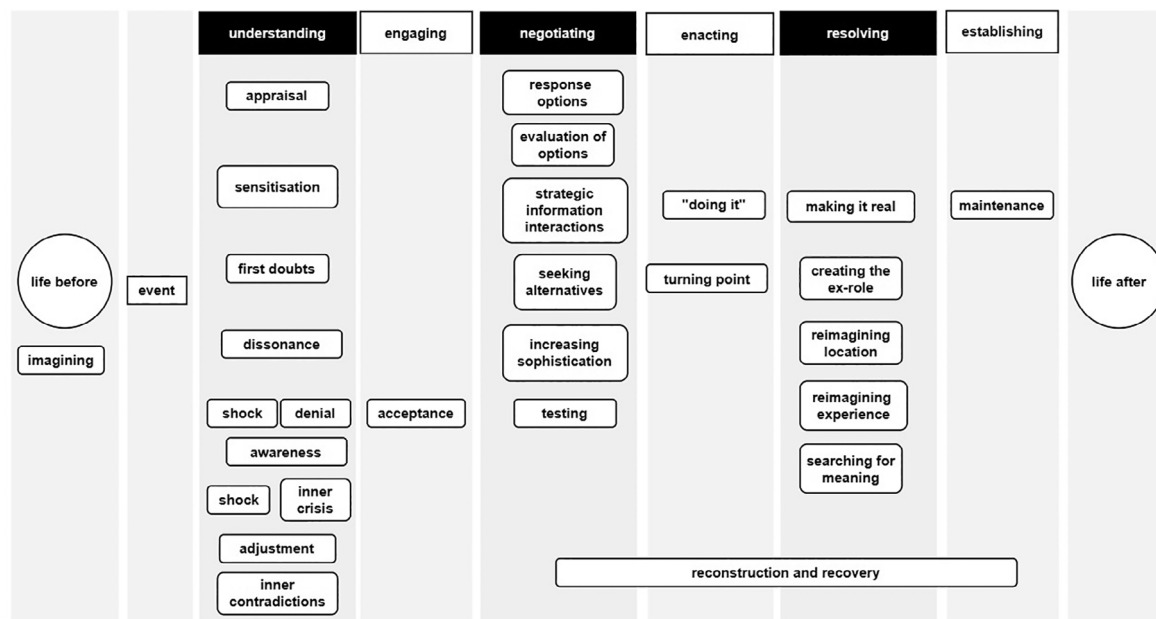
FIGURE 8 Translocal Meaning-Making

FIGURE 9 Result of theory synthesis

the individual undergoing the transition and that are reflected in the information behaviors that occur at that stage. The transition period is book-ended by an individual's life before and after a transition, is initiated by an event, and has three major processes (engaging, enacting, establishing) that mark shifts from one stage to another.

This is a developmental theory in which a transition develops from general to specific, from a situation where the nature of a change is vague, probabilistic, and has many possible outcomes, to a situation where change is specific, concrete, and has resulted in new behaviors and a new identity. The direction of transition is forward but exiting and looping backward is possible as will be discussed below.

This intermediate theory is used to develop the information behavior theory shown in Figure 10 and explained in the rest of this section. For the start and end points (life before/after), the theory describes the main features of an individual's information world; for the main phases (Understanding, Negotiating, Resolving), the theory proposes the main aims of the phase and the information behaviors that primarily characterize the phase; and for the transition processes (event, engaging, enacting, establishing) the theory describes the main factors that characterize movement from one phase to another.

5.1 | Life before

Life before denotes the generally understood way of life before a transition. This may be a general, humdrum, regularized existence or it may be something more chaotic and hand-to-mouth but it is recognized as the "normal" against which a transition is measured. Transitions happen against this background of normality: The people, the information sources, the modes of dealing with things including information behaviors and practices that Savolainen characterized as our mastery of life (Savolainen, 1995). Figure 10 expresses this normality from the perspective of the individual, although wider social norms, cultural attitudes, previous experiences, and demographic factors are relevant to how this normality comes into being.

5.2 | Event

The *event* maybe a defined event or experience (e.g., an illness), a time where we sense something changing (e.g., puberty), a conscious decision to engage in change (e.g., a retirement), or a new awareness of our lives (e.g., realization of personal dissatisfaction).
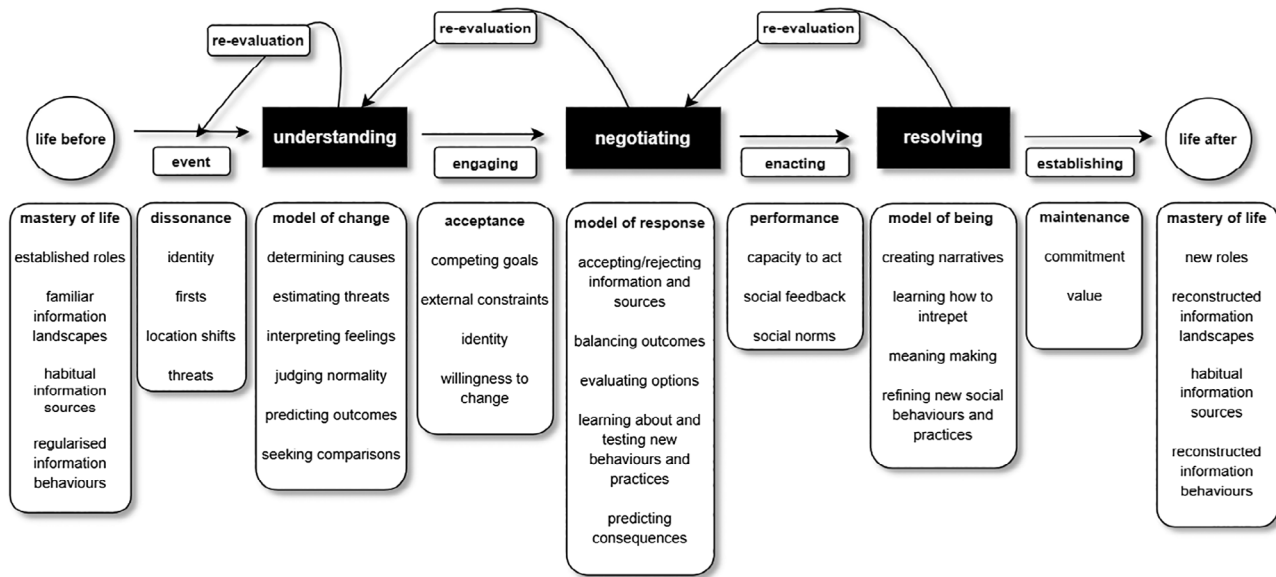
FIGURE 10 Transitions Theory

Not all events lead to a transition but the theories presented above agree that change happens for a reason. Even if the event results in denial, it will be something that forces attention to it: We need to recognize something to be able to deny it. Psychologically, we also like to assign reasons to change—to have causes for consequences—as part of our own process of understanding.

Dissonance, in the sense of a disrupted normality or potential change to our normality, appears to the characteristic feature that propels changes into transitions. There are specific features that are more likely to lead to greater dissonance. First experiences of events, for example, seem to signify bigger changes and "firsts" such as first parenting, first job, first cancer are more commonly studied and supported than repeated events. Those in which we move to new physical settings can also be difficult as the transition disrupts "familiar and certain information landscapes" (Lloyd, 2017). Changes that threaten our identity or roles are taken seriously and negative events demand more attention than positive ones: They receive more cognitive processing, a more extensive process of interpretation as to what happened, greater seeking of meaning, and are seen as more nuanced than happy events (Baumeister et al., 2001).

Therefore, we can propose that some events, those that are initially perceived as more serious, more discordant, are first occurrences and are negative events, are the ones that are more psychologically significant to us and are more likely to lead to a process of analysis and interpretation, the phase of Understanding.

5.3 | Understanding

This theory proposes that the earliest stage of a transition is one of *Understanding*. I use the term understanding rather than appraisal as appraisal suggests an evaluative assessment of a stable external event, whereas the early stages of transition can also be about or the process of identifying why something does not feel right. Huttenen et al., in the context of transgendering, evocatively describes this as a sense of friction: "This friction between one's own experience and how other people see the person had caused discomfort and need for information to understand this friction." (Huttunen et al., 2020). Other authors talk about dissonance leading to the need to "feel" differently, talking about a "highly uncomfortable state" (Park, 2005) resonating with Taylor's visceral information need, a "vague feeling of dissatisfaction" (Taylor, 1968). This speaks to the importance of liminality in transitions, both in the sense of being in between states (Willson, 2019) but also the sense of things coming to the surface—moving from sub-liminal to liminal—and requiring our focus.

Even in transitions where there is no crisis, such as starting a new job, there is still a process of making sense of a new situation and working out how we "feel" about the situation. If we look at the labels that describe this stage in Figure 9—shock, denial, dissonance, adjustment, sensitization, contradictions, and crisis—we see the emotional and unsettled nature of this phase. The emotions may be overwhelming anxiety and inability to think, a growing sense of "wrongness," elation or joy, or an

emotional blankness resulting from shock. Reducing negative emotions and sensations can be key here and this is why denial can be engaged as a control-oriented action (Young & Lockhart, 1995). The major task here is to understand a new situation and its implications: To create a *model of change* and what change means for the individual faced with the new life event.

The information behaviors that occur here are directed toward this understanding. They may involve seeking information for comparison, seeking information to test the limits of a situation and how much it can be changed, seeking from within to understand how one is feeling about a situation or seeking information to understand how one should deal with others. As "normality" has shifted, we may require information on what is normal (in the sense of being standard) in a new situation (Genuis & Bronstein, 2016). These are primarily orientation activities: Estimating, probing, scaffolding against what is known and using comparisons to judge the level of change that may be necessary. Some information may be more impactful than others at this stage as Huttenen et al., explain "Deeply meaningful information can serve as a trigger for life change, helping people forward during the transitions" (Huttunen & Kortelainen, 2020), particularly information that is somehow resonant with the individual (Ruthven, 2021).

Determining attributable causes to events can be important (Ruthven, 2019; Sweeny, 2008). The sense we make of an event can be an important determinant in how we understand the transition. For example, a diagnosis of illness may be viewed as a natural occurrence, an Act of God, or a half-expected consequence of our genetic inheritance. This sense of why something has happened is critical in determining how we emotionally and cognitively orientate ourselves toward the transition and becomes part of the basis for interpreting the information we have and the sources available to us.

A major aspect is that of imagined realities: The power of our imagination to create possible futures and alternatives. Imagination is strongly related to uncertainty; it seems to fill the void that uncertainty creates. In information behavior studies, we appear to prefer the more rational and tangible concept of uncertainty, whereas imagination appears much more fleetingly in our studies even though it is profoundly significant to our information interactions during life changes (Allard & Caidi, 2018).

Wondering and anticipation can be signs of preparation, using our imagination to help us prepare for possible futures, including estimating threats and how we will deal with them. The imagined realities are whole-person, imagining how we will feel—emotionally, psychologically, and often physically—how we will behave and how others may react toward us. Imagination is most likely to

be strongest and most powerful at the start of a transition, at periods when uncertainty is largest and most labile.

Our individual information worlds are better able to informationally support some events more than others through easy access to information and supportive social networks. Other events may be strange and discordant with our existing life and create informational difficulties as they require "a new and uncharacteristic response" (Young & Lockhart, 1995).

At this stage, our information behaviors may lack coordination resulting both from a lack of information, and a general lack of knowledge on how to obtain information, but also from a resistance to a need for change. Sleep disturbance can occur in the earliest stages of transitions and therefore information work at this stage may be undertaken at a time when one is not only dealing with cognitive loads but also physical tiredness (Davidson et al., 2002; Hunter et al., 2009). Transitions may end or stall here if information either provides a decision that change is no longer psychologically significant, or that it is too traumatic to deal with, and this understanding process may lead to a re-evaluation of the event. However, this theory suggests that understanding of a change event—a position of having used information and support to create a working model of the problem or opportunity—supports the process of engaging with a transition.

5.4 | Engaging

Except for the acceptance phase in The Transitions Curve, this process of *engaging* is latent in the other theories but there is a clear psychological change between Understanding the situation and the process of working out how to react to the situation, the Negotiating phase. This requires a form of psychological commitment to the idea of a transition through *acceptance* of being in a possible transition process.

Transitions may be subject to external factors, for example, illnesses often have their own progression or organizational expectations may force a timescale on change, which can mean individuals are forced to engage before they are psychologically ready to do so. We may have competing goals during the same time-period and therefore an event gets less attention than it would have otherwise. Sometimes our identity is a barrier to accepting information, especially if we must lose certainty or risk loss of self-esteem to recognize that we are in a situation that requires change. However, our identity can be a motivator for change, especially if we feel that our identity has been overly compromised and that change is necessary to allow a more authentic identity to re-assert itself (Ebaugh, 1988).

Either way, whether we are resisting or embracing change, engaging marks the turn from understanding a situation to working out how to deal with it.

5.5 | Negotiating

This theory proposes that, having engaged, the individual starts *Negotiating*. The main activity is creating a *model of our response* to the change event. I use the term Negotiating for two reasons. First, because we are conservative and seek to minimize change to retain a sense of coherence in our lives. This means that we often try to negotiate a change down to something less threatening and information behaviors here are often around trying to find reasons to lessen change. However, change maybe the easiest option: The effort to keep a "normal" situation going may be harder than the change required to create a better situation. Second, there is often a sense of Negotiating one's way through a new area of life, a process of trial-and-error experimentation using information to uncover options, balance outcomes, and seek out compromises.

Our drive toward conservativism is persistent and manifests as informational biases in many ways: We avoid situations and people that may provide useful but unwelcome information, we seek social comparisons that give us favorable interpretations of a current situation rather than more representative ones, we use self-deception to allow us to favor comforting over discomforting information, we seek information to allow us to reappraise the severity of a life change, and we repress negative information as a form of information avoidance. Information can have different emotional outcomes, leading us to prefer some information over others, and our decision-making at this stage is often emotion reconstructed into cognition.

These biases do not mean that we do not trust; often we may trust too much particularly if information sources offer us emotional certainty. As Neal and McKenzie explain when proposing the concept of affective authority, "the extent to which users think the information is subjectively appropriate, empathetic, emotionally supportive, and/or aesthetically pleasing" can be important determiners in evaluating information (Neal & McKenzie, 2011).

The social environments in which we operate, and the information practices they support, can be a facilitator or barrier to gaining information and this theory suggests that Negotiating can be prolonged by unsupportive information environments: Having to work against dominant information practices to gain information can result in poorer information outcomes and a sense of information incompleteness.

Many transitions are blocked because of how we imagine how others may react, particularly if we see a transition as being stigmatizing or imagine sources of support as being unhelpful. A recurrent theme is that asking for help requires making ourselves vulnerable and this may be too great a risk to take (Chatman, 1996). Having taken a risk though we may over-trust those in whom we place our trust, especially gatekeepers into a new community (Harviainen, 2015).

Our reactions to life changes have led other disciplines to categorize us as "types" who respond in different ways to situations and to information. These may reflect situation-specific attitudes or general trends to react in a particular way, for example as blunters or monitors. It is also clear that many personality and temperament factors affect how we interact with information as do our information abilities, including our information literacy (Heinström et al., 2020).

The process of Negotiating may mean some aspects of the transition become visible to others, resulting in social feedback. Others' negative reactions can retard progression or result in abandonment of the transition. This can also be a phase when earlier interpretations are reinforced (Ebaugh, 1988) and this reinforcement can be through selective readings of new information. Negotiating is a way of creating actualities from possibilities and, as an individual moves through this phase, there is realization of where one may be heading and a crystallization of possible outcomes. One possible outcome is not to change, or to move back to Understanding to try to find another route forward through choosing an alternative interpretation of the event. If the individual decides to follow a particular path or action, then they may already start to think like a new grouping or be working with a new identity (Ebaugh, 1988). This will involve learning about, and testing, new behaviors and practices.

Commitment to a new mode of living does not mean that we accept or value the new role, sometimes we resist roles and will create new dissonance between our current role and our perception of that role—"I'm not that kind of parent", "I'm not like those other patients"—as part of Negotiating an interpretation of the role that fits us. As Silverman expresses it "There can be no script for accommodation except that an individual must find a way to live in a changed situation." (Silverman, 1982) but this accommodation may be continued resistance to the change.

5.6 | Enacting

Enacting refers to the process by which the individual acts upon the general response pattern being developed in Negotiating to create new behaviors, make concrete decisions, and start to act with a changed identity. This happens as part of the Negotiating phase and experimentation

and feedback are used to tailor how the transition will manifest. *Performance* of new behaviors and a new identity is an important experiential component in this process.

In the case of Crisis Decision Theory, William's, and Lockhart and Young's models, a specific response or specific set of behaviors is chosen; in the case of Straus's and Ebaugh's theories there are specific phases (Doing it, Turning point) at which the transition becomes real, often through a single action, and this can be a stage of relief where dissonance decreases (Ebaugh, 1988).

This point often becomes psychologically identified as the moment of change, even though the change process had been initiated earlier. Here, individuals may engage in public expressions of transition. For example, Ebaugh describes how many former nuns started smoking after leaving their convent as a public sign that they had taken an irrevocable change. Visible signs of a transition may attract offers of new information and connections to new social networks. Our social environments may limit our capacity to act on a change, especially if the transition could be the source of social stigma, and we may need to seek out physical environments to be able to fully express ourselves.

This can be the point where a transition is not reversible and, once we enact a transition, we may not be able to return to a previous state. The psychological commitment to a specific nature of transition means that information behaviors also change from working on a solution to working on completing the transition: Reconstructing personal narratives and creating new information environments and practices as part of the Resolving phase.

5.7 | Resolving

After Negotiating is *Resolving*. Resolving refers both to the sense of deciding on a course of action but also a sense of increased focus about the nature of the transition. It is characterized by reconstructions of personal narratives, decisions about a specific way of living, and developing the information skills necessary for this new life. It is therefore working on a *model of being*. There may still be a sense of experimentation lingering from Negotiating and part of Resolving is working out the specifics from the general pattern created in Negotiating.

If Negotiating has been unsuccessful, this stage may also be characterized by lack of resolution: Chronic uncertainty, denial, or no routes forward. However, this itself can be a new state of normality. Sometimes roles are taken on provisionally to explore what full transition may mean and the final stages of a transition may still feel unreal and lacking authenticity until the new roles

are sufficiently practiced to become "real" and part of Resolving is refining social and information practices.

Krajlik claims that "Reconstruction of a valued self-identity is essential to transition" (Kralik et al., 2006). Reconstruction rather than replacement is key here as previous identities are not lost in transition and parts of our previous lives will carry forward into how we live new ones as a "previous role does not leave one completely but usually remains residual and previous values, beliefs and thought patterns may resurface." (Ebaugh, 1988). As Hicks elegantly untangles in her review of the concept, identity development is a complex process that can be viewed from many perspectives, each with its own information focus (D. Hicks, 2020) and identity work can be important here to create a stable sense of self, one that has coherent social groupings, and a narrative that is acceptable to oneself. This process of meaning-making, creating personal accounts to explain the change to oneself and others, is a vital psychological task during this phase (Allard & Caidi, 2018; Ruthven, 2019).

Information is critical to Resolving what a new life will be like and creating a basis for the future. A particularly important aspect is that information in the form of embodied interactions helps us develop new ways to interpret the world. Often this is the form of new things to which we need to attend (e.g., new environments, or new people) or increased awareness to aspects of the former everyday (e.g., new attention to our blood sugars, our breathing patterns, or others' reactions).

There is a movement here toward belonging and insider status and a movement from the outsider nature of earlier parts of the transition. Now we are informationally changed: Information has helped us orient ourselves differently toward the world.

5.8 | Establishing

Even at this late stage, a transition may not "stick." This is under-specified in the original theories and only Straus seems to acknowledge that transitions often need *maintenance*. The process of establishing is proposed as what helps us follow through this process of change so that new behaviors and identities become part of a regularized way of living and rather than part of a time-limited process of change. Factors that influence this establishing include the value of the transition to the individual (does the new way of living provide sufficient meaning and purpose to be maintained) and their willingness and ability to commit to the transition (can the individual commit sufficient resources to sustain this new life). If the transition does not establish then it may leave the individual with a ruptured transition process or back to where they started.

5.9 | Life after

Life after is the new state of normality which may be a better or worse one than before the initiating event. The transition has been subsumed into a new way of living that has its own dynamics: "This 'role-making' process involves constant creative modifications as situations change... [and]...is a constant, ongoing, process of thinking, feeling perceiving, evaluation and decision making" (Ebaugh, 1988). The new life may be very different than what went before, resulting in radically new information worlds and practices, but these are becoming habitualized. The level of change in information behaviors and practices between our life before and after the transition can be a proxy for the level of general life change incurred by the transition.

5.10 | Validation

In this section, I test this new theory against other phase theories of transitions to test whether the theory can generalize beyond theories that went into its creation.

Bridges' influential organizational change management model, based again on Kübler-Ross, works on responses to unwelcome or imposed changes (Leybourne, 2016) and consists of three stages. The first phase characterizes transitions as starting with a process of loss in which the individual must let go of a former state. Like the theory presented here, Bridges characterizes this stage as a highly emotional one. The second phase, the Neutral Zone, is where Bridges argues that transitions take place as it falls in a liminal zone in which experimentation takes place to try out new behaviors, learn about new ways of working, and importantly, undertake psychological shifts toward the transition. The final stage develops new ways of working, and the adoption of new behaviors and identities. These are conditioned by what happens in the Neutral Zone. Bridges saw transitions then as "ending, then a beginning, and an important empty or fallow time in between" (Bridges, 2004). Bridges' three stages are broadly aligned with the three stages presented here but ours has less emphasis on the first stage being a detachment, has a wider scope, being not restricted to imposed change, and Negotiation is far from a "fallow" or "empty" phase but one that is, cognitively and emotionally, highly active.

Ruble presented a transitions model focused on orientations toward social information (Ruble, 1994). At each of its three phases, Construction, Consolidation, and Integration, Ruble claims an individual's orientation toward information shifts in predictable and meaningful ways. In the Construction phase, an individual starts with low levels of domain knowledge and the goal is to obtain general, rather than specific information, on a new area of life. In the Consolidation phase, the individual has acquired basic knowledge and tries to apply it to their life. Here, information seeking is focused rather than general. Ruble proposes that as the individual works through this stage, biases become introduced so that there are preferences toward information that support conclusions already decided. In the final stage, Integration, the individual is in a maintenance phase with little information seeking and resistance to any information that is dissonant with that already obtained and used. Therefore, this broadly fits with understanding an event (Understanding/Construction) and working out what change and how the change will affect one's life (Negotiation/Consolidation) and creating stable information environments (Resolving/Integration) but there is less emphasis on Resolving a specific, chosen transition path and less focus on information activities such as meaning-making or imagination.

Taking an example of a specific transition, Coleman proposed a model of the coming-out process consisting of several phases (Coleman, 1982): Pre-coming out (a developing awareness of one's sexuality), coming out (recognizing and acknowledging one's sexuality), exploration of one's sexuality (exploring and experimenting with a new identity), first relationships (a process Coleman characterizes as learning to function in a same sex relationship), and identity Integration (a stage where individuals move toward incorporating the public and private person into a single coherent self-image). The first two stages describe a process of gradual moving from preconscious feelings of difference, working through what one is feeling to a stage where one can accept one's sexuality and start to tell others. This falls under Understanding. The phase of exploration refers to working through, usually by experimentation, various ways of interacting with others, including the phase of first relationships, before they reach the stage of Integration, and successful long-term relationships. Exploration can be viewed as the Negotiating stage while exploration and first relationships and Integration are Resolving stages.

These are only three examples but they show the theory presented here can work with other established theories and models, ones that have different backgrounds and which are less information focused than the one presented here.

6 | DISCUSSION

6.1 | Theoretical implications

In the theory presented here, transitions start from dissonance between how things were and how they are,

leading to the use of information to create routes to a new way of living. Three stages are presented: Understanding, Negotiating, and Resolving. Depending on the transition taking place, more information work may be required at one phase over another. Specific information behaviors characterize each stage and these behaviors could be used to map where an individual is on a transition journey.

The theory is developmental, describing the development from understanding an event to the specific response to the event. It is a starting point and can be developed as we learn more about information behaviors and practices during transitions but is in the form that can allow hypothesis and predictions to be derived from it.

Although the theory is a developmental one, and the movement is primarily forward, looping backward is possible: An individual may realize in Negotiation that the path forward is not working and move backward into Understanding to create a better route forward or to pause the need to act, or an individual who is trying to resolve a transition may realize that the Negotiation stage is not complete and move backward to create a more useful model of the transition to go forward again. In some cases, the transitions cannot move backward, either because our realization of a situation cannot be unknown and we cannot move back to a psychological position of ignorance, or because enacting a transition means the milk is out of the cow and cannot be put back in. Deciding to hand in one's notice or ask for a divorce, for example, may not be undone and we must move forward. Once we have reached the Resolving stage, the evidence suggests that we are more likely to move backward to further reinforce the decisions we have already made rather than to create new ones (Ebaugh, 1988; Ruble, 1994).

The stages are presented in somewhat idealized form to make them clear. However, this does not imply clear cut boundaries between these phases as, even at the final stages of a transition, we may still be trying to understand it and, at various points, we may be in overlapping phases. However, the theory proposes that the dissonance that characterizes the early stages of transitions is what provides a force to resolve the transition.

How we model transitions is important. Willson (2019) rightly notes that a weakness in our general approach to investigating transitions is that we mostly study people at one point in time thereby not seeing the whole transition, only parts of it. Arguably, a further weakness is that we typically study transitions where we know how it ends, working with those who have transitioned rather than those who are starting out or are in the middle of transitions without ideas of where they will end up. Some authors, notably Kralik et al. (Kralik et al.,

2006) working on chronic illness, have argued that transitions can take other forms than linear phase models. But how do we label a transition: If an addict has three attempts at recovery and only the final one succeeds, is the whole period a transition from addiction to recovery, or is each attempt a transition and perhaps recovery from addiction or chronic illness is a series of transition episodes? Presenting theoretical accounts of transition stages, as attempted, here can allow us to ask questions of individual experiences and be clearer about our terminology and concepts. That this theory, and others, could provide better explanations of some transitions than others may help us better understand what is and what is not a transition from a theoretical perspective.

Hicks discusses the subjective nature of transitions (A. Hicks, 2021) and this raises interesting discussions about subjective versus objective natures of transitions: Who decides when someone has transitioned or not? Meleis and colleagues were clear that we can treat transitions objectively and that we can talk about good and bad transitions (Meleis, 2010). Others prefer a more subjective approach in which individuals decide if they have transitioned or not. Concepts such as Imposter Syndrome may lie in the gaps between these two perceptions but the kind of behaviors in which someone is engaging may help understand if someone is Resolving their transition or still trying to understand it, and therefore what informational support is important.

This theory arose from a synthesis of existing theories and models. It is not a meta-theory but rather than translational approach across multiple models and theories to provide a common theoretical apparatus for investigating transitions from an information perspective. The meta-ethnographic approach taken may also be useful for other areas of Information Science to progress the many models we have in Information Science toward theory.

6.2 | Practical implications

The theory presented here can help us specify what kind of support may be useful for supporting transitions in terms of what individuals are trying to achieve, distinguishing their information behaviors at different stages, and proposing what information support is required to support their transitions.

In the initial stages, what is helpful are solutions that support the process of Understanding. As understanding the problem is important here, information on solutions may be rejected as the individual has not yet worked through the problem. Individuals often report information overload at the start of a new transition leading to a paradox of feeling that one has insufficient information

but too much new information at the same time. Support for simplifying information, including synthesizing information, could be welcome at this stage.

At the Negotiating stage people, are moving into solution spaces. What is required is information support to make decisions and comparisons: Structuring of information to see what choices are available and what might be outcomes of choices. Helping people understand key concepts—ones that may form the basis for searching—and how they relate is important. Support to evaluate information, in particular its credibility is useful here, as is support to evaluate the information available. Information intermediaries are important, both systems and people, and a common search task is searching for people and organizations.

At the stage of Resolving, an important focus of information work is creating new information worlds. For more significant changes, we have new sources of information and new information behaviors, for example, about health monitoring. We may have new, long running information needs and often informational support is longer-term, requiring tailored information responses, alerts for new information and perhaps specialist information stores. We also may become sources of advice and expertise and therefore become information providers as well as information users.

7 | CONCLUSION

This paper proposes a new theory of transitions focused on information behavior. By aligning a series of influential theories and models from other disciplines into single framework of transitions, and then overlaying an information behavior focus, this provides a Transitions Theory for use in Information Science. This paper proposes transitions as having three stages, Understanding, Negotiating, and Resolving, each of which have qualitatively different information behaviors and which, it is proposed, would benefit from different types of information support.

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