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Putting Relational Frame Theory to Work:
Current and Future RFT Research in Organizational Behavior Management

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The workplace is a complex and ever-changing environment. The defining characteristic of all organizations is that individuals work together to achieve a common goal. Organizations depend on interconnected behavior by various people, because work is not produced in isolation (e.g., people work together to produce a product or service and deliver that to its customers). This interdependence is at the heart of the complexity of the influences on human behavior in organizations. Each organization has a unique culture, a set of values and practices that distinguish it from other organizations. These values and practices (e.g., recruitment, incentive schemes, performance appraisal systems, labor relations) contribute to the personal environment of each employee at each level of the organization. The contingencies within this personal environment determine whether an employee is creative, engaged, and productive, or frustrated, cynical and uninterested.

Organizational behavior management (OBM), the application of behavioral principles to organizational behavior (Bucklin, Dickinson, Austin, & Jackson, 2000), attempts to identify the critical contingencies in the employee’s environment that can be adjusted to enhance employee satisfaction and productivity. The promise of OBM is that, by providing functional analyses of ineffective organizational contingencies, interventions can be designed to transform those contingencies into effective systems. To date, most research in OBM has been influenced by accounts of organizational contingencies that focus on direct reinforcement and punishment. However, for many years now, OBM researchers have recognized that much employee behavior is indirectly controlled by verbal statements of one kind or another (e.g., rules). People at work, both managers and employees, constantly exhibit complex verbal behaviors: thoughts, feelings, beliefs, attitudes, judgments, biases and values. Workers’ behavior, verbal or non-verbal, covert
or overt, is constantly changing and influenced by multiple sources. Organizational contingencies are thus exceedingly intricate.

Relational frame theory (RFT; Hayes, Barnes-Holmes & Roche, 2001) is particularly suited, among behavioral theories of language, to address the complexities of the workplace environment and behavior. This is because relational frame theory explicitly provides a behavioral account of reference; that is, how words ‘mean’ what they ‘stand for’. In this way, RFT articulates how such ‘meanings’ can establish novel behaviors and novel consequences for individuals in the work environment. Specifically, RFT proposes that, through transformation of function, understanding verbal statements (e.g., rules) changes how stimuli in our environment affect us, which changes our behavior (for more detail see Stewart & Roche, this volume). For instance, understanding that ‘quarterly returns’ are important (i.e., they predict positive and/or negative reinforcement) may encourage employees to engage in behaviors that maximize such returns and to neglect other behaviors.

In this chapter, we review recent research on organizational behavior influenced by RFT. This research can be broadly construed within three themes: the application of Acceptance and Commitment Therapy (ACT) in organizational settings, the impact of psychological flexibility on employee health and performance, and the analysis of the effects of common organizational interventions. The practical application of RFT in the workplace is most readily seen in the application of therapeutic interventions based on ACT (Hayes, 1987; see also Blackledge & Drake, this volume). Working in an organization exposes individuals to overt physical dangers, such as the probability of injury on construction sites, but also less obvious psychological hazards such as stress and burnout. Interventions based on ACT have proven to be effective in the amelioration of psychological distress (e.g., depression, anxiety; Hayes, Masuda, Bissett,
The first section of this review outlines a number of studies that have demonstrated that ACT interventions can be employed to reduce the severity and prevalence of psychological distress and enhance worker performance.

**ACT interventions in the Workplace**

Bond and Bunce (2000) reported the first evaluation of an ACT intervention in the workplace (i.e., a large media organization). The study included a total of 90 participants in three groups. One group received an ACT intervention, the second received an Innovation Promotion Program (IPP), and the third served as a wait-list control group. The interventions were delivered across 3 months and lasted 9 hours. Both the ACT intervention and the IPP intervention significantly improved general mental health, depression, and the workers’ propensity to innovate compared to the control group. Since Bond and Bunce’s study, there have been numerous implementations of ACT interventions in a variety of organizations. For example, Dahl, Wilson and Nilsson (2004) conducted an evaluation of an ACT intervention on employees who were at risk to be put on long-term disability due to stress and pain symptoms. Using a randomized control trial, 19 public health workers were randomly assigned to either an ACT intervention group (with treatment as usual) or a treatment as usual group only (i.e., use of pain medication). The brief four-hour ACT intervention led to a reduction in the number of sick days and fewer medical visits at post-treatment and at 6 month follow-up compared to the control condition. More recently, Flaxman and Bond (2010) compared ACT with Stress Inoculation Training (SIT; a traditional CBT model) to reduce psychological distress for 107 employees of two large government organizations with above average levels of stress. Employees were randomly assigned to either an ACT, SIT or control group. Both the ACT and
the SIT interventions were successful in improving general mental health compared to the control group.

Acceptance and Commitment Therapy interventions have been particularly successful in reducing worker burnout. Burnout is a combination of exhaustion, cynicism/depersonalisation, and lack of personal accomplishment that comes about as the result of prolonged exposure to job stressors (Maslach, Schaufeli, & Leiter, 2001). Hayes, Bissett and colleagues (2004) compared the effects of an ACT intervention and multicultural training on burnout and stigmatizing attitudes of substance abuse counselors towards their clients. The interventions consisted of day-long workshops. Participants were assessed at the beginning of the workshop, the end of the workshop, and at 3-month follow-up. Stigmatizing attitudes in the ACT condition did not improve at post-treatment; but did significantly improve by 3-month follow-up. Interestingly, the opposite occurred with the multicultural training group. Their stigmatizing attitudes improved at post-treatment, but not at follow-up. There was a significant improvement in burnout within the ACT group at post-treatment and follow-up.

A number of further studies have reported that ACT interventions can reduce burnout. Ruiz, Rios, and Martin (2008) described an evaluation of an ACT-based intervention in a Spanish hospital. The intervention was found to be effective in preventing the development of burnout among workers in a palliative care unit. The effect was particularly evident in terms of reducing feelings of depersonalization and increasing feelings of personal accomplishment. In Sweden, Brinkborg, Michanek, Hesser and Berglund (2011) investigated the effect of a brief ACT training as an intervention with 106 social workers experiencing stress. One third of the sample had been on sick leave for an extended time in the past, and in more than half of the cases this was for stress-related reasons. At post-treatment, the ACT group had significantly lower
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levels of perceived stress, and significantly fewer mental health problems than the control group. The ACT group had significantly fewer burnout symptoms, but there were no significant differences found in performance-based self-esteem, or job demand and control. Brinkborg et al then separated the participants’ data into high and low stress level groups based on their baseline stress level, and found that participants with different levels of stress responded differently to the ACT intervention. This analysis found that, in the high stress group, a substantial proportion (42%) improved to a clinically significant degree, but those with low pre-intervention levels of stress did not significantly improve. Finally, in a recent study by Lloyd, Bond and Flaxman (in press), 100 government customer service workers were randomly assigned to an ACT group or a waitlist control group. The ACT group received three 3-hour training sessions, two on consecutive weeks and one 2 months later. Measures were taken at the beginning of the first workshop (T1), the beginning of the second workshop (T2), the beginning of the third workshop (T3), and again 6 months after the final training workshop (T4). Results showed that there were significant reductions in burnout and strain in the ACT group compared to the control group. These results were apparent at T3, and maintained at T4 for depersonalization and emotional exhaustion.

Acceptance and Commitment therapy interventions have also been employed to enhance employee performance. Luoma et al. (2007), investigated whether adding an ACT group consultation to a standard 1-day training course would increase adoption of a Group Drug Counseling (GDC) technology, a group-therapy approach with empirical support. All 30 participants attended a 1-day 6-hr training workshop on how to implement GDC. Following this, 16 of these were assigned to an ACT group and participated in eight weekly 1.5hr training groups based on ACT and a Relapse Prevention Model (Marlatt & Gordon, 1985), focusing on
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overcoming barriers to implementing the GDC. The group exposed to the eight-week course was significantly more likely to adopt these new practices. Varra, Hayes, Roget, and Fisher (2008) evaluated the effectiveness of ACT training on 59 drug and alcohol counselors’ use of evidence-based pharmacotherapy. Participants in the ACT group attended a 6-hour ACT training day, and the control group attended a 6-hour educational control training, before both groups attended the same 2-day training on evidence-based pharmacotherapy treatments. Participants with ACT pre-training showed significantly higher rates of referrals to pharmacotherapy at post-training and follow-up than those with educational control pre-training.

**The Role of Psychological Flexibility**

The foregoing research provides ample evidence that therapeutic interventions based on ACT are effective both in increasing worker resilience and enhancing innovation and performance. In order to understand the role that relational framing plays in these interventions, it is necessary to consider how these interventions work. ACT interventions are designed to impact an individual’s psychological flexibility. Psychological flexibility is the ability to contact the present moment without avoidance enabling persistence or change in behavior in pursuit of values or goals (Hayes, Luoma, Bond, Lillis, & Masuda, 2006). In ACT interventions, psychological flexibility is established through six core processes; acceptance, cognitive defusion, being in the present moment, self as context, values and committed action (Blackledge & Drake, current volume). Though a detailed consideration of the core processes of ACT is beyond the scope of the current chapter, readers who wish to learn more about the therapeutic processes of ACT and the practicalities of developing ACT-based interventions for the workplace are directed to Bond, Flaxman, van Veldhoven, and Biron (2010). Bond et al provide a thorough introduction to these processes and comprehensive detail on the implementation of
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ACT-based interventions in organizations, including examples of dialogues between trainers and employees.

According to RFT, psychological flexibility can be viewed as an indication of an individual’s repertoire of relational responding. Specifically, certain repertoires of relational responding enable more flexible, adaptive responding to environmental contingencies, whereas other repertoires result in less flexible responding (e.g., rigid rule following). From an RFT perspective, many of the functions of antecedents and consequences in the workplace are established through relational responding. For instance, the positive emotional feelings (or predicted feelings) associated with having a ‘corner office’ might be due to its participation in sameness (coordination) relations with being successful (“I’ve made it”), or due to ‘greater than’ (comparison) relations between the employee’s view of himself/herself and his/her colleagues (“I’m the best”, “I’m top dog”). Without language to make one office ‘better than’ another, it is unlikely that the actual differences between offices would affect behavior. Rather, it is the derived sameness relations between the ‘corner office’ and ‘success’ established by the employee’s verbal behavior and derived comparison relations between ‘me’ and ‘them’ that makes the ‘corner office’ a derived reinforcer. Such verbal transformations of function are necessary for us to work together towards long-term goals. However, this power of language to transform the functions of stimuli may also give rise to psychological inflexibility because, to a degree, verbal behavior can establish its own reinforcement. In fact, numerous basic research studies have shown that verbal rules can induce behavior that is insensitive to programmed contingencies (see Hayes, Zettle & Rosenfarb, 1989 for a review).

A number of the intervention studies mentioned previously provided evidence that ACT interventions work by enhancing psychological flexibility. Bond and Bunce (2000) included the
Acceptance and Action Questionnaire (AAQ; Hayes, Strosahl, et al., 2004) as a measure of psychological flexibility and found that scores on the AAQ mediated positive effects of their ACT intervention. Flaxman and Bond (2010) also measured psychological flexibility and found that, in the ACT group, change in psychological flexibility mediated the effect of the ACT intervention on general mental health when controlling for change in dysfunctional cognitions. Increased psychological flexibility thus functioned as a mediator of change even after controlling for changes in cognitive content. In the study by Lloyd et al. (in press) on burnout, increases in psychological flexibility in the ACT group mediated decreases in emotional exhaustion. These decreases in emotional exhaustion mediated the maintenance of depersonalization levels. This pattern of results suggests that the impact of psychological flexibility is not always direct, because, in this study, psychological flexibility beneficially impacted depersonalization through its effect on emotional exhaustion.

There is now considerable evidence that psychological flexibility is an important predictor of employee mental health. Bond and Bunce (2003) conducted a longitudinal study with 412 customer service center workers. The AAQ was used as a measure of psychological flexibility, and the authors also measured job control using a Job Control Questionnaire (Ganster, 1989). Outcome variables included computer input errors, scores on the GHQ and scores on a general job satisfaction scale. Greater flexibility not only predicted better mental health (GHQ), but also performance (lower errors) one year later. Donaldson-Feilder and Bond (2004) surveyed 290 workers in the UK to compare how well psychological flexibility and emotional intelligence, another meta-cognitive measure, predicted well-being. These employees came from five different organizations: a manufacturing company based on the south coast of England; the London office of an overseas government; the management consultancy arm of a large
accountancy firm; the corporate headquarters of an insurance broker; and a financial services consultancy. The correlation between psychological flexibility and general mental health and physical well-being was stronger than the correlation between emotional intelligence and these outcome variables. In 2006, Bond and Flaxman found that job control and psychological flexibility predicted learning, performance, and mental health of 488 customer service center workers. In addition, there was an interaction effect of psychological flexibility on job control. Higher levels of psychological flexibility at Time 1 increased the beneficial effects of higher levels of job control on learning, performance and mental health. In a rehabilitation setting, McCracken and Yang (2008) surveyed 98 workers including nurses, physiotherapists, occupational therapists, physicians, speech and language therapists, psychologists and administrative staff. Psychological flexibility, mindfulness and values-based action were associated with less burnout, better health, and better well-being. Bond, Flaxman, and Bunce (2008), tested the extent to which a work reorganization intervention improved mental health, absence rates and job motivation, by enhancing perceived levels of job control. Participants who had higher levels of psychological flexibility perceived that they had greater levels of job control due to the intervention, which led to improvements in mental health, and absence rates. Greater psychological flexibility thus not only had a direct positive effect on mental health, but also indirect benefits through enhanced job control.

It is clear from the research reviewed thus far that ACT interventions have been effective in a variety of organizations both in reducing psychological distress at work and in enabling workers to enhance their performance. Such interventions have demonstrated reliable positive effects on general mental health and decreases in depression, depersonalization, stigmatization and burnout. They have also been shown to empower employees to take on new work
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challenges and embrace positive change in work practices and structure. It is also clear that the constructs based on relational frame theory that are understood to underlie the efficacy of ACT interventions, in particular psychological flexibility, mediate the impact of ACT interventions in the workplace and are associated with increased employee resilience and performance improvement. In fact, Hayes et al (2006) conducted a meta-analysis of 32 studies involving 6628 participants, across clinical and industrial/organizational psychology, to investigate the relationship between psychological flexibility and various quality of life outcomes and found a weighted effect size of these relations of .42. However, even though the greatest impact of relational frame theory on the workplace has undoubtedly been through ACT, researchers have recently attempted to employ RFT to investigate the effects of common organizational interventions and it is to that research that we now turn.

**Analyses of Common Organizational Interventions**

Within OBM, the majority of empirical studies have been motivated by and analyzed using direct contingency accounts, but, since 2001, a number of authors (Austin, 2001; Austin & Wilson, 2002; Hayes, 2004; Wiegand & Geller, 2004) have recommended including more complex accounts of human behavior, especially verbal behavior, to shed light on organizational behavior. This resulted in a special issue of the *Journal of the Organizational Behavior Management* on potential contributions of RFT to OBM in 2006. Since then, two empirical studies have interpreted their data using conceptual accounts based on RFT and these will be discussed here. The first of these focused on the interaction between rule-following and performance feedback and the second focused on goal-setting.

Haas and Hayes (2006) investigated the effects of feedback on rule-governed behavior in a laboratory-based experiment. This study highlights the unpredictable effects of feedback on
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behavior and the intricate interrelationship between rules and feedback. The rules (networks of relational responses) that an individual uses when they navigate the world and engage in work to some degree determine the effect of the feedback on the individual’s behavior. Haas and Hayes employed a complicated experimental paradigm in which participants moved a sign through a visual grid on a computer screen to earn points. In the first part of the experiment, participants were instructed on how best to earn points, but once participants had learned to do this, the computer game changed so that participants could earn more points by ignoring the original instructions. Participants were assigned to one of variety of rule conditions. One group received no instructions on how to best earn points during the first stage (Minimal Rule) and this served as the control group. Two of the other groups received accurate feedback on whether they were following the original rule (‘You are/are not following the rule that you were given at the start of the session’) and one of these also received performance feedback (e.g., ‘You earned 10 points’). Two more groups received random rule-following feedback (50% following, 50% not following regardless of performance) and one of these received performance feedback. During the experiment, the authors found that the Minimal Rule group were most sensitive to the change in experimental contingencies and the least sensitive group was the one that received accurate rule-following feedback and performance feedback.

It seems counter-intuitive that the group in Haas and Hayes study who received the most accurate feedback would perform most insensitively. During the second part of the experiment, if participants in this group shifted their behavior to fit the new contingencies they received messages telling them that they were not following the original instructions, but they also have received performance feedback so they saw the impact of their behavior on the points earned. One might expect that participants would be more likely to ignore the rule-following feedback
when they had access to performance feedback. However, the opposite was the case. Accurate performance feedback enhanced the effect of the rule following feedback, which increased insensitivity and impaired performance. Haas and Hayes suggested that, when participants were told that they were “not following the rule” at the same time as they were told “You earned x points,” this may have established the points as aversive if participants had a pre-experimental history of reinforcement for following rules and punishment of breaking rules. For these participants, points constituted evidence that they had not followed the rules provided by the experimenter. Such an account would explain the observed insensitivity effects.

Another common intervention in OBM that highlights the impact of verbal statements on the functions of feedback is goal-setting. In the goal-setting literature, Locke, Shaw, Saari and Latham (1981) have argued that feedback is a critical determinant of goal-directed performance in that it allows the individual to gauge the relationship between their current performance and their goal. Behavioral researchers have made similar claims; both Agnew (1998) and O’Hora & Maglieri (2006) have suggested that goal setting works in part by establishing novel functions in performance feedback. According to the relational frame approach provided by O’Hora and Maglieri, feedback on current performance can serve to reinforce performance once goals have been set. Feedback can serve both positive (“I’m getting somewhere”) and negative (“I still have work to do”) reinforcing functions. For particular individuals in particular situations, the functions of performance feedback will be due to the individual’s previous behavioral history in similar contexts (e.g., previous goal achievement).

Tammemagi, O’Hora and Maglieri (in press) investigated the impact of goal setting on the performance of 26 college undergraduates in an analog work setting. These researchers employed a data entry task designed to mimic a hospital task in which a technician might enter
heart-rate data for various individuals into a database. This study incorporated two novel features. First, participants’ performance was measured at baseline, which is not typical in the basic research on goal setting. Second, the paradigm included a choice condition, in which participants were asked to choose to work to a high or low goal. Participants were exposed to sequence of 5 phases, a baseline phase, then either a high or low goal condition (counterbalanced across participants), followed by a second baseline, the remaining goal condition and a final choice phase. As expected, performance increased significantly on introduction of a high specific goal. Mean performance increased by 21% when a high goal was introduced after baseline, whereas mean performance only increased by 11% when a low goal was the first goal condition. In the final phase, 20 of 26 participants chose the low goal condition (involving the least effort to attain), when given the choice between a low or high goal condition.

O’Hora and Maglieri (2006) proposed that, even though higher goals will result in higher performance, achieving goal levels periodically is necessary in order to maintain performance. Unattainable goals may give rise to high levels of performance initially, but this level of behavior should decrease over time because reinforcement cannot be obtained. A high, unattainable goal may seem attainable over a short period of time, but over a longer duration, as the person’s performance does not significantly progress them towards the goal, performance may decrease or cease altogether. In the Tammemagi et al. study, a negative trend in performance was observed within the high goal condition for a minority (38%) of participants. When the high goal was presented as the second goal condition, a negative trend was observed for more participants (46%) than when it was presented as the first condition (31%). Even though these findings constitute some evidence of extinction of goal-directed behavior, for many individuals, this
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behavior was quite resistant to extinction. Depending on an individual’s behavioral history, prolonged exposure to unattainable goals may be necessary for extinction to occur.

**Future Directions**

Relational frame theory is beginning to make an impact on organizational behavior management. ACT interventions, based on RFT, have now demonstrated efficacy across a wide range of organizations in improving mental health outcomes and organizational performance. Correlational research on psychological flexibility has contributed to informing the picture of the modern worker by identifying the skills that workers need to avoid frustration and burnout and to positively affect change in the workplace. Conceptual analyses of common organizational interventions that have employed the concepts of RFT have suggested new research questions for organizational researchers, particularly dealing with how verbal stimuli affect employee behavior. The first studies to address these questions have been conducted but much remains to be done.

Recent RFT conceptual analyses of organizational phenomena suggest further areas of research in OBM. Stewart, Barnes-Holmes, Barnes-Holmes, Bond and Hayes (2006) provided an overview of Industrial-Organizational psychology that suggested numerous potential contributions of RFT in the workplace. Stewart et al. suggested RFT contributions in the areas of job satisfaction, attitudes, and behavior, teamwork, organizational culture and organizational development. For example, they suggest that attitudes be treated as relational networks that support long-term consistencies in behavior and that RFT-based interventions might be used to modify attitudes or reduce the impact of attitudes on behavior if necessary. More recently, Herbst and Houmanfar (2009) provided an interpretation of organizational values informed by RFT that highlighted practical positive changes that can be made in the workplace.
While RFT-based translational research in OBM is in its infancy, ACT intervention research in organizational settings is now well established. The majority of this research has focused on the impact of ACT interventions on verbal dependent variables such as scores on mental health questionnaires. Particularly exciting from an OBM perspective, however, is the ACT research that has demonstrated improvements in observable behavior, such as reductions in errors and sick time and the adoption of new work practices. OBM practitioners and researchers might consider including ACT interventions in the suite of procedures that can be brought to bear on organizational issues. In addition, the positive effects of ACT interventions on worker’s adjustment to novel work practices suggests that combining ACT workshops with traditional interventions such as employee training, goal setting, feedback, task clarification and process redesign may enhance the effect of these traditional interventions.

The foregoing suggestions constitute but a fraction of the myriad possibilities for new OBM research influenced by RFT. It is our hope that RFT will enable OBM researchers to begin to tease out the intricate details of behavioral control in the workplace. The concepts of RFT continue to show promise in enabling behavior analysts to address complex verbal behaviors within a comprehensive operant framework. In doing so, RFT broadens the scope of OBM interventions and provides copious opportunities for future translational and applied research in organizational settings.
References


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