INCREASING PSYCHOLOGICAL FLEXIBILITY TO INFLUENCE CULTURAL EVOLUTION

Anthony Biglan[1]
Oregon Research Institute

ABSTRACT: Increasing the prevalence of caring in society could contribute to the evolution of a society that ensures the wellbeing of every member. Recent research on psychological flexibility suggests that helping people to accept, but not believe, their unpleasant thoughts and feelings contributes to people becoming more caring. This paper reviews evidence of the value of Acceptance and Commitment Therapy for increasing psychological flexibility and focuses, in particular, on its impact on prejudice and caring. It then discusses how this empirically based strategy for increasing psychological flexibility could contribute to the evolution of a more caring society with less conflict and prejudice and that is less punitive and more sustainable.
KEYWORDS: psychological flexibility; Acceptance and Commitment Therapy; society's evolution

This paper discusses the value of increasing the prevalence of psychological flexibility in society as a means of facilitating diverse beneficial developments in cultural evolution. Psychological flexibility refers to a mindful orientation, in which people are aware of their thoughts and feelings, as thoughts and feelings, and are able to act consistently with their values, even when they have thoughts or feelings that discourage them from doing so. Recent research in clinical psychology indicates that, as people become more psychologically flexible, their willingness to care more for others increases, while their prejudice and stigmatization of others decrease. Although this work is in its infancy, existing evidence is sufficiently promising that it seems appropriate to encourage further research on the implications of this line of thinking by influencing the direction of cultural evolution.

CARING: A CRITICAL BEHAVIOR FOR THE BENEFICIAL EVOLUTION OF CULTURAL PRACTICES

The unwillingness or inability of people to care for each other aggravates many societal problems. These problems include war, terrorism, prejudice, interpersonal conflict, crime, depression, and drug abuse.

Prejudice causes one to evaluate others based on the groups to which they belong rather than on their personal behavior. In interpersonal conflict, people are hostile to each other and typically supply "good reason" to justify the hostility. A stressful environment increases the likelihood of depression (Stroud, Davila, & Moyer, 2008); aversive behavior of a depressed person's family also adds to the depression (Biglan, 1991). A major risk factor for developing drug abuse is a coercive family environment that leads to children's aggressive social behavior (Dishion & Patterson, 2006). Peers socially reject these aggressive children, who then form deviant peer groups within which drug abuse develops (Snyder, Dishion, & Patterson, 1986).

In each of these examples, problems would diminish if those involved began to care for those around them. This claim is hardly controversial, but behavioral science has lacked a clear framework for increasing caring across such diverse problems. Recent work on psychological flexibility provides just such a framework.

PSYCHOLOGICAL FLEXIBILITY AND EXPERIENTIAL AVOIDANCE

Psychological flexibility is "the ability to contact the present moment more fully as a conscious human being and to change, or persist in, behavior when doing so serves valued ends" (Biglan, Hayes, & Pistorello, 2008, p. 142). To sense what this orientation involves, it helps to understand the opposite orientation—experiential avoidance (EA). EA is the tendency to avoid or control unpleasant thoughts and feelings, even when doing so creates problems for a person (e.g., in order to avoid feeling anxious, someone may avoid public places or avoid people who evoke anxiety). However, such behavior considerably limits one's options in life.

Growing evidence associates EA with diverse psychological and behavioral problems, including anxiety, depression, substance abuse, poor work performance, high-risk sexual behavior, pain, and long-term disability. Hayes, Luoma, Bond, Masuda, and Lillis (2006) provide a meta-analysis of relationships between a measure of EA and psychological problems: the weighted effect size was .42.

Acceptance and Commitment Therapy or Training (ACT) has increased psychological flexibility in more than 20 randomized trials. Hayes et al. (2006) summarized the evidence: ACT has ameliorated substance abuse, depression, psychosis, self-harm, chronic pain, anxiety, smoking, prejudice, worksite stress, employee burnout, diabetic self-management, adjustment to cancer, obsessive-compulsive disorder, trichotillomania, and epilepsy.

ACT employs metaphors and experiential exercises to help people accept unpleasant thoughts and feelings and *defuse* from them. People fuse with their thoughts when they behave as if those thoughts are literally true. *That is, they do not distinguish between the thought and what the thought describes*. For example, a person might think, "That person doesn't like me," and might react without noticing if the thought is true or not.

ACT also helps people clarify their values. The critical question is, "What do you want your life to represent?" As people learn to accept and defuse from their thoughts, they become better able to connect fully with situations they face and to make the choice to act consistently with their values.

Behavior analysts who are unfamiliar with both Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001) and Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999) may be surprised to learn that ACT research grows out of a behavior analytic approach to language and human behavior. In behavior analytic terms, the ACT processes involve reducing rule-governed behavior so that people stay in better contact with the contingencies in their current situation. For example, people may react angrily toward coworkers because they believe the coworkers have harmed them. However, behaving under the control of this verbal formulation may obscure behaviors of a coworker that might usefully be reinforced.

In general, ACT treats an individual's relational responding as a set of stimuli that affects other aspects of behavior based on a prior history of reinforcement for responding to those aspects. A large and growing literature on relational responding (e.g., Barnes-Holmes et al., 2004; Hayes et al., 2001; Stewart, Barnes-Holmes, & Roche, 2004; Whelan & Barnes-Holmes, 2004) shows that, for verbally able humans, the functions of most stimuli are affected by the way the person relates them to other stimuli. For example, those who have learned a network of relationships about themselves that includes, "I am not smart" may avoid situations (e.g., a classroom) that might embarrass them. Such rule-governed behavior can be highly constricting and can interfere with effective behavior. ACT's metaphors and experiential exercises enable people to reduce the control of their own relational responding over the rest of their behavior. People who thought they were not smart would learn to see such thoughts—as thoughts

only—and to act in ways consistent with their values, as if they had no such thoughts. Thus, a father who valued getting ahead financially for his family's sake might accept but "hold lightly" thoughts about his intelligence and take a class in order to get a better job.

At least two studies indicate the value of ACT in reducing prejudice and stigmatization. Lillis and Hayes (2007) used an ACT intervention to help undergraduates accept their prejudicial thoughts, recognize them as such, and clarify their values about members of other races. In contrast to a traditional lecture approach to prejudice, ACT helped people accept the fact that they had prejudicial thoughts and to try to stop controlling them. Traditional theory suggests that this would make people more prejudiced. Instead, they found that those who received ACT were more interested and willing to be involved with people of other ethnicities and races than those who did not receive the training.

In a second study, Hayes et al. (2004) found that ACT had greater benefit in reducing drug counselors' stigmatizing attitudes toward their clients than did traditional multicultural training. It also had a greater impact on counselors' feelings of burnout.

Hayes (2006) has argued that increasing acceptance and defusion encourages loving acts toward oneself. If I dislike or am ashamed of aspects of me, such as memories of past behaviors, then acceptance and defusion can help me to view those memories only as thoughts I have about myself, not as reality. One metaphor ACT uses is to encourage people to accept thoughts and feelings: "Hold them as you would hold a crying child" (Hayes & Smith, 2005, p. 130). In other words, people are encouraged to take a loving stance toward the parts of themselves they usually dislike and avoid. This is not to say they are encouraged to like or believe these ideas about themselves but rather to learn simply to let those thoughts exist. In this context, it is possible for people to choose to act in keeping with their values (e.g., even if people often feel inadequate, they can still work on tasks at which they fear they will fail).

If we take this stance toward the full content of our minds (i.e., our thoughts and feelings), we will include feelings we have about others. Learning to "hold lightly" our thoughts and feelings toward another can put us in better contact with the actual person—his or her needs as a human being. To understand this process better, it helps to consider the role of evaluation in human action.

Evaluation

Evidence from both evolution and social psychology indicates that humans (and other organisms) possess a bias toward detecting and avoiding danger. Organisms that were not highly sensitive to danger simply did not survive. Social

psychological research shows that "losses loom larger than gains" (Kahneman & Tversky, 1979, p. 279). Several studies have shown that messages emphasizing loss or a danger to avoid are more influential than equivalent messages framing the communication in terms of benefits to gain. Thus, evaluation appears to be a core process of survival, with a bias toward harm avoidance.

Human relational responding (Hayes, Gifford, & Wilson, 1996) extends the impact of this process beyond the immediate situation. A nonverbal organism responds to a current situation as a function of the stimuli present and past conditioning relevant to those stimuli. However, human relational responding means that people can respond to a current situation in terms of how they relate it to previous experiences and to future events. Given the tendency to emphasize losses, they may harbor a bias toward seeing the situation as threatening.

Relational responding and EA mean that people's interpersonal relationships can suffer harm due to their tendency to feel evaluated by others and to avoid such feelings, even when doing so leads to further conflict or avoidance. For example, someone who has had an ambiguous encounter with a new coworker may attribute malevolent intent to the other and act in guarded or aversive ways, making further negative interactions more likely. This analysis points to the importance of helping people to defuse from evaluations of themselves and others so that they can come into contact with the current contingencies in situations and behave more effectively.

Recently, Biglan, Layton, Rusby, and Hankins (in preparation) evaluated a set of ACT workshops for teachers of preschool children having developmental disabilities. This randomized trial showed that participation in two 3.5-hour workshops reduced staff members' EA and stress and increased their sense of efficacy. However, the more striking result was the impact the workshops had on interpersonal relations. Based on the just-presented analysis of the key role of evaluation, the workshops focused on using acceptance, defusion, and values to help staff accept the feelings that arose in interactions with coworkers and act in keeping with two of the preschool's values—caring for others and having the children succeed. Efforts to provide feedback to staff had often resulted in hurt feelings, resentment, and resistance. Supervisors, who themselves felt punished by the negative reactions of those whom they supervised, tended to avoid giving feedback. Following the workshops, however, staff was better able to give and receive feedback. In the post-workshop year, the preschool successfully implemented two evidence-based programs. A survey of selected supervisors and other staff indicated that this more psychologically flexible way of interacting had facilitated these innovations. They also said it made the preschool more fun and caring.

WHY PSYCHOLOGICAL FLEXIBILITY IS IMPORTANT
FOR CULTURAL EVOLUTION

If I am correct that promoting psychological flexibility leads to people becoming more caring, then increasing the prevalence of psychologically flexible people may be critical in fostering the evolution of a variety of beneficial cultural practices. Some examples are below.

Prejudice and Conflict

The Lillis and Hayes (2007) study on prejudice and the Hayes et al. (2004) study on stigma toward drug abuse clients show that helping people accept and defuse from their prejudicial thoughts is more useful than trying to discourage them from having such thoughts. If further studies replicate this finding, it will have profound implications: many of our past efforts to confront and challenge prejudicial thinking directly may actually be counterproductive (Dixon, Dymond, Rehfeldt, Roche, & Zlomke, 2003; Mattaini, 1999).

To the extent that we can foster this more mindful approach to others, we may be able to reduce both interpersonal and intergroup conflict. Situations where this is relevant include police misconduct, school and worksite harassment, marital relations, and religious or ethnic intolerance. All of these problems involve people dealing with others in terms of their own thoughts and feelings. A police officer who beats or exploits someone thinks of that person in biased terms. A coworker who discriminates against another has beliefs that coincide with that discrimination. A husband who refuses to talk to his wife does so "because she was so mean to me." To the extent that people can accept and defuse from these beliefs, they may connect better with the needs of others and be more able to act in the service of their own values, including caring for others.

The Emergence of a Shared Value of Caring

It is possible that, if people became increasingly more psychologically flexible, attending to everyone's wellbeing would emerge as a shared value. This certainly is what emerges within ACT workshops. Such a shared value seems fundamental in evolving a society in which the practices of government, business, education, and civic life ensure that the society meets the basic needs of each person. Businesses would increasingly act in ways that benefit the society as well as their bottom line. Governments would evaluate their impact on human wellbeing. As the proportion of people who shared this value increased, it would be easier to generate public support for policies that reduce poverty or otherwise benefit people who are disadvantaged.

Reducing Punishment

The U.S. is one of the most punitive societies in the world: it has the highest incarceration rate of any developed country (Harrison & Beck, 2006) and still practices capital punishment. Harsh disciplinary practices in families and schools continue to be a major impediment to preventing youthful problem behavior (Mayer, Nafpaktitis, Butterworth, & Hollingsworth, 1987; Patterson, Dishion, & Bank, 1984). Although it is widely believed that harsh punishment effectively reduces undesirable behavior, it is more likely that most of our punitive practices increase problems (Lipsey, 1999; Mayer, Sulzer, & Cody, 1968; Patterson et al., 1984). Finding ways to reduce punitiveness would contribute to reducing aggressive behavior and the problems resulting from it.

People who are psychologically flexible (i.e., those who tend to accept their thoughts and feelings, but do not take them too seriously) will be more willing to support nonpunitive policies and practices. One reason is that they will have a more caring orientation toward others—even those who transgress or harm them. Another is that they will be more willing to forgive. Forgiveness involves being willing to feel angry or hurt, yet act positively towards the other. Finally, psychologically flexible people are more willing to support effective practices, as those practices are less likely to be attached to existing beliefs about effective punishment.

Sustainability

Given the problems of sustainability and global warming that the world faces, reducing people's consumption is an important goal for cultural evolution. It should be noted in this regard that, beyond a minimal level of income, there appears to be no relationship between income and happiness (Diener & Seligman, 2004).

If it is true that evaluation is an almost constant process among human beings, then part of people's tendency to buy and consume may be a function of their avoidance of negative self-evaluations. Having material goods may reduce people's feelings that they are not as good as others are. Consider how advertising frequently involves social comparison. For example, recent reviews of the evidence on tobacco marketing (Biglan, 2004; National Cancer Institute, 2008) indicate that the most common and most effective ads were those that influenced young people to believe that smoking a particular brand would make them more popular. These ads were most appealing to adolescents who did poorly in school and had other concerns about inadequacies or social rejection.

Consider what would happen to such motivation if people were more psychologically flexible. Appeals that suggest a person could look better, feel less inferior, etc., would have less impact on them because people would accept such feelings, and recognize them as such. Moreover, people might be less oriented toward consumption because values concerning human wellbeing would be more dominant. In a world where consumption is harming everyone's long-term wellbeing, consumption would receive less reinforcement.

FOSTERING THE DISSEMINATION OF PSYCHOLOGICAL FLEXIBILITY

Superficially, this analysis may seem to be simply a call for people to care more. It is not novel to suggest that the world would be better off if people were more caring. However, what is new is the research on psychological flexibility that not only indicates the psychological processes that lead people to be fearful and avoidant instead of caring, but also provides a set of empirically evaluated procedures to foster caring.

The question remains: how do we use these processes to reach a significant proportion of the population? We need research on nonclinical methods of increasing psychological flexibility (e.g., Biglan et al., in preparation), for surely there will never be enough clinicians to affect all who could benefit. Even if there were, the approach would need to affect many people who do not need a clinician. Thus, behavior analysts with concerns about ensuring that the behavioral sciences make a difference on all of society's most important problems could advance those efforts by conducting research on how to increase the prevalence of psychological flexibility.

Public policies can foster the spread of psychological flexibility. For example, under Oregon law, publicly funded mental health and drug abuse treatment must utilize evidence-based programs. ACT has been recognized as one such treatment, and the amount of ACT training in Oregon has increased.

Education is a particularly high priority for research. If, as the evidence suggests, psychological flexibility is beneficial across a wide range of situations, then it is important for education to instill this orientation in all students. Psychological flexibility will enable students to confront diverse challenges in life while remaining clear about their values and acting in keeping with them. (I would not advocate a requirement that such education occur at this point, because ACT interventions for young people are not yet sufficiently tested.)

One might ask, as one reviewer of this paper did, if there would be any political support for therapists and teachers to promote psychological flexibility. Presumably such support would grow as the population begins to understand that most psychological and behavioral problems develop in the context of stressful

environments and that promoting psychological flexibility contributes to reducing diverse sources of stress.

The spread of the practices that support psychological flexibility (ACT therapy and training) and the spread of psychological flexibility presumably will start locally, in places where a critical mass of people master the skills and make a commitment to disseminate them. This paper is intended to stimulate such action on the part of behavior analysts, who are already strongly committed to making a difference in the world.

REFERENCES

Barnes-Holmes, D., Staunton, C., Ryan, E., Whelan, R., Barnes-Holmes, Y., Stewart, I. et al. (2004). Interfacing relational frame theory with cognitive neuroscience: Semantic priming, the Implicit Association Test, and event related potentials. *International Journal of Psychology and Psychological Therapy, 4*, 215-240.

Biglan, A. (1991). Distressed behavior and its context. *Behavior Analyst, 14,* 157-169.

Biglan, A. (2004). Direct written testimony in the case of the U.S.A. vs. Phillip Morris et al. U.S. Department of Justice [On-line]. Available: http://www.ori.org/oht/testimony.html.

Biglan, A., Hayes, S.C., & Pistorello, J. (2008). Acceptance and commitment: Implications for prevention science. *Prevention Science, 9,* 139-152.

Biglan, A., Layton, G., Rusby, J.C., & Hankins, M. (In preparation). The value of workshops on Acceptance and Commitment for people working with young children.

Diener, E., & Seligman, M.E.P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5,* 1-31. http://dx.doi.org/10.1111/j.0963-7214.2004.00501001.x

Dishion, T.J., & Patterson, G.R. (2006). The development and ecology of antisocial behavior in children and adolescents. In D. Cicchetti & D.D. Cohen (Eds.), *Developmental psychopathology: risk, disorder, and adaptation* (pp. 503-541). Rochester, NY: University of Rochester Press.

Dixon, M. R., Dymond, S., Rehfeldt, R.A., Roche, B., & Zlomke, K. R. (2003). Terrorism and Relational Frame Theory. *Behavior and Social Issues, 12,* 129-147.

Harrison, P. M., & Beck, A. J. (2006). *Prisoners in 2005*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Hayes, S.C., & Smith, S. (2005). *Get out of your mind and into your life: The new Acceptance & Commitment Therapy*. Oakland, CA: New Harbinger.

Hayes, S.C. (2006). *Acceptance and Commitment therapy (workshop)*. London, UK: World Conference on ACT, RFT, and Contextual Behavioral Science.

Hayes, S.C., Barnes-Holmes, D., & Roche, B. (2001). Relational frame theory: A précis. In S.C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational Frame Theory: A post-Skinnerian account of human language and cognition* (pp. 141-154). New York: Kluwer/Plenum.

Hayes, S.C., Bissett, R.T., Roget, N., Padilla, M., Kohlenberg, B.S., Fisher, G. et al. (2004). The impact of acceptance and commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behavior Therapy, 35,* 821-835. http://dx.doi.org/10.1111/j.0963-7214.2004.00501001.x

Hayes, S.C., Gifford, E.V., & Wilson, K.G. (1996). Stimulus classes and stimulus relations: Arbitrarily applicable relational responding as an operant. In *Stimulus class formation in humans and animals* (x ed., pp. 279-299). Amsterdam, Netherlands: Elsevier.

Hayes, S.C., Luoma, J.B., Bond, F.W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy, 44,* 1-25.

Hayes, S.C., Strosahl, K.D., & Wilson, K.G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: Guilford.

Kahneman, D., & Tversky, A. (1979). Prospect theory: an analysis of decision under risk. *Econometrica, 47,* 263-291. http://dx.doi.org/10.2307/1914185

Lillis, J., & Hayes, S.C. (2007). Applying acceptance, mindfulness, and values to the reduction of prejudice: A pilot study. *Behavior Modification, 31,* 389-411.

Lipsey, M.W. (1999). Can intervention rehabilitate serious delinquents? *AAPSS, 564,* 142-166. http://dx.doi.org/10.1177/0002716299564001009

Mattaini, M. A. (1999). One more clinical implication of stimulus equivalence research (letter to the editor). *Behavior Therapy, 30*, 341-343.

Mayer, G.R., Nafpaktitis, M., Butterworth, T.W., & Hollingsworth, P. (1987). A search for the elusive setting events of school vandalism: A correlational study. *Education and Treatment of Children, 10,* 259-270.

Mayer, G.R., Sulzer, B., & Cody, J.J. (1968). The use of punishment in modifying student behavior. *Journal of Special Education,* 323-328.

National Cancer Institute (2008). *The role of the media in promoting and discouraging tobacco use (NCI Tobacco Control Monograph Series, Number 19)*. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health.

Patterson, G.R., Dishion, T.J., & Bank, L. (1984). Family interaction: A process model of deviancy training. *Aggressive Behavior, 10,* 253-267.

Stroud, C.B., Davila, J., & Moyer, A. (2008). The relationship between stress and depression in first onsets versus recurrences: A meta-analytic review. *Journal of Abnormal Psychology, 117,* 206-213.

Snyder, J., Dishion, T.J., & Patterson, G.R. (1986). Determinants and consequences of associating with deviant peers during preadolescence and adolescence. *Journal of Early Adolescence, 6,* 29-43.

Stewart, I., Barnes-Holmes, D., & Roche, B. (2004). A functional-analytic model of analogy using the relational evaluation procedure. *Psychological Record, 54*, 531-552.

Whelan, R. & Barnes-Holmes, D. (2004). The transformation of consequential functions in accordance with the relational frames of same and opposite. *Journal of the Experimental Analysis of Behavior, 82*, 177-195.