

THE CURRENT STATE OF MOTIVATION THEORY: THE SELF-REGULATED VISITOR

by John W. Lightner

Motivation has always played an important role in museum learning for without it visitors would never darken our doors, much less become engaged with our exhibits to the point where learning could occur. Yet motivation remains vague in the minds of many practitioners who express concern about their desire to motivate visitors but who do not know exactly how to go about doing that. The psychological field of motivation adds to this dilemma by offering a variety of theories from which to choose.

Should a practitioner consider some sort of extrinsic motivators? How does one implement goal theory? Is self-efficacy theory the answer in museums? But then there is the range of intrinsic motivational theories. And what about the claim that extrinsic motivators are detrimental to intrinsic motivation? Don't we want our visitors to be self motivated? Where should the museum practitioner turn in order to find a good theory?

Much current motivation theory places a heavy emphasis on the self-regulating role of the individual visitor. In fact, contemporary motivational theorists see motivation more broadly as a process of intrinsic regulation by individual learners as opposed to a process of extrinsic control by a more powerful external entity.

Motivation in the Behaviorist Era

A traditional view of learning is one in which the learner is trained to exhibit appropriate behaviors through rewards and punishments. Motivation for the behaviorist was seen as a pro-

cess of controlling learners; external rewards were provided to assuage felt needs in an effort to attain externally imposed goals. The psychological roots of motivation lie in the behaviorist tradition and the motivational theories that resulted from animal experiments. The fallacy in this thinking, however, is that human beings bring a different dynamic to motivational theorizing that renders much of the animal work inadequate to explain human motivation. Yet much of the behaviorist tradition lingers in psychological thinking concerning motivation.

Motivation in Transition

It was during the 1970s and 1980s that theorists became concerned with intrinsic motivation. Learners who are intrinsically motivated engage in an activity for its own sake, finding satisfaction in their interactions with their environment. Such learners per-

ceive themselves to be the locus of causality and, therefore, are considered intrinsically motivated (deCharms, 1968). During this transition period it was thought that rewards would interfere with, reduce, or even eliminate intrinsic motivation.

This interference with intrinsic motivation was called *undermining*. Research from the 1970s and 1980s tended to support the conclusion that extrinsic rewards "cost" (Lepper & Greene, 1978) in terms of decreased intrinsic motivation. In other words, the individual's motivation was thought to shift from the intrinsic factors that originally motivated the activity to engaging in the activity solely for the reward. Theorists began to refer to this undermining as *overjustification*. In other words, the combination of intrinsic and extrinsic motivators "overjustified" engaging in the behavior, leading to a reduction in intrinsic motivation.

(continued on next page)

Table 1.

Types of Extrinsic Regulation (adapted from Rigby, et al., 1992).

Type of Extrinsic Regulation	Locus of Control	Example
External Regulation	Contingencies external to the individual.	Behaves in response to rewards or punishments.
Introjected Regulation	Internal pressures such as those related to self-esteem.	Behaves as one thinks he/she should to avoid feeling guilty.
Identified Regulation	Internal, due to the behavior being adopted as one's own.	Behavior is viewed as personally important.
Integrated Regulation	Internal, due to integration into one's sense of self.	Behavior is in total harmony with one's sense of self—no need to even pause and consider alternative behavior.

The work of Rigby, et al. (1992), however, represents the transition from the argument over the intrinsic-extrinsic dichotomy and the arguments over undermining to a more individualized view of motivation. Rigby and his colleagues began looking at the processes of internalization and integration, saying that “the tendency to explore and to assimilate is an innate endowment of the human being . . . it is intrinsic to the organism” (1992, p. 166). This view assumes that many of the pressures to engage in one behavior or another originates from extrinsic sources and that the degree to which the extrinsic motivator has become internalized and integrated into the individual’s self determines the ability of an external prompt to motivate behavior.

Recent Perspectives

Rigby, et al. (1992) moved the transitory work of Deci and Ryan (1985) along by positing a continuum of extrinsic regulation. This so called “differentiated view” develops four types of regulation that varies (differentiates) according to the degree to

which the control is considered self-determined by the individual. See Table 1 for a summary.

In this view the regulation is considered to be external, introjected, identified, or integrated. External regulation embodies the traditional view of extrinsic rewards in that the behavior exhibited by the learner is exhibited in order to do the bidding of another. Introjected regulation is a bit more internalized than external regulation but not integrated. With introjected regulation the learner behaves in the way that he/she feels others expect them to behave; the learner responds to social pressures to conform. Identified regulation moves yet a step closer to totally integrated regulation. When the behavior has been internalized to the extent that the learner considers it personally important, the learner has come to identify him/herself with that behavior. Identified behavior lacks only one step from becoming totally integrated into the learner’s self. Integrated regulation results when the learner has totally integrated the behavior. The motivation comes from the fact that

totally integrated behaviors are in harmony with the learner’s sense of self; the behavior is so much a part of the self that action is motivated almost automatically.

The work done by Rigby, et al. (1992), therefore, signals a moderation in the debate that consumed the field in the 1970s and 1980s that extrinsic pressures are antithetical to intrinsic motivation. By developing the continuum described above, Rigby, et al. have provided a method to link the external motivators that abound in the world with the important concept of intrinsic motivation. In fact, a relatively recent meta-analysis by Cameron and Pierce (1994) has shown that extrinsic rewards do not permanently interfere with intrinsic motivation unless they are given indiscriminately, that is, without regard to accomplishment of pre-specified goals.

Motivation in the Museum

This progression in the history of motivation theory from reward and punishment to a view of human learners as autonomous and self-regulated
(continued on page 12)

Table 2.
Elements of the Attention Model for Museum Exhibits (adapted from Lightner, in press)

Construct	Definition	Example¹
Enduring Personal Interest	This is an individual characteristic that is idiosyncratic; becomes a stable attribute of the individual, once initially formed.	A group of three mechanical engineers from the U.S. were interested in “mechanical transportation in general.”
Curiosity	This is a characteristic of the population; people tend to be curious in the presence of novel stimuli.	A representative comment is: “I thought how huge it was—massive. And how complicated it must have been back at that time to design and build something like that. I’ve been around, but this thing’s huge!”
Connections to Personal History	Another idiosyncratic characteristic that depends upon whether an individual visitor has personal connections through family, family friends, or personal friends who have historical connections to the objects exhibited or to the historical context that the objects represent.	A female visitor said, “Reminds me, when we lived in Ohio, every morning we would hear the whistle from the train and I always thought, ‘I would like to ride a train like that someday.’”
Group Influence	Here, interactions with the exhibit (Diamond, 1986) are influenced by group interactions.	Any group member can bring his/her influence to bear: “The grandson brought us over hers.”

bodes well for museum practice. The fact that visitors are motivated enough to come to our institutions in the first place can be construed to mean that they are in a motivationally ready state to become further motivated in any one of our exhibits or galleries.

The question becomes one of asking what we must do within any given exhibit in order to make a bridge from the exhibit presentation to the interests and expectations that visitors bring with them when they come to the museum. An empirical study by Lightner (in preparation) developed an Attention Model for Museum Exhibits and suggests that visitors are motivated to attend on the basis of their interests and/or the relevance of the exhibit. See Table 2 on previous page for a summary.

The four constructs in Table 2 fit within the two categories of *interest* (i.e., enduring personal interest and curiosity) and *relevance* (i.e., connections to personal history and group influence). Each of the first three are representative of the autonomous or self-determined nature of motivation as currently defined by contemporary motivational theorists with the fourth, group influence, falls on the extrinsic regulation continuum of Rigby, et al. (1992). An exhibit can motivate visitors' attention through the use of these four constructs.

Autonomous learners develop personal interests over the course of their lifetimes. As these interests become more integrated into their own sense of self, such interests can be referred to as enduring personal interests. One individual may develop an enduring personal interest in Impressionist painting while another develops an enduring personal interest in antique clocks. This kind of interest, in fact, becomes so integrated that the person is often identified by his or her friends according to their enduring personal interest. Museum exhibits that make potential areas of interest explicit

have a better chance of motivating attention than do exhibits that leave these connections to the visitor.

Most if not all learners exhibit a degree of curiosity. Curiosity may be considered as a kind of generalized interest within the human species in any kind of novel stimuli. There is a strong motivation to reduce the level of uncertainty that any uncommon or unique stimulus engenders. Many exhibits contain a number of features that elicit visitors' curiosity but often contain nothing to help satiate that curiosity. Without these, attention motivated by curiosity will become frustrated and non productive.

Motivation is strong when a visitor can make connections with his or her own personal history. Attention is strongly engaged in such cases, making for multiple opportunities for additional learning to occur. Exhibits that can make explicit those aspects that can connect to the individual's past have a strong draw on the visitor's attentional resources.

Finally, group influence can become operational as other members in the visiting group make their own connections through the previously described constructs and transmit these connections to their group mates. The group can make the exhibit relevant by performing an interpretive function and communicating connections to others in the group. Exhibits that facilitate discussion among visiting groups can provide the kind of scaffolding that will permit additional learning through interaction.

The Attention Model provides some preliminary insight into some of the factors that can motivate visitors to attend to a museum exhibit. In doing so, the model makes it clear that the self-determined visitor engages in some very complex motivational processes. It would appear, therefore, that good interpretation of exhibits that can assist the visitor in

making clear personal connections and that also elicits interactions amongst group members is the best answer to the question of how to take motivational theories and incorporate them into practice.

Summary

This paper has briefly summarized the historical record of the evolution of motivational theories in rather broad terms. The behaviorist tradition, grounded in animal studies, still has a great influence in motivational thinking with regard to rewards and conditioning of behavior. Despite this, however, motivational theorists are adopting a more organismic view of an autonomous and self-determined individual. This change began during the 1970s and 1980s with the renewed interest in intrinsic motivation and the concern that extrinsic motivators might permanently interfere with intrinsic motivation. In the 1990s this view has been moderated as theorists have come to view the individual as autonomous and able to internalize and integrate extrinsic motivators to varying degrees.

The learning environment in the museum, with its free choice nature, is an ideal setting for self-determined learners. In the end the real challenge is to make exhibits less opaque by providing the kind of excellent interpretation that will cue visitors to connections that can be made to their enduring personal interests, curiosity, or personal history while also making group interactions easy and natural. If we provide this kind of scaffolding, museum visitors will exercise their autonomy in ways that will motivate them to attend to and learn from our exhibits.

References

Cameron, J. & Pierce, W.D. (1994). Reinforcement, reward, and intrinsic motivation: A meta-analysis.
(continued on next page)

DISSERTATIONS PUBLISHED SINCE 1995

Burnett, J. R. (1995). *Small group interaction among senior science students during field instruction at a marine park*. Unpublished doctoral dissertation, Queensland University of Technology, Brisbane, Australia.

Carliner, S. A. (1995). *Every object tells a story: A grounded theory of design for object-based learning in museums*. Unpublished doctoral dissertation, Georgia State University, Atlanta.

Arenson, L. J. (1995). *An assessment of the Zooreach program as a model for the development of informal education programs*. Unpublished doctoral dissertation, University of Southern California, Los Angeles.

Harvey, M. L. (1995). *The influence of exhibit space design features on visitor attention*. Unpublished doctoral dissertation, Colorado State University, Fort Collins.

Kleinman, K. J. (1997). *The museum in the garden: Research, display and*

education at the Missouri Botanical Garden since 1859. Unpublished doctoral dissertation, Union Institute, Cincinnati.

Morris, T. L. (1997). *Interpreting our own: Native people's redefining museum education*. Unpublished doctoral dissertation, University of Arizona, Tucson.

Moussouri, T. (1997). *Family agendas and family learning in hands-on museums*. Unpublished doctoral thesis, University of Leicester, Leicester, UK

Riley, D. M. (1996). *The representation and interpretation of the image of science and scientists at a museum of natural history*. Unpublished doctoral dissertation, Miami University, Oxford, OH.

Sachatello-Sawyer, B. (1996). *Coming of age: An assessment of the status of adult education methodology in museums*. Unpublished doctoral

dissertation, Montana State University, Billings.

Sikes, M. (1992). *Interpreting the Heard Museum as a metaphoric structure: A critical and ethnographic study*. Unpublished doctoral dissertation, Florida State University, Tallahassee.

Young, R. W. (1995). *Art education in art museums: Curriculum, policy and culture*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, Champaigne.

^ This list is adapted from a literature database created by the Museum Learning Collaborative at the University of Pittsburgh. For more information on the MLC and a more complete listing of the database, visit their web page at <http://mlc.lrdc.pitt.edu/mic/>. If you have completed a dissertation since 1995, please send the citation to **Visitor Studies Today!** We will keep an updated list on our web site.

THE CURRENT STATE OF MOTIVATION THEORY (CONT.)

Review of Educational Research, 64, (3), 363-423

deCharmes, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York: Academic Press.

Deci, E.L. & Ryan, R.M. (1985). The general causality orientations scale: Self-determination in personality, *Journal of Research in Personality*, 19, 109-134.

Diamond, J. (1986). The behavior of family groups in science museums. *Curator*, 29, (2), 139-235.

Lepper, M.R. & Greene, D.

(1978). Divergent approaches to the study of rewards. M.R. Lepper & D. Greene (Eds.), *The Hidden Costs of Reward: New Perspectives on the Psychology of Human Motivation* (pp. 217-244). New York: Lawrence Erlbaum Associates.

Lightner, J.W. (In Preparation). An attention model for museum exhibits: Explicating the complexities of the 'hook.' Manuscript in preparation for publication.

Rigby, C.S., Deci, E.L., Patrick, B.C., & Ryan, R.M. (1992). Beyond the intrinsic-extrinsic dichotomy: Self-determination in motivation and

learning. *Motivation and Emotion*, 16, (3), 165-185.

¹The study referred to here was conducted in a locomotive exhibit at the Henry Ford Museum in Dearborn, Michigan.

John W. Lightner is an associate professor at Lansing Community College, Lansing, Michigan, and a doctoral student in educational psychology, College of Education, Michigan State University. His work focuses on informal learning and motivation.