

Interest—The Curious Emotion

Paul J. Silvia

University of North Carolina at Greensboro

ABSTRACT—*Despite their interest in why people do what they do, psychologists typically overlook interest itself as a facet of human motivation and emotion. In recent years, however, researchers from diverse areas of psychology have turned their attention to the role of interest in learning, motivation, and development. This article reviews the emerging body of work on the psychology of interest, with an emphasis on what contemporary emotion research has learned about the subject. After considering four central questions—Is interest like other emotions? What functions does interest serve? What makes something interesting? Is interest merely another label for happiness?—the article considers unanswered questions and fruitful applications. Given interest’s central role in cultivating knowledge and expertise, psychologists should apply research on interest to practical problems of learning, education, and motivation.*

KEYWORDS—*interest; curiosity; exploration; emotion; learning*

Humans are curious creatures: They devote a lot of effort and brainpower to the things that interest them. How much money would it take to persuade an indifferent person to memorize a team’s baseball statistics, compile a four-volume encyclopedia of Danish furniture, learn to play the banjo, or spend a career studying an obscure academic topic? As a source of intrinsic motivation, interest plays a powerful role in the growth of knowledge and expertise (Kashdan, 2004; Sansone & Thoman, 2005). The psychology of interest dates to the 1800s, and it has flourished in the last 10 years. Researchers who study emotion, personality, aesthetics, education, vocations, motivation, and development have taken a new look at what interest is, what it does, and how it works (Silvia, 2006). In this article, I’ll review what emotion psychology has learned about interest, the curious emotion.

Address correspondence to Paul J. Silvia, Department of Psychology, P.O. Box 26170, University of North Carolina at Greensboro, Greensboro, NC, 27402-6170; e-mail: p_silvia@uncg.edu.

IS INTEREST AN EMOTION?

Interest is an eccentric emotion. Many theories don’t include interest in their lists of major emotions, and a few theories reject interest as an emotion altogether. Nevertheless, interest has a proud history in emotion psychology. In his landmark book on emotional expression, Charles Darwin (1872/1998) described emotions related to learning, thinking, and exploring. Darwin’s terms—*abstracted meditation*, *perplexed reflection*, and *stupefied amazement*—seem quaint to modern readers, but his ideas remain ahead of their time. Many decades later, modern emotion psychology doesn’t know much about what I’ll call *knowledge emotions*: states such as *interest*, *confusion*, *surprise*, and *awe*.

A good case can be made for viewing interest as an emotion. Modern theories of emotion propose that emotions are defined by a cluster of components. Typical emotional components are physiological changes, facial and vocal expressions, patterns of cognitive appraisal, a subjective feeling, and an adaptive role across the lifespan (Lazarus, 1991). Interest appears to have these components: It has a stable pattern of cognitive appraisals (Silvia, 2005b), a subjective quality (Izard, 1977), and adaptive functions (Sansone & Smith, 2000). Interest’s physiological and expressive components, not surprisingly, are associated with orientation, activation, concentration, and approach-oriented action (Libby, Lacey, & Lacey, 1973). Interest lacks the smiling and eye-crinkling expressions of happiness. Instead, interest involves movements of muscles in the forehead and eyes that are typical of attention and concentration (Langsdorf, Izard, Rayias, & Hembree, 1983; Libby et al., 1973; Reeve, 1993). When interested, people often still and tilt the head, which aids in tracking objects and sounds (Reeve, 1993). Interest’s vocal expression involves a faster rate of speech and greater range in vocal frequency (Banse & Scherer, 1996). Taken together, interest appears to have the features typical of emotions.

WHAT DOES INTEREST DO?

According to functional approaches to emotion, emotions help people manage fundamental goals (Lazarus, 1991). Interest’s function is to motivate learning and exploration. By motivating people to learn for its own sake, interest ensures that people will develop a broad set of knowledge, skills, and experience. The

need for learning is pressing in infancy. Baby humans are cute but ignorant—they have a lot to learn. Early research on infancy found that exploration, play, and diverse experience enhanced motor and perceptual learning (e.g., Fiske & Maddi, 1961). Beyond infancy, interest is a source of intrinsic motivation for learning. When interested, students persist longer at learning tasks, spend more time studying, read more deeply, remember more of what they read, and get better grades in their classes (see Silvia, 2006). People seem to understand that interest enhances their motivation and performance. When faced with a boring task, people will use strategies to make it more interesting, such as working with a friend or making the task more complex (Sansone & Thoman, 2005).

Interest attracts people to new, unfamiliar things, and many of these things will turn out to be trivial, capricious, dangerous, or disturbing. Some people—such as researchers who study why people experiment with unsafe behaviors—might understandably see this as a dark side of interest. Nevertheless, it is because unfamiliar things can be harmful that people need a mechanism that motivates them to try new things. One never knows when some new piece of knowledge, new experience, or new friendship may be helpful. Interest is thus a counterweight to feelings of uncertainty and anxiety (Kashdan, 2004). Interest won't—and shouldn't—always win the tug-of-war between approach and avoidance, but, over the long haul, interest will motivate people to encounter new things.

WHAT IS INTERESTING?

What makes something interesting? This deceptively simple question has proved to be hard to answer. Any theory of what makes something interesting runs into two problems. First, people differ in whether they find something interesting: One person's dissertation is another person's indifferent shrug. Consider a chair designed by Kaare Klint, a legendary Danish furniture designer. This chair will absorb a few people, but for most people it is merely another boring chair. Second, the same person will differ in interest over time. A once-interesting book can become boring, confusing, frustrating, or aversive. These two problems—the problems of between-person and within-person variability—confound theories that attribute interest to objective features of objects. For example, classic theories proposed that objective stimulus features—particularly novelty, complexity, uncertainty, and conflict (Berlyne, 1960)—evoked feelings of interest. Even some modern theories assume that some things (e.g., themes of sexuality and death) are inherently interesting to nearly everyone, an assumption that is probably wrong (see Silvia, 2006).

Modern emotion psychology offers a new way of thinking about what makes something interesting. Appraisal theories of emotion propose that emotions come from subjective evaluations of events: People appraise an event's meaning, and these appraisals bring about emotions (Lazarus, 1991). Emotions are

thus caused by how people appraise what is happening, not by what is actually happening. Because people will interpret a situation differently, they will have different emotions in response to the situation (see Silvia, 2008). Visitors to a museum, for example, will make different appraisals of Andres Serrano's photograph *Piss Christ*. Many people—but not everyone—will appraise the photograph as violating their values and thus feel angry or disgusted (Silvia & Brown, 2007).

If emotions come from appraisals, what are the appraisals that cause interest? In my research, I have suggested that interest comes from two appraisals (Silvia, 2005b; Silvia, 2006). The first appraisal is an evaluation of an event's *novelty-complexity*, which refers to evaluating an event as new, unexpected, complex, hard to process, surprising, mysterious, or obscure. This appraisal isn't surprising: Intuition and decades of research (Berlyne, 1960) show that new, complex, and unexpected events can cause interest. The second, less obvious appraisal is an evaluation of an event's *comprehensibility*. Appraisal theories would label this appraisal a *coping-potential* appraisal because it involves people considering whether they have the skills, knowledge, and resources to deal with an event (Lazarus, 1991). In the case of interest, people are “dealing with” an unexpected and complex event—they are trying to understand it. In short, if people appraise an event as new and as comprehensible, then they will find it interesting.

Consider, for example, a group of college students meandering through the campus art museum. Some of the students find the modern-art gallery interesting: The works strike them as new, different, and unusual, and—thanks to a few classes in art history—they feel able to get what the artists are trying to express. But most of the students, such as the students forced to attend as part of a class assignment, do not find the modern-art gallery interesting. The works strike them as unusual but also meaningless and incomprehensible: They do not know enough about this art to find it interesting. Finding something understandable is the hinge between interest and confusion—a related knowledge emotion. New and comprehensible works are interesting; new and incomprehensible things are confusing.

Many studies suggest that these two appraisals cause interest. Most of these experiments have used real-world stimuli, such as abstract art, classical paintings, contemporary poetry, and brief essays. Experiments that manipulate participants' appraisals find that people are more interested when stimuli are made both more complex and more understandable. For example, people found an abstract poem more interesting when they received a hint that enabled them to understand it (Silvia, 2005b, Study 2), and they spent more time viewing complex polygons than they did viewing simple polygons (Silvia, 2005b, Study 4). Within-person correlational studies show that appraisals of complexity and understandability predict the experience of interest (Silvia, 2008; Turner & Silvia, 2006). People viewed a diverse set of art works and rated each picture for interest and for appraisals. The more novel and more comprehensible people rated a picture, the more they rated it as interesting. In one study, 100% of the within-

person correlations were positive, indicating that the appraisals predicted interest for each person in the sample (Silvia, 2005a).

The appraisal approach to interest builds upon past theories of interest. In his landmark work, Berlyne (1960) proposed that curiosity is a way of managing arousal. Because stimuli high in novelty, complexity, uncertainty, and conflict enhance arousal, people seek novelty and complexity when they are understimulated (cf. Fiske & Maddi, 1961). In theories of optimal experience, feelings of absorption, concentration, and interest come from tasks in which a person's skills match the task's level of challenge (Csikszentmihalyi, 1990). The appraisal approach borrows from both traditions: Interest stems from events that are new, complex, and unfamiliar (Berlyne, 1960), provided that people feel able to comprehend them and master the challenges that they pose (Csikszentmihalyi, 1990).

Interest motivates learning about something new and complex; once people understand the thing, it is not interesting anymore. The new knowledge, in turn, enables more things to be interesting. For appraisals of novelty–complexity, knowledge about an area enables people to see subtle differences and contrasting perspectives that aren't apparent to novices. It is common for experts to feel that the more they learn, the more complex and mysterious their field becomes. (Many psychologists may agree that human behavior seemed simpler before we studied psychology.) For appraisals of comprehension, knowledge enables people to understand increasingly complex ideas and events. Concepts confusing to novices can be interesting to experts because experts feel able to understand them. In a sense, interest is self-propelling: It motivates people to learn, thereby giving them the knowledge needed to be interested.

What does this research mean for everyday practice? If interest comes from seeing something as new and comprehensible, then people who want to evoke interest should try to enhance both complexity and comprehension. College textbooks are an intriguing example. The typical textbook wants to engage students' interest, so it sprinkles each chapter with irrelevant quotes, cartoons, contrived stock photos, and random stories from the authors' distant childhoods. But diverting attention from the text's main points isn't the same thing as making the text's main points interesting. According to educational research (Sadoski, 2001; Silvia, 2006), the largest predictors of a text's interestingness are (a) a cluster of novelty–complexity variables (the material's novelty, vividness, complexity, and surprisingness) and (b) a cluster of comprehension variables (coherence, concreteness, and ease of processing). Intuition tells us that we can make writing interesting by “spicing it up”; research reminds us that clarity, structure, and coherence enhance a reader's interest, too.

WHAT ABOUT HAPPINESS?

Interest is often lumped together with happiness, but interest and happiness diverge in three ways. First, they serve different

functions. Interest motivates people to try new things, places, and experiences; happiness cultivates attachments to things, places, and experiences that have proved rewarding in the past. Because they motivate different actions, interest and happiness can conflict. Imagine choosing between your favorite Thai restaurant and a new Thai restaurant. Happiness motivates sticking with the restaurant that has always been tasty; interest motivates trying the new place that might be tasty but could be abysmal. Without interest, people would stubbornly stick with what they like instead of trying new things. Without happiness, people would capriciously flit from new thing to new thing instead of returning to proven sources of enjoyment. Second, interest and happiness connect to different abstract dimensions of personality. Interest connects to *openness to experience*, a broad trait associated with curiosity, unconventionality, and creativity (McCrae & Costa, 1999). Happiness, in contrast, connects to *extraversion*, a broad trait associated with positive emotions and gregariousness (McCrae & Costa, 1999).

Finally, interest and happiness stem from different appraisals. In a recent experiment (Turner & Silvia, 2006), we asked people to view a set of paintings. Some of the paintings—such as landscapes by Claude Lorraine and Claude Monet—were soothing and relaxing. Other paintings—such as works by Francis Bacon and Francisco Goya—were twisted and disturbing. People rated their interest and enjoyment for each painting, and they appraised each painting on a wide range of appraisal dimensions. Our results showed that interest and enjoyment had contrasting within-person relationships with appraisals of the paintings. Paintings rated as interesting were appraised as complex, unfamiliar, negative, and disturbing; paintings rated as enjoyable were appraised as simple, positive, and calming.

WHAT NEXT?

The psychology of interest is enjoying a renaissance: Researchers across psychology are studying how interest relates to their area's important issues. Like many emerging areas, the study of interest risks splintering into many small literatures, such as interest and the arts, interest and education, interest and vocations, and interest and personality. One task for future research is to bring these diverse bodies of thought together. Can the study of momentary feelings of interest inform why some people are generally more curious than others? What role does interest play across the lifespan? How do enduring interests, hobbies, and avocations develop? A second task for future research is to put our knowledge to good use. If we know what makes art interesting, how can we cultivate engagement with challenging and controversial art? If we know how interest enhances learning, how can we teach better classes, write better books, and be better mentors? Based on research so far, psychology can expect some interesting answers.

Recommended Reading

- Berlyne, D.E. (1960). (See References). A landmark work on the psychology of curiosity; it includes an insightful analysis of the nature of novelty, complexity, uncertainty, and conflict.
- Kashdan, T.B. (2004). (See References). A contemporary review of curiosity research, with an emphasis on motivation and individual differences.
- Renninger, K.A., Hidi, S., & Krapp, A. (Eds.). (1992). *The role of interest in learning and development*. Hillsdale, NJ: Erlbaum. An edited volume devoted to educational and developmental research on interest.
- Sansone, C., & Thoman, D.B. (2005). (See References). A recent review of the role of interest in motivation and self-regulation.
- Silvia, P.J. (2006). (See References). A wide-ranging review of research on what makes things interesting and how enduring interests develop.

REFERENCES

- Banse, R., & Scherer, K.R. (1996). Acoustic profiles in vocal emotion expressions. *Journal of Personality and Social Psychology, 70*, 614–636.
- Berlyne, D.E. (1960). *Conflict, arousal, and curiosity*. New York: McGraw-Hill.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.
- Darwin, C. (1998). *The expression of the emotions in man and animals* (3rd ed.). New York: Oxford University Press. (Original work published 1872).
- Fiske, D.W., & Maddi, S.R. (Eds.). (1961). *Functions of varied experience*. Homewood, IL: Dorsey.
- Izard, C.E. (1977). *Human emotions*. New York: Plenum.
- Kashdan, T.B. (2004). Curiosity. In C. Peterson & M.E.P. Seligman (Eds.), *Character strengths and virtues* (pp. 125–141). New York: Oxford University Press.
- Langsdorf, P., Izard, C.E., Rayias, M., & Hembree, E.A. (1983). Interest expression, visual fixation, and heart rate changes in 2- to 8-month old infants. *Developmental Psychology, 19*, 375–386.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Libby, W.L., Jr., Lacey, B.C., & Lacey, J.L. (1973). Pupillary and cardiac activity during visual attention. *Psychophysiology, 10*, 270–294.
- McCrae, R.R., & Costa, P.T., Jr. (1999). A five-factor theory of personality. In L.A. Pervin & O.P. John (Eds.), *Handbook of personality* (2nd ed., pp. 139–153). New York: Guilford.
- Reeve, J. (1993). The face of interest. *Motivation and Emotion, 17*, 353–375.
- Sadoski, M. (2001). Resolving the effects of concreteness on interest, comprehension, and learning important ideas from text. *Educational Psychology Review, 13*, 263–281.
- Sansone, C., & Smith, J.L. (2000). Interest and self-regulation: The relation between having to and wanting to. In C. Sansone & J.M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation* (pp. 341–372). San Diego, CA: Academic Press.
- Sansone, C., & Thoman, D.B. (2005). Interest as the missing motivator in self-regulation. *European Psychologist, 10*, 175–186.
- Silvia, P.J. (2005a). Cognitive appraisals and interest in visual art: Exploring an appraisal theory of aesthetic emotions. *Empirical Studies of the Arts, 23*, 119–133.
- Silvia, P.J. (2005b). What is interesting? Exploring the appraisal structure of interest. *Emotion, 5*, 89–102.
- Silvia, P.J. (2006). *Exploring the psychology of interest*. New York: Oxford University Press.
- Silvia, P.J. (2008). Appraisal components and emotion traits: Examining the appraisal basis of trait curiosity. *Cognition and Emotion, 22*, 94–113.
- Silvia, P.J., & Brown, E.M. (2007). Anger, disgust, and the negative aesthetic emotions: Expanding an appraisal model of aesthetic experience. *Psychology of Aesthetics, Creativity, and the Arts, 1*, 100–106.
- Turner, S.A., Jr., & Silvia, P.J. (2006). Must interesting things be pleasant? A test of competing appraisal structures. *Emotion, 6*, 670–674.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.