

The Future of Emotion Research

by Lisa Feldman-Barrett

What will be the future of emotion research? Two recent articles in *The Affect Scientist* have offered concerns and suggestions on this topic, though each concentrated on somewhat different issues. Paul Ekman critically discussed the academic reward system and the challenges it has brought to affective science. Klaus Scherer presented opinion on the processes that should guide affective science in the coming years. As a newer researcher, I would like to offer some insights inspired by Ekman and Scherer's words, and then turn attention to a related, pressing matter for affective science: that as a field, we do not agree on what we ought to be studying. Unless emotion research develops some additional infrastructure, its future might be only a repetition of its past.

Publish and Perish?

According to Paul Ekman's piece, today's academic reward structure discourages researchers, especially young ones, from tackling risky research questions, engaging in field research that takes time and patience, and developing research programs supported by serious scholarship of theoretical breadth and depth. Instead, we conduct laboratory studies quickly and efficiently so we can publish many papers, forming a foundation for grant support and evidence for tenure decisions. As a result, emotion research lacks scholarship, and grand theories are rare.

Ekman's commentary is on the mark but not surprising. The impact of the 'publish or perish' syndrome on scholarship is well known throughout academia. At a recent meeting of the Society for Personality and Social Psychology in tribute to Kurt Lewin, the lack of grand theorists in social psychology was a major topic of discussion. Perhaps what Ekman has highlighted in his column is that, as a community of researchers, we have not taken these problems seriously enough and our field, like many others, is suffering for it.

To take this argument further, I suggest that the academic reward system may work not only against the development of affective science as a field of inquiry, but also against academic freedom in general. According to a recent article by Neil Hamilton published in *Academe*, academic freedom in the United States has been periodically threatened by religious, political, economic, and even academic considerations.¹ Freedom of academic thought and speech was assaulted by the religious fundamentalism of university administrators and trustees in the late 19th century (and earlier), by patriotism during World War I, by anticommunism both before and after World War II, by student activism in the mid to late 1960s, and by political correctness in the early 1990s. One could argue that the current academic reward structure – including the journal, grant, and tenure review procedures in which we all participate – constitutes another



limitation to academic freedom. By requiring endeavors to yield rapid, publishable results, researchers are encouraged (one might even say forced) to work on less substantial problems that will produce many publications quickly or are safe investments for funding agencies. As a result, researchers are discouraged from doing scholarly work that could potentially be taken seriously as knowledge. Furthermore, the grant and journal peer review systems contain anonymous reviewers who sometimes block the exploration or publication of ideas that do not conform to conventional or sanctioned views. In an interesting paradox, then, the peer review system that is supposed to protect academic freedom (including the right to focus on risky or non-consensually held ideas) may actually contribute to the narrowing of both academic freedom and the development of knowledge.

Today's academic reward system presents a puzzle for newer researchers like myself. On the one hand, we must contribute knowledge to demonstrate that we are worthy of the privileges bestowed by academia. On the other hand, we must do so in a timely fashion (approximately 6 years). The paradox is that true knowledge probably cannot be developed in such a short time span, and so, rewards are meted out on the basis of a proxy measure of knowledge: publications. Publications are a flawed index of the degree of knowledge contributed, despite the peer review process, because they are often constrained by precedent. It is easier to publish ideas that have already been established, and ease of publication is sometimes inversely related to incremental validity. To be sure, some important knowledge is being generated by our field. But, if we continue to use the number of publications as a measure of scholarly contribution, then we run the risk of intellectual stagnation.

The alternative to awarding tenure and grant support on the basis of publication number (and assuming that this translates into scholarly contribution) is to reward academics (whatever their age or status) solely on the quality, rather than mere quantity, of their scholarship. Of course, this plan of action would require that we read one another's work more carefully and thoughtfully, and it may mean that we will all have to slow down, produce less, and read more. Rather than justifying a line of research by whether or not it has precedent, whether or not the ideas are safe, perhaps we should justify research endeavors only on the quality of scholarship – that is, reward vigorous ideas and solid methods. Given that an idea is testable, perhaps it would be evaluated on the basis of whether or not it is novel. Or innovative. Or creative. Even if an idea is risky, what would the payoff be if it were shown to be correct? If we are to evolve as a field, then rewards cannot be reserved for those ideas that have already been worked and re-worked.

Emotion as Process

Klaus Scherer's column touched briefly on publication practices, but focused primarily on methods likely to be important to future research on emotional phenomena. He highlighted the need for collaborative, multimodal, process-oriented field research. That is, emotional phenomena should be studied as a process that unfolds over time, using multiple methods from different scientific vantage points by collaborating scholars. Despite a growing consensus that emotion is process, Scherer pointed out, we continue to have difficulties with terminology, probably because we use words with colloquial meanings in our scientific discourse.

I would go a bit further with this line of thinking: as we use it, the term 'emotion' is too broad a class of events for science. Psychologists apply the term to a wide spectrum of phenomena: a brief startle at an unexpected noise, a cardiovascular change in response to viewing a film, a memory of sadness or grief, or a lifelong love of an offspring. Definitions are rarely rigorous and are more reminiscent of folk theory than scientific discourse. The use of vague or undefined terms, especially in theoretical writing and secondary sources, makes the literature on emotion a virtual nightmare for those who attempt any sort of large scale integrative theory of emotion.

Furthermore, I argue that the terminology problem that besets our field is symptomatic of a larger one: we don't agree, as a discipline, on the nature of what we are studying. We don't have standard definitions for the jargon that we rely on, and miscommunication and misunderstanding are rampant. Despite periodic attempts to rectify this problem, there is still little consensus on what emotion is or is not. Vague boundaries and ill-defined concepts continue to preclude the precision and rigor that any science requires.

What is Emotion?

The future of affective science will be determined by our ability to establish the fundamental nature of what we are studying. There are many ways we might accomplish this task, and I will offer two somewhat different suggestions as examples. One option, suggested by many scientists, is to first observe, describe, and classify phenomena, identifying the functional relationships between them, and only afterward invent constructs to cover what has already been identified. Most behavioral scientists, however, begin with an abstract, theoretical construct (e.g., emotion) and then try to identify it in human behavior. Perhaps we need to concentrate on empirically identifying which observables (e.g., cardiovascular changes, facial expressions, startle responses, EEG recordings, subjective experience, conscious thoughts) should be included in the affective domain and observe, rather than theorize, their relationships (if any) in varying circumstances and time frames. I would add that both convergent and discriminant validity should be addressed for this approach to be successful. That is, we could begin with an overinclusive set of observables to determine empirically what is (and is not) necessary to

the affective domain. Rather than argue over the essential feature of emotion, we would include all possible components and see what coheres. If emotion is to be defined by empirical connections, then no matter where we begin the investigation, our observations should eventually demonstrate reliable patterns of relationships between the components of emotion.

In contrast, if we were to appeal to abstract theoretical concepts when trying to define emotion, we might learn from other research domains that have struggled with the same issues. As the second example, consider what lessons we might learn from cognitive science in how the concept of memory has evolved. I suggest this not because emotion is determined by cognition, but because memory, as a psychological concept, can be used as an analogy to help us understand the nature of emotion.

Cognitive psychologists used to treat memories as monolithic entities stored intact in the brain. Dan Schachter's recent book, *The*

Search for Memory, explains that cognitive psy-

chologists used to

treat memories as intact com-

puter files stored in the brain and pulled out

when needed. This mirrored (or was mirrored by) the

colloquial discourse on memory: people were thought to 'search through their memories' to locate a specific memory.

Recent developments in cognitive science indicate, however, that memory is not a thing, an entity, a unitary faculty of the mind, but rather is composed of a number of distinct processes.

Although different neural structures are associated with different memory processes, and memory is impaired by their destruction, cognitive scientists do not talk about any one structure as the biological 'seat' or cause of memory. Different parts of the brain hold on to different aspects of an experience, which are in turn linked together during the act of remembering. Some cognitive scientists go even further to suggest that subjective experience is important to memory. Memories, rather than being literal read-outs of reality or the events that they represent, are records of how we experienced those events. Our experiences are encoded by brain networks whose connections have already been shaped by our previous experiences and are available for use in the act of remembering; thus, the nature and quality of what is remembered is influenced by our previous experiences. These experiences, when recalled, are brought forth in the context of influences like motivations, goals, or theories that exist at the time that remembering occurs. Thus, memories are, to a large extent, experiences that are constructed at the time of recall, and our present state influences the quality of the memory. Memories are not things, but rather are processes or acts.

Correspondingly, perhaps emotions are constructed events. Although in lay (and scientific) discourse we refer to emotions as things (e.g., 'people have emotions'), perhaps emotions, like memories, are emergent processes or acts. Perhaps emotion, like memory, is not a unitary faculty of the mind and/or body, but rather is composed of a number of distinct processes. Although different neural structures are

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Editor's Column

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On a slightly more desultory note, the members of ISRE have mustered a less than enthusiastic response to the upcoming conference in Wurzburg. Bernard uses the President's column to inspire (and cajole) members to register for and attend this meeting, and especially to extend invitations to junior scholars whose interest might be sparked at the conference. Nico Frijda provides an update on the conference program, which promises to be the right mix of stimulation and controversy. On a similar note, only 10% of the membership have responded to Tom Boone's request for information for the ISRE website. This is an important innovation for ISRE, as the World Wide Web increasingly becomes the primary source of information gathering for non-academics and academics alike. As the premier organization on emotion, we should have a solid presence in this medium, so please respond (if you haven't already) with the information sheet included in this issue. Continuing along this line, I am in need of someone who can take on the job of book review editor. It would be disappointing to have to look outside of ISRE for someone to take on this role, but given the plethora of new books in this area, I believe this is an essential feature that must be added to this newsletter.

Thank you again to everyone who contributed to this issue. Your enthusiasm and willingness to contribute are what make the *Affect Scientist* a quality publication.

ISRE on the NET

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For consistency, the APA citation style will be used for listing recent publications. Please only submit publications that have appeared in print after January 1, 1998. This request should be sent separate from your list of recent or representative publications. Please be specific that you would like this information posted on the recent publications page.

Finally, it would be nice to add more graphics to the Webpage. If you have any pictures, drawings, or multimedia displays that you would like to see posted on the Webpage, please forward them to the address above. Any information can be readily updated changed. Further suggestions about other content categories are welcome; many members have already been very helpful in that regard.

If you have not had the chance to check out the Webpage, the Internet address is: <http://www.assumption.edu/HTML/Academic/users/tboone/ISRE/ISRE.html>

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associated with different emotion processes, affect scientists could refrain from referring to any one structure as the biological 'seat' or cause of emotion. Perhaps we will discover that, as in memory, different parts of the brain store different aspects of emotion, and these aspects are in turn linked together when one emotes. Emotional experience, rather than being a literal read-out of the face or the autonomic nervous system or the brain, will be seen as how we experienced those biological events or what they meant to us at a particular time. These experiences, in the context of present influences (like implicitly held theories or scripts that are accessible at the time that feelings occur) yield emotion. Thus, emotions, like memories, may one day be seen as phenomena that are constructed. When we say that we are studying emotion from this perspective, we are not studying an emotion as a thing, separate from the experiencer.

When I suggest that emotion cannot exist without input from the experiencer, in no way am I suggesting that the input must be deliberate. One can have a subjective feeling without the self-awareness or self-perception of having that feeling. Implicit memory certainly exists without a feeling of knowing; so too can emotion exist without the self-perception that one is having a feeling. When I suggest that the definition supposes that previous knowledge is a necessary component of emotion, in no way am I trying to challenge the idea that infants, and even non-human animals, experience emotion. There is no necessity that the information from previous experience be encoded linguistically (hence the idea could still apply to infants and non-human animals). Furthermore, even if the information is encoded linguistically, the more abstract idea that previous knowledge is a component of emoting may still hold across species; that is, the process might show constancy but the content might not. The capacity for language is one of the things that sets humans apart from other animals (although this is a debatable point), and so it might not be surprising to learn that emotion, like some other phenomena, have continuity with other species yet do not look identical across species. Finally, I think one can reject the idea that measurements of neurophysiological processes are sufficient to explain emotion, without rejecting biology's necessary role in emotion. Nor does it mean that one is rejecting an evolutionary perspective on emotion. Like memory, perhaps emotion is a biologically-based capability that had likely been molded by the selection pressures of evolution to help us adapt the demands of life.

Concluding Comments

Ekman and Scherer began this series by making important points about how we go about the business of emotion research, and I have expanded on them. Accumulation of knowledge will occur more quickly when we stop playing it safe with our ideas, and when we consider one another's ideas with more thought and care. It is important that we develop a framework of precise terminology in order to accomplish this task. Working definitions of emotion are fine for a time, but in my opinion they are not enough to keep our field on the right track. It is possible to hide poor scholarship, impoverished methods, and misinterpretation behind the epithet of 'working definition'. Clear and consistent use of terms within an individual over time is a good place to start, and precision would be even better. But in the end integration will only be facilitated when we address ourselves to the difficult question of defining the boundaries of what emotion is and is not. Maybe we won't agree on one single definition for emotion, but perhaps we might try to agree on standard definitions for the terms that we use. Of course, consensus is not truth, and the search for consensus has pitfalls. Older ideas are often considered to be more important and ideas tend to be evaluated on the basis of who said them as much as on what was said. But if we don't take up the task of serious dialogue (particularly across party lines), we may never converge on a generally accepted framework for discourse. Without this framework, the study of emotion has no boundaries. And that is not acceptable in a distinct academic discipline.

¹Although I use the United States as an example familiar to me, I assume that a similar argument can be made for academia in other countries.