The Affective Regulation of Social Interaction*

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The recent publication of David Heise's Expressive Order *(2007) provides an occasion for discussing some of the key ideas in Affect Control Theory. The theory proposes that a few dimensions of affective meaning provide a common basis for interrelating personal identities and social actions. It holds that during interpersonal interactions, social behavior is continually regulated to maintain an affective tone compatible with whatever social roles or identities define the situation. We outline the intellectual history of the proposed dimensions and of the idea that each social action invites an action from the other that has a particular location along these dimensions. We also relate these ideas to the Affect-as-Information hypothesis, an approach that often guides research in psychology on the role of affect in regulating judgment and thought.*

In Jean Genet's (1956) play, *The Balcony,* a thief appears before a judge in a courtroom. In the distance are sounds of revolution. As the judge questions the accused, he appears concerned about whether she really is a thief. At length, he begins to plead with her to say that she did in fact commit the theft. It becomes apparent that the reason for this odd behavior is that he needs her to be a criminal in order for him to be a judge. "What would happen to me," he laments, "if there were no criminals? It would be awful, I would cease to be!"

This scene takes place in a brothel, and the judge is really a client dressed in robes and a powdered wig. The house has supplied someone to play the role of thief. The play thus dramatizes the hidden truth that social roles, even powerful ones, require others to play complementary roles. Genet believed that the downtrodden and oppressed had the power for social revolution by refusing to play the roles into which they had been cast.

In his recent book, *Expressive Order,* David Heise (2007) explains his Affect Control Theory, which also concerns the collaborative nature of social roles and identities.

Whereas Genet examined this insight in plays, Heise does so in computer simulations. In this article, we examine Heise's Affect Control Theory, sketching some of its intellectual history, and relating it to our work on Affect-as-Information (Clore and Huntsinger 2007; Schwarz and Clore 1983, 2007).

Ideas about settings, identities, actions, and emotions are part of the fabric of sociology and social psychology. Innumerable theories offer explanations for how subsets of these elements are related in particular contexts, but in lieu of such a piecemeal approach, Heise (1979, 2007) offers a general explanation for the entire set of relationships. His account, moreover, is formalized in equations and implemented in a computer program capable of making numerical predictions about ongoing human interactions (Heise 1997). This is an astounding achievement. By comparison, the rest of us work on modest problems with blunt instruments.

Thirty years ago, the senior author of this article heard David Heise present his then new work at the University of Illinois. At the time, social psychologist colleague Harry Triandis proclaimed it one of the most important social science projects of the 20th century. Nothing in the intervening years suggests that judgment to have been wrong. We have been a fan of this work ever since, regularly including Heise's writings on readings lists, and often encouraging students to try out his computer

program in order to appreciate the beauty of the theory.

AFFECT CONTROL THEORY

The interaction of two people is guided, according to Heise (2007), by the affective values of each person's social role or identity in the situation and of their immediately preceding actions. Such affect defines both people's roles and the actions with which they realize their roles.

But as illustrated in the opening segment about *The Balcony,* realization of a social role requires that it be reflected in other people's complementary responses. To the extent that others' responses imply a slightly different identity, that deviation stimulates an equal and opposite reaction aimed at encouraging the other to act in a way that validates both of their identities. That corrective reaction is what makes Heise's theory a control theory (e.g., Powers 1973; Carver and Scheier 1982). Like thermostats, we sense our environment and then act with the aim of bringing our perceptions into line with some set point or goal. In Heise's case, compensatory actions are designed to maintain our definition of the social situation. Thus, if we were to step on someone's toes, we are likely to become especially solicitous in order to reestablish that we are friendly and intend no harm. The same behavior without being set up by the accidental infraction would be very odd. It is therefore clearly compensatory in the manner that Heise discusses.

To use Heise's terminology, the fundamental affective meaning of a person's role is partially realized in the transient affective meaning that results when interpersonal actions modify the role. Further actions are designed to move toward an optimal solution, which depends on the size and nature of the deflection of transient affective values from fundamental affective values.

In Part 3 of his book, Heise (2007) describes the computer implementation of this theory in a program called *Interact.* It draws on a dictionary of social roles and everyday actions defined in terms of ratings of goodness, strength, and activity. Many actions and identities have been rated on these three dimensions of evaluation, potency, and activity (Osgood, Suci, and Tannebaum 1957), discussed more fully below. These values are then input into simultaneous equations that can be solved to predict each action as the interaction unfolds. There is more to say, of course, but before we elaborate further, we place the theory in some historical context.

INTELLECTUAL HISTORY

Heise's theory connects the insights of Cooley (1902), Mead (1934), and Goffman (1957) in sociology and of Sullivan (1953) and Leary (1957) in psychology. Harry Stack Sullivan (1953) defined personality (identity) as the recurrent interpersonal situations in a person's life. Sullivan and Heise echo an insight common to psychoanalysis, existentialism, and behaviorism that people define themselves by what they do. Their actions create interpersonal situations and are the realization of the roles into which they cast themselves. Psychologists have often failed to see this thoroughly intertwined nature of persons and situations, a failure that spawned in the 1970s a "person-situation" controversy aimed at determining which was most important in behavior: personalities or situations?

Timothy Leary (1957) anticipated Heise with his own interpersonal system. Leary and Heise both locate actions and identities on a single set of underlying dimensions. In Leary's case, they were love vs. hate and dominance vs. submission, dimensions reminiscent of Freud's dimensions of love and work. Also like Heise, Leary insisted on quantitative predictions, noting that any interpersonal act has a set of values along these dimensions. Most important, they concurred in the belief that each action invites a complementary action from others, so that we tend to get treated as we invite others to treat us. Leary spelled out the rules of such behavioral invitations. The values of an action along the love-hate dimension invite acts with similar values, whereas their values along the dominance-submission dimension invite acts with opposite values. Thus, friendliness invites friendliness, but dominance invites submission. Both

Heise and Leary proposed that people jointly define themselves and their social situations by the invitations implicit in their actions.

Although Heise employs similar logic to that of Leary and the other interpersonal theorists in psychology, his project is much more ambitious. Actions stem not from the identity of the individual in isolation, he argues, but jointly from that identity and the identity of the other person, along with the preceding actions. A person in the role of doctor, a role that connotes goodness, strength, and activity, is likely to engage in similarly good, strong, and active actions. Thus, a doctor might advise or medicate, but such actions assume a patient. If the doctor interacts not with a patient, but with a nurse, a colleague, or a supervisor, different actions are likely. These are further modified by setting, emotion, and prior action.

Heise (2007) models such interactions with equations that employ least squared estimates of the most culturally appropriate response, given the identities of the participants, the nature of the situation, and the actions to date. He summarizes the mathematics in Part 2 of his new book. A benefit of Heise's conception is that neither the actor nor the modeler needs to articulate or label the identities, actions, or situation involved. An interaction exists as a set of numbers, and actions and identities are defined with respect to how they feel along these dimensions of goodness-badness, strength-weakness, and activity-passivity. Since identities, actions, settings, and emotions are located on the same three dimensions of connotative meaning (evaluation, potency, and activity), these otherwise very different components can be interrelated. And since the variation along these dimensions is quantifiable, numerical predictions can be made and the model tested.

The theory has had less impact on social psychology than it deserves. Its originality and all-encompassing nature may be partly responsible. The quantitative and computer formalisms that make it powerful also make it difficult to adapt to other ends. But investigators motivated by the new wave of interest in affect and emotion will find it rewarding to work with the theory. In addition, recent research in psychology on affective influences is very compatible with Affect Control Theory. An example is research on the Affect-as-Information hypothesis to which we turn next.

AFFECT-AS-INFORMATION

The Affect-as-Information hypothesis holds that the influences of affect and emotion often depend on the information they provide about value and importance. The valence of affective reactions signals value, and the level of arousal or excitement signals the urgency or importance of events.

Feelings are informative because affective processes are largely unconscious. In the case of decision-making, for example, one's feelings and inclinations in response to the possible choices inform people about what they prefer (Wegner 2002). Indeed, making important decisions, such as buying a house or choosing a spouse, without feeling anything is likely to lead to low confidence in one's choice.

The hypothesis maintains that people often make evaluative judgments essentially by asking themselves, "How do I feel about it?" This informational function of affect and emotion is evident also in Heise's (2007:57) theory. For example, he says, "Your emotions help others figure out how you define situations and how you assess recent events . . . Sometimes you yourself consider your emotions to better understand your interpretations of situations and events!"

Our own approach to this idea has been to conduct experiments in which we either induce temporary affective states or study people in naturally-occurring moods. In one early experiment, we asked people about their levels of life satisfaction in telephone interviews (Schwarz and Clore 1983). The calls were made either on the first warm, sunny days of spring or on subsequent cold, rainy days. We found that people judged their lives as more generally satisfactory when the ratings were made on sunny days when they were in good moods. People's feelings can evidently influence their judgments even when they are from an irrelevant source.

An additional finding was that if experimenters first asked about the weather, so that respondents experienced their feelings as due to their true source, no influence of affect on life satisfaction occurred. Thus, although people may base their judgments on how they feel, these influences depend, not on the feelings themselves, but on the information they seem to provide about what is of value.

We find that affect influences judgment when the affect is experienced as a reaction to the object of judgment. But when it is experienced instead as a reaction to one's own thoughts, then it influences thinking and problem solving. For example, positive affective feedback about one's own thoughts stimulates further thought, whereas negative feelings inhibit thought and focus attention instead on perceptual detail (e.g., Gasper and Clore 2002).

In this brief exposition, we have sketched how affect can influence whatever is in focus at the time, including objects of judgment and one's own thoughts. In Heise's theory, the object of attention is often one's identity. Do affective influences operate the same way on identity? We have just begun to ask that question.

IDENTITY

Pappas (2007) recently examined people's ratings of their own personalities before and after they viewed a bloody horror film. He found that people who were frightened or disgusted by the film later concluded that they were less courageous than they had previously thought of themselves. By contrast, those who felt strong and excited while watching the film decided afterward that they were less anxious individuals in general. In Heise's terms, one might say that the film caused a deflection in the transient value of their identity relative to the fundamental value they expressed beforehand. In his theory, such deflections usually occur when another's action moves a person away from the fundamental values of their social role or identity. In this research, the deflections were caused not by feedback from interpersonal actions, but by feedback from one's own emotional reactions.

In future studies, we intend to examine further how affective feelings serve as information about identity, a process that follows logically from Heise's idea that identities are functionally defined by the affect they evoke. Some prior research that examines another concept that is basic to Heise's and our own approach concerns affective coherence, to which we turn next.

AFFECTIVE COHERENCE

Heise's interpersonal theory and our own affect-as-information approach share a view of the connectedness of affect and cognition and also of affective feelings as feedback or information. They also share the assumption that the system demands coherence between conception and affection.

In recent research (Centerbar et al. forthcoming), we found that experiencing affective coherence led people to be cognitively efficient, as measured by their memory for a story they had read. Affective coherence existed when affective experiences (e.g., smiles or frowns, happy or sad feelings, approach or avoidance actions) were compatible with affective thoughts that had been activated through priming techniques (e.g., the concept of happiness or of sadness). Thus, people's memories were better when, for example, they were thinking sad thoughts and frowning than when they were thinking happy thoughts but frowning. In the latter case, when people's affective experiences were not congruent with primed affective concepts, memory suffered.

The idea is that just as empirical data can validate scientific theory, and sense data can validate everyday beliefs about the world, so affective feelings can serve as validation (or invalidation) for affective concepts that come to mind, including those of identities, actions, and situations.

When experiential data invalidate one's current active concepts, one has an epistemic problem. The effort to resolve such affective incoherence serves as a secondary task that interferes with primary tasks, such as learning and recalling a story or performing some other cognitive task. We assume that affective coherence is important in social interaction

also. Affective coherence should allow more graceful and effortless social behavior, whereas affective incoherence should interfere with social ease.

In Heise's theory, the deflection of the transient affective value from fundamental affective value is a form of affective incoherence, and it has a similar impact in that it causes attention to be allocated to issues of identity management, rather than to whatever other tasks might occupy the individuals. Thus, somewhat similar processes appear to be involved in our work on coherence between feelings and concepts, and in Heise's theory where the coherence concerns the connotative meanings of identities and actions. For example, Heise's concept of an *optimal solution* is one in which "behavior or identity maximally confirms sentiments" (2007:146).

We have touched on several related themes between Affect Control and Affect-as-Information theories. Another theme concerns the affective dimensions examined in these approaches. Our own approach focuses on hypotheses about the dimensions of evaluation and arousal. These are only slightly different than Heise's dimensions of evaluation, potency, and activity, which we now examine briefly.

EVALUATION, POTENCY, AND ACTIVITY

Charles Osgood (Osgood et al. 1957) proposed that all concepts in all languages share three dimensions of connotative meaning—evaluation, potency, and activity (EPA). The data come from factor analyses of ratings of nouns, adjectives, and verbs from diverse languages. Thus, the noun "mother" connotes something good, powerful, and active, whereas the adjective "ill" connotes someone in a negative state, who is weak, and inactive.

Osgood proposed that connotative meaning is fundamental to communication and its origins. Thus, the prelinguistic cave person who encountered a novel creature would have needed to represent and communicate whether the creature was good or bad, whether it was large or small, and whether it was coming quickly or slowly (Osgood 1969). Such distinctions enable one to cope differently with

saber-toothed tigers and mosquitoes. In Osgood's view, such connotative meaning remains a fundamental aspect of thought and language today.

We should note that evidence of these dimensions turns up again and again. The classic factor analytic studies of personality structure arrived at a five factor model (the big five) that includes dimensions similar to Osgood's three dimensions (e.g., Norman 1963). The same basic factors also arise in study after study of interpersonal perception and impression formation (Foa & Foa 1974; Gollob 1974; Heise 1979; Leary 1957; Sullivan 1953; Wiggins 1991). The first factor that emerges whenever interpersonal descriptions are analyzed is almost always evaluation, with subsequent factors accounting for diminishing amounts of variance. Data from many domains produce similar results, although authors sometimes retain only two of the dimensions (as in accounts of emotion), sometimes three to five (as in accounts of personality), and sometimes even more. The number of factors retained is more a policy decision than a discovery.

What accounts for the surprising similarity of structure across such diverse domains? How is it that the language itself has the same structure as personality, interpersonal behavior, and emotion? Perhaps these discoveries mainly reflect the structure of our own perceptual categories. We behavioral scientists may thus have found ourselves in the same position as beginners using a microscope. Sometimes everything that a novice sees in a microscope turns out to have the same hairy legs, which look suspiciously like his or her own eyelashes. Such an experience tells students little about microorganisms but much about science. It suggests that no matter what is being studied, the investigators' own categories of knowing are always in the picture.

CONCLUSION

In conclusion, we note that Heise's work can be seen as providing one kind of answer to the mind-body problem. Questions about the relationship between the material body and the immaterial mind are of course very old.

Descartes's answer was that although separate, mind and body function in parallel. The promise of current neuroscience is that mind can be reduced to body by studying the brain. But it is not enough to explain in principle that mind depends on brain or even to locate precisely where various mental functions take place. An ocean of neurochemical and anatomical data will not uncover the rules by which changes in people's actions arise jointly from their identities and the actions and identities of others. According to Heise, the underlying rule is the conservation of connotative meaning. Somehow a person's immaterial and invisible identity guides and determines the visible behavior in a particular situation. Part of the genius of Heise's position is the fact that he saw in Osgood's evaluation, potency, and activity not simply that they are dimensions of spoken and written words, but that they are the hidden language, the affective Rosetta stone that allows mind and body to communicate.

POSTSCRIPT

It is evident that there are many parallels and potential points of contact between our own and others' work in psychology and that of Heise and his colleagues in sociology. This fact is perhaps not surprising, given the focus on a common problem. But the parallel nature of these concerns does make it surprising that investigators in these two fields, focused as they are on such similar issues, have had so little contact. We therefore welcome this opportunity to get somewhat better acquainted with the achievements of David Heise and his collaborators and to begin thinking about our own work in the rich context they have provided. In furtherance of such interdisciplinary impulses, some recommended reading includes the research on interpersonal interaction of Stacey Sinclair and her colleagues (2005) within psychology and of Heise's associates Lynn Smith-Lovin (2007) and Neil MacKinnon (1994) among others in sociology.

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