THE NEWSLETTER

Institute of Cognitive & Decision Sciences•http://hebb.uoregon.edu•University of Oregon•Eugene•(541)346-4941
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FROM THE DIRECTOR.....

Welcome back to the Institute after, I hope, a productive and restful summer. We in the Institute have been quite busy. Mark Johnson, the Institute's secretary Vonda Evans and I spent enormous amounts of time organizing our upcoming conference "Body, Mind and Brain: The Collaboration of Cognitive Science and Philosophy" which will be held October 3-4. (See more details in this newsletter.) Vonda and Mark had an especially difficult time finding a room for Friday. We almost ended up in the Beall Concert Hall. They both deserve many thanks for creating what will be an exciting and valuable event for the Institute and the University. I hope you can all attend. Another major summer project for Vonda and I was learning the UO's on-line accounting system. I have established a budget control system that will become more valuable as the University's financial situation continues to be more difficult. This will help us monitor the Institute's money more effectively. In order to make this work, I have asked that any expenses Institute members might have for speakers, labs, etc. should go through Vonda.

We've had news of several exciting awards to the Institute recently. Bertram Malle, one of our Social Cognition/Decision Science faculty hires, has received an NSF Faculty Early Career Development (CAREER) Award, and the Hill Lab was awarded a NSF laboratory equipment grant for a "Wireless Laboratory for Interpersonal Cognition" (more about these two items later in the newsletter).

In addition to the Body, Mind and Brain Conference in October, we will also have the Attneave Lecture coming up in the Spring and Dare Baldwin, Lou Moses and Bertram Malle are planning a conference on "Intentionality" to be held Fall of 1998.

I myself am away in Canada for research this quarter. After completing publication of my book on computer-based pointing (*The Ergonomics of Computer Pointing Devices*, Sarah Douglas and Anant Mithal, Springer-Verlag), I was offered the opportunity to work with two groups in the Toronto-Kingston Ontario area. To give you some background, within computer science, the rapid development of 3D graphics and virtual reality systems have stimulated a rapid and explosive need for 3D input and manipulation devices, including devices which have force feedback integrated into them. (Imagine that your GUI interface had "tangible" buttons which gave haptic, or touch, feedback when you selected them, or that moving a file folder with many files in it felt heavier as you dragged it across the screen.) At present, most of this new technology has been developed and engineered without any attention paid to testing human performance or using principled psychomotor and perceptual models. And the results are often poorly usable devices. For example, Intel Corporation recently gave my lab a PHANToM input device to work with. This device provides six degrees of freedom input and force output in the three positional directions using a stylus. Ted Kirkpatrick, one of my Ph.D. students, is currently working with the PHANToM and reports that writing his name has an unnatural feel and a poor signature. Although some research has been done with the simulation of texture through force output, there is virtually no principled way of designing algorithms that produce realistic and appropriate stimuli to the human user. Ted will be developing the PHANToM's use as an artist's brush for painting. Critical parameters that need to be understood are temporal resolution (feedback rate), feedback lag, spatial resolution and gain factor, and how these are perceived by the human user.

My trip to Canada will help me develop this exciting new research area. At the University of Toronto, I'm working with the Input Research Group in the Computer Science Department. This group works primarily in the human factors evaluation tradition, but has also engineered several new pointing devices including the Rockin' Mouse which allows 3D input. I am also visiting Queens University in Kingston, Ontario, where Susan Lederman, one of the top psychologists working in haptic perception, is located. I am attending her basic research seminar on haptics and learning quite a bit of useful neurophysiology. Susan has recently begun working with robotics and teleoperation, both areas that are somewhat related to computer-based input devices. She has a cognitive science background, and has recently advocated to the AI community that robotics research could benefit from the scientific findings of haptic psychological science. She's a terrific colleague and I'm looking forward to an exciting research collaboration.

It's now the end of September and one of the best things about this part of Canada is the spectacular colors of autumn—the scarlet of the sugar maples and the yellow of birches. As I enjoy this display out my window, I remind all of you that I am always available by my regular email (douglas@cs.uoregon.edu) or through Vonda.

Enjoy the Body, Mind and Brain Conference, and I'll see you in person in December.

Sarah Douglas, Director
Institute of Cognitive and Decision Sciences

Body, Mind and Brain: The Collaboration of Cognitive Science and Philosophy

A Conference Sponsored by the Institute of Cognitive and Decision Sciences, the Humanities Center and the Department of Philosophy
University of Oregon

October 3-4, 1997

Friday, October 3rd, sessions will be held in the **Browsing Room, Knight Library**
Saturday, October 4th, sessions will be held in **110 Willamette Hall**

Conference Theme:

For most of this century mainstream analytic philosophy has tried to understand the mind as though it were fundamentally independent of human embodiment. Theories of conceptual structure, knowledge, and reasoning made virtually no mention of the body and brain. Philosophy conceived of its own nature and purpose in terms of a transcendent, universal reason reflecting on its own operations and limits. First-generation cognitive science adopted this disembodied orientation in various functionalist views of mind. Over the past two decades however, research in second-generation cognitive science has progressively revealed the role of human embodiment in all aspects of human thought. Not only in the neurosciences, but also in cognitive psychology, linguistics, and philosophy we are discovering some of the ways in which structures of our bodily experience are the basis for abstract conceptualization and reasoning. We are learning more about how the brains of embodied, active organisms constrain the possibilities for human understanding and thought.

Unfortunately, there has been very little communication among these disciplines by way of offering converging evidence for the embodiment of mind and its implications for philosophy. Too seldom do cognitive psychologists talk with neuroscientists, neuroscientists with philosophers, and philosophers with psychologists. The purpose of this conference is twofold: (1) To encourage dialogue among these various disciplines on the role of embodiment in human cognition, understanding, and reasoning, and (2) To ask whether thinking about the mind in this new way — as embodied and imaginative — should change our view of what it is to be human. The traditional philosophical conception of human nature was tied to a disembodied, transcendent view of the mind; therefore, a philosophically sophisticated account of mind would need to rethink its purpose and methods in light of empirical research on cognition. For more information regarding the conference, please contact Vonda Evans at 346-4941 or by email (vevans@oregon.uoregon.edu).

Friday, October 3

1:00-2:00 **Paul Churchland**, Philosophy, University of California, San Diego
"Conceptual Similarity Across Sensory and Neural Diversity: The Fodor/Lepore Challenge Answered"

2:00-3:00 **Robert McCauley**, Philosophy, Emory University
"Explanatory Levels in Science and Conception of Cognition"

3:00-3:30 Break

3:30-4:30 **Raymond Gibbs**, Psychology, University of California, Santa Cruz
"Human Embodiment and Linguistic Meaning"

4:30-5:30 **George Lakoff**, Linguistics, University of California, Berkeley
"The Neural Theory of Language"

Saturday, October 4

8:00 am Continental Breakfast

8:30-9:00 **Tim Adamson**, Philosophy, University of Oregon
"The Idea of Embodiment"

continued on page 3

Conference *contd. from page 2*

9:00-9:30	**Tim Rohrer**, Philosophy, University of Oregon "Why Metaphor and Embodiment Matter to Philosophy and Science"
9:30-10:30	**Gerald Edelman**, The Neurosciences Institute "Neural Darwinism"
10:30-11:00	Break
11:00-12:00	**Giulio Tononi,** The Neurosciences Institute "Analyzing Brain Complexity"
12:00-1:30	Lunch (on your own)
1:30-2:30	**Mark Turner**, English, University of Maryland "Descent of Meaning"
2:30-3:30	**Mark Johnson**, Philosophy, University of Oregon "Philosophy in the Flesh"
3:30-4:00	Break
4:00-5:00	**William Bechtel** and **Jennifer Mundale**, Philosophy, Washington University, St. Louis "Multiple Realizability Revisited: Linking Cognitive and Neural States"
5:00-6:00	**Owen Flanagan**, Philosophy, Duke University **Gillian Einstein**, Neurobiology, Duke University "The Neuro-biology of Sexual Self-Consciousness: Mind and the Interplay of Body and Brain"
6:30-	Dinner and party at home of Mark Johnson

NSF FUNDS WIRELESS RECORDING LABORATORY FOR INTERPERSONAL COGNITION IN THE HILL CENTER

Bertram Malle

Ideally, we would directly observe the thoughts and feelings that people have when engaging in social interaction. However, Ray Hyman told us that these telepathic tools are not yet available. So we turned to what we considered the next best thing (no, not brain maps; apologies to our colleagues in cognitive neuroscience): wireless equipment that records subjects' conscious reports of ongoing feelings, perceptions, and judgments during social interactions.

The Hill Center for Social Cognition and Decision Making received funding from NSF for such wireless recording equipment beginning September, 1997. At the heart of the equipment lies a variety of flexible and unobtrusive "Personal Information Devices" (PIDs). These devices range from finger caps that send a signal when connected to a thumb cap (thus recording dichotomous judgments or ratings) to fully programmable pocket computers with a screen to display experimenter-controlled information. Up to 16 of these PIDs are wirelessly connected to sensors in an access station that relays the information to and from a computer server. Thus, it becomes possible to collect simultaneous data from 16 subjects engaged in group interactions.

The flexibility of such a system goes beyond anything we know in traditional laboratories. The radio frequency technology of PIDs allows them to operate not only in a designated lab room but also in other rooms of the same building or elsewhere on campus. PIDs can be used while conversing with another person, between conversations, or while performing other tasks. The devices can record simple yes-no answers, probabilistic predictions about others' behavior, or continuous on-line ratings of cognitive and emotional reactions. Finally, the on-line records of subjects' thoughts, judgments and emotions can be time-stamped and synchronized with audio/video re-

continued on page 4

Wireless Recording Laboratory

contd. from page 3

cordings (which will also be available in the Hill Center laboratory). Thus, the real-time link between, say, A's thought following B's behavior or B's emotional reaction following A's utterance can be identified and studied within the dynamic interaction stream.

Under the supervision of Bertram Malle and John Orbell the wireless equipment will be built over the next few months by a team of engineers at the University of Oregon's Technical Science Administration (TSA). Bertram Malle and Holly Arrow will supervise the purchase and installation of a four-channel audio-video system, and the entire laboratory will be housed in the Hill Center (Straub 171-178), which was renovated with University funds last year.

IT'S IN THE CARDS

Holly Arrow

A poker hand requires five cards. So how can you play if you only have two? By pooling your cards with those of a few other players to form a hand. Who will you choose as partners, and will they choose you? If your group makes the best hand, how will you divide the prize money? The social poker team wants to know.

An interdisciplinary group within the Social Cognition and Decision Making area of the Institute, the social poker research team consists of Holly Arrow and Ruth Bennett in psychology, and John Orbell and Scott Crosson in political science. The social poker paradigm is designed to study the sequence of individual and collective membership decisions that result in the formation of self-organized groups.

Club theory, developed by economists and political scientists, predicts that such groups will form to provide goods that members cannot create alone but that are not provided as public goods. Public goods such as public television suffer from the free rider problem. People can enjoy the benefits whether they send in a membership pledge or not, and thus the stations are continually strapped for funds. Clubs have more clout. The goods provided by clubs are restricted to members, and if members fail to contribute what the other members consider fair, they can be thrown out of the group. While club theory predicts that clubs will form, it provides no insight on how they form, how clubs select members, how potential members choose among clubs, and how they jointly determine what is fair and what is grounds for eviction.

The coalition formation literature, however, does yield specific predictions about which members will join together to form a coalition, based on the value of their resources and on the number of alternative choices for viable coalitions that each member has. Together, these determine the relative power of members, which also yields predictions about how members will divide up the goods that the coalition obtains. The social poker group will be using the game to test some of these predictions when multiple coalitions can form simultaneously from a pool of previously unacquainted players.

Much research in decision theory makes the simplifying assumption that people choose among a known, finite set of alternatives that remain available until they make up their minds. This is a good model for how people choose among the brands of breakfast cereal in aisle 12. Unless an impending disaster has flooded the store with panicked people who are snapping up products right and left, the choices a consumer faces when she enters the aisle will remain constant until she finishes comparing prices and sizes and nutritional content and reaches for a box. The Shredded Wheat and Captain Crunch sit there passively, and are not simultaneously sizing up the attractiveness of consumers who might or might not wander down the aisle. They cannot veto the choices of cereal shoppers.

When new clubs form, however, people are forming impressions about others who are simultaneously forming impressions of them, and choices must be reciprocated to result in a partnership. As each person in the pool gathers information and makes or reciprocates overtures for partnership in a group, the choices available to the rest of people change as well. The social poker paradigm is designed to investigate how people make multiple sequential decisions in a dynamic social environment that changes from moment to moment.

The research team will be aided greatly in this task by the new Hill Center equipment that will be installed this coming year, funded by an NSF equipment grant written by Bertram Malle of psychology and John Orbell. Video cameras will record the sequence of player actions, and microphones will record the conversations in which players exchange information about their cards, form partnerships, and then negotiate the division of prize money that their poker hands earn. Using hand-held personal information devices, players can respond to questions sent by experimenters, and their responses will be routed via infrared receivers to a central computer that will record and time stamp this information so that it can be synchronized with data from the video and audio records. This technology will allow the social poker researchers to ask questions about players' developing impressions, intentions, and decisions

continued on page 5

In The Cards

contd. from page 4

as the action unfolds, rather than stopping the experiment and handing out written questionnaires, or relying on recall after the game is over.

A proposal for funding research on group formation using the social poker paradigm is currently under review by the National Science Foundation. During the fall quarter, the social poker group will be developing materials and play-testing the game with the help of a team of undergraduate research assistants. If you wander through the Hill Center at the right time, you might get a chance to play too — but not before you get some instruction in poker hands and pass the comprehension quiz. Once again now, which is the better hand, a straight or a flush?

SEMINARS

DO YOU WANT TO KNOW WHAT THIS COGNITIVE SCIENCE IS ALL ABOUT??
Cognitive Science for Undergraduates Psychology 401

You receive 1 hour of credit each quarter. Dr. Michael Posner will provide a tutorial each week prior to the cognitive science colloquium especially designed to help undergraduates prepare for the weekly speaker.

Sign up for 401 Fall and Winter (1 credit pass/no pass each quarter). You will receive a 1 hour tutorial Mondays from 2:00-2:50 pm, Room 156 Straub, followed by the Cognitive Science Colloquium at 3:30 pm.

The tutorial will cover the topic of each weeks colloquium, provide historical background, discuss information about the speaker, other related research and answer all questions about the previous weeks colloquium.

Learn about research in Cognitive Science from experts while still getting help from an experienced faculty member.

ORGANIZATIONAL MEETING, NEUROBIOLOGY JOURNAL CLUB (Bi 607)
LEARNING AND ADAPTATION SEMINAR (Psy 607)

There will be an organizational meeting at 1:00 pm on Monday, September 29, Room 317 Huestis for the Seminar on **Learning and Plasticity** (Psy 607 4 credits) and the **Neurobiology Journal Club** (Bi 607, 1 credit). These two courses are being joined this term as an educational experiment and to encourage people to make friends across disciplines. Those who are simply taking the Journal Club for one credit will attend for only 1 hour per week. Those taking Psy 607 for 4 credits, will meet a second hour for more in depth discussion covering additional publications. Unlike the journal club of the past, we will focus on a single topic, "mechanisms of behavioral learning and adaptation". The subject matter is indicated by the following outline. The staff will assist in selection of good papers for presentation.

1. Factors in the causation of post-embryonic long term synaptic change.

(a) coincident firing
(b) specialized glutamate receptors
(c) calcium and second messengers
(d) retrograde transmitters
(e) gene regulation and transcription factors
(f) other factors (e.g. growth factors)

2. Can known mechanisms of synaptic change account for behavioral learning and adaptation?

(a) adaptation in response to juvenile experience (b) learning in adulthood (e.g. motor learning, fear conditioning, relational learning)

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SEMINAR ON INTENTIONALITY

The concept of intentionality lies at the heart of people's conceptual framework of human action (often called their folk psychology or theory of mind). The ability to detect, interpret, and explain intentions and intentional actions is a major achievement of the developing human mind and a central capacity of social agents. Bridging the Language, Culture & Cognition and the Social Cognition & Decision Making programs of the Institute, Dare Baldwin, Bertram Malle, and Lou Moses will teach a seminar this fall on the philosophical, social, and developmental aspects of how people deal with intentionality, focusing on the following issues:

*philosophical and conceptual questions surrounding intentionality and its constituent concepts of belief, desire, and intention
*the process of detecting and interpreting intentions and the developmental path to achieve these capacities

continued on page 6

Seminars

contd. from page 5

*the role of intentionality in behavior explanations
*the role of intentionality in communication
*the implications of intentionality for moral judgment
*psychopathological disturbances of dealing with intentionality
*comparative and evolutionary aspects of intentionality

Further information (including a syllabus and reading list) can be found on the course web page at <http://darkwing.uoregon.edu/~bfmalle/intentionality.html>.

DISSERTATIONS

Negative Affect Emotionality and Evaluation

Phan Luu

Recent advances in mood and personality research as well as advances in both the technology and methodology of brain research provide exciting opportunities to address some very fundamental questions about human behaviors and their biological bases. One question is, "how are affect and personality organized within the brain?" In this paper, the mood and personality dimensions known as negative affect and negative emotionality, respectively, are proposed to have a common underlying neural basis. The anterior cingulate is proposed to be part of a system regulating the levels of negative affect and negative emotionality. A study is reported in which a functioning of the anterior cingulate, indexed by electrophysiological measures of error detection, is correlated with negative affect and negative emotionality. The results confirm that these mood and personality dimensions are, indeed, related to this anterior cingulate function. Furthermore, the relation is discriminate in that none of the other mood or personality dimensions are correlated with error detection.

INSTITUTE TECHNICAL REPORTS

No. 96-1 "Recognition Memory and Modality Judgments: A Comparison of Retrieval Dynamics"
by Douglas L. Hintzman and David A. Caulton

No. 96-2 "Conflict, Target Detection and Cognitive Control"
by Michael I. Posner and Gregory J. DiGirolamo

No. 96-3 "The Time Course of Parietal Activation in Single-Digit Multiplication: Evidence from Event-Related Potentials"
by Markus Kiefer and Stanislas Dehaene

No. 96-4 "Anatomy, Circuitry and Plasticity of Word Reading"
by Michael I. Posner, Yalchin G. Abdullaev, Bruce D. McCandliss and Sara C. Sereno

No. 96-5 "Time Course of Activating Brain Areas in Generating Verbal Associations"
by Yalchin G. Abdullaev and Michael I. Posner

No. 96-6 "Emotional Expectancy: Patterns of Brain Electrical Activity as Depressives Consider Life Events"
by Phan Luu, Don M. Tucker and Lynn McDougal

No. 96-7 "Vertical Integration of Neurolinguistic Mechanisms"
by Phan Luu and Don M. Tucker

No. 96-8 "Comparing Conditions for Learning Syntactic Patterns: Attentional, Nonattentional and Aware"
by J. Schachter, P.L. Rounds, S. Wright and T. Smith

No. 96-9 "On the Role of Metaphors in Science: Metaphors of Attention in the History of Psychology"
by Diego Fernandez-Duque and Mark L. Johnson

No. 96-10 "2-D Center-Surround Effects on 3-D Structure-From-Motion"
by Margaret E. Sereno and Martin I. Sereno

No. 96-11 "Interaction Among Depth Cues in Structure-From-Motion"
by Margaret E. Sereno and Martin I. Sereno

No. 96-12 "Sequential Representation and the Neural Basis of Motor Skills"
by Steven W. Keele, Matthew Davidson and Amy Hayes

No. 97-1 "Toward a Functional Analysis of the Basal Ganglia"
by Amy E. Hayes, Matthew C. Davidson, Steven W. Keele and Robert Rafal

No. 97-2 "Brain Mechanisms of Cognitive Skills"
by Michael I. Posner, Gregory J. DiGirolamo and Diego Fernandez-Duque

No. 97-3 "Retrieval Dynamics in Recognition and List Discrimination: Further Evidence of Separate Processes of Familiarity and Recall"
by Douglas L. Hintzman, David A. Caulton & Daniel J. Levitin

No. 97-4 "Event-Related Brain Potential Imaging of Semantic Encoding During Processing Single Words"
by Yalchin G. Abdullaev and Michael I. Posner

No. 97-5 "Negative Priming and Stages of Selection: The Effect of Perceptual Discriminability and Response Congruency"
by Antonella Pavese

PROFESSOR DOUGLAS R. HOFSTADTER TO VISIT UNIVERSITY

Professor Hofstadter is a College of Arts and Sciences Professor of Cognitive Science at Indiana University where he is in several departments, including Comparative Literature, Cognitive Science, Psychology and Philosophy. He is a graduate of the University of Oregon (M.S. in Physics '72, Ph.d. in Physics '75).

In 1980 four major awards came to Professor Hofstadter: a Pulitzer Prize for his book, *Godel, Escher, Bach: An Eternal Gold Braid*; an American Book Award (for the same Book), the John Simon Guggenheim Fellowship (spent at the Computer Science Department, Stanford University), and a Sigma Xi Distinguished Lecturer Award. Author of seven published books and over eighty articles, Professor Hofstadter is also a much sought after lecturer. His visit is sponsored by the College of Arts and Sciences, who will present him with an Alumni Fellow Award on October 3 at the Profiles in Achievement banquet.

OLD SEXISM IN NEW GUISE"
October 2: 10 - 11:00 a.m. (Reception 11 - 11:30)
Library Browsing Room
Co-sponsored by Center for Study of Women in Society

Most people—even ones who change their speech habits to accord to the 'new ideas'—are not aware of their own speech and imagery and the negative affect certain word usage have for women. It is a talk about "generic man" in new guise. On the surface, it is a talk about sexist language, on another level it is a talk about the relationship between words, concepts and things in the world. It will jolt listeners a bit, perhaps even provoking them to pay closer attention to their own ways of using language.

BOOK SIGNING — In Praise of the Music of Language: Le Ton beau de Marot
October 2: Noon - 1:00 p.m.
(Lecture on the book is at 2:30 on October 3, Oak Room, EMU)

"BOUNCING BETWEEN PATTERNS AND META-PATTERNS: How Discovery Emerges from the Pursuit of Elegance and Symmetry"
October 2: 3:15 p.m. Room 100, Willamette Hall
Co-sponsored by Physics Dept.

This lecture will show how a keen sense of esthetics underlies mathematical discovery. The key thesis is that pattern recognition and pattern extrapolation are the core of mathematical invention. Some analogies to the discovery process in physics will also be presented.

"WHAT'S LOST IN TRANSLATION?"
(Lecture stems from recent book: In Praise of the Music of Language: Le Ton beau de Marot
October 3: 2:30 p.m. Oak Room, EMU
Co-sponsored by Comparative Literature Program

Lost in an art-the art of translation. Thus, in an elegant anagram (translation=lost in an art), Hofstadter hints at what led him to pen a deep personal homage to the witty sixteenth-century poet Clement Marot. Through a series of musings on life, loss and death, his most recent work is a sparkling poetic exploration aimed at both the literary and scientific world.

"THE ROOTS OF MUSICAL BEAUTY: Patterns or Emotions?"
October 3: 4:30, Gerlinger Lounge

"Computers play such a huge role in society. They are everywhere. But there is a frontier that they must not cross. They must not cross into the area of human creativity."—Garry Kasparov What did Kasparov mean by this? Haven't they already done so? Are there "grammars", so to speak, for producing great new pieces in the style of, say, Bach, Chopin, Rachmaninoff, or Gershwin? This lecture will present some "difficult and painful musings about musical meaning and depth."

For more information about any of these free lectures, contact DeNel Stoltz at 346-3904.

BERTRAM MALLE RECEIVES CAREER AWARD

The CAREER program is an NSF-wide young investigator grant award that "combines in a single program the support of research and education of the highest quality and in the broadest sense" (NSF 96-115). Submitted proposals describe a research program of 4-5 years and an integrated education/ teaching plan.

CAREER awards were started three years ago, and Bertram's is the first such award given by the Social Psychology Program of the Division of Social, Behavioral, and Economic Sciences (SBE) at NSF. It is expected that a total of about 4-5 awards will be given by other programs across SBE this fiscal year.

The predecessors to the CAREER awards were called Presidential Young Investigator Awards (starting around 1985) and National Young Investigator Awards. Three or four social psychologist received such awards during that time. Jennifer Freyd, a cognitive psychologist in our Psychology department, was a recipient of a PYI.

With this grant Bertram will receive about $250,000 over four years, mostly consisting of summer salary, graduate student support and research personnel support. The grant will be used for research and teaching in the Institute of Cognitive and Decision Sciences and the Psychology Department. The title and abstract of his proposal follows below.

Congratulations Bertram!

The Folk Theory of Behavior: Implications for Social Perception and Interaction

One of the fundamental problems that humans face as social beings is to make sense of each other's behavior. With this CAREER award, Dr. Bertram Malle will investigate how people solve this problem. The innovative approach of Malle's research program is to fully appreciate people's own conceptual framework within which they describe, explain, and influence human behavior — their "folk theory of behavior." Because this folk theory critically influences people's social perception and interaction, social scientists must understand this folk theory in order to understand the regularities inherent in communication, interaction, and relationships.

Dr. Malle's theoretical model relies on two propositions: (1) that people distinguish between intentional and unintentional behavior, and (2) that they explain unintentional behavior by mere causes (e.g., inside the person, in the situation) but intentional behavior with reasons (e.g., beliefs, desires). Initial evidence for these propositions (Malle, 1994; Malle & Knobe, 1997a; Malle & Knobe, 1997b) has led to an integrative model of folk explanations (Malle, 1998). This model generates numerous implications that are tested in the present research program, grouped under four questions: (1) How do people judge intentionality? (2) Which behaviors do people attend to? (3) How do people evaluate behavior? and (4) How do people explain behavior? To answer these questions, the research employs multiple methods, including questionnaires, interactive audio-visual computer presentations, detailed codings of existing texts (e.g., novels, diaries), and observations of dyadic interaction.

The aim of this research program is to identify key components of people's folk theory of behavior and to examine their substantial implications for social perception and social interaction. The aim of the associated educational activities is to increase awareness, among students and the public, of social perception and interaction phenomena and of the principles that govern them. This award will enable Dr. Malle to advance his research on people's folk theory of behavior and integrate its results into his undergraduate and graduate course teachings as well as his training of future social scientists.

SUBMITTING TO THE NEWSLETTER

When preparing an article for submission to The Newsletter that is more than a page long, please include your disk. It is possible to transfer both IBM and Apple data onto the Macintosh. Formatting suggestions (to save time after transferring, as well as to assure the formatting that you want): IBM —save in or convert to DCA format if possible, otherwise save as text or ASCII; Apple—Appleworks Word Processor files; and of course, Macintosh (Microsoft Word, Microsoft Works or MacWrite) can be accepted. For any questions on formatting, consult your reference manuals. Also, be sure to include the name of the relevant document(s) on the disk. You can give these disks either to that month's feature editor, or directly to Vonda at the institute. It will be returned as soon as it's been transferred, which, in some cases, can be a matter of only minutes.

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