

Social Science and Brain Science

by Bertram F. Malle

Over the past 10 years, the Institute of Cognitive and Decision Sciences has changed in significant ways. A structural reorganization turned three large thematic units (Cognitive Neuroscience of Attention; Cognition, Culture, and Language; Social Cognition and Decision Making) into a number of smaller and dynamically changing focus groups (e.g., Evolution; Event Perception; Social Poker; Intentionality and Theory of Mind; Psychology of War). But perhaps more significant has been the shift towards a heavier emphasis on social levels of analysis within the larger endeavor of Cognitive Science.

With the emergence of the UO Brain, Behavior, and Machine Initiative, researchers interested in cognitive processes of attention, memory, and their corresponding brain operations have found a new intellectual home as well as exciting resources in the Lewis Center for Neuroimaging, and more recently in the Steve W. Keele and Michael I. Posner Cognitive Neuroscience Laboratory in Straub Hall.

The Institute of Cognitive and Decision Sciences, meanwhile, has focused more on methodologies of behavior observation and experimentation, higher-level cognition, and the interplay of communication, experience, and social interaction, also making room for purely conceptual and theoretical analyses. This trend has better integrated scholars from such fields as Anthropology, Political Science, Philosophy, and History with scholars from Social and Developmental Psychology, Linguistics, Ecology, and Decision Science. It has also brought the ICDS in closer contact with the Oregon Humanities Center and its associated disciplines; and there is still more room to strengthen this promising connection.

Of course, a social and behavioral level of analysis does not rule out brain-level analyses. Mike Posner and Mary Rothbart are working on projects that seek to improve education through a better understanding of temperament and brain structures underlying attention. Jean

Many thanks to the outgoing members of the executive committee: Warren Holmes, John Orbell, Ellen Peters, and Sara Hodges.

Decety has been elucidating the higher-level phenomena of empathy and perspective taking by reference to lower-level processes that link motor representations with perceptual representations.

The question is whether we are all just heading towards brain science — some of us merely being a few more steps (or centuries) away from that ultimate goal. For who will doubt that, say, hatred toward certain social groups or the social perception of intentions has to be *somehow* accomplished by the brain? And if we want to know exactly how this is done, the brain-level analysis will help us answer this question. But what is “it”? What is the actual phenomenon that is accomplished by the brain?

Phenomena such as intergroup hatred or judgments of intention necessarily involve a social and a cognitive level of analysis, no matter how they are implemented in the brain. Even just describing them (let alone relating them to brain processes) involves reference to high-level concepts (*attitude*) and the identification of fundamental human assumptions about how the mind works (“intentions generate actions”). Despite what the Churchlands have told us, the very questions we pose about such phenomena are simply not reducible to brain processes, as the answers to those questions will have to refer to concepts, mechanisms, processes, and phenomena at the same higher-level of analysis. For example, when Joshua Knobe and I discovered that people’s judgments of intentionality are based on a framework of five component concepts, we knew that these concepts are somehow implemented in the brain, but no brain study could tell us which concepts they are. Brain processes don’t let us read off the content of concepts, probably don’t even have recognizable boundaries between concepts, because the concept of *concept* is our higher-level construction, not a natural unit of brain processes.

But just because social and cognitive levels of analysis are necessary for certain phenomena, it doesn’t mean that we can understand them *only* at that level of analysis. The more we know about the specific features that make up intergroup attitudes (e.g., their characteristic emotions and their associated cognitive structures), the better we can flesh out the picture with lower-level data. Ultimately, if we have a very good cognitive theory of such attitudes, we can run some smart neuroscience

Continued on page 2

studies that will test and expand that theory. At the same time, a good theory of intergroup attitudes must also talk about their function and history, their environmental triggers, and their dynamic distribution among individuals. And if we have a very good social-level theory of intergroup attitudes, we can make some smart predictions about the cognitive structures that underlie them, which then guide further neuroscientific studies.

Because levels of analysis are conceptually distinct, none of us — social-, cognitive-, or neuroscientists — are put out of work by each other, just as we are not put out of work by the fact that all phenomena, including rocks rolling and neurons firing, ultimately consist of the stochastic smear of subatomic particles. We cannot infer the specifics of neuronal firing from quantum-physical equations, nor can we infer the specifics of visual working memory from knowledge about the chemistry of neuronal firing, nor can we infer the specifics of intention judgments or prejudice from BOLD responses in the PFC, nor...you get the idea.

Constraints go in both directions. Operations of the brain allow individuals to perform a myriad of complex social perceptions and actions, and the operations set limits to those performances. At the same time, social forces constrain the operations of the brain during development, in contact with other people, and through the powerful selective pressures of social interaction during human evolution. We still haven't fully appreciated the extent to which social interaction and the rise of communication have influenced how the brain has evolved and which part of the brain is therefore doing what today. Often basic processes such as selective attention or categorization are cited as the underlying components of, say, prejudice. But prejudice, and the history of resulting intergroup conflicts in human evolution, may have shaped the scope and limits of attention; working memory may be the result of selection pressures for dealing with social complexity; and the link between action and perception in the brain could be a direct result of the need to learn from others by mere observation.

The Institute of Cognitive and Decision Sciences has, over the decades, been open to and has brought together scientists from virtually all disciplines. The Lewis Center for Neuroimaging is equally open to researchers from all disciplines. In fact, its future depends on a broad base of researchers (in and outside the UO) who conduct and fund studies to keep this novel methodological tool alive. There is a real opportunity, then, for cross-level and interdisciplinary collaborations, insights, and discoveries that involve the tradi-

tionally classified natural sciences, social sciences, and human sciences.

However, there is a lot of teaching and learning to do, and that requires plenty of communication. Scott Frey, current director of the Lewis Center, has been generous with his time in introducing new researchers to neuroimaging methodology. More of this is surely needed, but perhaps the opposite must be done as well — scholars posing social-level questions and linking them to cognitive and neural levels of analysis, simply asking whether knowledge about the brain could help us to answer more completely some of the social questions at issue. For that to happen, a lot of theory building is necessary, because only good theory can make brain imaging — indeed, any biological analysis — into a useful tool. (The same is true for the usefulness of computer simulations, which require careful explication of one's theoretical assumptions — just ask John Orbell and Holly Arrow about their latest project.)

Social and human scientists may need to think deeply about how their higher-level phenomena are constrained by and constrain lower-level phenomena; and neuroscientists may need to consider the many pressing questions that are formulated at a social level of analysis. These social questions have to be answered at that same level of analysis but may not be fully understood unless we incorporate lower-level processes into these answers. None of the social and neuro scientists can do that job on their own; somehow they have to tackle it together. If this is what the future holds, then the gap between the brain sciences and the social and human sciences may become smaller; as a result, there may be further Institute reforms in the offing; and we might have to start practicing the mouthful of a *Human Social Cognitive Brain Sciences*.

Student Research Funding

We are continuing our program of small research grants to graduate or undergraduate students who are engaged in interdisciplinary research. Inquiries or application letters can be submitted at any time to the Institute director, Bertram Malle, bfmalle@uoregon.edu. A letter of application, no more than two pages long, must include: (a) a brief description of the proposed research, (b) an argument for the interdisciplinary nature of the research, (c) name and contact information of faculty sponsor(s), and (d) suggested use of the grant money (e.g., for paying research subjects, purchasing equipment, paying a programmer). Grant amounts are limited to \$500.

Recently Supported Student Research

Shayna Rohwer's Master's research was supported by an Institute of Cognitive and Decision Sciences student research award. Her project provided a test of whether human males have evolved strategic mate guarding behavior in response to female fertility across the ovulatory cycle. Previous studies found that males adopted novel technologies in mate guarding and changed their behaviors in response to their mate's reproductive cycle (Gangestad & Simpson, 2002). Shayna predicted that today's males might be using cell phone technology to guard their mates, so cell phone bills could provide an objective measure of modern mate guarding intensity. She examined the cellular phone records of 50 undergraduate females at the University of Oregon to determine whether 1) the amount of cell phone contact between couples varied with fertility 2) the amount of cell phone contact females have with extra-pair males also varied with fertility and 3) how these measures of contact were affected by other measures of relationship quality. Results suggest that males are not employing cell phones to guard their partners but that, depending on relationship quality and fertility, females may instead be guarding their mates.

Call for Scholarly Meetings

In the past, the Institute has funded and organized a number of successful conferences, many of which have led to published volumes. Every Institute member is encouraged to propose high-profile conferences, but also variants of the typical conference format, such as workshops (e.g., a weekend during which a particular scientific method is presented and discussed), summer schools (a meeting for top graduate students working on a particular topic), or community events (e.g., a day of presentations and discussions on problems of decision making for local business leaders or on the group dynamics of conflict resolution for local law enforcement).

Evolution Focus Group

The University of Oregon is rapidly becoming become a recognized interdisciplinary center for studies in evolution of human cognition and behavior. Although the UO used to have intellectual expertise in organismal approaches to behavior and evolution in the Center for Ecology and Evolutionary Biology, loss and changes in faculty have shifted the center's focus to evolution at the molecular level. During this time there has been a qualitative shift in the level of intellectual activity and interest that now is a uniquely integrative approach to this aspect of human evolution that spans psychology, sociology, anthropology, and the behavioral sciences generally. This interest and intellectual focus has formed the Evolutionary Focus Group of the Institute for Cognitive and Decision Sciences

(ICDS). The catalyst for this change has been activity of a few key individuals, especially the addition of Warren Holmes as a senior scholar. Warren's graduate seminars have attracted faculty and graduate students into this highly interactive group, including Larry Sugiyama and Frances White in Anthropology, Holly Arrow in Psychology, and John Orbell in Political Science. Warren's prominence as a senior scholar and his personal connections in the field have been important in attracting preeminent speakers to the ICDS lecture series and have resulted in the birth of potentially long-term future collaborative exchanges on both the National and International level. This seminar series was similarly the origin of new research initiatives and grant writing, including current ICDS focus group multi-investigator and multi-faceted projects in the evolution of human mating systems and in the evolution of warfare. It has also lead to a series of preliminary discussions about developing a more formal initiative in Integrative Evolutionary Studies.

Developments of these ideas and visions have also created leverage to provide contracts for Frances White and Warren Holmes, with contributions from multiple departments and units and, particularly, Richard Linton's office, which has been consistently supportive of ICDS's mission and activities.

Collaborative Project on Heroism

A collaboration between Oleg Smirnov (a recent PhD in Political Science from the U of O, now at the University of Miami), Holly Arrow (Psychology), Doug Kennett (Anthropology) and John Orbell (Political Science) has used computer simulation to investigate the evolution of "heroism"—a willingness to take the risk of death in defense of one's group, band, tribe, polis, or country. Heroism is conceptualized as a domain-specific form of altruism, distinct from "communitarianism", which is an altruistic propensity to provide other public goods for one's group. When the world is divided into some number of groups each occupying a resource base, when communitarianism contributes to population increase, and when resource stress provokes war between groups, the incidence of heroism determines the outcome of wars. Despite the private costs associated with both forms of altruism, heroism evolves positively and strongly, but both communitarianism and heroism evolve more strongly when they are free to evolve separately than when they are subsumed under a single, general purpose form of altruism—because the private costs of each do not compromise evolution on the other. The effect is stronger in smaller groups and when larger proportions of the group are killed as a result of defeat in war. The project is presently being prepared for publication.

Naturally Occurring Decisions

What, if anything, does a difficult decision about where to attend college have to do with a difficult decision about whether to end a romantic relationship? In his research, doctoral student and ICDS Decision Making Focus Group member Adam Kramer is hoping to answer this question. Along with his advisor Sara Hodges, Adam has been working to develop a multi-dimensional system of characterizing decisions that can be used across the myriad of contexts in which we make decisions. Although the current body of decision research can tell us a lot about *specific* kinds of decisions (e.g., how people will choose among two gambles with different payoffs and probabilities), little work has been done to examine whether there is “deep structure” that can be used to characterize decisions across real life contexts.

In his research, Adam has been asking people to describe the most recent decision they’ve made, in addition to the last important, the last difficult, and the last bad decisions they’ve made. His research participants rate each of these four decisions on a long list of characteristics (e.g. whether the decision involves other people and whether people felt like they had equal information about all the options they could choose from). Adam’s work has revealed clear characteristic “profiles” for the four types of decisions, and many of the decision characteristics he measured appear to fall into one of two categories: characteristics associated with how challenging the decision is, and characteristics associated with how much closure the decision-maker feels about the decision. Adam is currently working on a follow-up study in which he experimentally manipulates characteristics of decisions to see if he can change people’s judgments of the decisions in predictable ways.

Ultimately, Adam hopes to use his decision taxonomy to help people make better decisions. By first identifying the cross-contextual “signature” of the most treacherous types of decisions, Adam would like to then work to identify what kinds of decision strategies work best with particular types of decision. Adam has presented his work at several conferences in the last year and has just submitted this work for publication.

Merleau-Ponty Circle Conference

The University of Oregon Philosophy Department hosted the 30th Merleau-Ponty Circle conference on the topic of *The Child and the Animal* this past fall (September 29 - October 1). The Institute co-sponsored the event, whose program can be viewed at <http://philosophy.uoregon.edu/mpcl/>.

Cognition and Metaphor in Persian Poetry

Habibollah Ghassemzadeh (Tehran University of Medical Sciences, Iran) was a sabbatical visitor in the Institute in the fall of 2005. A respected specialist on Obsessive-Compulsive Disorders, Dr. Ghassemzadeh has become increasingly interested in the role of metaphor in cognition, with a special focus on poetry. He visited the Institute as part of his retraining in Cognitive Science and in preparation for directing a new Institute for Cognition and Culture in Tehran.

Like few other cognitive scientists Dr. Ghassemzadeh uses poetic language as the primary focus of his investigation, which builds important bridges between Cognitive Science and the Humanities. Dr. Ghassemzadeh’s work on Persian poetry also expands the cultural horizon of Cognitive Science by exploring metaphor outside the standard Indo-European languages (e.g., English, German, French). These cross-linguistic comparisons provide fascinating test cases of the role of metaphoric structures and their relation to cognition and social life.

Ghassemzadeh, H. (1999). Some reflections on metaphoric processing: A move toward a meta-sign formulation. *New Ideas in Psychology*, 17, 41-54.

Ghassemzadeh, H. (2005). Vygotsky’s mediational psychology: A new conceptualization of culture, signification and metaphor. *Language Sciences*, 27, 281-300

Recent Institute Visitors

Minoru Karasawa (Kobe University, Japan)

Sebastian Lipina (Centro de Educacion Medica e Investigacion Clinica, Buenos Aires, Argentina)

Tom Morikawa (Waseda University, Japan)

Recent ICDS Brownbags and Colloquia

Minoru Karasawa: *Language in trait inferences: Different roles of verbs and adjectives across cultures*. (January 26, 2005)

Gunvald Svendsen: *Psychology and Telecommunication Research*. (June 1, 2005)

Habibollah Ghassemzadeh: *Cultural aspects of metaphor: The case of Persian classic poetry.* (October 26, 2005)

Steve Larson: *Music and the internal representation of physical action: Are musical forces, representational momentum, and other experiences of environmental invariants analogous?* (February 16, 2006)

Joseph Carroll: *Evolution, human nature, and literature: Toward a new humanities.* (January 26, 2006, In collaboration with the Humanities Center)

Bruce Winterhalder: *Impediments to the origins of agriculture as a source of insights about prehistoric economics* (14 April 2006, in collaboration with the Department of Anthropology)

Dr. Donald Grayson: *Sloths, Pikas, and Preccaries: Ice Age Extinctions in the Great Basin* (April 21, 2006, in collaboration with the Museum of Natural History)

Agustin Fuentes: *It is NOT all sex and violence: Integrated anthropological perspectives on cooperation and social complexity in humans.* (May 15, 2006, in collaboration with the Department of Anthropology)

NSF Grant for the Study of Cooperative Social Relationships

Misha Myagkov and **John Orbell** have been awarded a two-year NSF grant (Political Science Program, \$327,000) for “Deciding to enter cooperative social relationships: Does framing matter?” The project builds on earlier work with Tim Johnson (about to start graduate work in Political Science at Stanford University) showing that subjects are substantially more willing to enter prisoner’s dilemma games (a standard model of the risks of social relationships) when that choice is framed as among losses than when it is framed as among gains. The project will seek an explanation for these findings. Is the effect a function of the “risky choice” being a *social* choice, as in the original findings, or would it be observed in a risky choice involving with similar incentives, but not being a social choice at all? Can it be explained by subjects having higher expectations that others will cooperate in the domain of losses, such that the “enter social relationships” choice seems less risky in that domain than in the domain of gains? Myagkov and Orbell are interested in the possibility that humans’ considerable sociality has evolutionary roots more in our ancestors’ confronting pos-

sible losses (e.g., predation, other competing human groups) than in their confronting possible gains (e.g., benefits from joint hunting).

Member Portrait

Ellen Peters is a Research Scientist at Decision Research and an Adjunct Assistant Professor of Psychology at the University of Oregon in Eugene, Oregon. She has been an ICDS member for many years, is a regular member of the Decision Making Focus Group, and has served on the Executive Committee the past three years. She also collaborates with a variety of faculty and students in the Institute of Cognitive and Decision Sciences, including Paul Slovic, Jean Stockard, Mike Posner, and Stephan Dickert.

Ellen received her BSE and BS from the University of Pennsylvania in Systems Engineering and Business. She completed her MS and PhD in Psychology at the University of Oregon before joining Decision Research in 1998. In her research, Ellen focuses on how affective and deliberative processes help people to make decisions in an increasingly complex world. She studies decision making as an interaction of characteristics of the decision situation and characteristics of the individual and is currently funded by grants from the National Science Foundation and other federal and private agencies. She has published widely in journals such as *Psychological Science*, *Personality and Social Psychology Bulletin*, *Risk Analysis*, *Health Affairs*, and *Health Psychology*.

Introducing a New ICDS Student Affiliate

Eric Olofson describes his research, which cuts across psychology and linguistics, this way: “I am interested in infants’ understanding of human action and the interaction between that understanding and verb acquisition. As adults, we are able to extract the gist of a particular movement—such as interpreting the repeated movement of a knife through a carrot as chopping—and form a hierarchical goal structure where chopping is a sub-goal involved with cooking dinner. My research investigates the development of this skill and how infants learn verbs for these actions.” This spring Eric received the Henry V. Howe Scholarship from the College of Arts and Sciences at the University of Oregon.

Tools for Laboratory and Field Studies of Social Interaction

The Institute has various capabilities for social interaction experiments in the Richard J. Hill Center for Social Cognition and Decision Making. In addition to analog SVHS recordings from four cameras and two split-screens,

Continued on page 6

we can make digital audio/video recordings of individual or mixed camera input. The files are stored at a central computer and, with the help of a high-speed network, at a sister computer a few doors down the hall. This allows for procedures in which participants simultaneously watch records of their interaction and make various judgments about them.

We are now acquiring additional technology that expands our capabilities for field recordings and thus the realism of social interaction research. The new devices are hand-held computers that are programmed to perform two functions: experience sampling (measurement of various experiential reports) and ambient audio recording. Each of these functions has existed in separate equipment in the past but has not been united in one piece. The recording of experience reports and audio signals can be participant controlled, experimenter controlled, or random. The recording can be coupled with certain events (e.g., voice-activation) or particular time points (e.g., commute) or specific interactions (e.g., with a person who is above or below in the power hierarchy). This technology will be useful to researchers in linguistics, anthropology, social psychology, decision making, and consumer behavior.

Recent Findings in the Aviation Safety Research Project

Under several NASA grant awards, Robert Mauro and his colleagues (including Christina Shepler, a UO Ph.D. student, Jenny Terpenning and Jeff Curin, UO graduates who have continued on as research assistants, and Sharon Pickering, a recent MS graduate now working for Boeing) have been conducting applied decision research as part of the *Aviation Safety Research Project*. Mauro and colleagues developed several computer-based interactive pilot training programs and have now formally evaluated one of these programs. Using pilots from a major regional airline, Mauro and colleagues assessed both the pilots' relevant knowledge and their ability to appropriately apply that knowledge in planning and executing typical flights. Compared to pilots trained using traditional materials, pilots trained using the new programs recalled substantially more information and were better able to apply that knowledge. Tens of thousands of pilots from the United States, Canada, United Kingdom, and Europe have now completed the training and are flying us more safely to our destinations.

Robert Mauro has also collaborated with Immanuel Barshi at NASA and a team of pilots from Southwest Airlines to create "human-oriented procedure design"

for in-flight standard operating procedures. They analyzed the operational environment for flight decisions, assessed the safety risks at each operation point, and took into account pilots' cognitive limitations. The resulting procedures accomplished the necessary tasks without taxing the capabilities of the flight crew and without causing a problem in some other part of the operation. The resulting system was then tested, first in simulators, then by selected crews flying with trained observer pilots (and passengers). Strikingly, pilots demonstrated more than 50% decrease in errors immediately after they started flying under the new procedures. The procedures were approved by the FAA for adoption by the airline as a whole and are now in use nationwide. Follow-up research has shown that the rate of errors continued to drop as the pilots became more comfortable with the new procedures.

Member News

Larry Sugiyama, Anthropology, developed a framework for understanding human attractiveness in evolutionary life history perspective, now published in *The Handbook of Evolutionary Psychology*. Currently he is working on a collaborative project to study the social, ecological, and economic determinants of varying life history outcomes among the Shuar in Ecuador.

Sugiyama, L.S. (2005). Physical attractiveness in adaptationist perspective. In D.M. Buss (Ed), *The Handbook of Evolutionary Psychology* (pp. 292-243). New York, Wiley.

Paul Slovic, Psychology and Decision Research, won the 2006 Otto Klineberg *Intercultural & International Relations Award* for his article "If I look at the mass I will never act: Psychic numbing and genocide". The committee selected this paper from among 21 submissions across a wide array of topic areas including policy, political science, and experimental social, developmental, and clinical psychology. The paper is available online:

www.decisionresearch.org/pdf/If_I_Look_At_The_Mass.pdf

Paul Slovic also edited the book *The Construction of Preference* (with Sarah Lichtenstein), which is going to be published this fall by Cambridge University Press.

George Sheridan, History, is editor and multiple author in *Engaging Europe: Rethinking A Changing Continent* (2005), an interdisciplinary reflection on

Continued on page 7

Europe, historical and contemporary. It emerged out of a collaborative teaching project here at the UO, in a course titled "Idea of Europe."

Gould, E. & Sheridan, G. J. Jr. (Eds.) (2005). *Engaging Europe: Rethinking A Changing Continent*. Lanham, MD: Rowman and Littlefield.

Mike Posner, Mary Rothbart, (Psychology) and **Charo Rueda** (a brief Institute visitor last year), published a widely noted article in the *Proceedings of the National Academy of Sciences* in which they show that an attention training program can boost executive attention and intelligence scores of 4-year-old and 6-year-old children. Mike Posner and Mary Rothbart will also be publishing their book *Educating the Human Brain* (American Psychological Association, October 2006). An accompanying website can be explored at <http://www.teach-the-brain.org/learn/attention>.

Rueda, M. R., Rothbart, M. K., McCandliss, B. D., Saccomanno, L., & Posner, M. I. (2005). Training, maturation, and genetic influences on the development of executive attention. *PNAS*, 102, 14931-14936.

John Orbell and **Misha Myagkov**, Political Science, have been successfully collaborating on projects that bridge the gap between economics and social behavioral research. In two papers in the *Journal of Bioeconomics* and *Politics and the Life Sciences*, they use the classic experimental method of a Prisoner's Dilemma game to examine various determinants of cooperative behavior, including mindreading (perspective taking) and loss aversion. With other collaborators, among them Institute visitor **Tom Morikawa**, John Orbell also published a review and theoretical statement on Machiavellian intelligence that was a lead article in the *American Political Science Review*.

Myagkov, M., & Orbell, J. (2006). Mindreading and manipulation in an ecology of Prisoner's Dilemma games: Laboratory experiments. *Journal of Bioeconomics*, 8, 67-83.

Johnson, T., & Myagkov, M., & Orbell, J. (2004). Sociality as a defensive response to the threat of loss. *Politics and the Life Sciences*, 23, 13-19.

Orbell, J., Morikawa, T., Hartwig, J., Hanley, J., & Allen, N. (2004). 'Machiavellian' intelligence and the evolution of cooperative dispositions. *The American Political Science Review*, 98, 1-16.

Bertram Malle and **Sara Hodges**, Psychology, recently published an edited volume entitled *Other minds: How humans bridge the divide between self and others* (Guilford Press, 2005). This book is based on an interdisciplinary conference sponsored by the Institute of Cognitive and Decision Sciences in 2004. <http://www.uoregon.edu/~bfmalle/OthMinds.htm>

A paperback version of Bertram Malle's book *How the mind explains behavior* (MIT Press, 2004) will be published this fall. <http://darkwing.uoregon.edu/~interact/MalleMIT.html>

Steve Larson, Music, presented an ICDS colloquium in which he reviewed his work on the experience of musical forces and how it relates to other force phenomena in language and perception. He also published a recent article on this topic in *Music Perception*.

Larson, S., & VanHandel, L. (2005). Measuring musical forces. *Music Perception*, 23, 119-137.

The University of Chicago Press will be publishing **Mark Johnson's** (Philosophy) latest book, *The Meaning of the Body: The Aesthetics of Human Meaning-Making*. In this book Mark tries to integrate what we know about how humans experience something as meaningful. He draws on work from various traditions and disciplines including cognitive neuroscience, cognitive psychology, phenomenology, and American Pragmatist philosophy. Two essays en route to this book have been recently published.

Johnson, M. (2005). The philosophical significance of image schemas. In B. Hampe (ed.), *From perception to meaning: Image schemas in cognitive linguistics*. Mouton De Gruyter.

Johnson, M. (2006). Mind incarnate: From Dewey to Damasio. *Daedalus*, 135(3), 1-9.

Susan Guion, Linguistics, published two papers based on her NIH-supported research, both in the top journals of their respective fields:

Kang, K.-H., & Guion, S. G. (2006). Phonological systems in bilinguals: Age of learning effects on the stop consonant systems of Korean-English bilinguals. *Journal of the Acoustical Society of America*, 119, 1672-1682.

Guion, S.G. (2005). Knowledge of English word stress patterns in early and late Korean-English bilinguals. *Studies in Second Language Acquisition*, 27, 503-533.

Marian Friestad and **Peter Wright**, Marketing, co-edited a special issue of the *Journal of Public Policy & Marketing* on the topic of "Marketing and Advertising to Children" (Fall 2005). They contributed a review article themselves on persuasion knowledge among children and young adults, and **Lou Moses** and **Dare Baldwin** co-authored a review on insights from cognitive development research that show the capacities and limitations of children's responses to advertisement.

Wright, P., Friestad, M., & Boush, D. M. (2005). The development of marketplace persuasion knowledge in children, adolescents, and young adults. *Journal of Public Policy & Marketing*, 24, 222-233.

Moses, L. J., & Baldwin, D. A. (2005). What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising? *Journal of Public Policy & Marketing*, 24, 186-201.

Jennifer Freyd, Psychology, was the lead author on a paper in *Science* describing the interdisciplinary scientific approach to child sexual abuse. The article received several commentaries and was followed by the authors' reply. Jennifer was then invited to talk on NPR's *Science Friday* in May 2005. See http://www.sciencefriday.com/pages/2005/May/hour1_051305.html.

For a genetic analysis of individual differences in dissociative behaviors in childhood and adolescence, Jennifer Freyd and co-authors (2004) received the *Pierre Janet Writing Award* from the *International Society for the Study of Dissociation*. Relevant material on the topic of cognitive dissociation in relation to abuse experiences have been collected digitally at <http://libweb.uoregon.edu/news/stories/dissociation.htm>

Freyd, J.J., Putnam, F.W., Lyon, T.D., Becker-Blease, K. A., Cheit, R.E., Siegel, N.B., & Pezdek, K. (2005). The science of child sexual abuse. *Science*, 308, 501.

Becker-Blease, K.A., Deater-Deckard, K., Eiley, T., Freyd, J.J., Stevenson, J., & Plomin, R. (2004). A genetic analysis of individual differences in dissociative behaviors in childhood and adolescence. *The Journal of Child Psychology and Psychiatry*, 45, 522-532.

Jean Decety, one of our non-UO members of the Institute, was promoted to full professor with indefinite tenure at the University of Chicago's Psychology Department. Jean is also editor of the new journal *Social Neuroscience*, which just published its first issue. See <http://www.social-neuroscience.com>.

Two recent articles provide an excellent overview of Jean Decety's insightful work on the cognitive neuroscience of empathy and social cognition.

Decety, J., & Sommerville, J. A. (2003). Shared representations between self and other: A social cognitive neuroscience view. *Trends in Cognitive Sciences*, 7, 527-533.

Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. *Current Directions in Psychological Science*, 15, 54-58.

Dare Baldwin, Psychology, received a Catell sabbatical award for next year and a prestigious Guggenheim Fellowship. Guggenheim Fellows receive a stipend and a year's sabbatical to pursue their research. Dare plans to write a book that will synthesize what is currently known about the human capacity to understand and interpret the actions of other people.

Baldwin, D. A. (2005). Discerning intentions: Characterizing the cognitive system at play. In B. D. Homer & C. S. Tamis-LeMonda (Eds.), *The development of social cognition and communication* (pp. 117-144). Mahwah, NJ: Erlbaum.

Holly Arrow, Psychology, has been continuing her research on group dynamics with an emphasis on dynamics over time. Recently she has also turned her attention to the psychology of war. She has taught several graduate and undergraduate seminars on the origins, evolution, experience, and consequences of war as "coalitional killing" and is working on a collaborative project on Heroism (see page 3).

Arrow, H., Poole, M. S., Henry, K. B., Wheelan, S. A., & Moreland, R. L. (2004). Time, change, and development: The temporal perspective on groups. *Small Group Research*, 35 (1), 73-105.

ICDS NEWSLETTER

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