

Affect & Emotion

Newsletter of the NCCR Affective Sciences

PHYSICIAN - PATIENT INTERACTION



RESEARCH FOCUS

What is the role of gender and nonverbal behavior in the physician-patient relationship? Marianne Schmid Mast gives some answers.

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RESEARCH FOCUS

Physician and patient: a complex interaction



MARIANNE SCHMID MAST's team investigates the effect of physician sex and communication style on patient satisfaction and behavior. She summarizes some of their findings.

The way a physician communicates with his/her patient has been shown to affect patient satisfaction, doctor shopping, preventive practices, adherence with physicians' advice and recommendations, information recall, and health outcomes. Two aspects of physician communication style, *dominance* and *caring*, have been of particular interest. Dominance encompasses control over such resources as information and services, as well as the visit agenda, goals, and treatment decisions. Caring or emotional responsiveness is defined as responding to patient emotions by establishing interpersonal rapport and demonstrating empathy.

Our research investigates the effect of physician sex and communication style on patient satisfaction and behavior during the medical visit. In real medical visits, physician sex and communication style are confounded variables. By using the virtual medical visit paradigm, we were able to disentangle the two variables and study their separate and/or joint effects. This paradigm consists of so-called analogue patients (167 students adopting the role of a patient) interacting with a computer-generated virtual physician on a computer screen. Participants were randomly assigned to one of 4 experimental conditions (physician communication style: high dominant and low caring, high dominant and high caring, low dominant and low caring, or low dominant and high caring). The participants' verbal and nonverbal behavior during the visit as well as their satisfaction were assessed.

Results showed that patients provided less medical information, spoke less, and agreed more when interacting with a high-dominant compared to a low-dominant physician. They talked more about emotions and were quicker in taking their turn to speak when interacting with a high-caring compared to a low-caring physician. These findings have practice implications in that physicians should avoid a dominant communication style and instead foster a caring interaction style if they want to obtain more information to make more accurate diagnosis and protect themselves from malpractice suits.

Moreover, results revealed that depending on the sex composition of the dyad, physician communication style affected patients' satisfaction differently. For instance, in male-male

dyads, physician communication style did not affect the patients' satisfaction whereas in female-female dyads, patients were more satisfied when the physician adopted a caring communication style. In other words, a female-sex role congruent communication style leads to higher patient satisfaction. This implies that physician communication training cannot be one size fits all, but female and male physicians should obtain different training and they need to be made aware of the fact that female and male patients harbor different expectations toward them. Indeed, we showed in a separate study that in particular female physicians are expected to behave according to their gender role. In this study we aimed at identifying how specific physician nonverbal behaviors predict patient satisfaction depending on physician and patient gender. Eleven physicians in a real medical encounter were videotaped and analogue patients (163 students) watched the videotapes indicating their satisfaction with each physician. Results showed that patients were most satisfied with female physicians who behaved in line with the female gender role (e.g., more gazing, more forward lean, softer voice) while still stressing their professionalism (lab coat, medical-looking examination room). For male physicians, satisfaction was high for a broader range of behaviors, only partly related to their gender role (e.g., louder voice, more distance to patient).

In sum, our research shows that physician caring and empathic concern for the patient not only shows advantages for the patient but also for the physician in that he/she gains more insight into the medical condition of the patient. Moreover, patients have different expectations in terms of how a female and a male physician should behave, and female physicians seem to be more confined to gender stereotypical behavior in order to elicit positive outcomes in patients than male physicians are. ■

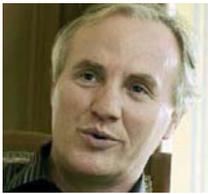
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INTERVIEW

A successful career in neuroeconomics



The news fell this September: the prestigious Marcel Benoist prize, often called the “Swiss Nobel prize”, is awarded this year to ERNST FEHR, who leads the Institute for Empirical Research in Economics in Zurich and the NCCR project “Norm Compliance”. He answers here to questions about his career.

PA: How would you summarize your research?

EF: My research focuses on the proximate patterns and the evolutionary origins of human altruism, and the interplay between social preferences, social norms and strategic interactions. I have conducted extensive research on the impact of social preferences on competition, cooperation and on the psychological foundations of incentives. More recently I worked on the role of bounded rationality in strategic interactions, as well as on the neurobiological foundations of social and economic behavior.

My work is characterized by the combination of game theoretic tools with experimental methods, and the use of insights from economics, social psychology, sociology, biology and neuroscience for a better understanding of human social behavior.

PA: Did you plan to follow this path when you started your career?

EF: No, initially I was a labor-market theorist before I turned into an experimental economist.

PA: What made you change?

EF: In the late 1980s, I wrote a paper about involuntary unemployment, which I hoped would answer questions economists had been debating for decades. The paper was entitled ‘Fair wages and unemployment’ and its central theme was that employees do not work hard if they are paid an unfair wage. At that time

economists still had strong conventions regarding what constitutes a proper utility function - fairness had certainly not been among the objectives the convention legitimized. Thus, I was not too surprised when several leading economics journals rejected my paper, because the utility function included fairness goals. Despite all the rejections, I remained convinced that fairness concerns are important. Therefore, I searched for ways to capture the issue of fairness empirically. In retrospect, this search was the major turning point of my scientific career and completely reshaped my research program. That is how I metamorphosed from a labor-market theorist into an experimental economist.

PA: Did you expect to receive this prestigious prize?

EF: I had the information that I might be one of several possible candidates. But there are so many good scientists in Switzerland that the probability of getting this prize is always quite small.

PA: What emotions triggered the phone call warning you that you were awarded the Marcel-Benoist prize?

EF: I was very happy of

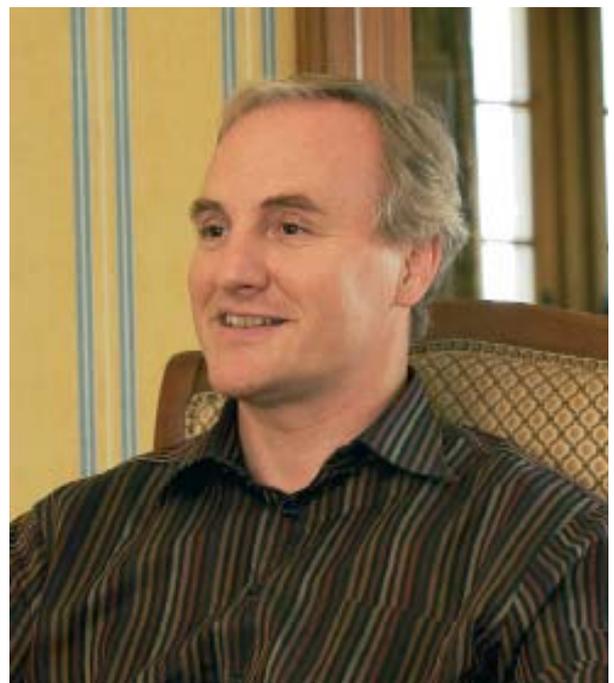
course, and felt rewarded for the many years of hard work.

PA: Will this prize change something in your scientific agenda?

EF: No, not at all.

PA: Would you encourage a young researcher to enter the field of neuroeconomics?

EF: Yes, absolutely. Neuroeconomics is a burgeoning field and there are numerous things to be detected. I expect many exciting findings from the field of neuroeconomics in the upcoming years. ■



NEWS

Events

On October 13, 2008, we held our general meeting in Geneva.

On November 15-16, 2008, more than 30 scientists of our NCCR met in the "Cénacle", in Geneva, to review and discuss existing theories of emotions. This "Emotion theory workshop" will be followed by similar ones in 2009.

On November 26-27, 2008, the Philosophy Group organized a workshop entitled "The metaphysics of value".

On December 2-5, 2008, the NCCR Affective Sciences and the Geneva Neuroscience Center organized a training workshop on functional MRI analysis. Seven fMRI experts trained the participants to analyze fMRI data with the SPM5 software in a series of practical courses. These courses covered all usual analysis steps in fMRI, from acquisition and pre-processing to the first and second levels of analysis including beta extraction, ROIs and PPI analyses, as well as a some discussion on interpretation issues.

On December 17, 2008, the NCCR Affective Sciences and the Geneva Neuroscience Center held a common workshop entitled "Justice and Conflict - Brain and behavior mechanisms"

On November 13, December 18, 2008 and January 8, 2009, three NCCR seminars took place. The invited speakers were, respectively, Anne Bartsch and Christoph Jäger, Eddie Harmon-Jones, and Iven van Mechelen and Francis Tuerlinckx. We also had presentations of Project 1 by Tobias Brosch, Project 2 by Marcello Mortillaro and Project 5 by Peter Wilhelm. The professional skill presentations were given by Alex Waehry (EURResearch Geneva) and Stéphane Barges (Association Bernard Gregory).

On January 11-15, 2009, several young researchers of our NCCR were attending the 2009 edition of the Alpine Brain Imaging workshop (ABIM) in Champéry, VS ■

Staff changes

On November 1, 2008, Urs Rühle started his appointment in our IT team, in replacement of Natascha Michel.

On November 1, 2008, Ingrid Vendrell Ferran, from the Free University of Berlin, joined the Philosophy Group as a visiting scientist.

On December 20, 2008, Cain Todd, visiting scientist from Lancaster University, left after 2 months of stay.

On January 1, 2009, Camille Ferdenzi started a postdoc in the Firmenich research project. She is in charge of inter-

cultural studies on emotions and odors.

On January 1, 2009, Tatjana Aue started her 3 years *Ambizione* research project within the University of Geneva.

For vacancies at the NCCR, see our website www.affective-sciences.org/positions ■

The NCCR's Annual Research Forum will take place on **March 26-27** in presence of the International Steering Committee. All researchers are expected to come and present their latest results.

Knowledge transfer

The NCCR Affective Sciences is engaged in an ambitious knowledge transfer program for 2009.

First of all, the University of Geneva will celebrate this year its **450th anniversary**. In this framework, our researchers will participate in numerous activities like the "University Night", where all Faculties and NCCRs will have a booth, or the "High-school week", where future students will be given the opportunity to visit many labs and places at the university in order to help them make decisions about their orientation. The NCCR Affective Sciences is also involved in a special event during these celebrations: a dedicated exhibition at the "Conservatoire et Jardin Botaniques" entitled "Emotion of collections, collection of emotions". It will take place from April 7 to October 4.

2009 is also the **Darwin year**, celebrating the bicentenary of his birthday, and sesquicentenary of the publication of his book "The Origin of Species". A few years after this masterpiece, Darwin published "The expression of emotions in man and animals", one of the first books to feature printed photographs, that became very popular at the time. As this book belongs to the "classics" of emotion theories, we will naturally put the limelights on it. A special exhibition will take place at the Museum of Natural History, in Geneva, from October, 2009 to January, 2010.

From March 4 to July 26, the Musée International de la Croix-Rouge et du Croissant-Rouge, in partnership with the museum for photography Musée de l'Elysée, will host an exhibition called "**Stigmates**". Several researchers of our NCCR will participate in writing the accompanying booklet and in various public events highlighting some particular facets of this exhibition.

Of course, our NCCR will continue to be involved in the **Brain awareness week** scheduled for the 16-22 March ■

NEWS

Media coverage

The NCCR Affective Sciences continues to attract media's attention. This was particularly true last fall with three events. The first one was the Marcel Benoist prize granted to Ernst Fehr (see p. 3). The second event was the evening seminar on decision making organized by the Continuing Education Services of the University of Geneva. During this event, three NCCR speakers, David Sanders, Tanja Wraniijk and Benoît Bediou presented recent research on decision making, and

where joined by Klaus Scherer, Caroline Miller and Birgit Sambeth-Glasner for a round-table discussion. This event, coming in conjunction with the financial crisis, led to many newspaper and magazine articles, as well as radio broadcasts. The third event to be widely covered was the inauguration of the fMRI scanner of the Brain and Behavior Laboratory (BBL). This inauguration was designed to thank the generous donors and the Academic Society of Geneva. This first stone in

the BBL opening, grabbed the attention of local newspapers, radios and TVs.

Media coverage is important to us, and we can expect to remain in the news in 2009 with the BBL inauguration, the SNF's umbrella campaign on the achievements of the NCCRs, and the SCIENCE-Suisse book and TV programs portraying Ernst Fehr and Klaus Scherer ■

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Special issue

The review Critical Quarterly (CQ) celebrates its 50th anniversary with a special issue entitled "Emotion: the intelligence of the heart" edited by Patrizia Lombardo. Researchers of our NCCR participated in this issue and wrote about "The Geneva school of emotions: an interview with Klaus Scherer" (P. Lombardo and K. Mulligan) or "Shame's guilt disproved" (J. Deonna and F. Teroni).

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Affect & Emotion

is the newsletter of the NCCR Affective Sciences, a research centre for the interdisciplinary study of human emotion

The National Centres of Competence in Research (NCCR) are a research instrument of the Swiss National Science Foundation

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