

Paul Ekman in Geneva for Honorary Degree



Paul Ekman receives an honorary doctorate from the Rector of the University of Geneva, Jacques Weber

Our Centre was honoured recently by the presence of Paul Ekman. He came to Geneva to receive an honorary doctorate from the University on June 5.

Paul Ekman is internationally known as a master of the human face. He has developed a theory of emotions based on his empirical work which is very influential.

While he was here, Ekman gave us his take on his work now that he is past retirement. He no longer teaches as a university professor,

but he has his own consulting group, with which he provides training, mainly for law enforcement agencies in the United States.

He gave a public lecture in which he reviewed his work and career. He recalled how he outgrew the prevailing tendency to think that everything involved in social behavior was learned (a tendency represented for him by the figure of Margaret Mead) and how he searched for the universals of human emotion and found them. He recalled that as a psychologist he was not well received by anthropologists in the 1960s and 70s. He also talked about the theory of emotion that grew out of his work. Finally, he talked about his work on "micro-expressions" and how it enables him to tell truth from lying.

It was clear that at this stage in his career Ekman believes his theoretical work is largely done, and that he is now concentrating on applications of his work, such as in law enforcement. Which of course raises all kinds of ethical questions, of which Ekman is acutely aware. We also found out something about Ekman the man, when he talked about his encounters with the Dalai Lama.

Ekman also presided at a workshop held at our Centre. There some of our researchers presented work on the temporal dynamics of facial expression. Ekman responded to each of the presentations. All in all it was a worthwhile session and a rare opportunity to hear from a master in the field. While he was here, too, Ekman gave an interview in which he talked at some length about questions that are on his mind these days. You can read it in this issue.

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An Interview with Paul Ekman

Following his receipt of an honorary doctorate from the University of Geneva, Paul Ekman visited the Centre for Affective Sciences, where he gave a workshop. He took time out to speak with Terence MacNamee about his theories of emotion and his current work and interests.



TMcN: You have been remarkably successful in transferring your knowledge and skill about the human face to the world outside academia. I am thinking of your consulting business and so on. How did you do it? What is the secret of your success?

PE: It really all started with an article called “The Naked Face” which Malcolm Gladwell wrote in the *New Yorker*, and a book he wrote afterwards expanding on the topic, called *Blink*. After that I got thousands of e-mails, from all kinds of people, from congressmen to corporate executives. Another well-known journalist, Daniel Goleman, wrote about me in the *New York Times*, and then in his book *Emotional Intelligence*. So it was journalists who “discovered” me. Then I started to appear on TV, and every time I do that, I find that there is a lot of activity at my website immediately afterwards. I do an interview with the print media about every two weeks now. So it’s the media exposure that has people interested in my work. The media, like what I do because it’s visual - especially TV, of course. I believe in putting the time in making my work known to a wider public, because I feel I have that responsibility. I have a few rules. In particular, I don’t comment on people who are or have been in political office, or on anything currently in litigation.

TMcN: Let me ask you about the ethical implications of your work. While accepting the scientific basis of what you do, one could argue that applications of your work – apart perhaps from investigating crime – are an intolerable invasion of the private sphere. One could say that people have a basic right not to communicate, not to let others know what they are feeling or thinking. Why, even an accused criminal has the right to remain silent.

PE: In some countries, anyway! Look, I have provided training to some 5,000 law enforcement personnel. If I can teach them to tell truth from lying when they interview suspects, there are going to be less innocent people in jail. There are over a hundred people in the US facing the death penalty. Many times now DNA evidence has shown convicted murderers to be innocent. So can my work. I believe this is all in the public interest.

Again, in the health field, I work a lot with doctors and nurses. If you take your clothes off in front of these people and let them invade your body in the interests of diagnosis, surely my techniques too can be admitted to be benevolent and socially useful. It is known that people often lie to their doctor about whether they have taken their

medication. It would be useful for medical personnel to be able to tell truth from lying. Some lawyers use my work in jury selection too, though personally I don't get into that kind of thing. I wouldn't get into working with advertising or promoting perfumes, for example - just because other things are more socially useful.

Now, I admit that using micro-expressions in law enforcement to tell truth from lying is a pretty serious matter. I believe that if someone trained in my methods is interviewing a suspect, they should inform the suspect of the fact that they have had that training. Then the suspect should have the right not to speak, to leave the room, or even to wear a mask. On the positive side, just consider the case where your spouse has been murdered. In many of these cases, the other spouse is a suspect. As the murder victim's innocent spouse, you may be angry and fearful at being wrongly suspected, and you may end up acting like a culprit. My methods help police officers get beyond this and distinguish guilty behavior from real guilt. In fact, my work is "the enemy of intuition". I teach police officers to become aware of the basis of the judgements they are making about people. It is unanalyzed intuition that leads to stereotyped judgements.

My last book had a lot to say about the non-exploitative use of these techniques. But they are a double-edged sword, I admit. They are open to misuse. I know that my work was used in the old Soviet Union. Actually, I went there and lectured at one point. The KGB turned out to my lecture and were interested to hear what I had to tell them about not misinterpreting the behavior of their adversaries – Brezhnev, for example, should not misinterpret Carter's smile. But I do have my limits. I won't teach or lecture in China. I believe China is as bad and brutal a dictatorship as the old Soviet Union once was. In fact, I won't train law enforcement personnel in any country that is not a constitutional democracy. With my work, I just hope that the benefits will outweigh the dangers in the long run. I know that a torturer could use my work to help him to tell how much misery he was inflicting on his victim – though of course he could find that out in other ways besides facial expression. I just can't prevent my work being misused by the wrong people.

TMcN: What about the Dalai Lama? It seems like an odd association: the Western man of science and the Eastern man of spirituality. What does he see in you? What do you see in him?

PE: We have met between six and nine times, sometimes in public, but also sometimes in private, one on one. We are as dissimilar as two people can be. He a religious leader and a head of state in exile; I am an atheist scientist who holds no political office. For some inexplicable reason, we feel a strong connection with each other. He accepts the contributions of Western science, including evolution, although that is not the traditional Tibetan Buddhist view of human origins. Tibetan Buddhism is particularly interested in the problem of destructive emotions, and so am I. The Dalai Lama and I have come to new understandings together that I think neither of us would have found alone. We certainly have a good time together. He has a great sense of humour. With no-one else have I talked for so long about a single topic. I will see him again in India at the end of this month. We are putting the final touches to our joint book, which consists of transcribed conversations. The book is about "Emotional Balance and Global Compassion" – that's the working title, anyway.

PE: No. These are just surface manifestations of what is going on inside us. The facial signalling system developed because it happened to be of evolutionary benefit that people around us should know how we are feeling. But it's the central nervous system that drives everything. Even people with congenital facial paralysis, who go through life with a "dead face", known as Möbius syndrome, have emotions like anybody else. People find it very hard to talk to a person with Möbius syndrome because they're not getting the usual facial feedback from the listener. Anyway - no, there's more to emotion than facial expression.

TMcN: Then what about the story you always tell about yourself and Friesen making sad faces all day long and feeling really lousy afterwards?

PE: What Friesen and I felt was real. But this was not the only way, or even the most common way, to feel an emotion. When we feel an emotion, there is an opaque process of appraisal going on – I call it opaque because it is not accessible to consciousness – it is in fact faster than consciousness, which is a good thing. Klaus Scherer and I have talked a lot about this. Most emotions are in response to social events. The face is a dual system: there is a display system (involuntary) and an activation system (voluntary). There are facial expressions that ordinary people can't do voluntarily, unless they are trained to do it by someone like me. Duchenne de Boulogne long ago differentiated between the "social" smile and the "genuine" smile. The first is voluntary, the second is involuntary and is very hard to do voluntarily. "Its absence", as Duchenne said, "unmasks the false friend."

TMcN: So, do you believe that we also have inner feelings, of which we can be consciously aware?

PE: Certainly we have inner feelings. Most of the time, in fact, we are *not* aware of them. We may not know we are behaving emotionally till someone asks "What are you upset about?" We feel the fear after a near-miss traffic accident; while it was happening, we were hardly aware of the emotion at all. My work aims at bringing awareness into emotional experience. I describe some exercises to become aware of one's own emotions in my book *Emotions Revealed*. I find now from talking to the Dalai Lama that the Tibetan Buddhists have meditation exercises with more or less the same aim. It's a difficult thing to become aware of our emotions. Emotions evolved to keep consciousness out of the picture. We have to bring consciousness back into the picture in order to begin to be constructive about emotion. It's no easy task.

"FACSGen" Continues Work of Ekman

In the 1970s, Paul Ekman and his colleague Wallace Friesen developed the well-known FACS coding scheme, which defines the set of Action Units (AUs) that facial muscles can produce. FACS allows the formal description of the constituents of any facial expression, and is used in the coding of static and dynamic material. NCCR psychology researcher Etienne Roesch and computer engineer Lucas Tamarit are now using FACS as the basis for a software package to create material for use in psychological experiments.

Compassion, in my view, is not an emotion, it's a motivation. Darwin, in *Descent of Man*, said that the highest moral virtue consists in caring about other sentient beings. The Dalai Lama was surprised to hear this, because it is close to the Buddhist view of things, although Darwin is not known to have had any exposure to Buddhist thinking. When we see others suffer (according to Darwin), we suffer too, by way of a kind of empathy. So compassion is really a selfish act, in that we want others to stop suffering so that we can feel better too. The trouble is that we are not globally compassionate. We tend not to feel compassion with people outside our own family, people of other races, from other parts of the world, and so on. This is why we praise the exceptions to the rule, like the Dalai Lama himself, or Mother Theresa. I have discussed with the Dalai Lama – and we haven't reached complete agreement on this – why all human beings are not compassionate. Do we unlearn compassion, or on the other hand, do we need to learn to be compassionate? Science doesn't tell us. I can't measure compassion in my lab. Not yet, anyway.

Now here is the point. Unless we develop global compassion, the planet is in great danger. We in the developed world need to learn to worry more about the less developed world's welfare. Because these people in the less developed world cause trouble – it's the only means they currently have of getting our attention – and it can only get worse. Again, consider global pollution. Why should I care about it? Most likely it won't affect me in my lifetime. It will affect my grandchildren, though. According to the Buddhist view, compassion originates in the mother's concern for her child. But of course she is concerned with her own child, not necessarily with children of another skin colour, say.

TMcN: Let me try to situate your work in a historical context. What do you think about physiognomy? Was there anything in it? Is there anything in it? Has it anything to do with what you are doing?

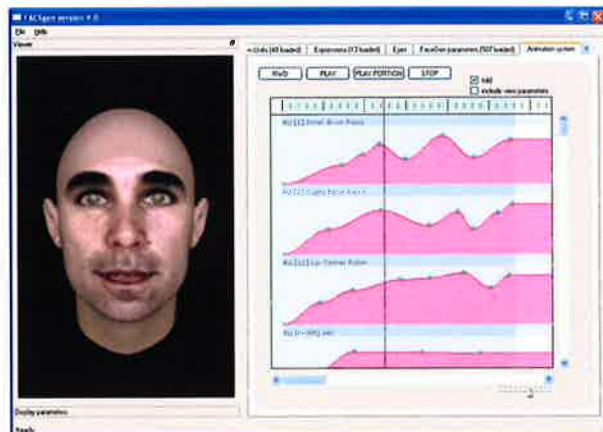
PE: Not much, really. The facial features differ in people, of course, which is what interested the old-time physiognomists, whereas the facial muscles are just about the same for everybody. My work focuses on the facial muscles, regardless of physical differences. I have done some work on intelligence and the face. Intelligence turns out to be indicated by muscle tonus, not, as was once thought, by the width of the forehead. I have an exercise I give to people I am training where they relax the facial muscles. They look a lot less intelligent when they do it. [He does it himself.] There are probably patterns of tonus that differ between culture, class and language.

I have also paid attention to mistakes made in inferring personality from facial features. People with low eyebrows are often misperceived as being ill-humoured, because “brows down” is part of the facial expression for anger. Again, people with narrow lips are often seen as less friendly, because narrowing of the lips is part of the expression of anger too. I particularly try to inoculate law enforcement personnel I train against those stereotypes. There are no personality “looks”, I think. No ethnic “looks”, either. Though maybe the language people speak has an effect on their facial muscles. I just spent 5 days in Paris, and I sat in sidewalk cafés and watched the passing parade for hours. Parisians seem to have tighter lips and mouth area. Maybe it's from the way they speak.

TMcN: Is facial and bodily expression all there is to emotion?

FACSGen is a novel tool that will allow the creation of unique, realistic, both static and dynamic, synthetic 3D facial stimuli based on FACS. Our researchers used FaceGen SDK library, a statistic-based library made of thousands of faces from which novel, realistic faces can be extrapolated using continua of gender, age, and ethnicity (FaceGen is used to create facial expressions for computer games). They then manipulated the 3D objects obtained from FaceGen on the basis of FACS, and controlled the intensity and the temporal dynamics of the facial expressions to produce static or dynamic stimuli.

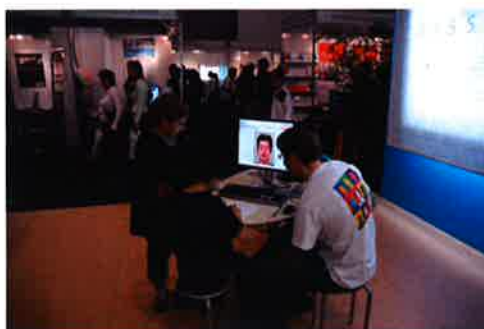
Our researchers plan to tackle two problems using FACSGen. First, specific predictions as to the dynamic unfolding of emotional facial expressions can be drawn from two competing theories, the “basic emotions” theory exemplified by the work of Ekman himself, and the appraisal theories advanced by Scherer and others. Ekman has argued in favor of innate affect programs, which trigger a full-blown emotional expression, whereas appraisal theorists claim that facial expressions result from the cumulative effect of distinct cognitive appraisals on facial muscles. Using FACSGen, our researchers hope to be able to generate the unfolding sequences predicted by each theory. Extending previous research, they will be able to systematically manipulate the constituents of facial expressions, so as to confront both of the theories in several experimental paradigms. Second, they plan to investigate individual differences in the allocation of attentional resources to emotional faces, such as angry and fearful ones.



A screen from the FACSGen software

The synthetic material being developed with FACSGen differs radically from the material that is commonly used in experimental research. Tools of this kind may have a great impact in many fields of the affective sciences, as they allow direct control of the information that is presented to experimental participants.

Salon de l'Étudiant Showcases NCCR



Tomorrow's affective scientists

The Salon de l'Étudiant is an annual fair for prospective students of universities and colleges in French Switzerland. It is always held in conjunction with the Geneva Book Fair, and thus draws a large audience, estimated at 15,000. The University of Geneva has the largest stand there, and this year our NCCR was the guest organization on this stand. The young researchers of the Public Relations Committee stepped in to do the work of preparation and ensure a constant NCCR presence at this event.

The University put at our disposal quite a sophisticated array of computer and visual equipment. We were able to run three tables simultaneously, each of them featuring one of the disciplines involved in the NCCR. Accordingly, visitors could participate in experiments, answer questionnaires and get feedback, but also learn about emotion issues in law and the study of antiquity.

The Fair was inaugurated on May 2, 2006, with a public panel discussion featuring the rector of the University of Geneva, the NCCR's director, Klaus Scherer, and other leading academics. The Fair itself lasted from May 2 until May 6. Over the five days, our young researchers put in a tremendous amount of work, ensuring that the booth was constantly manned by people able to demonstrate the work of the different disciplines involved in the NCCR.

Two Workshops on Emotion

A workshop entitled "Power, Gender, and Emotion" was held from May 31 to June 1, 2007 at the University of Neuchâtel, directed by Prof. Marianne Schmid Mast, University of Neuchâtel, and Prof. Susanne Kaiser, University of Geneva. A great deal of the organization of the workshop was due to graduate student Birgit Michel, who is currently based at the Affective Sciences Centre in Geneva.

Questions of gender have been studied abundantly with regard to both power and emotion. Also, there is research showing how power and emotion are intertwined. But there has been hardly any research looking at the three areas together. The workshop aimed at starting to fill this gap by bringing together researchers from different areas to present their view on various aspects of "power", "gender", and "emotion" and by fostering international exchange while identifying new avenues for future research in this area. Local media took an interest in the event, and Marianne Schmid Mast gave 2 radio interviews on the topic.



Marianne Schmid Mast

"Empathy and prosocial behavior: are they linked?" was the title of a workshop that took place on May 23-25, 2007 at the University of Geneva. It was organized by the Empathy Focus Group of the NCCR Affective Sciences. The aim of the Empathy Focus is to foster collaborations and scientific exchange between the members of the NCCR interested in empathy. Members of the Empathy Focus come from Fribourg, Zurich and Geneva. The welcome address was by Prof. Gisela Labouvie-Vief, and the workshop attendees heard from a range of international speakers.

Communications Mavens Meet in Berne

The communications officers from all the NCCRs in Switzerland met at the headquarters of the Swiss National Science Foundation in Berne on May 24 for their annual meeting. The meeting was introduced by Philippe Trinchan, head of the Press Service of the

SNSF, and was chaired by Kaspar Meuli, the NCCR communications “coach”. The theme of this year’s meeting was developing and improving NCCR websites.

Meanwhile, at the NCCR Affective Sciences, the Communications watch has been doubled. Carole Varone has joined the team in the area of communication and knowledge transfer. She began work at Battoirs in Geneva on June 1st. She will assume most of the liaison duties with the French-speaking media, and she will also take on responsibility for knowledge transfer to private and public institutions, which is a field the NCCR wants to get into a lot more in the years to come.

Carole Varone has recently worked as knowledge transfer manager for the science park of the University of Louvain-la-Neuve in Belgium. She thus brings a great deal of experience and expertise to her new responsibilities here. She will soon visit the different project groups to take stock of the potential for knowledge transfer. She will closely collaborate with Terence MacNamee, who will concentrate on science writing, improving the NCCR’s competence in English, and media work in languages other than French.

Young Researcher Wins Prize



Delphine Courvoisier

Delphine Courvoisier of our Centre has won the first prize of the Psychometric Society for her Ph.D. thesis. Entitled “Unfolding the constituents of psychological scores: Development and application of mixture and multitrait-multimethod LST models”, the dissertation was completed at the University of Geneva, under the direction of Prof. Michael Eid, in November 2006. The purpose of this award is to recognize the best Ph.D. thesis that was accepted at a university during the past year, written in any field covered by the journal *Psychometrika*. Judging is on the basis of the level of originality in the ideas and techniques, the possible applications and their treatment, and potential impact. The award consists of a certificate, a monetary prize of \$500, and a free one-year membership in the Psychometric Society. The winner has been invited to present a summary of her thesis at the 2007 Annual Meeting of the Society, which is to be held this year in Tokyo.

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