"manifest image" make essential reference to justificatory *reasons*. Logical reasons explain why we reach conclusions in thought, moral reasons explain why we prefer to perform some one act over another one. But this normative explanatory style stands in a tensed relation to the "scientific image", in which explanations are framed in terms of causes, instead of reasons. Evolutionary psychology (EP) is a recent manifestation of the claim that the scientific image should and will replace the manifest image. Evolutionary psychologists argue that workings of our minds are to be explained by particular adaptive mechanisms, aimed at the maximal distribution of our genes, and formed in ancestral environments, when the need to engage in co-operation with mutually beneficial results was urgent. Hence evolutionary psychologists have polemicized against the manifest treatment of our logical and ethical proclivities. Referring to the Wason test as proving that our logical abilities are wildly overestimated (we can't even deal with implication), they have proposed our capacities for reasoning derive not from a talent for logic *per se*, but from specialized, yet universally evolved, ancestral capacities to assess co-operative versus cheating inclinations in other people. Moral behavior is driven by quite similar, adaptive mechanisms. These adaptations, and nothing else, are what ultimately drive and explain apparently logical and moral behavior.

The conference *Understanding Human Nature* at the University of Antwerp (sponsored by the FWO-Flanders) provided a platform for reflection on the EP style of thinking regarding explanations of human behaviour.

Jesse Prinz showed how difficult, in the domain of ethics, the claim is to uphold that there are truly universal evolved mechanisms at work behind the scenes. For these even to be considered as valid *explanantia*, the *explanandum* should be uniform and universal. But, so Prinz argued, not even one example of a universal moral rule is to be found.

Fred Keijzer's talk made clear how much the computational view of the mind, underlying much of EP's theorizing about how the brain mechanisms of specific adaptations work, is a speculative theoretical framework, for which an (nonrepresentational) alternative exists, rather than a solid basis.

In their complementary presentations, Filip Buekens and Peter Goldie painted a picture of the manifest image as autonomous, but not totally detached from the scientific image. That is, no causal (evolutionary, neurobiological, ...) explanation will ever supersede the explanation that one arrived at 4x4=16 by following the rules of arithmetic. Yet there *are* interactions between the two styles of explanation. Causal explanations become appropriate when reason-explanations fail: When one has made calculation wrongly, or whenever we are confronted with failures of the "manifest" narratives for the behaviour and conduct of other humans. Beukens argued further that, if causal explanations are only invoked in the exceptional case, and since as, as a matter of logic, exceptions cannot constitute the rule, this implies that causal explanations can never fully replace reason-based explanations.

According to Andreas De Block, an analogous integration of the scientific image and the personal can be reached when we turn to the explanation of taboo-related behavior in cultural anthropology. The fact that basic disgust originated as an adaptive mechanism to avoid food contamination does not preclude that this basic emotion helped to shape a cultural order of the symbolically "impure". Disgust becomes a culturally learned emotion, while remaining at the same time firmly embedded in the biological make-up of humans.

Erik Myin and Willem Lemmens
Philosophy, University of Antwerp

Benelearn, 18–19 May

On 18 and 19 May 2009, Marieke van Erp, Herman Stehouwer and Menno van Zaanen, all researchers at the Tilburg Centre for Creative Computing (TiCC) organized Benelearn, which was held at Tilburg University. Benelearn 09 was the eighteenth in a series of successful annual conferences in the area of machine learning. The conference serves as a forum for researchers to present recent and on-going research, exchange ideas and foster collaborations in the field of machine learning. Even though the event aims at researchers from Belgium and the Netherlands, people from eight different countries participated.

The conference consisted of two invited talks, five sessions that each concentrated on a different topic, and a poster session with for each poster presenter the opportunity to give a four minute speed talk.

Steffen Pauws, the first invited speaker, talked about his experience in the Computational Intelligence group at Philips Research Europe. He concentrated on applied research on recommendation, physiology models for sleep and emotion and activity detection. Khalil Sima'an, who was the second invited speaker, discussed problems in and solutions to finding consistent estimators for non-parametric models that work well in the context of parsing and statistical machine translation.

The first main session contained two talks on applications. The first talk described research that aims to recognize names of monuments in free text, whereas the second talk was more philosophically oriented, describing how prediction theory can be applied to induction in the form of meta-induction.

The second session was on relations with the first talk describing the learning of intransitive reciprocal rela-

tions. The second talk tackled the traveling salesman problem by treating it as a ranking problem.

The third session contained two talks on structure with one talk on an inference-rules based learner that learns categorial grammars in the context of language acquisition and one talk one DFA learning in the context of grid administration.

The fourth session concentrated on empirical assessment. Again, this session contained two talks. The first talk looked at the classification accuracy of SVMs using a local context, whereas the second talk compared different one-class classification approaches.

The final session contained three talks on applications. The first focused on modeling ship trajectories using compression and clustering techniques. The second aimed at analyzing typing behavior by considering data retrieved from accelerometers in laptops and the final talk of the conference described means of preserving local structure in Gaussian process latent variable models.

In addition to the regular talks, the poster session and corresponding speed talk session contained talks on various topics, including language models, expert tracking, parameter tuning, clustering methods, probabilistic models, active learning, logic inference methods, structure learning, grammatical inference and various applications.

Overall, Benelearn 09 provided an informal meeting place for both junior and senior researchers in the area of machine learning and its applications. This informal aspect led to many interactive discussions, after each talk and also during the breaks. The location of the next Benelearn has not been decided yet, but keep in mind that it will be an excellent event to publish and receive useful feedback.

Menno van Zaanen, Herman Stehouwer and Marieke van Erp
TiCC, Tilburg University

Preference Change Workshop, 28–30 May

Change of preferences is a phenomenon that everyone experiences in himself or herself. Yet how can preference change be explained and modelled? This important methodological question—which is far from settled—was the main focus of the Workshop on Preference Change, organized by the LSE Choice Group at the end of May 2009 at the London School of Economics.

The contributions and discussions at this workshop were marked by a shared goal of analysing preference change in new and often unconventional terms, and by a surprising amount of agreement to go beyond orthodox models of rational choice. How exactly to depart from classical models and which of their elements to retain was the object of intense discussion and diverse proposals.

The contributions at this workshop can be largely divided into two groups. Some talks focussed primarily on foundational issues of explaining, modelling and representing preference change. Other talks focussed mainly on theoretical or practical implications of preference change, notably with regard to ethical theories, social choice theory, policy making and political philosophy.

Among the 'foundational' contributions, many took the notion of belief change as a starting point, either attempting to reduce preference change to belief change of some standard or (more often) non-standard type, or arguing for a richer understanding of belief changes to cover different types of preference change. In a belief revision approach, Sébastien Konieczny (CRIL-CNRS Lens) introduced improvement operators as a generalization of usual iterated belief revision operators. Brian Hill (HEC, Paris) analysed different Bayesian models and problems of disentangling preferences and beliefs from each other in a principled way. In a similar vein, though now in a model of epistemic logic, Sven Ove Hansson (Stockholm) showed that it is not possible to fully maintain a distinction between belief change and preference change. Richard Bradley (LSE) presented a probabilistic framework that extends Jeffrey-type conditioning to hypothetical imperatives. Peter Hammond (Warwick) proposed to generalize extensive form models in decision theory by introducing 'aberrant' events and allowing the decision tree to gradually 'unfold', which causes behaviour to change.

Other foundational talks proposed to explain preference change without explicitly involving beliefs at all, introducing other types explanations related to the agent or the environment. Christian List (LSE) and Franz Dietrich (LSE and Maastricht) introduced the notions of salient dimensions and motivating reasons to model preferences and preference change, arguing that they can be used to capture limited conceptualisation and limited imagination. Conrad Heilmann's (LSE) talk on multiple-selves introduced the notion of connectedness between selves to measure the stability of a decision-maker's preferences over time. Katie Steele (LSE) showed that important questions arise about what in fact are the objects of first-order desire when analysing higher-order desire.

Other talks focussed on various implications of change in preferences. Nick Baigent (Graz) analysed the relations between preference change and consequentialist rational choice and showed that preference change requires new conditions for a well-behaved choice function. Wlodek Rabinowicz (Lund) critically examined the conception of moral deliberation as a process of thought experimentation with concomitant preference change, and discussed implications for prefer-