curves observed in the multitude of studies that used highly stylized and content-free stimuli.

Thus, perhaps these learning mechanisms should be construed as back-up systems that the organism engages when it is confused by evolutionarily novel stimuli (such as electric shocks), used as a last resort when its domain-specific systems cannot be applied. It can be argued, therefore, that behaviorist labs were illuminating this backup learning system. In contrast, experiments such as those by Garcia and Koelling were illuminating what would be construed by some as the more interesting part of rat psychology, its "home-grown priors" that allow it to navigate the world successfully. While the behaviorists expanded our understanding of the learning system that had evolved in rats to solve problems they had never encountered during their evolutionary history, Garcia and those that came after him dissected the evolved content-rich cognitive architecture of the rat.

If this analysis is correct, behaviorist-like experiments in humans might also be engaging content-independent mechanisms that exist because evolution cannot foresee all possible contingencies. Experiments with stripped-down contexts, monetary rewards, and repeated trials might indeed allow us to view these learning systems in sharp relief, as illustrated in recent work detailing models of "fictitious play," "quantal response," and so forth (e.g., Camerer & Ho 1999). However, it is worth considering what the results of these experiments are really telling us about human psychology, and what they might be telling us about the last resort of a confused organism.

Other scientific purposes, other methodological ways

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Abstract: Hertwig and Ortmann have made a laudable effort to bring together experimental practices in economics and in psychology. Unfortunately, they ignore one of the primary objectives of psychological research, which is an analytic description of general cognitive processes. Among experimental practices in probability judgment tasks they discussed, we will focus hereafter on *enactment of scripts* and *repetition of trials.*

While economists run experiments in a normative perspective, namely, to test decision-theoretic or game-theoretic models, most cognitive psychologists have no such priority motivation. Indeed a primary objective of psychological research in probability judgment situations is an analytic description of general cognitive processes involved in a whole class of tasks. Of course normative models have a role to play in defining and constructing situations of interest. Furthermore, linking experimental findings to the "optimal" behavior in a given task should also contribute to elaborate formal descriptive models of cognitive judgments. However, to list "errors" and deviations from a priori models is clearly insufficient.

Cognitive psychologists need another approach in order to investigate spontaneous cognitive processes and to provide evidence of a number of fundamental probabilistic intuitions. A further aim is to reveal some internal coherence in these processes. These scientific purposes call for specific methodological ways and experimental practices. In particular, a constant concern of cognitive psychologists should be to avoid as much as possible experimental situations inducing stereotypical or learned answers, reflecting subjects' theoretical knowledge (for example, in probability theory) or experience more than their own opinions and judgments. An application of such an approach to statistical inference situations can be found in Lecoutre (2000) and Lecoutre et al. (2001).

Moreover, rather than to repeat trials of one particular task with a precisely defined "script," it is desirable to vary the situations for characterizing the best conditions under which the appropriate cognitive processes are activated. Only such a variability can allow us to characterize processes generally enough to be transferable to a whole class of situations. In this approach, with situations which the subjects are led to construct themselves, the adequate representations are increasingly privileged. Such an active construction appears to be a determining factor in the stabilization of these representations. A recent statement by Fischbein and Schnarch (1997) refers to this approach: "If students can learn to analyze the causes of the conflicts and mistakes, they may be able to overcome them and attain a genuine probabilistic way of thinking." Furthermore, many recent research programs in probabilistic and statistical education emphasize that it is important for students to construct their own knowledge and develop probabilistic and statistical concepts through the use of active learning.

Finally, one can get worried about the generalisability of the results obtained from a precisely defined script when it is well known from the analogical transfer literature how much "cover stories" or semantic contexts can affect transfer. The issue of transfer of learning from one situation to another is of perennial interest to psychologists. Results could be interpreted within the framework of a general mechanism which is increasingly recognized as playing an important part in cognitive activity: analogical processing. A lot of experimental evidence in psychology has shown that the frequency of the use of analogy is due to its heuristic and economical nature which allows people to make "mental leaps" (Holyoak & Thagard 1995) between different domains, and to interpret a new situation in terms that transform the newness into a well-known situation. Usually analogical processing is studied in an experimental paradigm in which a "source" situation (solutions in problem-solving or a set of knowledge in a domain) is taught to the participants before testing their behavior within a "target" situation (the new problem or new domain). It is commonly accepted that one may describe this process as a comparison mechanism which allows people to recognize and infer similarities between situations. When a subject has to solve a new situation in which no source situation is given, he uses his own source analogue evoked or activated by the (semantic) context of the new situation.

Much recent research focusing on the conditions under which transfer occurs or fails to occur between two domains shows that transfer often fails to occur. Indeed, subjects most often have difficulty in using a source problem to solve either a close or distinct variant of this problem. In this context Robertson (2000) indicates the beneficial effect of providing an explanation at a level of generalisability sufficient to allow the subjects to adapt the procedure to suit the target problem. Even if the perspective of the experiment is "to give participants a chance to adapt to the environment, that is, to accrue experience with the experimental setting and procedure," such an approach can be an attractive alternative to the use of repeated trials of the same particular situation. Rather than acclimatizing subjects to a specific task with a precisely defined script, we may attempt to act upon the cognitive representations and to give subjects the opportunity to learn processes sufficiently general to be transferable to a whole class of situations.

In partial defense of softness

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Abstract: The authors wish that the psychology of human decision making should borrow methodological rigor from economics. However, unless economics also borrows from psychology this poses a danger of overly limiting the phenomena studied. In fact, an expanded economic theory