1.- In what way does evolutionary theory contribute to understand economics?

Ulrich Witt: If you mean the Darwinian theory of evolution, I would point to the fact that, in the early times of human phylogeny, natural selection has shaped a good part of our preferences (viz. innate needs and innate forms of learning how to adapt their satisfaction to the prevailing circumstances). They are still present in our genetic endowment today and can be explained by the adaptive value they had for survival and reproductive success in the past. Something similar holds for the affective value we place under certain conditions on the pursuit of norms of conduct. Since preferences and norms are the bedrock of all economic endeavor, recognizing the influence of genetic dispositions here allows us to better understand what ultimately drives the economy.

2.- One fundamental assumption of economic theory is rationality, that is to say, assuming that agents maximize their utility in every exchange encounter they have. Experimental economics has shown, and evolutionary theory supports it, that this is not always the case. What can you say about it?

The concept of rationality, as much as logic calculus, is a cultural achievement that has grown out of thousands of years of systematic and cumulative human reflection. Our intuitive reasoning, following from the inherited structure of our mind, does not live up to these standards (if it were otherwise there would have been no need to develop rigorous logic). Although we generally prefer what appears more favorable to us, we therefore often fall short of making decisions as full rationality would require them, simply because we represent or frame decision problems incompletely, have biased perceptions, or resort to imperfect decision heuristics to reduce complexity. The ultimate reason for this is that a fully rational decision making requires such a huge amount of our cognitive resources that we cannot give all, or even only a large share, of our decision problems a fully rational treatment (a constraint known as “bounded rationality” in economics).

3.- Could you comment on the implications coming out of evolutionary psychology, that the human mind is not a tabula rasa, but rather is composed of an aggregate of mechanisms sculpted by natural selection? Is exchange one of them? Is it an indirect result of other mechanisms operating?

The hypothesis of the modularity of the human mind shaped by natural selection would make sense of many observations, but belongs to those meta assumptions of a theory that are difficult or even impossible to test independently. The question of what purpose a particular mind module would have evolved for is therefore highly speculative. Regarding out mental attitude towards exchange, genetic dispositions of a different kind may, however, be relevant. Social exchange behavior occurs in the simplest human societies and even among social animals, so that it is likely to have been subject to genetic adaptation. In contrast, economic exchange is a cultural development at much more recent times where genetic adaptations did no longer play a great role. Dispositions that have evolved for our
social exchange behavior may, however, be intuitively transferred to situations of economic exchange – a case of pre-adaptation or “exaptation” (as Stephen Gould called it). This would explain the affective value that norms of reciprocity and fairness – originating from the realm of social exchange between equals – also have for economic exchange behavior as long as we see our exchange partners on equal terms or even as our peers. (If this precondition is not met, particularly in anonymous interactions, these norms may lose their spontaneously binding character and need to be institutionally enforced.)

4.- What is the role of culture in economics? How does it shape our economic behavior? Can it change the main drivers behind economic activities?

After drawing attention to the often ignored fact that there are genetic influences on our economic behavior, I hasten to add that what we have inherited from early human phylogeny are but the most basic dispositions and constraints of our behavioral repertoire. All that we learn individually over a lifetime on this basis through experience and insight, and what the human kind accumulates over the generations in the tacit rules of conduct and institutions and in the codified commercial, technological, and scientific knowledge, is of course, the fruit of cultural evolution. What enormous impact culture has can be grasped by studying the “economic” behavior of primates. They still are at a stage of cultural development which is most likely comparable to that of the early hominids. Hence, the production, the consumption, and the institutions of our early ancestors may have resembled what we observe among primates today, and the long way the human kind has gone in its cultural evolution to its present day forms of production, consumption, and institutions immediately becomes apparent. Historically, different human societies have developed differently so that we can infer that culture has an impact on the main drivers of economic activities. But we should not forget that there has always also been competition between different societies that constrains the room for idiosyncratic cultural developments.

5.- Natural selection weeds out variations that do not increase fitness in a straightforward way, through differential reproductive rates. What can we say about those institutional changes in society that don’t seem to improve economic conditions? Can we draw any analogy between those two processes?

This question reminds a bit of Social Darwinism and its perilous analogies. The historical evidence we have shows that, beyond a certain stage of economic (or cultural) development, reproductive success is almost uncorrelated with economic success. Indeed, the rise and decline of different human societies is a highly complex process – an impression of it is given, for example, in Jared Diamond’s bestseller Guns, Germs and Steel. In my view it is much too complex to be explicable by simple analogies and mono-causal approaches.

6.- If evolution by natural selection has no goal to pursue, how does one describe the process by which human beings, one of the outcomes of evolution, attribute goals to economic development, and has “progress” in mind when so doing? How is that leap built up by our minds?

It is true, notwithstanding the wonderful richness and beauty of life it has generated, natural evolution has no goal to pursue. But humans do have goals, not least as a result of our genetic endowment (see the answer to question 1). What cultural evolution generates does
not necessarily reflect the goals of all members of human society simply because they often do not harmonize. Nonetheless, in the long run and on average, the achievements of cultural evolution in general and economic evolution in particular conform to what most people would, with hindsight to the goals they had, consider “progress”. Even though there is enormous individual variance in this respect, most people – particularly those not commanding the riches – would presumably subscribe to a definition of “progress” in terms of being able to conduct what they consider a better life. No wonder that this is then so easy to equate to commanding a higher income. And, I think, this would be o.k., if we did not know that part of the economic growth that makes rising incomes feasible comes at the price of severe damages to the natural environment on which we depend. It is still one of the weaknesses of our cultural evolution that we have not yet managed to internalize all social costs of economic growth. Another serious objection to equating “progress” grosso modo with rising income is, in my view, that we cannot ignore the origin of our needs and wants in assessing whose life is improving how by some extra income. A deep problem of distributional justice is implied here that has been debated in the moral sciences since centuries and that we may wish to reappraise in the light of the evolutionary theory of human nature.

7.- Do you think that economic theory should also include the selfless tendency humans exhibits in certain exchanges, and not only the selfish ones, as evolutionary psychology has established?

I definitely think that it is high time to account for the full complexity of human behavior also in economics. Being aware of one’s own interests while at the same time being a philanthropist at large scale is no contradiction at all. The multi-faceted nature of human motives also includes moral sentiments as Adam Smith was already eager to point out. In a sense, this is the social side of the rationality problem addressed in question 2 above, or should I say the social intelligence side. The bridge between the two kinds of motivation, the selfish vs. the non-selfish one, is the unique human capacity of empathy (as Adam Smith also already knew). This is the capacity of putting oneself in the shoes of others and, thus, of understanding their intentions and their concerns and worries, and to feel taking part in them. The question we still need to know more about is under what conditions we are prepared to take such a perspective, and of course, how far we can take it without running the risk of encouraging those who try to exploit the emphatic feelings of others to their own advantage.