The jugglery of a mythophilic animal

I grew up in a village in the Tatra Mountains. Each spring, my grandmother, who kept some fowl, allowed one of the hens to brood her eggs until the young chicks hatched. The clucking hen foraged for food for her offspring and protected them by all means; she would aggressively peck us children when we approached her young. I sometimes wondered whether the hen would have even sacrificed her own life if the lives of her brood had been at stake.

Yet, when the chicks grew older, the mother hen's behaviour changed dramatically. She no longer protected her offspring, but would chase them away and no longer pecked at my siblings and me, but rather at her former darlings. When the young females became adult hens, they too hatched their own broods and the cycle continued—unless, that is, my granny's knife took them first.

Quite regularly, my grandmother would also let a hen incubate the eggs of geese or ducks. Once the goslings or ducklings had hatched, the hen took care of them as if they were her own chicks, although I imagine that she must have been quite amazed to see her young marching in a row to a small stream that ran through the village to swim in the water. Nevertheless, the hen remained on guard at the bank, ready to attack anyone who would seek to endanger her brood.

In the first case, by protecting her own offspring, the hen was ensuring that her own genes would survive. As the British biologists J.B.S. Haldane (1892–1964) and W.D. Hamilton (1936–2000) claimed, if the hen sacrificed her life to save two chicks, the same number of the hen's genes would

survive as would survive if she herself continued to live; if she laid down her life for three chicks, the number of her surviving genes would even increase (Hamilton, 1996). The fact that she was protecting her young while they were powerless and that she later chased them away is understandable: the dispersal of individuals at an appropriate time increases the chance that the genes they carry will survive.

What about the second case then, when the hen raised and defended the young of a different species? Such a phenomenon is rare in Nature, although the cuckoo is renowned for clandestinely laying her eggs into the nests of other bird species. In the case of the hen, it was different: it was the work of human culture. Biological evolution has equipped the human species with the capacity to create culture and thus fashion its own environment, but it could not foresee the tricks that human culture would play on Nature.

The evolution of human culture has been made possible by artefaction: the human ability to make artefacts; both physical—such as tools, machines and houses—and abstract—such as institutions, symbols, ideas or new forms of behaviour. As such, culture serves to attribute significance to phenomena that biological evolution had neither perceived nor encountered. Artisans, farmers, artists, scientists and philosophers all produce works of culture. My grandmother's act to let a hen raise geese and ducks was also a work of culture. Indeed, it is human culture in a nutshell: a species, which had been moulded by natural selection in its natural environment, is moved to a novel, artificial environment by human intervention. Natural faculties are bridled and exploited for 'de-natured' human purposes. In contradistinction of the common assumptions made by non-biologists, culture is not arbitrary: its edifice can only be erected on the firm foundations laid down by biology.

What applies to the hen also applies to humans. Human nature—the heritage of hundreds of thousands of years of natural selection—has not disappeared or been modified, but it provides the groundwork for an artificial environment that is imposed upon us by rapid and steadily accelerating cultural evolution. One of the most powerful specific human characteristics, which was selected as an important adaptive trait among human ancestors in the African savannah, is mythophilia: a desire to explain

fully all events of the world, however strange and incomprehensible, by means of ideas assembled into myths. This environment, which shaped the evolution of the human psyche, did not favour the fitness of individuals who were hesitant, tolerant or stunned by the incomprehensibility of the world.

There is only one other species, our closest biological relative, the chimpanzees, that might show some incipient signs of this feature, as we know from the description of chimpanzees' 'rain dance' behaviour by British ethologist Jane Goodall (van Lawick-Goodall, 1971). However, mythophilia, by virtue of culture, has largely become dissociated from its original adaptive role, just as the sexual drive has become dissociated from its original function in human reproduction.

A teacher, spending his or her time and energy to increase the survival chances of the offspring of others is little different from my grandmother's brooding hen. Our ideas, beliefs and cultural works are just as much our progeny as our own children. Indeed ideas seem to be the most cherished of human offspring. The nineteenth century Czechoslovakian scholar Pavol Jozef Šafárik (1795–1861) put forward a most telling definition of humans: "Man is a being that can sacrifice his own life for an idea"—although I might note that sacrificing the lives of others has historically been the more preferable course of action. It does not matter whether the idea is considered noble and sacred by one human group and abominable by another.

Nazism and Communism during the twentieth century showed what bizarre freaks of nature mythophilia can produce in an artificial environment of totalitarian economy, politics and ideology. We are now nine years into the twenty-first century, and it is eight years since 11 September 2001. The destruction of the World Trade Centre in New York on that day by fundamentalist terrorists and the events that followed it have become another, most disquieting, reminder of this singular species-specific trait of *Homo sapiens*.

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