

Programmes of the Living World: Extraordinary Animal Behaviours that Defy Evolution

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Abstract

How do animals know what, when and how to do something? Of course, they have some kind of “programme” or “software” in their minds from the time of their birth. Modern-day evolutionists say that every innate physical and mental ability has developed step by step, by genetic mutations and natural selection. But inborn instincts are sometimes very complicated and these “behaviour chains” probably could not emerge by “gradual development”, as the *incomplete forms* of a complex behaviour are often not advantageous for the living being. In this way, inborn instincts support intelligent design and the creation concept of the Vaishnava Vedanta.

Keywords: animal, behaviour, creation, Darwin, ethology, instinct, intelligent design, nature, origin, vaishnava vedanta

1. Introduction: an evergreen topic

The origin of the living world is obviously one of the weightiest questions of humanity as the conceptions we have of the beginnings powerfully influence our ideas about the nature and purpose of life, and of ethics. Therefore it is no wonder that in modern societies of diverse creeds a number of markedly different philosophical, scientific and religious ideas cohabit and compete in the public arena. What gives a timeliness and significance to the topic is that 2009 will see a double Darwin anniversary: the British naturalist was born 200 years ago and his *The Origin of Species* was published 150 years ago. The Roman Catholic Church is organizing a conference on the topic, the scientific establishment is making arrangements to increase the number of its “Darwin Day” events where it can defend and promote the evolutionary theory, while sceptics and opponents are presenting their views through publications and in forums.

2. Well-known debate areas

Biology is one of today's most rapidly growing discipline which is divided into numerous subdisciplines. The more information we gather of the structure and function of living organisms, the more debate areas are to be covered by pro- and anti-evolutionists. In the wide-ranging controversy scientists supporting the evolutionary theory are opposed not only by religious creationists but also by the proponents of intelligent design, an alternative scientific school of thought.

One of the ever-hot classic issues is how to interpret fossils. In his time, Darwin was of the opinion that a lack of transitional fossils is "the most obvious and gravest objection which can be urged against my theory" [1], but explained it by the imperfection of the fossil records. In spite of the fact that a direct lineage link between fossils is still mere supposition and detailed unbroken fossil series continue to be missing, palaeontology has by now become a major stronghold of evolutionism. It should also be mentioned that due to a marked bias in favour of evolutionism, there are signs of a rather selective use of evidence, eliminating startling discoveries from scientific literature [2].

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Another typical cause of contention is the origin of anatomical and physiological features of present-day living organisms, including issues such as how the different types of vision [3], the panda's "thumb" [4] and the giraffe's neck [5] were formed. Another question closely related to the topic is whether life could be produced as a result of chemical processes [6]. Microbiology has uncovered the complexity of the cell and has opened another extensive debate area, i.e. the origin of intracellular complexity [7]. Widely known are the conclusions drawn from the similarities of species (homologies), the standpoints on the degree of changes by mutations, and the debate on whether the development of the embryo really reflects an evolutionary process. An analysis of these topic areas indicates that the standard examples cited in textbooks to support the evolutionary theory are not at all conclusive and are sometimes a source of problems themselves for the Darwinian approach [8].

3. A less emphasized problem

The examples mentioned above are all related to the anatomy of living beings, dealing either with the remains of dead creatures, or with the bodily structure of those existing now. In origin disputes, the mental abilities and instincts of living beings are given far less focus. Certainly, cognitive skills are more difficult to observe and study than the physical bodies of living beings. However, a closer look at the mental activities, and especially the innate instincts, of animals may provide a clue to the origin of life forms.

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Apparently it is not at all surprising that ants behave like ants, birds behave like birds, and mammals behave like mammals. They execute most of their eating, defending, and mating activities in a predetermined instinctive way. But how do the animals know when and how they should do what they do? Where does nature's I.Q. come from? What is the cause of the "practical" bodily structure of living beings and the intelligent behavior going along with it? Different animal species and groups are also equipped with specific problem-solving abilities; however, most of these work not in a conscious, but in an automatic hereditary way. Where does this encoded intelligence come from? Can the currently widespread view really be true—that the mass of inert matter (lacking consciousness) somehow acquired intelligence over the course of an immensely long time? Does nature possess innate intelligence? Or does our world reflect in many different ways a supernatural, external intelligence that applied its own infinitely ingenious solutions in creating the living world? How can science be of any help to us in answering these questions?

It is widely known that Darwin himself did not deal with the origin of life at all. He devoted a chapter to instincts but he declared: "I have nothing to do with the origin of the mental powers, any more than I have with that of life itself" [9]. He also admitted that an explanation of behaviour forms posed a great challenge to his ideas: "Many instincts are so wonderful that their development will probably appear to the reader a difficulty sufficient to overthrow my whole theory" [10]. He gave only a very general answer: instincts came into existence – somehow or other – by natural selection. But he did not give detailed answers to how the specific behavioural patterns appeared.

Sometimes contemporary evolutionists themselves admit that even today valuable, logically consistent, detailed explanations of the beginnings of instinctive animal action are practically nonexistent. In his book, evolutionist Gordon R. Taylor, former chief science advisor for BBC Television, claims about the unresolved origin of instincts in 1983: “When we ask ourselves how an instinctive pattern of behaviour arose in the first place and became hereditarily fixed we are given no answer” [11]. So it seems that the issue of the origin of instincts was left unclarified not only for a century after Darwin’s death, but well into our modern era when scientists are still searching for a clue.

Ethology, the study of the behaviour of living beings is a rapidly growing, highly productive and popular field of science. During the past few decades talented researchers have established a detailed information database about the features of different animal behaviours. While we have numerous books and articles describing behaviour forms, we have much fewer texts available that delve into the origin of neurological and psychological patterns controlling behaviours [12].

Due to the dominance of the evolutionary paradigm, heavy use of evolutionary terms and an automatic choice of Darwinian explications characterize the literature of ethology as well as other branches of life sciences. Upon encountering the typical evolutionist phrasing one is inclined to think (probably as a result of its verbal wizardry) that the problem of the origin of behaviour forms has been effectively solved. In actuality, however, what such superficially used terms as “has changed”, “has evolved” and “has accomodated” indicate is not an underlying wealth of detailed explanations but a lack of thought and, often suppressed, a deep sense of perplexity.

In the typical Darwinian reading, animal behaviours developed from simpler behaviour forms. Usually it is not mentioned that this is only one possible explanation, and the data do not lend themselves exclusively to the evolutionary interpretation. Moreover, these conceptions suffer from serious deficiencies in many cases. In fact, it appears that in many particular, complex cases this general, “progression based” concept is simply inapplicable.

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My colleague, bioengineer Balázs Hornyánszky and I thought that this mystery deserves a more thorough, larger-scale analysis in the format of a book.

4. *Nature's IQ* – the book

In 2002 we wrote and published a Hungarian book titled *Nature's IQ*. In our book there are more than 100 strange, unexplained phenomena from the animal kingdom, with 200 colour pictures. In the book we strongly question the superficial evolutionist explanation of instinctive behaviour patterns. The Hungarian audience and media received the book with great interest. Of course, evolutionists did not agree with the content of the book. They published a review in *Life and Science*, a Hungarian journal, but they did not discuss in detail any of the examples in the book. The article of the scientific journal made reference to the reviewer of our public service radio who kept explaining that he was holding in his hands “a book of world-class calibre”. In fact, he said that “both in appearance and contents it is of an international standard of excellence – or above” [13]. Fortunately our book has recently been published by Torchlight Publishing and is now available in English.

Nature's IQ is on animal instincts. Basically there are two types of animal behaviour. One is learned during the animal's lifetime from the parents, or from another animal (or by “invention”, using its own mental powers). The second type of behaviour is based on inherited instincts. The latter was more interesting for us as in these cases the special behaviour programmes are “coded” in the animals right from the moment of their birth.

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The chapters of the book include: 1 innovative predator techniques; 2 phenomena of defense, disguise, and deception; 3 symbiotic relationships; 4 the language of animals; 5 strange migration and navigation systems; 6 sexual behaviours; 7 upbringing the new generation. In the last (8th) chapter we present the answer of the Puranas and other ancient Indian writings to the question of the source of such automatic mental abilities.

We concluded that inborn instincts did not originate from the animals' own mental capacity and could not come into existence by slow, step by step evolution, either. We argued that the examples of instinctive behaviours listed in the book were originally implanted into the minds of the species by a higher intelligence, probably God. Let us see a striking example, by the analysis of which we can decide whether this is a valid proposition.

5. Do the big fish eat the little fish?

Let us take an excursion into the fabulous world of coral reefs, where millions of plants and animals live side by side. Though superficially a sea paradise, in truth the world of coral reefs is a terrifying place for its occupants, for behind any coral outcropping could lurk a hungry predator. The smaller fish have to be alert at all times. When, for instance, a coral grouper (*Cephalopholis miniata*) swims up from the depths, panic breaks out among the smaller creatures and they flee in all directions—except for a slender little fish that dances forward boldly from its hiding place, thumbing its nose at approaching death. And what’s more, it swims *toward* the grouper! Has this fish lost its senses? Why hasn’t the survival instinct prompted it to flee with all the other fish?

The little fish is the blue-streak cleaner wrasse (*Labroides dimidiatus*), of the blenny family. We might think it will soon disappear into the grouper’s stomach once and for all, but if we continue watching we’ll see some surprising events. The coral grouper suddenly stops, completely opens its gills, and waits motionless, with jaws wide open. Then the cleaner wrasse courageously swims into the grouper’s mouth and starts to bite off parasites and remove dead skin. The sanguinary predator bears the often-painful cleaning process with patience while it carefully avoids harming the diligent little fish. When the cleaner wrasse finishes its business, it triumphantly swims out of the huge mouth, and the grouper leaves satisfied. Though it doesn’t tip its small benefactor, it does allow it to live and eat its fill while cleaning. Sometimes two or three wrasses work on a grouper at once, like mechanics changing a wheel on a Formula 1 racing car at a pit stop. Even though the cleaner wrasses are quite efficient (in six hours they can attend to as many as three hundred groupers), the “patients” waiting for treatment often line up in long queues.



Figure 1: *The strange liaison of the coral grouper and the cleaner wrasse. How do they know how to behave?*

Several species including wrasses (*Labridae*), cichlids (*Cichlidae*) [14], catfish (*Siluridae*) [15] and gobies [16] have been observed to display cleaning behaviours. The cleaner wrasses in the genus *Labroides* open their cleaning stations within a given territory, and bigger fishes wishing skin and mouth treatments visit these places. Here the fishes that prey on fishes the size of the cleaner fish queue up peacefully, showing no signs of aggression, to get rid of their parasites. As if some kind of truce prevails in the territory of the cleaner fish... [17]

6. Limitations of the Darwinian line of reasoning

Modern evolutionists say that every physical and mental ability developed step by step in time, by genetic mutations and natural selection [18]. The standard evolutionary explanation is that in the living world there appear, by chance, such initial traits in the living entity that give them a better chance of survival; then these abilities give them even more advantage.

In the case of certain organs and abilities, it is theoretically possible that, for instance, the red kangaroo can clear 8 to 10 metres in a bound. Now it may be argued that this ability has evolved gradually; the descendants of the kangaroo may have taken smaller jumps, then in time, by random mutations, there appeared, and turned out to be fitter, animals that could take bigger jumps. Thus little by little, jumps came within the range of 8 to 10 metres. This line of reasoning has no conclusive value (as the species covering different distances may have emerged independently of one another), but in this case the evolvement of the ability through cumulative changes is, at least theoretically, conceivable. We happen to have certain kangaroo species that can actually take smaller jumps than the red kangaroo, so the ability do seem to have “lower gears” that are advantageous for their owner. Therefore it seems plausible, at least theoretically, that a *simple trait* should have evolved in small steps, in a linear fashion.

The living world abounds in examples where the Darwinian line of reasoning appears to be inapplicable.

The living world, however, abounds in (anatomical and behavioural) examples where this line of reasoning not only lacks evidence but appears to be theoretically inapplicable.

7. A missing scenario

Biologists today take the Darwinian theory (and its modernized versions) as universal, so they can reasonably be expected to be able to provide plausible, detailed explanations (at least in theory) for the origin of every specific phenomenon in the living world by the use of the mutation/selection model. At the same time, with numerous complex behaviours, it seems impossible to conceive a detailed evolutionary process which results in the instinctive behaviours observable today.

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Let us try to imagine how the soul-stirring relationship of the coral grouper and the cleaner wrasse could have started... Once upon a time there was a big predatory fish and a small fish. One day the small fish had a sudden idea, "I will swim to this big fish and try to eat something from his mouth! But because he usually eats small fishes, first I will dance a little for him and perhaps he will understand what I want." At the same time the coral grouper thought: "Oh, here is a small fish. Normally I eat them all. But this time I will let him enter my mouth. Maybe he will help me to brush my teeth..." Does that sound like a scientific explanation? It doesn't, does it? The predator fish would have eaten the small fish and the story would have ended quickly.

For a relationship to be established between the two fishes, the following items of information must be present and the following steps of action must be simultaneously taken by the fishes:

The small cleaner fish must

- a recognize and approach the predatory fish;
- b meanwhile perform a special dance to draw attention to its charity service (as if waving a white flag of surrender) so as not to fall prey to the grouper;
- c swim into the mouth of the predatory fish.

While the small fish is engaged in the above series of action, the coral grouper must exhibit the following instinctive knowledge and actions:

- d It must identify the small fish by seeing its movement, and know that it enjoys immunity and its activities will be useful
- e It must stop and open its mouth and gill cover.
- f It must not harm the small fish during the cleaning process.

To ensure mutually advantageous cooperation for the two partners, steps a–f must be taken simultaneously. If only just one of these steps were missing, the

procedure would be mutually inoperative or would simply end up with the death of the cleaner fish.

The behaviours of the two fishes are only useful if they are mutual and complete with all their elements.

As the behaviours of the two fishes are only useful if they are mutual and complete with all their elements, the evolutionary line of reasoning breaks down. If the possible “previous states” had not been advantageous for the two fishes, then they would not have survived and thus could not have evolved into a symbiotic behaviour that is “to be benefited hundreds of thousands of years later.”

8. Obstacles to the evolutionary interpretation

Inborn instincts are sometimes very complicated and – because of logical reasons – it is hard to imagine how they could have appeared through small modifications.

On the one hand, these instinctive “behaviour chains” could not appear in their present form by a sudden large-scale genetic mutation because they are very complex and are probably coded in the long sections of the DNA, whose sudden spontaneous emergence is genetically impossible.

On the other hand, “gradual development” of complex instincts is also disputable. In certain behaviours, simpler (“earlier”) versions may be assumed to have existed and are perhaps observable in the living world. For example, of the dance languages of various bee species some are simpler and some are more complex. Citing such similarities evolutionists often claim that the more complex versions evolved from the simpler ones (or from the ones similar to them) and suppose that by doing so the task of explaining origins is ticked off as completed. To make a rigorous scientific explanation, however, one should be able to provide a plausible explanation for *how* the alleged mutation may have taken place, which is not at all an easy challenge and seems quite preposterous sometimes.

In other cases, no reduced versions of the revealed instinct chains are observed in nature, and in certain examples it is impossible even to conceive of one, as the *incomplete* versions of these complex behaviour forms would not be advantageous for the living entity. All this places great obstacles in the path of evolutionary theorists since along Darwinian lines, only useful and functional traits are preserved and can evolve any further. (Of course, neutral mutations, which are

neither useful nor advantageous, can survive. But it would be unreasonable to assume that for hundreds of thousands of years random and neutral mutations had been building a long DNA section until it became such that it could start functioning and control a complex behaviour form.)

For complex instincts, Darwin's followers sometimes offer the explanation that these may have evolved from previous behaviour forms *servicing other purposes*. (For example, they presuppose, and then again provide no evidence for their supposition, that certain forms of animal communication may have emerged as a result of a change in or "ritualization" of, a series of movements or an element of behaviour.) In other words, they presume that a specific behaviour was complemented, modified and assumed *a new function* through a series of mutational steps. The incomplete earlier versions of a behaviour known today may have, even partially, been unable to occupy the *current* role of instincts, though it is possible, they say, that the more primitive versions played *other* roles in the animal's life.

In many cases, no detailed answer is given to *what* could have been those previous steps and what roles those steps could have played.

At first this may seem a plausible explanation but it suffers from two defects. One is that in many cases no detailed answer is given to *what* could have been those previous steps and what roles those steps could have played. Therefore what we get is not a logically consistent deduction but yet another general hypothesis. The other problem is that it is not proven, but rather doubtful, that a living being or a whole population can "switch" from one function of an instinct to another.

Proponents of the evolutionary theory endeavour to advance general explanations for the emergence of the behavioural patterns of species and specific explanations for the particular cases. As we have seen, however, their attempts at providing an explication that presupposes a linear evolution and a shift of functions seem to be inadequate.

For the 125th anniversary of its publication, *Science* magazine listed 125 embarrassing questions that are yet to be answered by science. One of the questions was "How did cooperative behavior evolve?" [19] The question of cooperation is but one phenomenon in animal behaviour whose origin has not been answered in evolutionary terms. Not even on paper.

In the case of complex bodily structures and behavioural traits that consist of interdependent elements, the “initial”, “transitional” or “half-completed” instinctive behaviour forms would not result in any survival advantage. So the model of gradual development is unsuitable for explaining such behaviours because we would need a sudden, target-oriented restructuring of behavioural patterns to get from one useful state to another (skipping a multitude of nonfunctional transitional stages). This, however, is so unlikely as to be impossible genetically, mathematically and in a common sense way.

It may happen that an inventive evolutionist author thinks up a story to account for the origin of the problematic behaviours of cooperating fishes and those of other animals. We should be aware, however, that such made-up evolutionary stories (which are often interspersed with miraculous turns of events that have never been observed in the mundane realities of biology) do not provide any evidence that the phenomenon under scrutiny has appeared in the expected fashion. It may well be that we should seek the answer along the lines of an entirely different paradigm.

9. Irreducible structured instincts

The concept of *irreducible complexity* was introduced into public debate on biological origins, by biochemist Michael Behe, a proponent of the intelligent design theory. By definition, a system may be called irreducibly complex if it “is composed of several well-matched, interacting parts that contribute to the basic function, and where the removal of any one of the parts causes the system to effectively cease functioning.” [20] In Behe’s argument, systems with such features could not arise through gradual development because the envisioned incomplete evolutionary stages are not functional and are not advantageous for the living being, so according to the very rules of evolutionary theory they could not have survived and evolved any further.

A removal of any of the elements of the instinctive “programme” would result in the programme not functioning usefully.

We can use this logic not only for biochemical or anatomical structures but for many behavioural patterns also. In many cases, specific behavioural elements *together* accomplish some reasonable purpose in the life of the animal. But a removal of any of the elements of the instinctive “programme” would result in the programme not functioning usefully. On these grounds, the definition of the

irreducible structured instinctive behaviour would read like this: “the innate mental action plan of a species, including several subplans, where an incomplete series of action (procedure), resulting from an omission of any procedural element(s), prevents any effective behaviour.”

In order to help grasp the concept of target-oriented structured procedure, let us take a common example. If we wish to withdraw money from a cash dispenser, we must follow a complex procedure, which should entail the satisfaction of certain material conditions. (Naturally, human action is not instinctive but volitional. Our example serves to help understand irreducible structure, not instinctiveness.) First, we have to find a cash dispenser, and realise that this is the device that can help us to achieve our goal. We must possess a valid bank card which we must insert into the right slot of the machine. The machine must be functional and filled with banknotes. When prompted by the cash dispenser, we must enter our password for identification and also the amount of money we wish to withdraw. Then the machine connects to the central computer of the bank to check our password and balance, also checking whether the requested sum of money does not exceed the maximum amount of money available. If everything is found OK, then each and every step of the process has been completed and we get the money we want.

From the point of view of achieving our goal, this procedure is *irreducibly structured*: if we omitted any of its subprocesses, or encountered a technical problem preventing the completion of the transaction, we would not get a single penny. So it is not that we go closer to the cash dispenser and automatically get a little cash... And if we go even closer, we get some more... And if we are willing to produce our bank card, we get a tidy sum... No. The whole behavioural chain works only if each step has been taken in the right order, from the beginning to the very end.

The whole behavioural chain works only if each step has been taken in the right order.

Similarly, animal behaviours also consist of several parts, which are all needed for the animal to engage in fruitive action. The question is: where do these intricate behavioral programmes come from? Is it possible that these behavioural chains have evolved step by step, in a long period of time? The problem gets even more complicated when we start discussing complex behavioural matrices where more than one animals are involved, and in this “net of instincts” all of them are equipped with the instincts essential for effective behaviour, just as we saw it in the case of the coral grouper and the cleaner fish.

10. Grouper Software[®], Cleaner Software[®]

As we have seen in the example of the cash dispenser, there are some effective procedures that are advantageous only when each of their steps are taken. It seems that such irreducible programmes are also to be found in the set of instincts and behavioural patterns of different species.

Encountering the above examples of irreducible structure, we may be inclined to think that the behavioural schemes of species have always been in the heads of the individuals of the species, in their complete, present-day form. If this is so, then these behavioural mechanisms can be considered as designed software in charge of the species-specific control of animal behaviour.

Some of the processes that are running during the operation of a man-made computer cannot be influenced as they are hardwired, proceeding always in the same manner. Some of the inborn instincts of the living entities appear to be such hardwired programmes which start running when conditions are appropriate and key triggers are present. The mental software that consists of several interconnected subprogrammes, none of which results in useful behaviour in itself, can most reasonably be attributed to the programming activity of a higher intelligence.

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Why is this the most likely answer? During the everyday life of our modern age we regularly witness that by intelligent activity (design) computer programmes controlling complex processes can be made. But the idea that matter itself and the selection of genetic mutations could make such programmes has remained, up to the present time, a bold assumption of materialist philosophy, not supported by any empirical evidence.

11. Instincts in the Gaudiya Vaishnava philosophy

The Gaudiya Vaishnava (Krishna follower) tradition of Hinduism considers species as designed and created entities. The Puranas describe the creation of living beings as a multistage process [21]. The material world is manifested by the different forms of Vishnu, according to the will and original plan of Lord Krishna, the Supreme Person. In charge of supervising the creation process within the spherical material universes is Brahma who receives the blueprints of the species

from Vishnu. In the appearance of the different living entities, the demigods (*devas*) and the progenitors (*prajapatis*) play a key role, populating the planets of the universes with a multitude of species.

The Vaishnava Vedanta describes life (the soul) as a separate substance from matter. As eternal, conscious, nonmaterial individuals the living entities get into different plant, animal and humanlike biological bodies, pervading them with their consciousness and wearing and moving them as clothes. It is said in widely known Bhagavad-gita (15.9):

*srotram caksuh sparsanam ca rasanam ghranam eva ca
adhithaya manas cayam visayan upasevate*

“The living entity, thus taking another gross body, obtains a certain type of ear, tongue, and nose and sense of touch, which are grouped about the mind. He thus enjoys a particular set of sense objects.” [22]

Thus the transcendental living entities, also called *jivas*, that live in the material world possess an additional subtle covering besides their flesh and blood body. This subtle body is composed of mind, intelligence and ego (the above verse briefly refers to this mental organ as “mind”). This subtle mind accommodates the manifestations of thought, emotion and will.

From the Vedic perspective, our empirical and experimental knowledge may lead us to the conclusion that species-specific behaviour forms are coded as a kind of mental programme in the subtle body of the living beings. The *jiva* is the prisoner of the material world and a manifestation of their imprisonment is that in each of their life forms they are under control in their activities of eating, defending, mating and rearing.

At the same time, plants and animals are not just biological robots whose existence is limited to having some software running in them. Living entities are nonmaterial sparks of consciousness whose manifestation is controlled by the behavioural programmes related to the particular species the living entity is born into. Generally speaking, the higher position a living entity has taxonomically, the more liberated their consciousness becomes, the more open their

Living entities are nonmaterial sparks of consciousness whose manifestation is controlled by behavioural programmes.

“software” becomes, the more their overpowering inborn instincts give way to learning processes, and the more the restraints imposed upon the life of the *jiva* loosen. The quantum leap in consciousness is, of course, from animal to human: while humans have their drives to provide for the bare necessities of life, in human existence man is eligible to engage in a wide range of communication and to foster culture, due to the intellectual skills of their consciousness. Scripture enjoins man to ultimately use their unique faculties to acquire knowledge and to search for and understand the absolute truth.

According to the scripture-based Vaishnava outlook on life, the specific animal instinct software originates from the Supreme Person.

According to the scripture-based Vaishnava outlook on life, the specific animal instinct software originates from the Supreme Person, just like the blueprints of biological forms do. Internationally renowned A. C. Bhaktivedanta Swami Prabhupada, the most successful translator and commentator of Vedic literature succinctly sums up this approach:

“The construction of dwelling place, it is known even to the birds and the beasts. The mouse also knows how to live within the earth. They make a hole. According to their capacity they make [it] there. The birds also, they make their nest also, to live comfortably. Ants also. So this intelligence [is] there. God has given that intelligence.” [23]

In the light of the above-mentioned highly structured instinct systems, we cannot simply shrug off the statement about animal behaviours having a divine origin as a “naive religious approach.” Rather, it seems to be an explanation most in accordance with empirical observations and logic. A more detailed study of the philosophy of Vedic scriptures and of the results of ethological experiments can help provide a more elaborate further description of this non-reductionist approach to instincts.

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