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Looking at anthropology from a biological point of view: A. C. Haddon's metaphors on anthropology

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TORRES STRAITS: FROM THE STUDY OF FAUNA TO THE STUDY OF NATIVES

As is well known, A. C. Haddon visited Torres Straits for the first time in the summer of 1888 with the purpose of studying, as a marine biologist, the fauna and the structure and mode of formation of the coral reefs in Torres Straits. There began Haddon's 'conversion' from zoology to anthropology.[1] It seems that Haddon felt an urgent need to collect ethnographic information on the islanders because he saw they were changing and diminishing in number very quickly, and therefore their customs were vanishing.

> Very soon after my arrival in the Straits I found that the natives of the islands had of late years been greatly reduced in number, and that, with the exception of but one or two individuals, none of the white residents knew anything about the customs of the natives, and not a single person cared about them personally. When I began to question the natives I discovered that the young men had a very imperfect acquaintance with the old habits and beliefs, and that only from the older men was reliable information to be obtained. So it was made clear to me that if I neglected to avail myself of the present opportunity of collecting information on the ethnography of the islanders, it was extremely probable that that knowledge would never be gleaned – for if no one interested himself in the matter meanwhile, it was almost certain that no trustworthy information could be collected in, say,

> ten years' time. This being my opinion, I felt it my duty to fill up all the time not actually employed in my zoological researches in anthropological studies.[2]

Although it seems that Haddon did not have a special interest in studying the native customs at the beginning of his expedition,[3] the fact is that before he left, James G. Frazer had given him several copies of his *Questions on the Customs, Beliefs and Languages of Savages* (1887). Also, he had provided himself with a copy of the Anthropological Institute's *Notes and Queries on Anthropology* (2nd edn, 1892). Afterwards, both questionnaires were very useful to him in the field when he gathered his ethnographic data.[4] He also hoped to collect ethnographic 'curios' during the expedition and sell them to museums upon returning to Britain, in order to pay for some of the expenses of his journey.[5] All these circumstances suggest that Haddon arrived at Torres Straits with a latent inclination to do ethnographic research, which awoke when he got in touch with the natives. However, no one would have expected that a biologist without experience in ethnographic matters could gather so much valuable ethnographic information, and do zoological research at the same time.

After his return from Torres Straits, Haddon began to report simultaneously the results of his zoological and ethnographical works in Torres Straits. In 1889, he read a paper at the British Association on 'Former Customs and Beliefs of the Torres Straits Islanders', and in May 1890, he delivered a lecture at the Royal Institution on 'Manners and Customs of the Torres Straits Islanders', which appeared some months later in *Nature* (1890c). In the same year, Haddon published a lengthy paper on 'the Ethnography of the Western Tribe of Torres Straits' in the Anthropological Institute's *Journal* (1890a) and a compilation of the 'Legends from Torres Straits' in *Folk-lore* (1890d).

James G. Frazer, still not the famous anthropologist he would be 30 years later,[6] wrote a letter to Haddon on 18 July 1890 (a month after the first edition of *The Golden Bough* had appeared) in which he congratulated him on the splendid results of his ethnographic research and suggested that Haddon should publish a monograph on Torres Straits islanders using all his material.

> Allow me to congratulate you on the splendid results of your stay in Torres Straits. This paper, with your paper in 'Folk-lore', form a most valuable contribution to anthropology. Indeed they are priceless, since the information they contain, if it had not been collected by you would probably have entirely perished. It seems only the other day that you would not promise to do anything. I thought at the time that this caution was much more hopeful than effusive promises would have been, and I have not been disappointed. Work like yours will be remembered with gratitude long after the theories of the present day (mine included) are forgotten or remembered only to be despised as obsolete and inadequate.
>
> I see that you reserve your notes on the language. Don't you think it

> would be worthwhile to publish all your materials in book form? It would make an admirable monograph, and I am sure very many anthropologists would be glad to have it.[7]

Haddon had probably considered the idea of writing such a monograph before Frazer mentioned the matter, but decided to forgo it when he noticed the deficiency of his material. The fact is that when Haddon received Frazer's letter, he had a more ambitious project in his hands: to write a book on general anthropology from a biological point of view.

My intention here is to try to show how Haddon's success in his first ethnographic research and in the subsequent development of his career as an ethnologist was due to his particular way of looking at the anthropological field with the eyes of a biologist. The apparent conversion of Haddon from zoology to ethnology was nothing but the transference of a great part of the techniques, instruments, theories, models and point of view of biology to the study of anthropology.

HADDON'S OUTLINE OF A TREATISE ON ANTHROPOLOGY FROM A ZOOLOGICAL STANDPOINT

The idea of writing a book on anthropology was a suggestion that Havelock Ellis made to Haddon at the beginning of May 1890. On 8 May Ellis wrote a letter to Haddon congratulating him on his papers in the *Journal of the Anthropological Institute* and *Folk-lore*, and he proposed that Haddon write a volume for his 'Contemporary Science' Series.[8] The same month, Haddon answered Ellis accepting his proposal and suggesting the following approach for the book:

> Personally I rather incline to a general work on Anthropology written from a biological point of view and not as is usually done from the 'anthropological' standpoint. I think it should be possible to bring out the essentially zoological character of the study & thus help to reconcile Biologists to it!
>
> For example. Archaeology is the Palaeontology of Anthropology, & should only be treated as such. Much of Folk-lore is 'Psychological Palaeontology'. (If the term may be allowed). Savages are our 'arrested' [a]n[d] 'generalised types' like Chitons-Peripatus, Amphiocus the Mud-fishes etc. The Geographical Distrib[ution] of man has many correspondences with that of animals. Waves of migration, insular forms, persistence of low types in the fag ends of Continents. Pygmies in the Andamans & in Central African forests. Australians comparable with their own kangaroos. The geographical distribution of manufactures & especially that of art is

> now interesting me. & I am making a special study of Papuan art, its local developments, its evolution & devolution.
>
> The development of customs, & beliefs, ceremonials & so forth of handicrafts & fabrications are embryological features.
>
> If you think this line of thought worth following out I will articulate a skeleton for you – (, should you desire it. . . . [)]
>
> In writing a General Anthropology one would be putting oneself in direct comparison with Tylor & his little & most excellent book; but I imagine that such a book as I have sketched out should have so sufficiently distinct an aim as to avoid any unpleasantness.[9]

As can be seen in this letter, in May 1890 Haddon had a very clear idea about what he thought anthropology and its possible research lines should be. His short ethnographic experience in Torres Straits had persuaded him of 'the essentially zoological character' of anthropology and, in consequence, of several analogies between the study of man and the study of the rest of the animals: archaeology and folk-lore bore certain resemblance to palaeontology; the geographical distribution of man and his cultural products could be compared with the geographical distribution of animals; evolution of art and manufactures, as well as the development of many other cultural features, could be interpreted in embryological terms; etc. Instead of adapting himself to anthropology as it was practised in the last decade of the 19th century, Haddon remained an evolutionary biologist in his practice of anthropology. Thus, instead of converting to anthropology, Haddon converted anthropology to biology.

Ellis was very pleased with Haddon's approach to the subject, and he asked him for a rough sketch of the whole work.[10] Although we do not know the exact sketch Haddon sent him, because no copy exists among his manuscripts, we know through Ellis' comments that his intention was to 'show that the savage man, the prehistoric man & the civilised man are all one study'.[11] Ellis thought that such a book on anthropology would succeed in exciting a genuine interest in anthropology in England, in a way that Tylor's 'dry' and 'formal handbook' had not.[12] The only general criticism Ellis made of Haddon's scheme for the book was that it was 'so large that it might easily fill a dozen volumes'.[13] In fact, Ellis' intention was to publish monograph volumes on some of those subjects, such as races of man, evolution of art, tattoing, music, festivals, etc. However, he believed that such a book as Haddon proposed would not have to deal systematically with each of the great anthropological issues, but should present a general vision of anthropology from a biological point of view by taking up special points here and there. Ellis suggested to Haddon as title for his book *The Study of Anthropology*, since he saw in the project certain similarities to Herbert Spencer's *Study of Sociology*.

In the end, Haddon did not write the book, but decided to develop separately some of the ideas of the initial project. At the end of February or the beginning of

March 1891, Haddon wrote to Ellis again, telling him that he wanted to leave the general book on anthropology, in order to concentrate on writing a work on the evolution of art.[14] In 1894, Haddon published a detailed study on the decorative art of British New Guinea, and finally, in 1895, Haddon's book appeared in Ellis' series with the title *Evolution in Art: As Illustrated by the Life-Histories of Designs*. These two works were Haddon's first attempts to go systematically into an anthropological problem as it would be approached by a biologist.

LIFE-HISTORY OF ARTISTIC DESIGNS

Haddon starts his book *Evolution in Art* with the following statement:

> Notwithstanding the immense number of books, dissertations, and papers which have been written on pictorial and decorative art, I venture to add one more to their number. I profess to be neither an artist nor an art critic, but simply a biologist who has had his attention turned to the subject of decorative art. One of my objects is to show that *delineations have an individuality and a life-history* which can be studied quite irrespectively of their artistic merit.[15]

The rest of the book is an attempt to make credible the metaphor: *artistic designs are biological species*, that is, *artistic designs have a life-history*. Haddon does not limit himself to pointing out parallels between the history of artistic representations and the evolution of living organisms; he actually proposes techniques and methods of zoology as being the most suitable to study the evolution of art.

The study of the evolution of art only makes sense if the evolutionary nature of artistic designs has been previously accepted. Therefore, what Haddon did was to extend to the field of artistic representations the fundamental law in biology expressed in the aphorism: *Omne vivum e vivo* ('All life from life'). 'Artistic expression', for Haddon, is not an invention of the artist, but 'the result of *a pre-existing visual impression*', either of a natural object, an artefact, or another artistic representation (Haddon, 1895: 308–9; emphasis added). Artistic designs, like organisms, have a life-history which can be distinguished into three periods or stages: birth (origin), development (evolution) and death (decay). Every artistic design owes its birth to realism, that is, it is born as a direct copy or representation of a real object. Throughout their lives, designs experience variations, and finally they become obsolete and their representations cease (Haddon, 1895: 6–7, 308–9).

In order to interpret the evolutionary cycle of artistic designs in the same way as the evolution of living beings, Haddon needed to find two principles

similar to variability and natural selection. According to Haddon, copies of designs vary from the originals as the offspring of organisms vary from their parents.

> Organisms have offspring which at the same time resemble and differ from their parents.
>
> This is the commonest experience one meets with in studies in ornament; certain simple patterns, on account of their simplicity, may be indefinitely repeated, and that without appreciable variation. . . .
>
> On the other hand, the more complex the original idea the greater opportunity there is for variation, in fact variation is inevitable.[16]

Variations in the copies of artistic designs are for Haddon the material that makes the evolution of art possible. Also, he thought that, just as in zoology the more complex animals vary more than the simpler, in art the more complex patterns should also vary more than the simpler, because an increase of variation occurs when there is more material to vary (Haddon, 1895: 312).

But, in order to validate the metaphor of the (biological) evolution of art, Haddon had to find a force analogous to natural selection, acting over time upon artistic variations to cause transformations in a specific direction.

> The offspring of an animal vary more or less from the parent just as copies of designs vary, both are alike subject to an *external selection*. If this selection proceeds sufficiently long in one general direction, a distinct and non-relapsing variation is established, and so on indefinitely.[17]

As was to be expected, Haddon does not explain how this 'external selection' occurs in the case of art; rather, he limits himself to giving some general considerations.

First, he admits that in the evolution of artistic designs there is a certain amount of conscious selection, which does not exist in the evolution of animals; since in the former there is a man who selects, whereas in the latter the survival of the fittest is due to the elimination of the unfittest (Haddon, 1895: 315–16). Also, Haddon points out four human needs as being the cause of artistic effort: an *aesthetic* need, the need to convey *information*, the need to reflect *wealth*, and the need to express *religious sensibilities* (Haddon, 1895: 4–5). However, for Haddon, the fact that in the evolution of patterns there is a man who selects one design instead of another design, does not mean that the transformation of any design as a whole is an entirely guided operation (Haddon, 1895: 317–18). Haddon interprets the variations in patterns to be a result of two psychological forces operating on the designs. On the one hand, the artist has a tendency to modify designs, because they constantly *suggest* new ideas to him. On the other hand, sometimes the artist tends to *conserve* an existing design, by virtue of an association of ideas, even though he makes it in a distinct way (e.g. using different

materials). These two forces, what Haddon calls 'suggestion' and 'expectancy', give rise to the life-histories of artistic designs (Haddon, 1895: 5–6).

But a metaphor can aid in understanding a phenomenon only to the degree to which both elements in the metaphor have a common experiential basis. It is my argument that metaphors are not based on the properties that things have, but on our individual and social experience of things. In order to comprehend a metaphor it is necessary to know its experiential basis (Lakoff and Johnson, 1980: 19–21). Thus Haddon's metaphor can be comprehended only if the evolution of artistic designs can be analysed with zoological methods and techniques.

Haddon believed that some of the methodological principles of zoology also could be effective tools in the study of decorative art. According to Haddon, in zoology

> . . . when difficult problems have to be investigated the most satisfactory method of procedure is to reduce them to their simplest elements, and to deal with the latter before studying their more complex aspects.[18]

For instance, the physiology of the more complex animals only became understood after zoologists' research into the physiology of simpler animals. In the same way, in order to elucidate the meaning of the more complex artistic expressions of civilized peoples, one should first study barbaric art, and savage art even before the barbaric.

As a zoologist, Haddon thought that the best way to study the art of savages was to examine one particular district or people, by gathering together all the available material from that region. Comparative studies were very suggestive but unreliable because, for Haddon, 'nothing was easier than to be led astray by superficial resemblances' (Haddon, 1895: 331).

As an empiricist, Haddon argued that facts should be the source of every theoretical explanation, and not merely illustrations of theory. The researcher should restrain from theorizing before he or she has revealed the facts. It is necessary to collect as much material as possible, since facts speak for themselves (Haddon, 1895: 11–12). Thus Haddon, for example, was able to classify decorative art in British New Guinea into several artistic regions by following this empirical imperative.

> By putting together all the objects in our possession known to come from any one locality, I found that the technique of the decoration and the style of the ornamentation were characteristic. It soon became apparent that British New Guinea could be divided into several artistic regions; and so it became possible to allocate to a definite district objects in museums whose exact locality was unrecorded.[19]

For Haddon, one of the advantages of studying the decorative art of a limited area was that similar designs probably would have a '*genetic connection*'. In such

limited areas, investigators would have a fair chance of tracing designs' life-histories (Haddon, 1895: 12). However, it does not mean that Haddon believed it possible to gather a series of designs which were genetically related. Rather, he thought that the researcher, in studying the art of a district, should use a similar method to that of a palaeontologist.

> A student of Palaeontology brings together as many specimens as he can from different geological horizons, and finding that the forms of a more recent deposit resemble with but slight differences those from an earlier formation, he not unreasonably concludes that the former were descended from the latter, and that the differences in the species are to be accounted for by the fixing and isolating of variations such as are commonly to be met with in members of one family.[20]

To sum up, for Haddon the right method of procedure to study the evolution of decorative art was, as in zoology, to collect accurate data from a limited area in an intensive manner. In studying the evolution, either of animals or of art, it is most important first to concentrate attention on a particular district, and then to gather together as much material as possible (Haddon, 1904: 250). In this way, Haddon ends his book on *Evolution in Art* by giving some practical directions on data collection to those who wish to commence a study of decorative art from a biological standpoint (Haddon, 1895: 334–8).

THE GEOGRAPHICAL DISTRIBUTION OF ANIMALS AND OF DESIGNS

As a zoologist, Haddon found the puzzle of the geographical distribution of animals fascinating. He believed that the study of the geographical distribution of artistic designs would yield worthy results if the experience of the zoologist was taken as a guide.

In order to investigate the geographical distribution of animals, zoologists first have to identify and classify the species of animals. In the same way, according to Haddon,

> . . . before the geographical distribution of art can be mapped out it will be necessary to accurately define the various artistic expressions, and to discriminate between designs, which though apparently similar are fundamentally distinct.[21]

For Haddon, ethnic boundaries were not indicative of the geographical distribution of art. One of the conclusions of his study on the art of Papua New Guinea was that natives of contiguous districts could be distinguished clearly by their art, but not so easily by their physical features (Haddon, 1894: 251–73; and Haddon, 1895: 59–66).

Zoologists had formed zoological regions according to three criteria: the typical animals which inhabit the region; the rarely found animals; and the absence of certain animals. Haddon thought that it was possible to establish artistic provinces following analogous criteria, and he gave some examples:

> The frigate-bird is [characteristic] of that of the Solomon Islands or of the Massim district of British New Guinea; but . . . not peculiar to these districts. . . .
>
> The employment of highly conventionalised and degenerate human figures to cover comparatively large areas is . . . peculiar to the Hervey Group. . . .
>
> The absence of scroll designs, and practically of sigmoid lines, in Torres Straits and Daudai and throughout the greater part of the Central District of British New Guinea, is as significant as their occurrence in the Massim district; or their general absence in Eastern Polynesia with their prevalence in New Zealand.[22]

Zoologists also used to divide organisms in relation to climatic zones depending on latitude and altitude. For Haddon, a similar situation could be observed in anthropology when a district was inhabited by different peoples that lived concentrically around one another (Haddon, 1895: 326).

Haddon argued that phenomena like 'discontinuous distribution' or 'existence of local types' occurred in art as well as in zoology.

Discontinuity in the distribution of a design could be due to a multiple origin. A second reason for this phenomenon could be, as in zoology, that a pattern had 'migrated' together with human populations from one district to another, and that it had not established itself in intermediate regions or that it vanished from these regions later. In order to find out whether the origin of a design was native or foreign, the design should be studied in one area separately from its being studied in another area (Haddon, 1895: 326–7).

As to local varieties of a design pattern, they could occur, as in zoology, when tribes or peoples were isolated by geographical conditions or by intertribal warfare. An additional reason for isolated types in art, of rare occurrence in zoology, was, for Haddon, the presence of a foreign colony in the district (Haddon, 1895: 327–8).

Despite the analogies between the distribution of designs and of animals, Haddon recognized the importance of cultural factors in the former, especially the importance of trade.

> Trade-routes are cultural routes, and in order to appreciate the history of culture it is necessary to know the directions in which it flowed.[23]

Haddon thought that designs could be studied from the zoological standpoint, but he was conscious that they were not animals.

CONCLUSION: PUZZLES, EXEMPLARS, METAPHORS AND THE DEVELOPMENT OF ANTHROPOLOGICAL RESEARCH

I have tried to show in this article that Haddon used biological metaphors not only to conceptualize, but also to manage anthropological puzzles. We have seen that Haddon's comparison of artistic designs with animals did not simply lie in suggesting rhetorical parallels; rather, he intended to solve anthropological problems on the basis of his practical experience as a zoologist and by using similar fieldwork techniques and analytical principles. As a matter of fact, what Haddon did was to model anthropological puzzles on previous puzzle-solutions of zoology.

Thomas Kuhn has pointed out in the postscript to his famous book *The Structure of Scientific Revolutions* that scientists learn to solve a newly encountered problem situation by seeing that problem as like a problem they have already solved. According to Kuhn, within the normal science puzzle-solutions or exemplars lies a basis for the solution of the remaining puzzles. For this reason, in science it is very important that students learn to do problems already solved – exemplars (Kuhn, 1970: 187–91).

It seems to me that Haddon tried to do something similar. As an academically trained natural scientist, he was accustomed to look for analogies between an exemplary problem and similar problems. However, in order to apply zoological exemplars to the study of anthropological situations, Haddon had to use metaphors.

When a metaphor is successful, it provides a *partial* understanding of a concept in terms of another concept (Lakoff and Johnson, 1980: 10–13). Yet a metaphor can aid in the comprehension of a concept only if both have a shared experiential basis. If this occurs, a metaphor can be used as a heuristic model.

It is my view that Haddon, in using metaphoric zoological exemplars as models to study anthropological problems, contributed to improving the anthropological method of work. In particular, Haddon introduced in British social anthropology the zoological idea of 'intensive study of limited areas'. I agree with Stocking (1985: 81) that there were important differences between the sort of intensive study proposed by Haddon and that made by Malinowski in the Trobriands. But I believe that Malinowski's fieldwork was in part a development of Haddon's original idea, and that both ideas were rooted in the practice of Darwinist zoology in the 1890s.

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NOTES

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Portugal, 31 August–3 September 1990. I am grateful to the Cambridge University Library for permission to quote some manuscripts preserved in the Haddon Collection.

1 Cf. Quiggin (1942: 81–2); Urry (1982: 61–2).
2 Haddon (1890a: 297–8).
3 See ibid.: 298, Haddon (1901: vii) and Haddon (1935: xi).
4 Cf. Quiggin (1942: 97); Haddon (1890a: 300) and Haddon (1890b: 466).
5 Cf. Quiggin (1942: 82).
6 Cf. Ackerman (1987: 123).
7 J. G. Frazer to A. C. Haddon, 18 July 1890, in Haddon Collection: envelope 3.
8 Havelock Ellis to A. C. Haddon, 8 May 1890, in ibid.
9 A. C. Haddon to H. Ellis, 14 May 1890, in ibid.
10 H. Ellis to A. C. Haddon, 24 May 1890, in ibid.
11 H. Ellis to A. C. Haddon, 16 June 1890, in ibid. See also Haddon (1890a: 638).
12 H. Ellis to A. C. Haddon, 24 May 1890, in Haddon Collection: envelope 3.
13 H. Ellis to A. C. Haddon, 16 June 1890, in ibid.
14 H. Ellis to A. C. Haddon, 14 March 1891, in ibid.
15 Haddon (1895: 1); emphasis added.
16 ibid.: 310.
17 ibid.: 315.
18 Haddon (1894: 1). Cf. also Haddon (1895: 2).
19 ibid.: 11.
20 ibid.: 310–11. See also Haddon (1890c: 638).
21 Haddon (1895: 323).
22 ibid.: 325–6.
23 ibid.: 328.

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