ORNITHOLOGIC: A STRUCTURAL ANALYSIS OF DUTCH BIRD NOMENCLATURE

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> To all the good the Almighty gave people on earth, for our use as well as for our joy, belongs the gift of birds.
>
> — (Linnaeus)

Abstract: As a departure from tradition this article analyses a Western system of classification: Dutch bird taxonomy. It would appear that the difference between "cold" and "warm" societies is less extensive than one might think. In Western societies a difference exists between some kinds of classification. There are the so-called "scientific" classifications, which are inspired by Aristotle's work, and there are the folk taxonomies, which are collective representations and which, consequently, have no individual creator. This difference appears most plainly if one speaks of *a priori* and *a posteriori* classifications. Dutch bird taxonomy is of the latter type; one could, following Locke, describe it as a series of *natural kind* as opposed to *nominal kind* terms. The principles upon which the taxonomy is constructed are examined in some detail.

Résumé: En abandonnant la tradition, cet article est l'analyse d'une classification occidentale: la nomenclature des oiseaux hollandais. Il semble que la différence entre la pensée des sociétés froides et des sociétés chaudes est moins profonde qu'on ne croyait. Dans les sociétés occidentales il existe une différence entre des types de classifications. Il y a des classifications qui s'inspirent d'Aristote, celles dites "scientifiques", et il y a des ordres du peuple, qui sont une réprésentation de la collectivité et qui, comme résultat, n'ont pas un créateur spécifique. Cette différence semble la plus claire au niveau de classifications *a priori* et *a posteriori*. La nomenclature des oiseaux hollandais est de ce dernier type, et on peut la nommer aussi une série en termes *natural kinds* en la contrastant aux terms *nominal kinds*, en suivant Locke. Les terms *natural kinds* ne changent guère; une analyse ethymologique était, dans certains cas, nécessaire. Les noms des

Anthropologica XXX (1988) 61-73

> oiseaux sont pour la plupart binairs, et il était possible des les diviser en construisant des catégories racines et des sub-catégories préfixes. Il y a cinq catégories dans les deux séries. Les phénomènes entrant dans la catégorie des racines sont les mêmes que celles des sub-catégories des préfixes: Voix, Extérieur, Comportement, Biotope, et Saison. Le plus remarquable est que les oiseaux communs entrant dans la même catégorie quant au racine, entrent aussi la même sub-catégorie, celle des préfixes. Des oiseaux rares peuvent être classés dans la même catégorie-racine, mais leur pré-fixes sont toujours dans un autre sub-catégorie.

Birds are animals which distinguish themselves quite clearly from all other animals by way of their plumage, and by means of their ability to fly. In this way they have almost always formed a natural and distinct group. Presumably only by accident ornithologists and Dutch laymen share the opinion that birds comprise a unique group; no one should state that a bat is a bird merely because it is able to fly!

An analysis of the nomenclature of birds offers an entirely different field of study from the investigation of the symbolic value birds have in Dutch culture. In such an analysis myths, proverbs and the like are analyzed, and many birds would be dealt with in this way. The crow, for example, will turn out to be a bird which is almost unanimously seen as related to death. In the analysis of nomenclature, however, all birds are involved, and its aim is to reveal the underlying principles of the names. The central question asked here is: what are the criteria used for naming them?

Scientific and Folk Classification

For a long time the emphasis in structural anthropology has been on the analysis of myths, and the appeal of Lévi-Strauss' work led to an increasing interest in them. As a result of this many equally interesting domains of research have more or less been neglected lately. The same author, however, pointed also at other fields of research for any one interested in revealing subsurface structures. *Le totemisme aujourd'hui* (1962a) and *La pensée sauvage* (1962b) both deal with the knowledge people have of their natural surroundings. And one of the most important aims of these works is to demonstrate that non-Western and Western scientific thinking run along comparable lines. This parallelism accommodates the tendency of non-Western thought to aim at features which are directly perceptible to the senses, whereas Western scientific thought focuses much more on a conceptual level. In spite of this difference, Lévi-Strauss credits non-Western thought with a large amount of theory building capacity and he emphasizes the immense knowledge non-Western cultures have of their natural surroundings (Lévi-Strauss 1962b:16-74).

Unfortunately, Lévi-Strauss has more or less ignored the fact that there might also be differences between scientific knowledge and folk knowledge with regard to the natural surroundings in the West. Indeed this difference has not been substantiated in most non-Western cultures; mythical thinking and totemic logic are the common way of dealing with the universe, according to Lévi-Strauss. The acquisition of knowledge of the concrete outside world is done by *bricolage,* which Lévi-Strauss contrasts with science as we know it. And the question whether a taxonomy is "scientific" or not seems to be important to many researchers, insofar as a number of ethnoscientists, just like Lévi-Strauss, uttered amazement when they compared non-western classification with western scientific classifications. Berlin, Breedlove and Raven report enthusiastically that much of the Tzeltal botanical data show that many species (according to Western botany) are recognized. The authors even claim that they "readily comprehend the distinction between our usual Linnaean system of classification and any particular folk taxonomy" (Berlin, Breedlove, Raven 1962:62-65). This remark is rather peculiar, and it raises questions. First, Western botany does not use a Linnaean mode of classification; this is seen as highly artificial and not fit to differentiate biologically between botanical species. The only thing Linnaean in Western botany is its nomenclature, which is completely arbitrary and does not influence classification. Linnaeus' *Critica botanica* (1753) is, indeed, still referred to when naming plants, but here Linnaean influence stops. The three authors also remark that "Linnaean" classifications are more general whereas folk classifications tend to be more specific, and, hence, have a high predictive value. The predictive value of western botanical systems, however, is very effective (cf. Jeffrey 1969), and this implies beforehand that the difference between folk classification and "botanical systems" is perhaps much slighter than the authors claim.

Lévi-Strauss says that totemic classification is constructed by the *bricoleur*, the one who deals with pre-constrained elements and who tackles the concrete only. Nonetheless, Lévi-Strauss also says that "indigenous classifications" are not only methodical and founded on a well constructed theoretical basis, but they seem also comparable from a formal point of view with those of zoology and botany (1962:59). The question remains: What is the *bricoleur*, an amateur or a scientist?

As a result it may be questioned whether the entire problem is a diversion in the comparative study of classification. For instance: the sixteenth and seventeenth Herbalists in the Netherlands and Germany, were they *bricoleurs* or scientists? (cf. van den Broek 1985.) These questions seem to be a waste of time. What we do like to know, however, is what the underlying principles are of various classifications, and what the nature of the differences and likenesses is between different modes of classification. And we see that

hardly any attention has been paid to the analysis of Western nonscientific classifications, and because scientists insist that there is a difference between this type and scientific classification, it might be revealed that non-Western thought differs even less from Western thought in general than Lévi-Strauss in an ambiguous way tried to make plausible. However, presuming that the difference between non-Western classification and Western classification in general may be deduced from the differences existing between the latter and Western "scientific" taxonomies, is a very hazardous way of reasoning.

The difference between Western and non-Western thought seems to weaken the more we go back into the history of science in Western Europe. This does not mean that a specific and fixed path for the development or evolutionary change of non-Western thought may be outlined.

Lévi-Strauss' criterion for separating Western from non-Western thought was the degree of conceptualization. This term proves to be of enormous importance when studying classifications, be it "scientific" or folk.

In Western Europe, "scientific" classifications have strongly been influenced by the works of Aristotle, and all taxonomists have been inspired by the comparative zoology of the Stagirite (cf. Larson 1971; Sachs 1885:1, par. 1-5; Simpson 1961:36). In this zoology one thought to find one of the most important distinctions between classifications: natural versus conceptual. Though some taxonomists think this distinction to be ambiguous (Simpson 1961), it is of more than minor importance to differentiate between both types since it strongly determined the discussion of classification in general. Natural classification implies the *a posteriori* or empirical ordering of elements without the application of presuppositions. Objects are classified the way they appear to the senses; they are grouped and ordered according to outward likenesses and differences. This type of classification emerges on a directly perceptual level, no *a priori* principles are applied, and is thus rightly to be called a "science de concret," to use Lévi-Strauss's term. Conceptual classification, on the other hand, is determined by the use of *a priori* principles. Certain criteria, or presupposed rules are to be used when one starts classifying a particular realm of nature (cf. van den Broek 1984, 1985; Dauhin 1926:82; Larson 1971:19-20; Lévi-Strauss 1962:15; Simpson 1961:24).

The shift from natural to conceptual classification was made permanent after the acceptance of the taxonomic systems of Carl von Linné. This scientific paradigm took the place of quasi-conceptual and natural classifications which vied with each other for many centuries, especially in botany. Conceptual classification emerged because of the lack of confidence among botanists, when dealing with the natural classification while lacking a really systematic approach. Hiereonymus Bock, Dodoens, L'Obel, Fuchs and Charles de L'Escluse and many other herbalists in the sixteenth and seven-

teenth centuries did not succeed in elaborating coherent systems, and in zoology the situation was even worse; Linné called this branch of natural history an "Augean stable" (cf. Larson 6, 25-9; Lepenies 1978:48; Linnaeus 1735).

The change from natural to conceptual classification is coupled with the evolution in sciences dealing with nature, from natural history, being the descriptions of various realms of nature, to physics, the systematic analysis of the universe. New ways of ordering had to be developed when huge amounts of brand new data were being collected by scientists and scholars who embarked on ships which were sent to explore new worlds. The result of this was an *Erfahrungsdruck,* (pressure of experience) as Lepenies calls it, and this was the main stimulus for reviewing the old ways of classifying natural phenomena (Lepenies 1978:16-17, 82-83).

If we were to draw the line between the different modes of thought Lévi-Strauss speaks of, prescientific and scientific thinking, and thereby distinguish between *a posteriori*, natural, classification, and a conceptual kind of classification, employing *a priori* principles and criteria based on logic, we would find that the nomenclature of Dutch birds belongs to the first group. However, modern botanists claim that they construct natural classifications, which are, however, quite different from the ones the Herbalists constructed, because they rely on biological/evolutionary notions. So the difference between "scientific" and folk classification cannot be induced merely by determining whether a taxonomy is "natural" or "conceptual." The mixture of both might have been possible, however, as ornithologists became active and recognized subspecies, for instance, among equivalently classed birds in the folk nomenclature. No indication, though, exists for presuming that *a priori* principles were used in a disturbing way, and the "new" names are patterned in the same way as the traditional ones.

The nomenclature of Dutch birds forms a classification "system" in itself; i.e., the systematic arrangement has been established through the names. However, one cannot say that the construction of a "system" was a consciously chosen goal. One finds, of course, groups not unlike genera and classes: birds of prey, water birds, song birds etc., but these orderings are the result of induction and not obtained by using *a priori* principles.

As a result of the critics in the nineteenth century, modern taxonomists reject a name-based classification, on the basis that a specific realm of nature should be segmented according to order, class, genera, species, and variety. Dauhin thought the names in Linnaeus' system too vague because of the mnemotechnical criteria which played such an important role in his nomenclature. Though Dauhin acknowledged the importance of mnemotechnical aspects in nomenclature, these could not justify the vagueness of the names (cf. Dauhin 1926). Despite the critique, Linnaeus' nomenclatural system won the battle, and it is still being used.

The difference between natural and conceptual classification coincides with the difference between "natural" and "nominal kind" terms, with regard to nomenclature. The basis of this difference was already developed by John Locke; he defined terms as nominal when they are associated with some abstract idea or definition that determines which things have a right to be called by that name. The "nominal essences," as Locke called them, are made by man, while "real essences," exist in the things themselves and are given by nature (Locke 1690:283-295). Both these notions have been reviewed in more recent times, but the difference remains. "Natural kinds" are covered by "natural terms," which are not analytic. This means that the semantic meaning of a word, a natural kind term, cannot be obtained by giving a list of features. It can, however, be characterized by a cluster of features, none of which would be sufficient in itself to determine the natural kind the term covers.

Nominal kinds, on the other hand, are easily defined and usually quite flexible. They have the character of concepts as their meaning has been agreed on. Natural kinds, however, have the character of proper names, and they are not easily submitted to change. Even when a mouse appeared to be a marsupial after modern evolutionary investigation, people would still tend to call it a mouse (cf. Putnam 1977:102-108; Quine 1977:155-176; Schwartz 1977:27, 34). The rigidity of Dutch bird names is easily demonstrated by the fact that despite accepting Linnaean nomenclature, the folk names still exist and are still being used.

The birds in the taxonomies of post-Linnaean biology, however, obviously have the character of *nominal kinds,* having nominal terms: their meaning has been agreed on, and the names strongly resemble concepts, and have to obey to particular rules. Moreover, if a certain bird appeared to belong to another genetic branch, modern taxonomists would not hesitate to rectify the error, classify the bird otherwise and give it another name. The criteria for classification are chosen out of evolutionary considerations; nomenclature is no longer so important, and the names have become rather trivial.

In practice the results of the separation of natural and conceptual classification might seem ambiguous. However, it is obvious that the use of *a priori* criteria makes the decision as to whether a certain element belongs to a certain group easier than it would be if no such principles were applied. Both natural and conceptual classification constitute a field of interest for the anthropologist. In the case of natural classification, we have to trace the criteria which have (subconsciously) been used when ordering nature, whereas with a conceptual classification the criteria for ordering have clearly been stated. In spite of this, it is, of course, the anthropologist's task to elucidate the chosen criteria, and to put them in their cultural context.

The Names

As soon as we turn to the names, we see that most of them have a binary character; they consist of two parts, a stem and a prefix. The stem stands for the "genus," as it were, and the prefix for the "species."

When tracing the nature and meaning of all the stems, five main categories are revealed, each of which refers to a specific domain connected with the birds. These five categories are: 1. terms related to the outward appearance of the birds in the broadest sense, 2. terms related to the voice of the birds, 3. terms related to nonvocal bodily behavior, 4. terms referring to specific natural surroundings, 5. terms denoting specific climatological or seasonal circumstances.

A fairly large number of names needed an etymological explanation, as the original meaning had disappeared. This was, however, never necessary with the prefixes; these are much more "modern" in character. After clarification, a remarkable fact is revealed: the prefixes point to exactly the same domains as the stems do. So here, too, appearance, voice, behavior, biotope, and climate/season become the categories for ordering the prefixes.

Names which refer in the stem to the appearance of the birds, are represented in the main category APPEARANCE; those referring to the voice fall into the category VOICE, and so forth (see table). The prefixes which specify the "species" are represented in the appropriate categories. An example may clarify the tenor of what is outlined above. The three kinds of *snip* (= beak, bill), the *houtsnip, watersnip,* and *poelsnip* (literal translation: wood bill, water bill, and moor bill), *Scopoloax rusticola, Capella gallinago,* and *Capella media*), each fall into the main category APPEARANCE, as the stem of the name refers to the outward form and figure of the birds. The prefixes, however, all refer to the natural surroundings the birds live in, and so all prefixes fall into the subcategory BIOTOPE.

The entire nomenclatural system is based on relations between the birds and five different domains, which are more or less immediately connected with the birds.

It will prove to be most important to turn to the birds as biological beings, as an interesting peculiarity is revealed. As we have already remarked, among several groups of birds various specimens share the same name stem, but have different prefixes. These are divided in different subcategories as they refer to different domains. If one considers the *uilen* (owls), *uil* being onomatopoeic, they all belong to the same main category: VOICE. Four of the owls have prefixes which refer to the natural surroundings, and so all four fall into the same subcategory: BIOTOPE (*Strix aluco, Asio flammeus, Athene noctua, Tyto alba*; literally translated: wood owl, field owl, stone owl, and church owl). Three owls, however, fall into another subcategory; these are the *Ransuiil* (*Asio otus* "veil owl"), the *Sneeuwuil*

(*Nyctea scandiaca,* "snow owl") and the *Ruiqpootuil* (*Aegoleus funereus,* "rough legged owl"). The first one scarcely have been named without reference to its outward appearance, since its voice, behaviour and biotope are hardly different from those of the other owls. Both other owls, however, are much more interesting. Their names do not belong to the subcategory BIOTOPE; in the case of the *Ruiqpootuil,* the name falls into the subcategory APPEARANCE, as it refers to the heavily feathered legs of this nocturnal bird of prey. The name *Sneeuwuil* is a bit ambiguous as the prefix may either refer to the appearance of the bird—it is "snow white"—or to the season during which it is to be seen in Holland. The common denominator, however, is the fact that these birds are, what one calls in Holland rare "winter guests." And herewith we have hit upon one of the most important features of the nomenclature system: All rare birds which share the stem of their name with more common species have prefixes which invariably refer to other domains than the prefixes of the names of these more common species. It is obvious that an anthropologist studying such a nomenclature/classification system should be totally familiar with the natural environment which imparts to it its sense. In a familiar environment, this task need not be too complex, but it might pose serious problems in more exotic surroundings. Were it not possible to determine whether or not specific birds are "winter guests," the scheme for the nomenclature of Dutch birds would not have been traced. Where birds share a particular stem in their names and so belong to the same main category, one is able to predict with a certain degree of accuracy which ones are rare. This is because the prefixes of this last group refer to different domains.

The Dutch may have had some problems during the process of naming the birds, for particular birds have apparently not been "recognized," i.e., it was never determined to which group of more familiar birds these particular birds belong. The result of this is a group of birds without a definite stem in their names; instead they have a totally neutral one: *-vogel* (-bird). For example, this is true of the *pestvogell* ("plague bird," *Bombycilla garrulus*), *Ijsvogel* ("ice bird," *Alcedo atthis*), and the *Kramsvogel* ("claw bird," *Turdus pilaris*). The first and the second have been associated with a specific season and the third with its appearance in the prefix of the name.

As mentioned earlier, a number of names had to be clarified etymologically and some of them were rather difficult to explain. It is remarkable that these difficulties mainly concerned the names of the birds of prey. Apparently these were named so early that the origin of the names is almost obscured by the mists of time. The archaic character of the names is supported by the fact that although owls, crows, and birds of prey have always played an important role in mythology, symbolism and heraldry, their names do not refer at all to such roles. This may be a reason to presume that the names are much older

than their mythological or symbolic role; at any rate, it demonstrates the immutability of the names.

Within the group of names with a stem referring to the general appearance of the birds, one finds names which have a metaphorical character. We find names like *Frater* ("friar," *Carduelis flavirostris*), because of the bird's resemblance to a lay-brother having a garland of "hair" around the head and wearing a brown habit; the *Nonnetje* ("little nun," *Mergus albellus*), because of its quiet nature and black and white habit: the *Grote-* and *Kleine burgemeester* ("big and little mayor," *Larus hyperboreus, Larus glaucoides*), wearing a black and white garment and having an impressive gait; and the *Kneu* (sociable or "cosy bird," *Carduelis cannabina*), for living in small, social, "cosy" groups chattering all day. Moreover, by *kneu* is usually meant an old woman.

Apart from the folk nomenclature as it can be found in every field guide, which may be considered as a crystalization of folk knowledge, there are more popular names for a number of birds, which are mostly restricted to particular regions in Holland. These names must, however, be characterized as "slang," for people using these names very well know that they are not the birds' proper names, but only nicknames. An example of names like this is *drijfsijsje,* which with people in Amsterdam alone refer to ducks. Also in Amsterdam one has *finkies,* which is a slang word for *vinken* (finches) denoting most song birds. These names, however, denote only classes of birds, and exist in juxtaposition with the ordinary folk nomenclature.

Names and Numbers

The main category VOICE forms the largest group in the scheme, immediately followed by APPEARANCE, then, BEHAVIOR, BIOTOPE, and SEASON. The reference to the voice of the birds proves to have been very successful as a stem, and combinations with all other domains could be made, something which cannot be said of the other stems. As a prefix, however, "voice" has not been used frequently; it was used only once in combination with another domain: appearance. One may conclude that "voice" was seen to be a very basic category, and birds were associated with their voice directly or not at all.

APPEARANCE, the second largest group, proves not only to have been a very appropriate main category, but was very useful as a subcategory as well, and it was used as such 86 times. Additionally "appearance" occurred in combination with all other domains.

BEHAVIOR, a not inconsiderable group when forming stems, constitutes a rather small group of subcategories and was used as such only eight times. For BIOTOPE the reverse is true: as a main category it was not often used, but as a subcategory it forms the second largest group. This reveals that

most birds have been associated with a domain directly linked with the birds themselves; the relation of the bird to its environment proves to be of secondary importance. This feature of folk classification is made clear by the fact that an even more difficult relation to perceive, that of the bird and the time or season in which it appears, constitutes a very small group, both as a sub- and a main category, albeit numerous species hibernate in Holland.

Almost every name being of binary character, it is not only the frequency with which a domain has been used as a stem or prefix that is important, but also the mutual occurrence of domains. The combination most preferred is the one with "appearance" in main as well as in subcategory. Therefore one may conclude that despite the fact that VOICE forms the largest main category, this auditory quality was less important in the process of naming the birds than visual qualities. This feature is stressed when we see that the second largest combination "behavior" also implies visual features connected with the birds.

Other "strong" combinations are VOICE/appearance, and VOICE/biotope. However, the fact that combinations are involved certainly does not imply an arbitrary sequence of domains. On the contrary, we see that some sequences prove not to be reversible. The combination of "appearance" being a stem and "behavior," being a prefix occurs only twice. The same is true for the ratios VOICE/appearance to APPEARANCE/voice which is 18:1, and VOICE/behavior to BEHAVIOR/voice being 1:0 in the possible sequences. Thus in the process of naming the birds there must have been preferences not only for particular domains, but also for particular combinations, especially for certain sequences. "Voice" has often been chosen for a stem, but rarely for a prefix, and the same is true for "behavior." In case of "appearance" we see that the subcategory is twice as large as the main category; with "biotope" this difference is even larger.

It is obvious that the names referring to visual, directly perceptible features form the largest group. If we include the auditory references as they occur in the main category and subcategory "voice," we are able to conclude that over 80% of the names consist of associations which are based on directly perceivable sensory data, namely 139.

Presumably we will never be able to say whether the nomenclature system of Dutch birds was developed consciously or is the result of a subconscious process. What we do know, however, is that certain regularities are to be found in the nomenclature when it comes to naming rare birds, and that very obvious preferences for particular domains played a part. Moreover, one tended to refer to the appearance of the bird rather than to other attributes. Besides this, an obvious preference for certain combinations and sequences of domains could be traced.

Table 1

Prefixes	Voice	Appearance	Behavior	Biotope	Season	
Voice	20	1	-	-	-	21
Appearance	18	35	22	7	4	86
Behavior	1	2	5	-	-	8
Biotope	17	10	10	3	1	41
Season	2	-	-	2	2	6
	58	48	37	12	7	162

Note: The table shows the numbers of the combinations of main categories (stems of the binary names), and subcategories formed by the prefixes. Main categories are given vertically, subcategories given horizontally.

Conclusion

Lévi-Strauss's idea of two parallel modes of thought which seem to separate non-Western and Western scientific manners of dealing with the universe, cannot, perhaps, be called incorrect. It is, however, incomplete as it does not note the equal difference that seems to exist between "scientific" practices and folk taxonomies in the West itself. Apparently Western thought is also characterized by directly perceptible sensory data when it comes to constructing nomenclature; even in the realm of science sensory data play a very important role, although they are complemented by concepts and logic (van den Broek 1985). Quine and Schwartz say that a field of knowledge becomes increasingly scientific to the extent that it depends more and more on subsurface structure rather than superficial observable properties in the process of classifying and naming things and species (cf. Quine 1977:167; Schwartz 1977:31). Though this sounds very plausible, it does not explain the reason for depending on subsurface structures when studying nature. *Erfahrungsdruck* may have been a reason, but this too gives no reason for nature being ordered in a particular manner. There must have been some sort of objectification, or even demystification, in order to treat nature as a domain of research rather then an infinite realm of phenomena wherein and with the help of which we are able to survive.

The notion of an order that one was able to find was first developed by Linnaeus (1707-1778), and he believed that God had installed order in nature at the moment of Creation. Logic would prove to be the ultimate means to detect the Divine Order, and he was also among the first to reduce reality to logic. Reality as it appeared to the senses became insufficient, and logic was applied to tackle the world of vegetation. Linnaeus no longer perceived morphological but logical relations between plants. Though he knew himself that the system he thus constructed—*Systema naturae* in 1735—was too artificial, it nonetheless was capable of creating order in the chaos of numerous plant classifications.

The perception of relations and the ordering of things is a universal human practice, and is the most fundamental feature in thought and language. The manner in which a classification is established may differ enormously. The same data may lead to various classificatory schemes, and a huge influence may be credited to literacy (cf. Goody 1977), a topic we will not deal with here. We must accept the existence, and in fact the need not only of many classifications, but of many kinds of classifications, says Simpson (cf. Simpson 1961:26), pointing at a tolerance many eighteenth century natural historians in France could not muster (cf. van den Broek 1984).

What does the analysis of nomenclature or other classifications tell us? Research of this kind may reveal the underlying principles of those ordering systems; moreover, it tells us something about the perception of nature in a particular culture. The separation between natural and conceptual classification already indicates a fundamental difference in modes of cognition and the attitude towards nature. The criteria, however, consciously chosen or traced by means of analysis, demonstrate the way in which elements of nature have been related.

In the case of the Dutch bird nomenclature, the conclusion may be that the members of Dutch culture did see the birds as a coherent biological entity, but they did not presume an internal structure, on a subsurface level, to exist in the avifauna. Nowadays taxonomies are based on the theory that the species are evolutionarily linked together, and the classifications show these kinship ties. The Dutch faced the birds open-mindedly and named them in the way they appeared to the senses. Voice, an auditory quality, appearance and behavior, both visual qualities, prove to have been the most important domains to refer to when naming the birds. This way the world of birds was made accessible. Even now not everyone will need the systematics of the modern ornithologist, and perhaps we can say, as did Thoreau, when noting a bird crossing our path: "I give the Latin (merely) on account of the savoriness of the trivial name."

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