Kaleidoscopic Grammar

Kaleidoscopic Grammar:
Investigation into the Nature of Binarism

By

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TO MELISA, MY BEST FRIEND

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ACKNOWLEDGEMENTS

The idea of binary features or what I term binarism in this book has rested in my heard for a while. I came across the idea when I read Prof. Richard Dawkins' *Climbing Mount Improbable* (Dawkins 1997) in late 2003. Some arguments put forward in his book seem to fit the grammatical structures of ancient languages, such as Proto-Indo-European that I was exclusively working on around that time. Since then, I have always watched out for various cases of binarism, both within and outside of linguistics. The title of this book is also hinted at from a chapter in Prof. Dawkins' book, Chapter 7, Kaleidoscopic embryos. My main research interests lie in linguistics and anthropology, but I have always been fascinated by biological science. In this book, my long-term interests in ichthyology and herpetology can somehow meet my linguistic work.

I have been supported by numerous friends and fellow scholars over the past several years, which are spent on maturation of my ideas. I would like to thank, first of all, my colleagues at the Centre for Cognitive Semiotics (CCS) at Lund University, Jordan Zlatev, Göran Sörensson, Arthur Holmer, Alf Hornborg, Lars-Åke Henningsson, Anastasia Karlsson, Anna Cabak Rédei and Lars Larm. Since the establishment of the Centre in January 2009, my research condition has been improved immensely and I cannot thank them enough for academic stimuli and friendly discussions over my research. Leif Paulsson and Robin Engström painstakingly proofread earlier drafts and commented on both stylistic and contextual matters. They saved me from the worst possible mistakes, and I thank them profoundly. Remaining errors are, needless to say, my own. I should also mention that I have taught a course based on materials presented in this book, and I received much needed feedback from students, which I gratefully acknowledge here.

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ABBREVIATIONS

ABL	Ablative
ASP	Aspect
ACC	Accusative
COP	Copula
CUST	Customary
DAT	Dative
DED	Deductive
DEM	Demonstrative
DR	Downriver
FEM	Feminine
FIRST	Firsthand evidential
FOC	Focus
FUT	Future
GEN	Genitive
HSY	Hearsay
IMPRFV	Imperfective
INAC	Inactive
INAN	Inanimate
INF	Infinitive
INFL	Inflection
IRR	Irrealis
LNK	Linker
LOC	Locative
MASC	Masculine
MOD	Modal
NEG	Negative
NOM	Nominative
NON.FIRST	Non-firsthand evidential
PART	Particle
PASS	Passive
PL	Plural
PRFV	Perfective
PROG	Progressive
PRS	Present
PRT	Participle
PST	Past

Q	Question word
REL	Relativiser
REL.PRON	Relative pronoun
SG	Singular
SUBJ	Subjunctive
UNDERGOER	Undergoer/patient
UR	Upriver
VN	Verbal noun

CHAPTER ONE

INTRODUCTION

Good and bad

> It is absurd to divide people into good and bad.
> People are either charming or tedious
> —1982 Oscar Wilde, *Lady Windermere's Fan*, Act I.

A nineteenth century Irish writer, Oscar Wilde, once stated that the distinction of good and bad is not aesthetically sufficient to categorise people, and instead, suggests that people are either charming or tedious. Oscar's concern here is the criteria for categorising people, but his basic distinction is binary, i.e. either good-bad or charming-tedious. Some might have different opinions concerning these criteria, but it is true that we all pass judgement on people around us in one way or another, and such a judgement normally involves a binary pair such as good and bad. A question raised in this work is how it is the case that we evaluate someone simply good or bad? Can the judgement be more complex, e.g. very good, ok, bearable, bad, etc.? This type of complex distinction is possible, but we tend to use a simpler binary option.

It is often the case that our judgement is referential, perhaps because it is much easier to comprehend someone or something in comparison with others. This type of comprehension often involves a set of two opposing elements. Why do we tend to behave like this? This is the theme of this present work, which focuses on the two opposing elements, termed as binary here.

Our life is filled with numerous binary oppositions, but is it just a coincidence? It may be somewhat hard to explain this synchronically, but once evolutionary perspectives are taken into consideration, it is possible to argue that binary oppositions are evolutionary beneficial. This means that they won the competition in the Darwinian survival of the fittest. However, modern life often involves non-binary features, too. For instance, black and white are a common binary opposition, but it is also common to involve gray in this pair. It is obvious that issues concerning binary

opposing pairs are not simple, and the present work unravels details of these complex matters.

Aims of present work

The main aim is to shed light on mysteries of binary opposing features in our cognition in general, but there is a biased emphasis on linguistic aspects of our cognition, as the title of this work, kaleidoscopic grammar, suggests. However, this book is written on the idea that the true nature of languages cannot be studied only by linguistic means. The main argument is examined on assumption that languages are merely one of many cognitive faculties with which *Homo sapiens* are quipped. This naturally demands research on different kinds of disciplines. This point raises a second aim, i.e. to show that these binary features are not merely present in our cognition or linguistic ability. For this purpose, other aspects of human life, including biological evolution, are also analysed. In the course of evolution, one sees that the earliest system was much simpler and the system becomes much more complex later. This shift in complexity is the key issue in this work. The following three points cover the main argument in this work.

Interdisciplinary view on binary structure

The binary opposition is not confined to linguistic structures. Our cognitive faculty has evolved to favour binary features, but this is not the only evolution concerning *Homo sapiens*. There are various other changes, starting from biological ones, e.g. body structure. Most animals have symmetrical body structure, and this was clearly favoured in evolution. Other kinds of binary features are found in cultural aspects of human beings. For instance, life and death form a binary opposition, which, as observed in Chapter 7 and 8, developed into our understanding of time, especially future. This forms a base for later evolutionary changes in our understanding, but a change in one domain can also trigger another change in a different domain. Some of these chain reactions will lead to various changes in linguistic ability and language structure, too.

Synchronic structure

The binary features are pervasive in our life, in terms of biological, cultural and linguistic aspects of human life. However, there are various non-binary features. For instance, deictic adverbial phrases such as

English *here* and *there* are clearly binary, but similar phrases in other languages such as Japanese *koko* 'here', *asoko* ' over there (far)' but *soko* 'over there (between *koko* and *asoko*)' are ternary (see Chapter 8). This is a rather straightforward case, and it can be simply stated that some languages have a more complex deictic system or spatial organisation encoded in their language. How about our sex genotype? There are two types, XY (male) and XX (female), but there are also some conditions that cause abnormality such as Turner's syndrome XO or Klinefelter's syndrome XXX or XXY (see Chapter 7). These odd patterns, which are not binary, are also related to deficits in other cognitive capacity of human languages, including psychosis or language impairments. It is simpler to state these points synchronically, but they can be a mere series of facts and listing them does not explain much.

Diachronic structure

Diachronic analysis is often considered as a strictly separate discipline, and at least it is often the case in linguistics. However, synchronic study can be considered as a specific point in diachronic study. It is assumed in this work that various synchronic oddities can be explained from diachronic perspectives, since they are often at intermediate stages in development. However, it is easier said than done. One of the serious problems in diachronic analysis is the uncertainty or paucity of earlier data, especially in linguistics. This is where interdisciplinary approaches become useful: various pieces of evidence can be drawn in order to form a reasonably reliable picture of earlier human cognition and language. Chapter 7 shows good examples of such cases.

Evolution of *Homo sapiens*

Since we mention different evolutionary stages of modern humans in the rest of this work, it seems appropriate to mention some basic facts about the evolution of *Homo sapiens* here.

The modern human, *Homo sapiens sapiens*, has evolved from our ape-like ancestors. Primates once lived in different parts of the world but due to the first ice formation in the Antarctic around 30 million years ago, they could only survive in Africa and Southeast Asia. This is perhaps why our ancestors are normally considered to have come out of Africa. Our closest relative in evolutionary terms is chimpanzees, and it is believed that the common ancestor can be dated back to around eight to six million years ago. From this common ancestor, there emerged genus *Australopithecus*

in Africa. From this genus, *Homo habilis* emerged around 2.4 to 1.4 million years ago in South and East Africa. Note, however, that there are ongoing arguments whether this species should belong to genus *Homo* or *Australopithecus*. Even at this stage, our ancestors were equipped with much cognitive ability and skill. For instance, they could already use tools made of stones and animal bones, commonly known as Oldowan artifacts. The earliest finidings, reliably dated to 2.3 milion years ago, have finished edges which cannot be made by trial and error (Chase 2006; Toth et al. 1993, 2003). Then came *Homo ergaster* and *Homo erectus*. *Homo erectus* lived from ca. 1.8 million years and 70,000 years ago in both Southeast Asia and eastern Africa, and this species in the earlier phase (1.8 to 1.25 million years ago) is sometimes considered as a subspecies of *Homo erectus*, i.e. *Homo ergaster*. They could walk upright thanks to evolution of knee structures and skull. They are probably the first species to incorporate fire into food preparation. *Homo neanderthalensis*, from ca. 300,000 to 30,000 years ago, lived mainly in Europe. Around the same time, ca. 250,000 years ago, *Homo sapiens* also emerged, and they spread to different parts of the world. *Homo neanderthalensis* and *Homo sapiens* used to share the same territory in Europe, and studies on DNA from these two species suggest that there was no mixing between these two species.

This description here is very brief and even cryptic, since some classifications are still under debate and some species often change their genus. In addition, we do not touch upon how these species spread to the four corners of the world, which can be important in some disciplines of historical studies such as historical linguistics (e.g. diversification of languages). However, it is intended here to show a rough outline and chronology of some species, since they are sometimes mentioned in the later chapters. See, among others, Mayr (2001: 233-264), Wood (2005) for thorough description of evolution of hominids. The developmental path described above is summarised in Table 1.

Table 1. Different stages in evolution towards *Homo sapiens*

Species	Year (million years ago)	Region
Australopithecus	8-6	Africa
Homo habilis	2.4-1.4	South and East Africa
Homo erectus/ergaster	1.8-0.7	Southeast Asia
Homo neanderthalensis	0.3-0.03	Europe
Homo sapiens	0.25-present	Worldwide

Organisation

This work starts off with reviewing earlier research concerning binary features in Chapter 2. This chapter, however, aims at introducing different kinds of binary oppositions, and it also provides a definition of binary features termed binarism. Chapter 3 focuses on binary features in nature and human culture, starting with description of embryo development and how the body is formed in foetus and various body shapes among animals. Then, various binary features found in cultural artefacts are presented, ranging from clay pots to burial system. This chapter also introduces two basic concepts which appear repeatedly in the entire work, namely, the uniformitarian principle and the recapitulationist hypothesis. These two chapters serve as background for further discussions in the subsequent chapters.

Chapter 4 to 9 describe how binary features function historically in linguistic changes. Chapter 4 deals with how binary features work in language, and this grammatical system is termed kaleidoscopic grammar. The main part of the chapter is devoted to analysis of the lexical categories noun and verb and how they emerged and how their binary opposition plays a crucial role in the evolution of human language. Chapter 5 deals with a specific case of binary pairs, namely stativity and dynamicity. This pair was used in language even from earlier on and it seems to be persistent in historical changes. They are naturally considered cognitively primitive, but there are other such domains of grammar, e.g. spatial relationships. They differ in their behaviour in historical changes, e.g. it is argued that due to the presence of the binary counterpart, stativity and dynamicity stay as they are in the course of historical changes. Chapter 6 focuses on the emergence of useful little words, ‘yes’ and ‘no’. One may take it for granted that every language has these words, but this is not the case and their evolution is rather neglected in previous research. It is argued here that binary opposition was the driving force for having both ‘yes’ and ‘no’. Otherwise, only ‘no’ would be used in reply, without ‘yes’. Chapter 7 explains internal mechanism of historical changes. There is an underlying principle known as grammaticalisation and various cases are used to demonstrate how this principle actually works in historical changes.

Chapter 8 and 9 demonstrate development from stable binary oppositions to more complex, less stable ternary or quaternary relationships. Chapter 8 deals with changes in culture and cognition. Something that we take for granted in our life, such as food and cooking, has gone through this shift. In addition, the brain function to deal with language also went

through this type of shift. This statement can be made clearer with a comparison with primates. The human brain is unique in many ways, and this fact also explains psychosis, abnormal mental conditions peculiar to human beings. These conditions also affect language. Chapter 9 focuses on linguistic change and how language structures become complex. The process of grammatical changes, known as grammaticalisation, is demonstrated, and an important concept in describing modern languages, gradience, is also introduced, pointing out that changes are constant and grammatical structures are constantly at flux.

CHAPTER TWO

DISTINCTION BETWEEN SYMMETRY AND BINARY OPPOSITION

Introduction

In this chapter, we will look at some basic issues of terminology concerning binary features. There are slightly different constructions referred to by different terminologies, and it is worth spending a chapter describing how they differ and how they have been used historically. Surprisingly, there are many academic disciplines that have been concerned with binary features.

Binary pairs in earlier academic disciplines

It is not a mere speculation to say that life surrounding human beings can be, roughly speaking, classified into either binary/symmetrical or non-binary/asymmetrical. This has been shown in different academic disciplines over the history of human civilisation, 'with the development of natural sciences (crystallography, chemistry, physics, …) symmetry structures have become an important area of geometric studies' (Jablan 1995: 4). As far as studies on symmetry, a type of binary pair, are concerned, the development may be recent, but binary pairs have been found in these disciplines from earlier. For instance, Newton's third law, which states that there is an equal and opposite reaction for every action, assumes a binary opposition of force, i.e. the object exerting the force feels a reaction force with the same magnitude, but in the opposite direction from the force that it is exerting. This law was proposed in his 1687 publication, *Philosophiae Naturalis Principia Mathematica*. Prior to Newton, a theory proposed by Aristotle in the fourth century B.C., claiming that there are two types of motion, i.e. natural motion (an object wants to be where it belongs) and violent motion (a motion caused by a force being applied to an object). This theory also consists of a binary pair of motion. The view proposed by Aristotle had been considered a standard

view in physics and mathematics until the seventeenth century, when Galileo proposed that an object would remain in motion unless an opposing force (friction) changed its movement. The Aristotelian understanding of motion was that an object naturally slows down, but Galileo attributed this slowing down to the presence of friction, acting as an opposing force. He laid the foundation for many of Newton's future contributions to science. In this case, it was believed earlier that there was one single force which can fade away spontaneously. This idea was replaced with a current view on physics that there are two opposing forces acting on each other. Another case of binary opposition in science is in embryology. It has been claimed that mutation in embryos normally happens at two different places simultaneously, making our body structure symmetrical. We will return to this issue in more details in Chapter 3.

These are just some instances, which may not be so often associated with the binary pairs. In recent years, what is most influential as far as binary features are concerned in any academic disciplines is structuralism, especially a version used in anthropology in the 1960's. This approach is often associated with a French anthropologist, Claude Lévi-Strauss and his semiotic approach to culture (e.g. Lévi-Strauss 1963a; 1963b; 1966; 1978) and his followers (Leach 1970; Pace 1983 just to name some). His principle idea is that all cultures are sign systems that express deeply held cognitive predispositions to categorise the world in terms of binary oppositions: the human mind is considered the same everywhere and cultures are different implementations of basic abstract logical properties of thinking which are shared by all humans and adapted to specific living conditions. There is no basic cognitive difference between thinking about the world in terms of abstract concepts such as algebraic expressions and thinking in terms of totemic names (e.g. eagles v. bears, earth v. sky, upstream v. downstream) taken from the natural world (physical surroundings, plants, and animals). So it is claimed that the differences between the ways of thinking of so-called 'traditional' societies (hunter-gatherers, for instance) and western, technologically advanced people have to do with the resources they use in building their theories. Comparative analyses reveal that the same types of combinations or substitutions are found in a variety of different cultures. If they are found in historically unrelated societies, anthropologists may see in these associations universal tendencies (or categories) of human thought.

Lévi-Strauss (1965) further formulates cultural transformations of nature based on the vocalic triangle by Jakobson (Figure 2a). For instance, he uses a culture and nature binary opposition as one distinction, and elaborated and unelaborated as another set of binary opposition to

illustrate properties of food. The elaborated and unelaborated distinction represents the transforming action of both culture (i.e. cooking) and nature (i.e. rotting) on food. In some cultures, raw food can be served but this is not as transformed by culture as cooked food, and raw is considered intermediate between cooked and rotted. This is schematised in 0. His works clearly suggest that nature of world and culture around us can be dissected into binary oppositions and this is what underlies in various aspects of our life. Since structuralism has been influential in various academic disciplines, contributions by Lévi-Strauss cannot be underestimated.

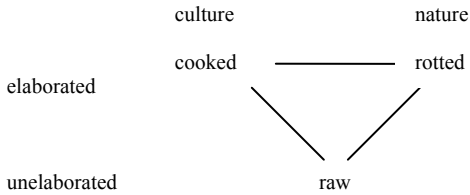

Figure 1. Culture-nature dichotomy by Lévi-Strauss

Concerning more specifically with languages, linguistics saw, especially earlier analysis based on structuralism, that a binary feature is indispensable in an approach dealing with meaning, known as compositional analysis. Earlier scholars such as de Saussure (1916) noticed the oppositional characters of signs, and Trubetskoy (1939) is perhaps the first scholar who formally identified phonological features in terms of binary oppositions, and each feature distinguishes meanings in minimal pairs. This phonological analysis was applied to compositional analysis in semantics, first by Hjelmslev (1934), followed by others such as Pottier (1964), Coseriu (1966), Geckeler (1971) or Greimas (1971). The principle understanding is that meaning is a combination of a number of binary features. For instance, English words *man*, *woman*, *boy* and *girl* consist of a set of features such as animate, human, adult, male, etc., which can be formulaically expressed as in (1). The + symbol signifies that a feature is present, and the –, absent. These features only work when they are considered in terms of binary features. This approach has not gone uncriticised even earlier (see, for example, Fodor 1970; Fodor et al. 1980 on philosophical accounts, and Quine 1953, 1960, 1976; Lewis 1972 in terms of metalanguages and translatability), but modern approaches on meaning components normally stem from criticisms on this approach.

(1)	a. Male	[+animate]	[+human]	[+adult]	[+male]
	b. Female	[+animate]	[+human]	[+adult]	[–male]
	c. Boy	[+animate]	[+human]	[–adult]	[+male]
	d. Girl	[+animate]	[+human]	[–adult]	[–male]

In lexicology and lexical semantics, there is a special semantic relationship known as antonymy, which represents words in opposite meaning. However, antonymy contains several different types. Saeed (2003: 65-68) identifies five subtypes: simple antonyms e.g. dead/alive (of animals), pass/fail a test, hit/miss a target, etc.; gradable antonyms, e.g. *hot* and *cold* have intermediate stages such as *warm*, *tepid*, *cool*, etc.; reverse, i.e. in describing movement, one term for movement in one direction and the other the same movement in the opposite direction, e.g. *pull*/*push*, *come*/*go*, etc.; converse, i.e. a relationship between two entities from alternate viewpoints, as in *own*/*belong to*, *above*/*below*, *employer*/*employee*, etc. The last one is taxonomic sisters, and this one can arguably be a part of antonymy. In this relationship, words are at the same level of taxonomy and they are incompatible with each other, as in *red* and *blue* (e.g. *His car isn't red, it's blue*), or various flavours of icecream, types of dogs, etc. gradable antonyms and taxonomic sisters may not be so obvious, but other types clearly have binary oppositions and lexicographers often paid special attention to this lexical pattern.

Most theoretical syntactic analyses, such as generative grammar, assume pairs of binary features, commonly referred to as parameters (cf. Haegeman 1994; Cook and Newson 2007 for a textbook explanation). Similarly to prototypical analysis, these parameters are either on or off for each instance to form a well-formed sentence. A finite set of these parameters are common in all languages and it is believed that they are innate linguistic faculty in human beings. For instance, one parameter states that every sentence must have a subject. When this parameter is on, the subject is overtly expressed, but when off, it is not. Some languages like English or French obligatorily require the subject, but the subject is optional in other languages, such as Japanese or Russian. Notice that in (2b) from French, the verb form (i.e. inflection) clearly indicates the subject form, but the presence of the subject is obligatory, which makes this example ungrammatical, whereas in (3b), the verb form does not provide any information about the subject, but the subject is not obligatorily required in Japanese, and thus, this sentence is fully grammatical. These theories in principle operate by manipulating the parameters.

French

(2) a. Il écrit un livre
he write.PRS.3SG a book
'He writes/is writing a book.'
b. **Écrit un livre*
write.PRS.3SG a book
'*writes/is writing a book.'

Japanese

(3) a. *Kare-wa hon-wo kai-te i-ru*
he-FOC book-ACC write-PROG-PRS
'He is writing a book.'
b. *Hon-wo kai-te i-ru*
book-ACC write-PROG-PRS
'(He) is writing a book.'

Another approach, generally known as cognitive linguistics (Langacker 1987, 1990; Taylor 2002), often assumes a different kind of binary pair. In this approach, it is considered that human beings tend to find a pivotal object or event when viewing or thinking of a particular scene, against which various things take place. This common nature of human beings is described as landmark (background) and trajectory (various things happening in the background). This suggests that when we speak, we tend to describe events or thoughts according to a basic binary pair. The difference in expressions depends on what people take as a landmark. Consider, for example, a pair of sentences in (4). These two sentences refer to the same scene, but (4a) takes the window as landmark, while (4b), the TV is landmark. The choice may depend on various factors, such as context, but it is important that we tend to incorporate both trajectory and landmark in our thinking.

(4) a. *The TV is beside the large window.*
b. *The large window is beside the TV.*

As an extension of cognitive grammar, metaphor is also considered to have a binary pair in its basic structure. It has been argued (cf. Lakoff and Johnson 1980, among others) that metaphor is a device that involves conceptualising one domain of experience (abstract) in terms of another (relatively concrete area of experience). The former is termed target domain and the latter, source domain and this binary pair, similar to the pair of landmark-trajector, is what underlies in creating and understanding

metaphors. Examples of this source and target domain are: anger is often considered in terms of heat, e.g. *You make my blood boil*, *She has a fiery temper*, etc. Lakoff and his followers argue that this pattern is universal and combinations of similar domains are found in different genetically unrelated languages. One can rightly claim that our communication won't function without metaphors and this suggests that we all possess this binary thinking.

Roman Jakobson argues that children, in acquiring their first language, make a number of binary distinctions in order to make sense of sounds they hear. One of the most basic distinctions is made between consonants and vowels. More detailed distinctions involve what is termed as grave v. acute and compact v. diffuse (Jakobson 1956; Jakobson, Fante and Halle 1963). Roughly speaking, the grave vs. acute distinction is concerned with the pitch (acute is higher and grave, lower) and compact v. diffuse is about loudness (compact is louder than diffuse). When considering these two binary oppositions, the three maximally distinctive vowels can be pointed out, namely /i/, /a/ and /u/. The problem in dealing with them is that they are binary once only one binary opposition is considered, but when two oppositions are compared with each other, the distinction is no longer binary, but ternary, e.g. /i/ and /u/ are diffuse, and /a/ is compact, but /i/ is acute and /u/ is grave, leaving /a/ in the intermediate of acute and grave, as schematised in Figure 2a. Jokobson notices this ternary distinction, and argues that this is how acquisition develops. Note also that a similar patterning can be found in the place and manner of articulation for the vowel, i.e. close-open (manner of articulation) and front-back (place of articulation). According to these, /i/ and /u/ are closed, and /a/ is open, but /i/ and /a/ are front, and /u/ is back. This makes a ternary distinction as shown in Figure 2b. Compare this with Figure 2a. Both patterns show a similar shape.

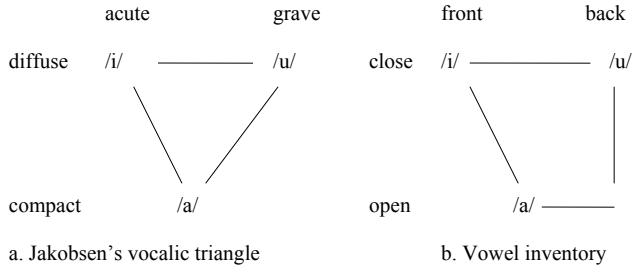

Figure 2. Two versions of representation for vowel system

Binary opposition and symmetry

Instances of binary oppositions we have seen so far involve cases where one element has its complimentary counterpart, e.g. culture v. nature, elaborated v. unelaborated, acute v. grave, diffuse v. compact, etc. This is realised as antonymy in lexical semantics, although as shown earlier, some cases can be more complex than a simple opposition. The presence of a complementary counterpart makes it possible to form a binary pair, but there are a couple of subtypes of such a pair. When two opposing features are identical, they form symmetry. Symmetry is, as we will see later in Chapter 3, also an important factor in understanding binary features. For instance, opposing forces in physics are in a way symmetrical in terms of the quality of force. The only difference lies in the direction to which each force is directed.

Symmetry has attracted a lot of attention in mathematics, physics, geometry, etc., and it involves various different kinds. We do not go into any details of mathematical formulae here, but it suffices to define some typical patterns of symmetry in Table 2. It is possible to give a special meaning to symmetry, but in this book, symmetry is considered a subtype of a binary feature. What is crucial is that one feature has its complimentary opposition, and when it is not identical to the original one, binary and when identical, symmetry. Henceforth, they are both considered as binary features, and when they are identical, symmetry is also used.

Table 2. Basic symmetry types

Terms	Characteristics	Examples in nature
Mirror/bilateral symmetry	Simple duplication of form.	Human body structure
Point/rotational symmetry	An object looks the same after rotating them for some degrees.	The Roman alphabets such as N, S and Z.
Radial symmetry	Cutting planes produces more or less identical form.	Sea anemones
Spiral symmetry	Symmetrical pattern spirally rotates.	Arrangement of leaves on some plants

Definition of binarism

The theme of this work, binary features, refers to any relationship containing complimentary counterparts. This is termed henceforth *binarism*. Naturally, binarism include a straightforward case of binary opposition, e.g. black v. white, earth v. sky, culture v. nature, etc. Symmetry is one specific instance when two complimentary counterparts are identical, and the term symmetry is reserved for such cases. Otherwise, binarism is used as a general term covering both symmetric and asymmetric counterparts. Various examples are shown in Chapter 3.

Summary

In this chapter, we have looked at some basic issues concerning the terms, binary feature and binarism. There may not be an explicit remark of these terms in previous research, but this concept has been found in different parts of academic disciplines. In this work, binarism is used as a general term for cases where one feature has its complimentary feature, forming a pair of binary opposition. Such cases may involve two identical features, forming a symmetrical pair. This is a specific instance of binarism and unless mentioned specifically, the binarism is used as a cover term for both symmetrical and asymmetrical pairs.