INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or “target” for pages apparently lacking from the document photographed is “Missing Page(s)”. If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.

2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of “sectioning” the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.
Naming and classification

Cramer, Sabine, M.A.

Rice University, 1987
PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark √.

1. Glossy photographs or pages ______
2. Colored illustrations, paper or print ______
3. Photographs with dark background ______
4. Illustrations are poor copy ______
5. Pages with black marks, not original copy ______
6. Print shows through as there is text on both sides of page ______
7. Indistinct, broken or small print on several pages √
8. Print exceeds margin requirements ______
9. Tightly bound copy with print lost in spine ______
10. Computer printout pages with indistinct print ______
11. Page(s) ________ lacking when material received, and not available from school or author.
12. Page(s) ________ seem to be missing in numbering only as text follows.
13. Two pages numbered ______. Text follows.
14. Curling and wrinkled pages ______
15. Dissertation contains pages with print at a slant, filmed as received ______
16. Other ____________________________

__________________________________________

__________________________________________

University Microfilms International
RICE UNIVERSITY

NAMING AND CLASSIFICATION

by

Sabine Cramer

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

of

MASTER OF ARTS

APPROVED, THESIS COMMITTEE:

Stephen Tyler, Director
Professor of Anthropology

Earl Douglas Mitchell
Adj. Assoc. Professor of Linguistics and Semiotics

Klaus Weissenberger
Professor of German

HOUSTON, TEXAS

May, 1987
ABSTRACT

The topic of naming and classification reveals human language as a construct of infinite variability. Not only do naming and classification occur in everyday life, but especially within language investigation they document an indispensable axiomatic basic and serve as a tool for linguists and as the main focus of their study. De Saussure, as the founder of structuralism, focuses his language analysis on structural elements and thus lays the foundation for modern linguistic theory.

The "cone" is posited as a figurative representation to explain the connection between the different fields of linguistics and to reveal their unifying central principle. Not only can this construction be used to reflect traditional linguistic terminology, such as diachronic and synchronic, but it also provides a means for portraying a horizontal-vertical language analysis within inter-lingual, as well as intra-lingual investigation in various fields of linguistics. In conclusion, linguistics is shown to be a science based throughout upon classificatory models and their names.
To Dr. Gertrud B. Pickar

for her continuing support.
TABLE OF CONTENTS

Chapter I.

Introduction ........................................ 1

Chapter II.

Why classification? The cone-principle. Horizontal and
t vertical method .................................. 12

Chapter III.

Naming and Classification within the specific field of
structural linguistics as related to de Saussure ..., 35

Chapter IV.

Other linguistic theories ............................ 48

Chapter V.

Conclusion and evaluation .......................... 64

Footnotes ............................................. 73

Bibliography .......................................... 79

Table .................................................. 84
"Namen sind Schall und Rauch?"
(slightly altered quote from Goethe)
"Ordnung ist das halbe Leben"
(German saying)

NAMING AND CLASSIFICATION

Chapter 1

Introduction.

Naming and classification as terms and as concepts deserve special attention in any discipline that describes, investigates, creates, researches. That topic, chosen here for a thesis, evokes philosophical thoughts and practical thinking particularly in the area of linguistics, which deals with a structured abstract world of signs and their contexts.

An investigation of naming and classification reveals the immediate and inseparable connection between these specific terms, which in themselves already illuminate the manner in which they have been perceived and applied. This study is concerned with the concepts of naming and classification, in particular with their realization in the
discipline of linguistics and their relevance for language use and terminology.

The number of areas in which naming and classification play a major role, be it within the natural sciences, the humanities or the social sciences, or even in everyday life, is infinite. Research in all scientific disciplines both depends upon and relies heavily on underlying structures, on systems that facilitate investigation and on typologies that help the scientist to keep track of his or her work. Both naming and classification have a long history of being a central concern of human life, both conscious or unconscious.

Without some kind of a structure the world would be in complete chaos. Things and people are perceived through the process of differentiating and establishing similarities. Thoughts are conveyed through words that follow an order that has been mutually agreed upon. Language, both spoken and written, constantly changing and developing, serves man as a means of communicating and understanding, of comprehending and formulating thought, of specification and generalization, of distinction and comparison, of description and analysis, of question and answer. It is the most complex and elaborated system of labeled classificatory elements. The nature of language reflects the nature of mankind and evidences the universality of the entities of naming and classification in the human experience. Professor
Tyler describes the importance of naming and classification in the introduction of *Cognitive Anthropology* (1969) in the following way: "It is through naming and classification that the whole rich world of infinite variability shrinks to manipulable size and becomes bearable." FN 1

Although the actual world does not "shrink", the perception through structured knowledge allows an overview of the uncountable items that the world consists of. At a certain point in history, it was possible to grasp the sphere of direct life without problems. Schools had the possibility of recapturing "all" knowledge that had been acquired at the time. The Greek philosophers developed their ideas clearly and only a few, knowledgeable people taught students. At that time in history the world still was more or less manipulable.

Nowadays there is no way of grasping all the knowledge that has been gained up to the present time. The structures have become more elaborated, the world of knowledge more specialized, and the scientific aspirations reach far behind the stars. A new and more sophisticated structuring of the different scientific fields has become necessary. And the combination of naming and classification has become an unseparable pair as a tool to manage that incredibly fast development in all possible areas.

Even the restricted sphere of everyday life functions almost solely on the basis of an elaborate systematization
of named items. In the grocery store, items are displayed on well-organized shelves, aisles are clearly marked to facilitate orientation. In the kitchen, the canister's label "flour" describes its contents, aiding the user in finding the ingredient and re-turning to it. Vegetables are stored in the 'vegetable drawer' of the refrigerator, glasses are placed on a shelf separately from plates, and garden-tools and fertilizer can be found in a storage area that does not contain food. Similarly, a secretary orders his or her information into files according to content, labeled in such a way that they are re-cognizable at a glance, so that the information can be readily found at any time.

An efficiently run factory, too, is ordered according to the most convenient and effective principles. Its administration, by nature, is structured by following a very strict hierarchical principle. Such structuring can also assume a spatial dimension. In many corporate home offices, at least in Germany, the "upper floor" of the office building is reserved for the offices of the highest executives, the directors, for example, of the company. This elevated physical location not only reflects the managerial position through its spatial distribution, but also mirrors the conceptual, abstract order of the organization. This spatial value certainly differs from that found, for example, in the seating structure of a theater or concert hall. In such cases, the "upper balcony", where the seating
is farthest from the stage and consequently least desirable, is available for the lowest prices, and thus carries with it minimal esteem. In this comparison, physical aspects, such as visual and acoustical quality, are decisive factors altering the value ascribed to the term "upper" employed in the "upper business floor" of the corporate world and the "upper balcony" of the performance hall.

The education system is similarly infused with categories of names. For every level of each educational institution requirements are prescribed. The "pre-school" or "preparatory school" "pre-pares" children for the first step of the educational ladder, the "elementary school" where the basic "elements" are taught which allow the pupils to move on to the "high-school". The hierarchical structure of the school system appears clearly already in the names of the different stages. The "univers-ity" finally opens up the way to a "univers-al" achievement of knowledge.

In Germany, as in many other European countries (FN 2), success was and still is due not only to a higher education, but it is in addition determined by a hierarchy of "titles" which played and continue to play an important role in the position held in society. A "von" added to the last name of an individual automatically establishes for that person a higher rank in the social sphere. A closer analysis of the strong ties between cultural and social background and
naming and classification will be provided in one of the later chapters.

Even the constant use of sentence patterns like: "If you are sick, you'll have to see the doctor," or "If you want to earn a good livelihood, you'll have to go to school," provide everyday life with sentenced structures that trace back to cause and effect, result in the understanding that one unmistakably is followed by the other. Education at home consists of a vast number of phrases that indicate an underlying principle of success after hard work, failure after laziness and least effort. The relationship between cause and effect is expressed verbally by phrases that are only existing for the purpose of something else which is usually connected to a specific situation, such as: "You are sick and I want you to go to the doctor", and "I want you to go to school, because I think school is necessary to be successful in life". This coded 'naming' of a situation has an impact on the structuring of a large number of procedures and life stages. Especially in our Western world, as we will see in the course of this work, this type of structuring governs everyday life. The more effort the more efficient.

One very explanatory example is the development of the computer. In the field of linguistics, as well as in virtually every other discipline, the computer has taken over the task of organizing knowledge into hard and software
and now serves as the fastest and most efficient means for organizing and storing information for fast recall and utilization. Word-processing is about to replace handwriting or manual machine-typing because of its time-saving features like: erasing without losing pages, having clean copies that can be alternated, shifting paragraphs, and going back and forth without writing anew. Especially programming languages, such as LISP and PROLOG, reflect a high degree of data classification; in linguistics, computer programming is used to classify language data and to label them according to their specific place in the programming language. In the case of PROLOG, one can easily understand the importance of extreme precision in ordering and labeling. (FN 3).

Turning our attention to yet further academic disciplines, such as those found in the sciences, mathematics in particular has to be mentioned, since it consists after all primarily (if not solely) of systems and categories that are named, for example, cardinal or ordinal numbers, presented in a sequential order based on what are called axioms. Mathematics can be considered as an entire construct of structuring devices that label and explain the world and its functions. This purely axiomatic discipline finds realization and application in the natural science, but also in everyday life (counting days, dealing with
money, attaching values to things and measuring with increasing or decreasing numbers, etc.)

In the natural sciences, charts of items grouped according to given criteria are essential. The chemical elements are a case in point. The "names" that are used here are often abbreviated to letters that stand for the whole: H2O actually designates a complete formula and not only means the element it describes but also delivers the ingredients or parts that form the whole. Later in this thesis this part-whole relationship will be elaborated and referred to linguistics in the context of naming and classification.

Medicine, as yet another discipline, certainly would be virtually impossible without naming and classification. The subdivision into specified areas within medicine is just a vague indication for the classification of mind, body, specific parts of the body. If a clear distinction between body parts was not drawn, their functions and their relationships to one another were not precisely described, and malfunctions within the system of the body were not identified, any attempt at medical treatment would be simply a matter of luck. An understanding of the ordering principles of the functions of the body is the basis of any analysis or treatment. Again the cause and effect play a major role in the structure of this specified medical knowledge.
The main focus of this thesis rests on the classification of languages as such and on classificatory systems within specific languages, classification which occurs in connection with the different fields or areas of linguistics.

In historical linguistics, for example, the classificatory process focuses on the origin and the relationship of languages, and classification reflects a change in time. This becomes obvious in the comparison of different languages with each other. Similarities and differences then reveal the change in relationship between the languages.

Within one language, as will be elaborated in Chapter Four, an infinite number of different approaches can explain underlying or obvious structures, the different approaches again have different names, such as structuralism, which describe their main focus. Terms and classes prove to be the one and only way of linguistic investigation, like an underlying principle.

In order to write in one particular given language, to communicate ideas and thoughts successfully, sentences must be structured according to the given or 'underlying' rules of that language. This presupposes an agreement upon one basic constellation of organizing principles in the language in question. Not only does the sequence of thoughts, and their organisation into different paragraphs, follow a
certain principle but the elements within one single
sentence also call for a definite, limited structure in
order to be understood. (FN 4). And finally, each word
itself is bound to a fixed sequence of its letters and thus
differs from other words.

Perhaps the epitomy of naming and classification can be
found in The Organization of Knowledge and the System of the
Sciences by Henry Evely Bliss (1929) (FN 5), which not only
outlines the manner in which books are to be categolued and
organized in a library but also simultaneously serves as a
manifestation of that very organizational system. In it, the
author strikingly points out the necessity, the
indispensability of systematization, iterating in detail all
the thoughts behind that tedious process which underlies the
structuring of books in the library itself. Particularly of
note is the fact that this book is not only completely based
upon classification, using this classification to explain
how a library is structured but it also follows that same
underlying principles in its own internal organization.
Addressing the universality of classification, Bliss states:

"Classification as a method of mind deals with all
things -- with their characters and their relations.
When we name a kind of tool or tree, when we define a
crystal or diagnose a disease, when we judge that a
certain misdeed breaks a law, when we state that a
cited law applies to a particular crime, we consciously
or unconsciously class the tool, or crystal, or disease, or crime; and in so doing we refer to some system of concepts and relations, that is, some classification. All names and definitions, all judgments and diagnoses, imply some form or aspect of classification." (Bliss, p. 118)

The claim that naming and classification are universals is undoubtedly justified. But it nevertheless raises a lot of questions that demand clarification. How is it possible to construct or to find "a classification"? Does the world itself have an underlying structure that the human being needs only to discover or does the human being impose a certain structure upon the world? And how can a system be justified with respect to the constant change and development of humans, especially their language, and the world they live in?

These questions themselves propose a polarity between either an imposed structure or an already existing structure, that only needs to be discovered. We will see in the course of the thesis how closely those approaches are connected with some of the linguistic theories and with the applicability of naming and classification in linguistics. Philosophically speaking, those terms go as far back as Aristotle, who describes inductive versus deductive as philosophical terms which will be referred to later.
Chapter II.


All of the arbitrarily chosen examples mentioned above root in a thought model that could be called "Western", maybe even "European", if one wishes to be historical. People in the western world are accustomed to, and trained to, structure, classify and name for their utmost convenience. Man tries to achieve the highest degree of time-efficiency by creating as many specialized categories in different contexts and by labeling them as precisely as possible. Man attempts to collect singles into groups, so that the overview is as broad as possible, thus permitting his mental power over things surrounding him to increase.

As far as this struggle for more efficiency is concerned, the very first team-work that allowed human beings to surmount more complicated and complex situations than they could if they acted alone was the first step toward "class" and "group". The instinctive behavior of animals in a pack, struggling for food in a times of need and weakness, is to surround their prey and follow an
elaborate pattern of team work in order to be subsequently

consciously used it in a more a more elaborated tactic. The
systems that work led to success and were remembered for
repeated use. This is the beginning of structuring
knowledge.

By having become aware of the benefit to be gained from
the applicability of knowledge from one situation to
another, men had achieved a degree of abstraction, and this
process of abstraction is itself mirrored in their "naming
and classification". They thus were able to apply knowledge
gained from or related to one experience to another,
upcoming event, and were able to draw upon their previous
experience and their consciousness of that experience. From
this moment on, the processes became more and more
sophisticated and distribution of work according to capacity
became the accepted approach toward work. People discovered
strengths and weaknesses within themselves and either
"classed" themselves through self-judgement or were classed
by others into "categories". The first 'tools' were used to
fulfill certain specific tasks: larger stones served to
smash things, smaller ones with a sharp edge could cut
things -- and already 'they had been placed in purpose-
oriented categories like "smashing-tool" and "cutting-tool".
Later, along with higher sophistication and preciser
denotation those tools were called "hammer" and "knife" as
distinguished from other similar tools and yet grouped
together as instruments for diminishing the size of other
objects. (FN 6)

Human beings at an early stage in history chose
abstract notions to refer to gods and evil spirits that
embodied the forces of Good and Evil, and at the same time
combined names with classes following a polarity-pattern of
value-judgement. Samuel Fillenbaum and Amnon Rapoport
investigated the subjective lexicon in their study Structures
in the Subjective Lexicon (1971) (FN 7) and include the data
of "good-bad" terms which points exactly at that personal
evaluative polarity, here reduced to a restricted number of
terms that were arbitrarily chosen by the authors. The study
does not only start out with a polarity, it also aims at a
set of evaluative terms that are supposed to be connected
with the given polarity.

The evaluative factor here plays the major role both in
the classificatory system and in the terms that form the
basis of that investigation. The authors comment:

Matters of evaluation, whether of humans and their
actions or, more generally, of all sorts of objects,
artifacts, and ideas, clearly represent some very
pervasive and significant uses of language; the
continual presence of a strong Evaluativ (sic) factor
in work using the semantic differential technique is
only one not-so-mute testimony to this. It is
immediately clear, however, that there are different ways or respects in which something may be good or bad, and that various modes of evaluation may be appropriate for different frames of reference or with respect to different objects of judgment. For example, Osgood, Suci, and Tannenbaum (1957), examining some of their semantic differential data, speak of goodness as "meek" or "dynamic" or "dependable" or "hedonistic," and distinguish between morally, aesthetically, socially, and emotionally evaluative terms (although in general their treatment does not maintain or stress such distinctions)." (Fillenbaum and Rapoport, p.209)

Every evaluative system is bound to a physical change or a difference in influences and will alter along with those. Since the beginning of thought about problems, such as classifying and naming or evaluating for the purpose of convenience, people have broadened their spatial and temporal frame tremendously. They use technology to overcome any inconvenience of reaching places in shortest time-periods. The discovery of the wheel was a tremendous breakthrough and may be the start of the development of more and more elaborate transporting devices. Until today our world is unthinkable without the circle used as a tool to make life easier. The wheel only represents one single feature in a technological development that does not only allow us now to drive through the country swiftly reaching goals as fast
as possible, but also instituted a profession culminating in our present time in the possibility to fly between places as comfortably as possible, even reaching the moon.

This tremendously fast technological development necessitates an analogous broadening of the thought frame. When in the seventeenth century Newton discovered the gravitation principle he laid the foundation for modern technology. His repulsion-principle forms the basis of aviation. The impact of distance has been diminished through it permitting distance to become an achievable, surmountable goal. In thinking, categories are created that comprise an indefinite number of single items, items that grow in quantity the greater the observer's distance from those items is. The neutralization of spatial limits develops into an enlargening of structural devices. Limits fade and space gradually opens up.

At this point, the geometrical form of a cone will be introduced as a valuable mental and physical tool that serves as a means of illustration and explanation (see table 1). Repeated mention of the cone-structure in its methodological application will be made throughout this thesis. Using the cone-principle in its physical reality, one can find a whole scale of different approaches. The view from the top of the cone enables the observer to increase, gradually and continually, the number of items at any given
spatial level as the circumference of the cone enlarges towards the bottom.

The vision field of the human eye parallels the form of the cone. Although focusing on one particular place, like on the cup on a table, the eye at the same time perceives the immediate environment of that cup; the farther away the observing eye is, the greater the number of items which are simultaneously perceived.

The different layers of the cone can be sliced at any imaginable level and investigated. A person who is looking through the window may decide to watch the children playing on the patio directly in front of the window or may look further away, past the children, at the more distant tree behind them, and behind the tree, the field and then the mountain. The window, the children, the tree, the field and the mountain are each on a separate level of observation. Also, the view through the window provides the person looking with the choice of what he or she wants to focus his or her attention on.

Returning to the thought-model within the naming and classification frame, one can easily apply the cone to the situation of taking off in an airplane, classifying each stage of distance, similar to the view out of the window, and describing it by names. The view changes from single flowers on the ground, each petal of which one can recognize with its particular color and movement in the wind, to an
entire field of blends of colors from different plants and
glass, etc. Then, from a little further up in the air,
fields can be distinguished from forests, from cities, from
mountains, etc. Any categorization could at this point be
constructed, the organizing principle being labeled
tentatively as "distance"; "flower," "field," "landscape,"
and, imagining an even larger distance, "land" could be
distinguished from "water", "continents" from each other,
and, in outer space, the "earth" from "other planets".
'Classifying' according to 'distance' on the abstract level,
returning here to the cone-principle, means the more items
are included into our classes -- the lower and thus the
larger the level will be (see illustration with sliced cone
downwards, table 1c) -- the broader also the rules have to
be that represent the underlying, distinctive and
distinguishing features between those classes. Returning to
the example: the further away the observer is from the
starting point, the broader the number of features is and
the greater the number of levels that we look at. "Flower"
comprises already "stem," "leaves," "blossom," etc., and is
included in the much larger, next higher group, that here
was labeled "field". The latter not only contains "flowers,"
but also "grass," "dirt," maybe even "shrubs" and "bushes",
and so on and so forth. This 'classification' appears
completely arbitrary. Instead of selecting the ordering
principle of polarity like "small" -- "large", the
perceptual ordering according to colors, applied here to the classification of the plants, one could as well have specified the "plants" labeled by their names "daisy," "dandelion," "plantain," etc., and describe botanically the picture that is displayed to the observer's eye. However, the chosen distinction only reflects one single principle: that of the change of view paralleling the change of distance. No other classification is necessary to illustrate the underlying principle. The names that designate the classification indicate exactly the purpose of the model. "Botanic," "Color," "size" all are names that evoke classes and classificatory principles.

This particular application of the cone-principle not only demonstrates its broadness, it also shows the limits of the method. Whenever the observer wants to focus his/her attention on a specific point, he/she excludes at the same time the other items on the same level of observation and also the other items on any different level of the cone. That necessitates a clear, focused definition of the organizing principle in order to be able to select examples that justify this specific classification. In the illustration above, the "perspectival view in a given frame of time related to space" not only indicates clearly the "class of investigation" but also reflects the purpose of that particular description as opposed to, for example, the botanic classification. (FN 8) The reason why this one
particular name is given to exactly this one specific classificatory principle must be obvious in the name itself. Labeling those loose words under one common title means combining formerly unconnected items under one particular purpose, thus creating a linkage between them for a certain reason. Thus the name of a class should and must reflect the inherent principle.

Similar to the realm of the "perspectival view in a given frame of time related to space", the airplane example cited above, the realm of linguistics can also be examined, and within it one encounters both a structuring according to chosen principles that serve to elucidate language processes and the ensuant necessity to construct a frame-work that allows comprehension. This needs to be clarified.

Linguistics describes language through its systematics and its use. The structures of one language and the relationship between different languages are, in the broadest terms, "exactly" what linguistics is. The selected principles become obvious in the subdivisions of linguistics. Not only is linguistics subdivided into different fields, like phonetics, semantics, syntax, morphology, but it has also developed "schools" that focus on specific aspects of language-investigation, such as Historical Linguistics, Grammar, Functionalism, Structuralism, Deconstructivism, etc. On the other hand, Neurolinguistics, Sociolinguistics and Psycholinguistics,
etc., cross the border between two different disciplines. All these terms, however, are self-explanatory in their designation of the main or basic focus of the specific school or field within linguistics.

The explanatory theoretical model and any "sub"-grouping in its terminology is due to the underlying principle or structuring devices that the interpreter chose to apply. Thus the observer-analyst and the "objects of observation" in the previous visual illustrations take the same position as the linguist and his or her "object of analysis"; namely, both choose their field of interest and construct a classification according to the underlying, assumed rules. The "objects" in both cases are selected individually, uniquely in the frame of the classificatory purposes. If a linguist wants to compare the origin of lexical items in different languages, he or she may be called an "etymologist". If another one is concerned about the abstract structure of sentences and coherence and non-coherence of their elements, one speaks of a "grammarians". Both are "a kind of" linguist and thus fall under that large category of "people who deal with language".

Language as an abstract entity "mirrors" the structure of the world within its own structure. The father figure within a family used to be considered the head of that small social unity. The concept "father" (FN 9) can also be used in different contexts, such as "god the father" or
"Vaterland," and inherent in both these terms is the concept of origin and the feeling of security and safety. The possibility that one and the same term can be applied metaphorically, utilizing one aspect of the role of the real, actual person, reflects the structuring of the "real world".

Comparing the physical world of animals to that of the human species, words may add to the performance of an action and may also incorporate that action. An exhausted animal by its own impulse lies down in the shade, a person may verbally, using words, offer a seat to someone. An enemy in the animal world is chased out of the dominion of another animal of by cruel aggressive attacks; persons use imperatives or orders or strong exclamations to fulfill the same purpose. These actions can be described in language, independent of the specific structure of the specific language in which the situation is described, but they can also simply be acted out. The verbal abstraction from the situation may have different forms in their realization (such as "out of here", "please leave the room", "I would like to be alone", etc.) but it may also simply be omitted, replaced by the concrete act of opening the door, or a gesture pointing with the finger to the door, etc.

Although the point under discussion may appear to approach de Saussure's distinction between the signifier and the signified, it should be viewed here solely within
the frame of the cone-principle. Here, at the top of the cone, the person-observer and the person-describer can be found; at the bottom, all the items that are perceived by the person-observer and articulated by the person-describer are distributed within a large circle.

The visual airplane-example illustrates the principle of "difference in distance". This idea is closely related to the "part-whole" relationship that also occurs across disciplinary borders. Each classificatory process not only identifies, but also describes and establishes the relationship(s) within the parts of one class. It thus serves to designate that class in contrast to another, and its parts in contrast to the parts of a different class. The result of this classificatory process is a set of relationships that is called "classification". As much as "flower" is part of the whole classification of the class of "elements of the perspectival view in a given frame of time related to space", "phonetics" is part of "linguistics". "Being part of" a "whole" leaves two possibilities open: a hierarchical ordering or a grouping on the same level. The hierarchical ordering allows not only the distinction between the members but also the reflection of the principles that underlie the class-structure. The members, or parts, of the class, or whole, define the rules and principles of that class; the class itself represents an abstract set of rules and requirements that each member of
that class must fulfill. Whatever other characteristics the parts possess is of no importance for their membership in the class, unless they enlarge or alter the number of required features. Thus overlapping features may play a decisive role in the classificatory question.

Combining the idea of the cone-principle with that of the part-whole relationship, two different approaches can provide helpful access to the linguistic realm and have indeed been used in language investigation as the main principles of research. From the top of the cone, one can discover the increasingly enlarged levels and can stop on any single level in order to distinguish members of the "class" comprised on this particular level from each other. This approach, I shall call "horizontal". One can also compare the members of a higher level with those of a lower level which I shall call "vertical". From the classificatory point of view, one has members within one single group, class, type, etc., that are united by horizontal similarity, and one creates sub-groups, sub-classes, sub-types that are distinguishable through vertical differences.

Lyons remarks in his *Introduction to Theoretical Linguistics*, (1968): "It is to be noticed that, while Bloomfield talked always of the *classification* of constructions, Chomsky talks of the *generation* of constructions." (p. 234). This represents exactly the bias between the resultative and processive aspects of language
investigation. Whereas classification describes the final product, generation points at the process of producing constructions. The polarity between stative and active becomes evident and parallels also the horizontal and vertical methods, defined above. The classification of languages, as well as classification within one specific language, presents itself as the finished constructum of a passed state of affairs which comprises one single level of the process of constructing.

Delineating this interpretation of the two key-terms 'vertical' and 'horizontal' further within the linguistic field, I would like to point out some of the possibilities and advantages it offers in comparison with the traditional terms "diachronic" and "synchronic", for example. De Saussure has related these terms to the rhetorical figures of metonymy and metaphor, linking metaphor with the vertical or associative relations of language and metonymy with the horizontal or syntagmatic relations.

In contrast to de Saussure's definition of the two terms which in his work is restricted to one language, I shall use them as an underlying structural principle, rendering possible its application in both diachronic-synchronic language analysis and intra-language analysis. The relationship within one language, to me, is but one single aspect of a whole system of linguistic explanation and description.
Roman Jakobson, as opposed to de Saussure, applies these terms to describe the opposition of metaphore and metonymy as related to the **diachronic** and **synchronic** mode of language, meaning for him "sequential, successive, linearly progressive relationships" -- the horizontal and "immediate, coexistent, 'vertical' relationships". (Hawkes, 78)

Naming and classification are characterizable through a list of innumerable different terms. They frequently occur throughout the daily language use without explicitly being consciously used. One often hears about members of a "class," "group," "type," "family," "system," etc., and these terms describe the single idea of collecting under one common name those items that share one or more common characteristics and that differ in exactly these characteristics from other, differently named items. They also all share the act and result of differentiating and differentiation between characteristic marks compared with each other under the same premises. These descriptive expressions belong to the horizontal structure because the elements of one class, group, etc., are of equal value in comparison to different classes at the same level. The vertical principle of ordering, on the other hand, is represented by genetic classification. Languages are classified into phyla, like Finno-Ugric, Indo--European,
etc., which are distinguished from each other through differences of origin.

There are also language families whose members when compared with one another show similarities with respect to the shared phylum, but differences with respect to each other. French is classified as a Romance language, as is Italian, yet there are different names for these languages, which belong to one specific "family". The underlying principle here is a combination of both the vertical and the horizontal, in that the historical development of the Romance languages allows an explanation for their relatedness but also for the differences of the individual languages in their appearance today.

Earlier in this thesis, mention was made of mathematics as the outstanding example of a classificatory model in the sciences. This same discipline discovers in abstract 'terms' the method and result of the classificatory process which clarifies some of the linguistic methods and results of classification in combination with naming. In mathematics one encounters a rare degree of congruence between mathematical names and the phenomena they describe. (FN 10) The identity between all constructs to which the number called "two" can be applied presents us per axiomatic agreement with everything that is "more than one" and "less than three", including all mathematical processes the result of which is "two".
In linguistics, a similar kind of "axiomatic" is often assumed. Hjelmslev, a member of the post-Saussurean structuralistic Copenhagen School, considers "the formal nature of all language" (Hawkes, p. 74) as universal. He says: "It would seem to be a generally valid thesis that for every process there is a corresponding system by which the process can be analysed and described by means of a limited number of premises." (Prolegomena to a Theory of Language, 1968, p. 9).

The danger, however, that linguistics is exposed to is the fact that language changes constantly and that any construct within a language may disappear or outdated names may remain, yet lose their original function and meaning. In mathematics the numbers and the functions will continue to serve as a fixed, unchangeable basis, and, though they may be enlarged, they will not in themselves ever change. The axiomatic character of language, on the other hand, is bound to the 'axioms' of social life, to cultural and historical facts and to contemporary and temporary states. Thus there is no predictable stability in language.

Every language can be investigated through assumed systematic comparison with similar occurrences in other languages. By this means, it is possible not only to create groupings of identical features, but also to contrast those features to other groupings in a different language. Language A is structured by grammar A, language B has a
similar, yet not identic structure, and language C differs completely from A and B. It is obvious that A and B are more "closely related" to each other than to C, if any relationship at all exists.

Not only does language demand a classification by and of itself, but it uncovers as well the value-judgement that quietly accompanies each "name" that is uttered or written. One talks about a "high-class" performance, a "low-class" job or a "middle-class" furnished room. All of these expressions transfer meaning to members of our Western society. In this meta-language, one finds a parallel to societal behavior, language being again a mirror of its speakers. Each act of classifying is bound to a value-judgement that asks for more or less proof, which in turn depends on the domain of the class, on its size and thus its specificity.

The French language is easily "proven" to be a romance language after the set of rules that defines "romance" has been established, permitting its delineation from other language families. However, the question if Dravidian and Uralian are related language phyla, for example, is still a controversial issue, and the relationship between Dravidian and Uralian, for various reasons, is much harder to demonstrate. French provides the linguist with enumerable living examples, whereas the much larger phylum of all collected Dravidian and all collected Uralian languages
bears with it the danger of false conclusions, since the available data has to have been selected from a much larger number of different languages that have already been once classified as belonging to one or another family and that now have to be reconstructed.

This problematic procedure leads to the basic question whether an inherent classification that we simply dis-cover already exists, or if we impose an arbitrary classification upon the things, that are around us by constructing rules and building complex sets of principles. Thinking of the major focus on generating rules in computer-linguistics, one certainly finds a perfect source of proof. However, even programming rules are based on a specific, given structure of language, otherwise the output would present unintelligible language. The combination of mathematical axiomatics in the use of computers and living ever changing language and its potential of creativity limits the use of those machines to a restricted bundle of functions within linguistics. The fixation of 'rules', which is a necessary step in any computer related work, means at the same time a fixation of the living language that is dealt with.

In this difference between the binary structure of computer-programs and the constantly changing construction of a language without precisely predictable rules lies a fundamental methodological and phenomenological divergence or opposition. Whereas computer-programming necessitates the
axiomatic basis which serves to construct the program with mathematical precision, language appears as the result of an underlying structure that enables a speaker to generate "new" utterances in infinite number. Each "new" sentence means a "new" realization of that structure without referring to it. No native speaker thinks of verb-subject agreement before uttering a thought in his or her language. This phenomenon of language generation by individual speakers also provides an explanation as to why linguistics is so difficult and why it has such multiple and divergent concepts. There is no one correct structure which can explain languages universally.

The model of surface and deep structure follows the principle of dichotomy. Paul Hopper and Sandra Thompson add a third element to this duo, the discourse context. In their article "The Discourse Basis for Lexical Categories in Universal Grammar", (1984) Hopper and Thompson discuss the problem of categorizing nouns and verbs as universals. (FN 11) They raise the question of "context-boundedness" in connection with names. For example, in different contexts the names "cup" and "glass", a frequently quoted pair, can designate the same object. Depending on the situation in which the speakers use the terms, they focus on a "prototypical" meaning of both, which certainly overlaps both names.
This raises the question of boundaries between different categories or classes. On the very extreme of opposing poles one can find decisive differences between "cup" and "glass"; however, those sharp boundaries have to be put in contrast to a gradual approximation of the two "prototypical" objects in terms of their overlapping characteristics.

An illustrative example in this context can also be found in the color terms of different languages. As opposed to the concreteness of the objects cup and glass, color terms are basically a description of a certain perception. They are definitely bound to the experience, and the circumstances of the speaker of the language. The differentiation of colors in a country of midnight-sun is certainly more dependent upon the time of the year than in a country with clearly distinguished daily "day" and "night".

The environment can also have an impact on language development as the variety of terms for "snow" in Eskimo illustrates. In that language, the terms for snow vary in relation to its texture, the time of the day, the angle of the sun, etc. (FN 12)

Linguists are not only confronted with the changing usage of utterances in relation to the changing context of the same utterance, but they also have to meet the challenge of changes in meaning for historical or cultural reasons. The word "atom" from Greek atomos once was supposed to be
the name for the "smallest undivisible part" existant, a
definition that is no longer valid, since today highly
developed laser beams are able to split the atom and nuclear
fission is a reality. The outdated name, however, remains,
even though different kinds of atoms can now be
distinguished from each other. The atoms of today are no
longer genuine "atoms", "a-tomos" is a name that has lost
its meaning.

Similarly, our "rising" sun is a relic, recalling the
former belief that the sun indeed rises, and not in tune
with contemporary knowledge that the sun only appears to
"rise" and serves to illustrate the stagnation of some
language fragments in contrast to the real world and the
advances in scientific knowledge.

Interestingly enough, the idea of naming and
classification unites at this point in the following way:
whereas classification, as has been pointed out earlier, can
be understood as the result of a former state of affairs --
which means that every classificatory model is by definition
outdated at the moment of its finalization -- it is actually
the naming that stagnates, even though it itself belongs to
the processive part of language. (FN 13)

So far not only the universality of the phenomena of
naming and classification has been pointed out but also the
multiplicity of its application in different areas. A closer
analysis of the terms with regard to their relevance in the
discipline of linguistics will follow in the subsequent chapters.
Chapter III.

Naming and classification within the specific field of structural linguistics as related to de Saussure.

In this and the subsequent chapter, specific linguistic fields will be explored with respect to their ordering and naming as either underlying or explicit structures. As indicated above, the most obvious link between linguistics and naming and classification can be found in the structural approach of linguistics. Thus this chapter will deal with an analysis of structural linguistics in connection with de Saussure's language analysis, which is considered to be the foundation of modern structural theories.

Structuralism not only shows the intertwining of naming and classification but it also proves to be ideally suited as an illustration of the cone-principle. Structuralism itself, as well as its specific, single aspects, match the vertical and horizontal movements of the cone and its gradually enlargening scope and increase in number and space. Within de Saussure's language description an obvious polarity structure can be found, and his terminology focuses on opposites as will be shown.

Although Roman Jakobson, N. S. Trubetzkoy and Karcevsky are often considered to have founded structuralism when in
1928 they publically announced their thesis no.22 at the First International Congress of Linguistics, I personally am inclined rather to give credit to de Saussure, because he did not limit his view to the restricted area of the phonological study of language. Instead, he included the entire realm of language realization and even its underlying conceptuality.

De Saussure was a precursor of structuralism focused on language not as a study of isolated, atomistic single words or single sounds, as had previously been done by traditional historical and comparative linguists, but rather as a coherent system of signs. Language for de Saussure is a complex, connected whole in which all single parts are interdependant. The main emphasis is placed upon finding and describing the kinds of relationships and positions that the single parts have in the whole of the language system.

In contrast to other linguists, de Saussure includes a whole range of different subfields of linguistics into his language study. He sets language into its context, historically as well as anthropologically, and from those connections draws conclusions regarding the evolutionary character of language:

"To ask the type to which a group of languages belongs is to forget that languages evolve; the implication is that there is an element of stability in evolution. How is it possible to impose limitations on an activity
that has none?

Of course many people really have in mind the traits of the original idiom when they speak of the characteristics of a family; their problem is not insoluble since they are dealing with one language and one period. But when we assume that there are permanent traits which neither time nor space can change in any way, we clash head-on with the fundamental principle of evolutionary linguistics. No characteristic has a right to permanent existence; it persists only through sheer luck." (Course in General Linguistics, pp.228-229)

Taking this fundamental underlying evolutionary character into account, linguistic structures receive a certain degree of relativity, due to the constant change of its matter, the language. Here, as we will later see, the crucial point is found in any structuralistic theory.

As far as naming and classification is concerned, their role in linguistics has to be delineated from their role in other scientific disciplines, such as physics or mathematics. Yet they find also strong similarities with scientific structuring and labeling methods. This will be discussed in a subsequent chapter.

The discussion whether or not linguistics as a discipline may be considered as a science has continued unabated. Ever since linguistics was separated from philology, it adapted the attitude of defending itself
against the prejudice of not being a "real" science. This may linked to the question of the status of linguistics in that language cannot be limited to itself and be a science, but rather has a place in any other science. This, however, will not be the topic of this work.

In his Course in General Linguistics (1959), (FN 14) de Saussure points out the reasons why linguistics has finally entered the realm of a science. He introduces the term "Semiology", which he considered to be the underlying idea of his investigation of language, thereby placing semiology above linguistics, which in his view is only "a part of the general science of semiology." (p.16) Thus de Saussure states: "The task of the linguist is to find out what makes language a special system within the mass of semiological data", and concludes: "... if I have succeeded in assigning linguistics a place among the sciences, it is because I have related it to semiology" (p.16).

The investigation of language as evolutionary processes evidenced by its changing structure represents a crossing of the borderline between scientific disciplines. Not only do cultural factors have to be taken into account, but also simple life conditions, all of which have an impact upon language development throughout history.

The structuralistic language discussion refers primarily to de Saussure's distinction between "langue" (language) et "parole" (speech), and between the other two
dualistic pairs of "diachrony" versus "synchrony" and "signifier" and "signified", concepts which in the frame of this work shall be analysed for their relevance for naming and classification.

De Saussure's explanation of linguistic processes and conditions is based upon the distinction between language and speech. To demonstrate the connection with the topic of this thesis, I will quote his definition of these terms:

"But what is language /langue/? It is not to be confused with human speech /langage/, of which it is only a definite part, though certainly an essential one. It is both a social product of the faculty of speech and a collection of necessary conventions that have been adopted by a social body to permit individuals to exercise that faculty. Taken as a whole, speech is many-sided and heterogeneous; straddling several areas simultaneously -- physical, physiological, and psychological -- it belongs both to the individual and to society; we cannot put it into any category of human facts, for we cannot discover its unity.

Language, on the contrary, is a self-contained whole and a principle of classification. As soon as we give language first place among the facts of speech, we introduce a natural order into a mass that lends itself to another classification." (p.9)
Here, the necessity of classification becomes evident within the immediate context of linguistics. De Saussure's notions of language and speech, however, not only represent the link between the classification and naming with language, but also follow the concept of polarity and thus, as a principle method of language investigation, lead to the further distinction between the synchronic and the diachronic. Hawkes, in his interpretation of de Saussure, (FN 15) uses the metaphor of an iceberg, a metaphor which in turn immediately brings to mind the image of the cone, described earlier in the presentation of the cone-principle:

"Parole, it follows, is the small part of the iceberg that appears above the water. Langue is the larger mass that supports it, and is implied by it, both in speaker and hearer, but which never itself appears." (p.21)

The "top" of the iceberg, represents the top of the cone and its perspective, allowing the data that form the bottom of the iceberg-cone to be viewed from a distance. Pursuing the iceberg-image, one can even recognize the presence and significance of different layers, depending in Hawkes image on that amount of the iceberg which emerges from the water and is visible above the water level.

The part-whole relationship underlying de Saussure's concept can also be viewed in terms of the cone-principle. Within the frame of synchronic and diachronic description, de Saussure not only repeatedly mentions the underlying
duality of language aspects but also stresses the part-whole relationship introduced during the discussion of language as a system and speech as only one single realization of the whole concept:

"... never is the system modified directly. In itself it is unchangeable; only certain elements are altered without regard for the solidarity that binds them to the whole."

....

"The diachronic perspective deals with phenomena that are unrelated to systems although they do condition them." (p.84f)

De Saussure combines the idea of synchrony and diachrony with a horizontal and a vertical illustration; he does not, however, develop a systematic principle out of that combination. Since the realm he is talking about deals with one single language and its synchrony and diachrony, or at the most with its immediate historical background in connection with other languages, the system is reduced to the slices of the cone without having the whole apparatus of the interconnectivity of languages becoming visible. In his conclusion of Part One, chapter III of the "Course", "Static and evolutionary linguistics", de Saussure again summarizes his interpretation of the object of his study:

"Synchronic linguistics will be concerned with the logical and psychological relations that bind together
coexisting terms and form a system in the collective mind of speakers.

Diachronic linguistics, on the contrary, will study relations that bind together successive terms not perceived by the collective mind but substituted for each other without forming a system." (p.99f.)

Another indication of de Saussure's restrictiveness in his language interpretation, as opposed to the broader view presented in this thesis, is to be seen in his statement that "in language there are only differences." (p.120) The cone-principle allows in its approach and investigation the application of both the difference and the affinity as principle method. If one talks about language as a "set of" differences, one would presuppose that necessarily a connection between its single parts exists. The linking relationship can simply be called "difference" under these premises. Taking one slice of the cone and viewing the elements that are comprised by that very level comprises corresponds exactly to de Saussure's concept of "differences". One can distinguish the different elements, but one can also draw relational lines between them (see table 1b: a slice of the cone with groupings and singles).

In a smaller sphere of investigation, de Saussure separates signifiant from signifier and points out the polarity between the object itself ("das Ding an sich") and the abstract reference made possible through language. In
combination with the "arbitrariness of signs", de Saussure talks about the fact that different individuals in different languages may use different terms for one and the same object in order to designate their own personal or socio-culturally conditioned perception of that specific object. He writes:

"The bond between the signifier and the signified is arbitrary. Since I mean by sign the whole that results from the associating of the signifier with the signified, I can simply say: the linguistic sign is arbitrary.

The idea of "sister" is not linked by any inner relationship to the succession of sounds s-oe-r which serves as its signifier in French; that it could be represented equally by just any other sequence is proved by differences among languages and by the very existence of different languages: the signified "ox" has as its signifier b-oe-f on one side of the border and o-k-s (Ochs) on the other." (pp.67f.)

"Signifier" and "signified", in de Saussure's view, are not only two representatives of a classification within one language 'philosophy' but as names they also describe something through and by themselves. When de Saussure talks about these concepts, he is using language himself as a means of description. Thus what he calls "signified" can
never designate the 'object' as such, since the only reference is made through language.

It follows from a conceptual point of view and from his own words that the classificatory model that de Saussure has developed is logically problematic and has to be placed in the realm of "meta-language" description. Philosophically perceived, the phenomena just described appear to parallel exactly the development from positivism to neo-positivism outlined in Wittgenstein's early works, in particular in reference to the supplementary logical basis applied as methodology.

As mentioned above, de Saussurean language concepts in contrast to others postulate that signs are arbitrary. A structure of language of the sort he develops does indeed demonstrate explicitly the connection which exists between one 'sign' and its opposition to other 'signs' in relationship to the very concept of meaning that he calls 'language'. The system he describes that underlies language, the system of signs he describes as arbitrary, finds a firm place in the naming and classification frame. Wherever a 'sign' is given to an object or event -- in Saussurean terminology wherever speech is produced -- that sign is set into context with other similar or differing signs, all of which are rooted in a conceptual system of language in the speaker's mind. Thus at any moment of speech-production, names are given to their objects of reference (be it
concrete or abstract 'objects') and are related to those objects within the speaker's mind which in turn connects the sign with one particular part of his or her classificatory view of the world. Fundamentally every language process is a selective process of relating ideas to things, grouping them according to context and evaluating the uttered or written things according to their relevance within the language situation.

Although the terms de Saussure chooses to use on first glance seem far removed from "naming and classification", an analysis of the processes of language creation and application which he describes within his concept of language reveals their essential affinity. Thus "naming" occurs whenever speech is produced and the conceptual background is in essence the system of "classification".

Of special interest in connection with the topic of naming and classification, is the insight that an analysis of de Saussure's language concept provides into the inherent "unexclusiveness" of both terms as applied to language and speech, signifier and signified, synchronic and diachronic. His terminology describes the intertwining existing in the creation of a system /*classification*/ on the one hand, and labeling, /*naming*/ on the other.

Applied to poetry, however, the simplified one-to-one relationship between the name and the named poses a difficulty from the point of view of the purely creational
process of that field of art. In poetry, language is abstracted from the convenient naming as related to specific objects. Instead, the naming process represents the art of poetry itself. Wolfgang Schadewaldt describes his view of poetry (Dichtung in German is not restricted to poems but includes any artistic literary form) in his article "Das Wort der Dichtung":

"Es ist eine Ueberzeugung, die sich mir ...
seit geraumer Zeit im Umgang mit Dichtung gebildet hat:
dass Dichtung, mag sie sich im Felde der Sprache bewegen und schoepferisch in Worten bilden, doch nicht vom Reden, Sprechen her konstituiert wird. Dichtung entspringt jenem ebenso sinnlichen wie geistigen Sehen,

(It is a conviction, which has developed for me for quite a while from dealing with Dichtung: that Dichtung, be it within the area of language and creatively take form in words, yet is not constituted out of speech and speaking. Dichtung originates from the sensual, as well as from the mental form of seeing/viewing, which perceives within the the surrounding world of objects, the supporting and basic
circumstances and references of an more actual, essential world, and is thus in its most original and at the same time highest force/power a kind of "prophetism", the prophetism of the being and to being.)

As had been indicated above, the interrelationships between linguistics and other disciplines are unavoidable and multiple. De Saussure's concept of metaphor, a philosophical explanation of that term, and its literary use in criticism all provide one and the same name for a variety of different terminologies in each of which that name is built into a new classificatory model. The following chapter will provide the reader with some information about the use and form of naming and classification within exemplary linguistic fields.
Chapter IV.

Other linguistic theories.

Not only do Ferdinand de Saussure's language analysis and description provide strong evidence for the ties between linguistics and naming and classification, but a review of other linguistic fields, as well, reveals that the conceptuality of both terms serves there, too, as an underlying principle. Any language description has without doubt fundamentally to be based upon systems of classification and the naming of the different parts within each class and the class itself. Hereby, depending on the specific item of investigation, the names and classes that result from that particular field of linguistics differ as to their focus. Often enough, the name of the linguistic field already indicates the corresponding underlying principle of that particular field and the co-occurrence of its classificatory principle: name and focus become obvious.

The field of the "dependency grammar or theory", another area of semantic structuralism, is a case in point. In dependency grammar, the close interconnection of different elements, or "constituents", is demonstrated and based upon the classificatory description of relationships between those elements. Various branches have developed within the dependency grammar. Tesniere differentiates
between a "linear" and a "structural" order which may be considered somewhat fuzzy. Since linearity can be seen as an underlying ordering principle, the two notions "linearity" and "structure" at least overlap.

The verb plays the major role in dependence structure. All other elements of a sentence 'depend upon' the valence or on the need for, or requirement of, a verbal complement. The only possible ordering principle in dependence theories is "hierarchical" in nature, with its hierarchy reflecting the value of the elements. The 'value' of verb and subject will be referred to later in this chapter.

Even within dependence grammar, the type of relation that is described is inherent in the terminology itself. One example here is the term of "translation", which describes exactly the change of syntactic categories of words, syntagms, sentences, etc., the transition from one specific syntactic category to another. This translation may be performed through "translatives" which transfer a linguistic sign from one syntactic function to another. Function and categories merge in this case with a resulting switch of categories.

Since dependency grammar focuses mainly on the verb and its relationship with other parts of the sentence in contrast to theories in which the subject plays the major role in the sentence, the discussion at this point will be set into a historical context returning to the term
"subject" and the traditional relationship between "subject" and "verb". Whereas in dependency grammar the subject is sub'grouped in relation to the verb and defined as an "actant", Boethius (FN 16), whose translation of Greek terms became the basis for the traditional perception of the subject-verb relationship, defines that relation between subject and object -- as yet non-grammatical entities -- in the following way:

"subjectum est, quod praedicatio suscipit dictionem, praedicatum vero est, quod dicitur de subieto."

(Linguistisches Woerterbuch, III, p.1056)

The connection between those interrelations of verb and subject, of hierarchical versus sequential ordering and their realization in language, is formulated from a different, namely a philosophical point of view by Wolfgang Hirsch in Normen des Seins (FN 17):

"... die Philosophie prueft den menschlichen Geist und den objektiven Inhalt seiner Vorstellung von Zeit, Raum und Kausalitaet, nicht aber die Brauchbarkeit dieser Begriffe fuer die Klassifizierung bestimmter Phaenomene." (p.2)

(... philosophy examines the human mind and the objective content of its perception of time, space and causality, not, however, the useability of those concepts for the classification of specific phenomena).
Applied to linguistics, the concepts that the discipline uses in different contexts and within different theories seem to be inseparably intertwined with "classification". Every linguistic theory abstracts its interpretation from actual language by the use of terms which in turn select parts of the language(s) in question and organize these into a conceptual system -- a classificatory model.

A widening of the structuralistic approach can be found in a recent linguistic theory, "Tagmemics". Kenneth L. Pike, in his language analysis, as described in Linguistic Concepts. An Introduction to Tagmemics (1971), includes human behavior as a contextual component, thus introducing an additional factor into linguistic analysis, one which functions like an umbrella term for all language occurrence:

"The concepts presented here are useful for understanding human behavior, including the nature of language, and for finding the structure of that behavior."

(p.11)

Pike assumes that verbal and non-verbal behavior have the same underlying structure. The "tagmeme" ("unit-in-context"), as a unit of structure and function, allows, in his theory, greater attention to be given to the function without neglecting the formal analysis. Pike distinguishes between "four features of a tagmeme" which "are in part
independently variable" and "also mutually dependent on each other, with interlocking components and definitions." (p.75)

In his description, they are:

(1) Slot

Where (the position)
Specific place of part in whole
Wave characteristic, with nuclear or marginal relation
Syntagmatic relations

(2) Classes

What (the item)
General set of items substitutable appropriately in the slot
Particle characteristic
Paradigmatic relations

(3) Role

Why (the relevance)
Specific function of the set to other sets in the including whole
Behavioral meaning
Pragmatic relations

(4) Cohesion

How tied to other units
General background materials from any level of the hierarchy which are controlled by or controlling the item in view
Field characteristic, systemic structure
Framework relations"

Applying in this discussion the terms used by Pike, we find that the four components of Pike's theory can be comprised in the system of the cone, the model presented previously, where two main underlying features were illustrated: the horizontal and the vertical view of
language analysis. In combination with the part-whole relationship, Pike's diagram collapses into the units that are comprised under the cone: "Slot," which he later refers to as "structural slots", designates the constant positions to be found in grammatical entities, such as word, sentence, paragraph, etc. Pike assumes here hierarchical grammatical structures and thus follows the vertical order of the cone.

The "substitution class" is the term for all items that have one and the same function as opposed to other classes. Noun-like items, be they words or phrases, for example, can be substituted "without affecting the proportion (the general, not lexically specific, relationship) between the various kinds of chunks of the unit." (p.76) Applied to the cone-principle, this substitution happens on one (horizontal) level of the cone.

"Role" is nothing other than the function of the parts of the sentence. The subject of the sentence, for example, may be the acting part of the utterence (in active sentences) or it may be the patient (in passive sentences). The difference of one and the same subject-like part in two different grammatical constructions thus explains the relationship of that one part of the sentence with regard to the other parts of the same sentence. (Halliday in An Introduction to Functional Grammar, 1985, pp. 30ff, elaborates an entirely new view concerned with just this particular phenomenon of "function" as opposed to "class".
"Cohesion", also called "framework and control", describes the agreement of the different parts of one whole (for example in an English sentence, verb and subject have to agree in number). Here, explicitly, the part-whole relationship governs Pikean terminology. Role and cohesion "cohere" in that the role represents the definition of the nature of cohesion.

The problem of Pike's more inclusive language analysis, which takes into account the context of sentences, dialog, etc., is a structuralistic one. His basic idea, that is the context-boundedness of utterances, certainly should be part of any language philosophy. However, in linguistics the interrelationship between the feature of observation and the features that are left describes exactly the dilemma of the discipline. Within the frame of this work, the cone becomes infinitely large, starting with the morpheme and ending with the whole context of language use, differences and similarities in language comparison, and the physical situations in which language is used. Pike tries to include all of these features into his view of language analysis, starting out with a model similar to that of the cone, and, by adding a third dimension, seeks to expand the mental construct:

"Within tagmemic theory there is an assertion that at least three perspectives are utilized by Homo sapiens. On the one hand, he often acts as if he were cutting up
sequences into chunks—into segments or particles. At such times he sees life as made up of one "thing" after another. On the other hand, he often senses things as somehow flowing together as ripples on the tide, merging into one another in the form of a hierarchy of little waves of experience on still bigger waves. These two perspectives, in turn, are supplemented by a third -- the concept of field in which intersecting properties of experience cluster into bundles of simultaneous characteristics which together make up the patterns of his experience." (pp.12f.)

In my personal view, the third entity can be readily incorporated into the first two entities of linear separation and grouping. Again, the cone-principle allows not only a vertical and a horizontal perspective, but also the intersection by means of combination of those two perspectives, achieving in essence what Pike terms the concept of field. Here, names that are used to construct a theory overlap and still constitute a "kind of" classification. Pike's interpretation of "tagmemes" as a correlation between function and form mirrors the same pattern of horizontal and vertical interpretation. A stative pattern on the horizontal level in his theory has through its function "vertical" impact, meaning in this context, the consequence of language upon the speech situation. Here, in
language as "a kind of behavior" (p.15), the connection is established between language and action.

The contextual feature added to traditional language investigation is clearly already established in Pike's conceptual presuppositions and as such may be viewed as an underlying principle of his theory:

"... if a person tries to make a classification of isolated possible meanings, he is likely to end up without helpful results unless somehow these meanings arise from words which are tied into some language system or systems of cultural behavior (including scientific behavior and its classificatory devices)."

(p.17)

An even more interesting and illuminating description of the interdependence of class and name occurs in the section where Pike talks about part-whole relationships directly:

"A class of items can be treated as if it were a unit .... Or a sample of a class can be somehow treated as representing the whole class...." (p.19)

The act of naming unifies the single elements under one name and, in turn, the name designates one class, as distinguished from other classes, echoing here the notion of "opposition" in de Saussure's terminology; this class, together with others, then forms an entirety composed of such classes, creating thereby a classification. The cone-
principle allows again the specification of one single item on one particular layer of the cone, as well as the whole system of all classifications on the different layers or on one single layer among the items displayed.

The notion of behavior in tagmemics can very well be related to the "functional" aspect of the theory of functional grammar. In An Introduction to Functional Grammar, M.A.K Halliday distinguishes between two types of labeling, functional labeling and class labeling, and explains the process of labeling in the following way:

"Labelling means putting names on things, and so it is a way of specifying what these elements are. The label provides some kind of a definition of the units that have been identified as parts of some larger whole.

There are in principle two significant ways of labelling a linguistic unit. One is to assign it to a class; the other is to assign a function to it. Hence there are two principles according to which we can label the constituents of a grammatical structure: (i) by CLASS, and (ii) by FUNCTION." (p.27)

Methodologically speaking, Pike's distinction between "emic", the units of structure, and "etic", the units of all observable data, within the linguistic frame designates nothing other than de Saussure's distinction between "language" and "speech" or Chomsky's notion of "deep structure" versus "surface structure". I could continue the
list of names designating the same items throughout most of the linguistic theories. This short selection is intended only to indicate the "identity" of the underlying principle as opposed to the "variability" of the names that are used to construct "different" classificatory models.

Let me just add a few other theories that prove by themselves the necessity of naming and classification in relationship both to each other and to the discipline as such. One of these linguistic fields is historical, or comparative, linguistics. Within this field, grammar has the purpose of investigating the construction of the words, the wordgroups and the sentences of a particular language with respect to that language's historical change. As Tschirch expresses it, the task of the historical linguist is:

"... die Veraenderungen der Sprache in der Folge der Zeit auf die Veraenderungen im Verhaeltnis des Menschen zu seiner Umgebung, ... auf sein jeweiliges Weltbild, auf sein dauernd sich wandelndes Lebensverstaendnis zurueckzufuehren. .... Sprachgeschichte ist ...
angewandte Kunde vom Menschen, ist Anthropologie."

(Fritz Tschirch, Geschichte der deutschen Sprache, I. Die Entfaltung der deutschen Sprachgestalt in der Vor- und Fruehzeit, p.15)

("...to re-fer the changes of language in the sequence of time to the changes within the relationship of the human being to his environment, to his current concept
of the world, to his constantly changing understanding of life. History of language is the applied 'science' of man, is anthropology'.

Within historical linguistics, various constructs of language relations have been developed. Language trees and diagrams show the relationship not only between single languages but also between language families, phyla, etc. The fact that a unique, conceptual distinction is established between "families" and "phyla", for example, parallels the cone-principle, which allows the perspective of the observer to enlarge from that of the top or to diminish, if one begins from the point of view of the "member" of one language in one specific historical time and environment. The tree-diagram not only shows the vertical historical relationship between various steps in the historical development, but also demonstrates the vertical relationship between languages. Here, the similarity to the structure established in the cone-principle is obvious.

Phonetics offers a specific relation to our topic by providing so-called "natural classes" (Godby, Wallace, Jolley, Schaffer, Perkins, Latta, Geoghegan, Bissantz Johnson. Language Files. 1985):

"Natural classes are groups of sounds in a language which share some articulatory or auditory feature(s).

In order for a group of sounds to be a natural class it must include all of the sounds that share a particular
feature or group of features, and not include any sounds that don’t. Thus when we refer to the natural class of voiced stops in English, we mean all of the sounds which are voiced stops in English and no sounds that are not (i.e. /b, d, g/)." (p.73)

Natural classes receive names according to the features of their members. Not only does the part-whole relationship apply within this realm of phonetics, but the use of natural classes also reveals its opposition to "non-natural" classes, implying the presence of 'non-natural' classes, that must exist if the term "natural" is applicable. Methodologically speaking, one can claim that within the naming and classification frame, a 'natural class' represents the ordering of single features of sameness as distinguished from different features. The names given to each class allow conclusions, i.e. describe the binding feature: "Interdental Fricative Consonants," "High Tense Vowels," "Voiced Sibilant Consonants," etc.

From such classification the authors of the Language Files assume that it is possible to draw conclusions concerning larger realms of linguistics:

"Describing sounds in terms of natural classes makes it possible to state generalizations concerning (1) the sound systems of human languages (e.g., the possible sequences of sounds that can occur together, which sounds will be modified when next to some other sound,
etc.); (2) dialect variation; (3) changes in the pronunciation of borrowed words; (4) the acquisition of language by children; (5) rules for rhyming in poetry; (6) processes of sound change over the history of a language." (p.73)

The example of "natural classes" in phonetics serves as an ideal transition between naming and classification. By using the name "natural classes" in the naming process itself, it becomes obvious that something other than "natural classes" exists, otherwise the distinction would not be necessary. The resulting assumption that something like "non-natural classes" exist, immediately leads to a polarity, that describes two different classes -- a classification of sounds into natural and non-natural sound classes.

Charles F. Hockett devotes an entire chapter of his book, A Course in Modern Linguistics (1958) to "words" and starts his discussion with the doubtfulness of their definition:

"The everyday use of the English word "word" is not very precise. In general, the layman looks to writing, and classes as a word whatever he finds written between successive spaces. So matchbox is one word, match box two, and match-box two or one depending on whether or not a hyphen is interpreted as a special sort of space. That these three spellings reflect a single combination
of morphemes with a single pronunciation ... is ignored." (p.166)

Hockett proceeds with the explanation that word boundaries exist which are found out through isolation and pause. The important factor that is taken into consideration is the intonation morpheme used in connection with the "word". Hockett here actually investigates the use of "word" in two different contexts: the layman's use and the linguistic use (his linguistic explanation) by renaming the various parts of the "word". He segments the class "word" and creates subclasses which he names individually. Apart from "morphemes", the "minimum free form", "lexemes" and "idioms" in his view all belong to the higher class "word".

In the subsequent chapter, he provides the reader with a perfect vertical structuring in his linguistic theory: "In many languages, words play an important grammatical role, in that they are built out of smaller elements by certain patterns, but are put together into sentences by rather different patterns." (p.177)

The hierarchical structuring is constituted by the part-whole relationship: words are parts of sentences, but words also consist of parts, thus they form at the same time a part of a higher class and a class with lower subgroups. Each of these ways of looking at the "word" reflects again the image of the cone. The word as a part of a sentence is found on the larger layer of the cone, the word as a class
to be subdivided is found as the top of the cone. In return, the part-whole relationship is illustrated by both vertical directions and represented as a interplay of part of a whole and whole subdivided into parts: the cone with the top at the bottom and the cone with the larger side at the bottom.

In this chapter, some linguistic theories have been chosen that most obviously constitute the close relationship between naming and classification. The process of classifying proves to intertwine steadily with naming. Especially in the example, where the term "natural classes" actually stipulates its own opposite, the circularity, the interplay between naming and classification becomes unavoidable.

Here again, as has been shown, the cone-principle describes effectively each of the different linguistic approaches, using the fixed structural buildings of the theory on one specific layer of the cone. Each of these approaches analyses the vertically existing processual language at different points. The overlapping lines of the strucuralistic approaches are visualized in the drawing table 1b, and show the relationship to each other and the fixedness on that particular layer of the cone.
Chapter V.

Conclusion and Evaluation.

In this last chapter of my thesis, I would like to recapitulate the problems raised at the beginning and refer to the initial question whether linguistic is a system that is imposed upon language or if language already consists of a system that is discovered by linguistics. It seems evident that language has an underlying describable and communicable structure; however, the enormous variety of different language descriptions -- names for one and the same thing, abstractions from the actually performed language -- seems to contradict the thesis that one and only one "true" structure exists.

Western philosophy offers multiple ways of finding answers to that question. The terms "deductive" and "inductive," which represent two basic concepts and methodological approaches underlying all philosophical thoughts can also be applied to the cone-principle presented here. Referring to the part-whole relationship, explained above, "deduction" is the derivation of a 'specific' from an all-inclusive, encompassing 'general' or the cognition of the 'specific' within a general 'law'. This explanation
combines structure with method and classification with names in the following way: if the part (see horizontally sliced cone) of the whole is initially taken as the point of departure and if conclusions from this part are drawn that allow derivations to be made about the whole, then the shift from horizontal to vertical (towards the top of the cone) has been performed. The method of deduction results in a classificatory system the parts of which fall under nomenclaturally distinct features. Deduction only follows the law of contradiction. Induction, on the other hand, describes the method of starting with (on one cone-level) the specific individual case and concluding with a general law that, initially, had already been hypothetically assumed. That law is then valid for non-investigated cases, as well. Within empirical sciences it is thus only possible to register invalidations (falsifications) of a law, never verifications. Within the linguistic realm, in historical linguistics, it is absolutely possible to deduce certain rules -- grammatical, phonological, etc. -- from individual examples, but it will never be possible to claim them to be universal. Thus the systems that are assumed to be true are only true as long as no contradiction has invalidated/falsified them.

It is at this point that the discussion of the concept of naming and classification is expanded by an additional notion: that of evaluation, a feature which not only appears
in the various "sub"-structuralistic theories that have been
developed from de Saussure's structuralistic approach but
also in all other, non-structuralist approaches. The
question of 'prescription or evaluation' within linguistics,
in contrast to 'description', remains the subject of an
ongoing controversy in various branches of linguistic
discourse. These terms can be considered as characterizing
two types of linguistic approach. In structuralistic
language analysis, the evaluative factor can be found in the
development of a system of classes which reflects the
decision of the analyst as to which kind of principle is to
be applied. Whether it is a sequential string of morphemes,
or an arbitrary, yet voluntarily chosen sign (as opposed to
other non-chosen signs), or a hierarchical structure of
language evolution, as it is in de Saussure's diachronic
terms, all structuralism is ultimately based on the judgment
of the linguist. As a result, classification here is itself
already evaluative in nature.

Tyler writes in his book The Said and the Unsaid,
(1978) "There is an urge for objectification in all
classifying, as if man's common lot was to be victim of a
Faustian obsession with classification as an object of
knowledge rather than an instrument of knowledge and work."
(p.280), and postulates thus the arbitrariness and
subjectivity of classificatory processes. Throughout the
same chapter in that book, Tyler talks about inclusion and
attribution as classifying features. Here the subjective portion is easiest to demonstrate and can be explained with the help of the cone-principle. As long as the differentiation between inclusion and distinction through different attributes has to be made, the analyst moves within one level of the cone: the inclusion representing by a grouping of similar features/items, and the attribution paralleling a vertical movement and attaching to the groupings certain values and qualities that combine the single features.

Important, fundamental questions, apart from, yet connected with the analysis of specific fields of linguistics arise at this point. What is the essential purpose of classification and naming, in relation to language and language analysis? Is linguistics as a science bound solely to describe and interpret relationships between smaller or larger language units? To find an answer, one has to step out of the dense linguistic realm and try to view linguistics from a distanced point of view, maybe similar to the top of the cone:

Language, as we have seen in the first chapter, serves not only as the major tool of communication but also as a means of simplifying life through its structure. Any language use is bound to a specific context in the "real world", any language analysis within linguistics picks a
small choice of contexts and describes or analyses language in that particular context of that particular utterance.

There is yet a different world of language use which steps aside of our topic of naming and classification within linguistics, and that is language as art. Literary language may be considered as the only form of language that is not structured at its birth, but may be structured both during the creational process and subsequently, for example, by interpreters. But here the text itself is taken away from its original context and the resulting language product is viewed from various sides that may even be contradictory. The potentially limitedless number of possible text interpretations may by comparison make linguistics appear to be restricted.

At the very end of my thesis, I would like to quote one example from Jacques Lacan's *Écrits*, vol. II, which describes involuntarily and quite effectively the difference between the traditional linguistic approach to language and the creational process of combining names with an unusual and unexpected context, the connection between naming and classification and personal perception resulting in an actually uttered statement about the "world around us": (FN 18)

Lacan first explains de Saussure’s distinction between *signifiant* et *signifier* and starts with the illustration of
the tree, a sketchy drawing with the surtitle "arbre" (tree). He continues using the following illustration:

```
  hommes       dames
```

He explains that here diversity in naming, actually, a duplication in that the names, "ladies" and "gentlemen" designate two identical looking doors. He sees a conversion ("wie das Signifikante in das Signifizierte eingeht", p.24) of the significant into the signified. The discussion reaches its height, when he tells the reader the following incident:


voruebergleiten an einem Bahnsteig, an dem der Zug haelt: "Schau, wir sind in Frauen!", sagt der Bruder. 'Dummkopf', erwidert darauf seine Schwester 'siehst du denn nicht, dass wir in Maenner sind!'" (p.25)

The thing itself, the context, the classification and the names, all merge together in those children's words
through their personal perception. Noone would accuse the children of having used language in a "wrong" way. However, the labeling process will be "corrected" according to the traditional, generally accepted context. The children reversed the process of naming and classification.

So far, the discussion has been governed by the "Western Thought" model. It must be said though that this way of thinking refers to the educated person. Modern anthropology provides us with a large number of experiments that show yet a completely different way of classifying and naming which does not at all correspond with a "logical" classificational system. It reflects rather a practical thinking and a concrete relationship to objects.

A. R. Luria describes and analyses in his book *Cognitive Development, Its Cultural and Social Foundations* (1976), a number of experiments that has been undertaken by people who have never attended school and thus were not pro-formed by systematical thinking. The results of those experiments show how far abstracted the description of naming and classification in our thinking is and gives at the same time an insight into a -- for us unfamiliar -- thought model:

"... instead of trying to select 'similar' (ukhshaidi) objects, they proceeded to select 'objects suitable for a specific purpose.' In other words, they replace a theoretical task by a practical one: to reproduce the
practical relationship among objects. .... They saw no need to compare and group objects in abstract terms and assign them to specific categories. .... Moreover, these subjects did not interpret words as symbols of abstract categories usable for classifying objects. What mattered to them were strictly concrete ideas about practical schemes in which appropriate objects could be incorporated." (p.54)

In contrast to the classification and naming processes in linguistics that have been discussed in this thesis, Luria chose to "undo" abstractions and to start at the very level of experience, which he then again classifies by the evaluation of his experiments. He labels that kind of thinking of his "subjects" "situational thinking" and characterizes "abstract or categorical thinking" in the following way which brings us back to the naming and classification topic:

"Categorical classification involves complex verbal and logical thinking that exploits language's capacity for formulating abstractions and generalizations for picking out attributes, and subsuming objects within a general category. It should be noted that "categorical" thinking is usually quite flexible; subjects readily shift from one attribute to another and construct suitable categories. They classify objects by substance (animals, flowers, tools), materials (wood, metal,
glass), size (large, small), and color (light, dark), or other property. The ability to move freely, to shift from one category to another, is one of the chief characteristics of 'abstract thinking' or the 'categorical behavior' essential to it." (pp.48f.)

Let me conclude with a metaphor taken from an art-historian, who in a recent lecture explaining art versus nature, stated:

One can never in nature find a 'line' as such. A line is non-existent in nature. It is the invention of the artist in his endeavor to convert a three-dimensional object into a two-dimensional extension. This is only possible through individual perception. Similarly, the linguist tries to present his or her particular perception of language in a network of structures which never purely or without exception exist in the real world of language use. The linguist creates a terminology by systematizing language. His or her task is classification and naming.
1 One of the main tasks of an anthropologist is to build systems that reflect a people's behavior or patterns of their cultural life. This by nature necessitates classificatory models, labeled according to the results of the investigation. Tyler describes a new approach towards anthropological investigation and thus a different methodological schema, a cognitive oriented branch of anthropology, which "focuses on discovering how different peoples organize and use their culture. This is not so much a search for some generalized unit of behavioral analysis as it is an attempt to understand the organizing principles underlying behavior." (p.3)

2 In Mexico the name de Navarro seems to have a function similar to the European title-system. Also the Indian cast system is representative for the class and esteem of the person -- 'higher' or 'lower' -- depending on the hierarchical level he or she is on. The medieval court-structure reflect a very strict hierarchical ordering according to the title the person has received.

3 Most of the commands in PROLOG describe the relationship that they "create", for example "string of," as a functional device, "kind of noun" as a description in the
dictionary. The structure of the dictionary itself has to be
conform with the names used in the functional part of the
program in order to construct matching connections between
command and dictionary. Every item is labeled with its class
(verb, transitive, noun, plural etc.) and thus constitutes
by itself a necessary intertwining of naming and
classification. The programming terminology corresponds with
the linguistic classificational terminology.

4 The subdivision of linguistics into different
specific fields indicates the variety of structuring on
different levels: Not only is word order necessary to
communicate thoughts successfully, but the structuring also
takes place within spoken utterances. Sentence accent, word
stress, too, are part of the structural character of
language. Phonetics deals as a linguistic field with the
sounds as smallest units, describing sound systems and
naming each phon as distinct from other phons. Lexicology
concentrates on the the word as the item of the lexicon.

5 Bliss' book opens up a whole new world which
effectively consists of classificatory models and their
application to the organizing of a library. This
classification, to us, is only accessible through the labels
that we find in the library. Here, classification and naming
find a practical use and application: Someone thought out
the structure and named the items so that someone else can follow the inventor's structuring -- the library user.

6 Janet W. D. Dougherty and Charles M. Keller explain in their article "Taskonomy: A Practicle Approach to Knowledge Structures", published in Directions in Cognitive Anthropology, ed. by Janet W. D. Dougherty in 1985, the connection between structuring of knowledge and the purpose of named instruments. They use the blacksmith as an example and describe his ordering principles concerning his tools. Each tool is distinguished from another tool by a different function that it fulfills in contrast to other tools. They delineate the classification of the blacksmith vigorously from the by nature more abstract linguistic classification:

"... the linguistic hierarchy, ... is too general for the everyday activities of a blacksmith (although it may be relevant to the owner or employee of a hardware store)."

(p.164)

7 Fillenbaum and Rapoport indicate in their introduction the main purpose of their work:

"This work represents an approach to the study of structures in the subjective lexicon. On the assumption that the meaning relations obtaining between that item and other items in the same domain, we sought to determine how people 'reckon' in assessing similarity
relations among terms in a given domain." (p.vii)

They include questionnaires about color names, kinship terms, pronouns, emotion names, prepositions, conjunctions, HAVE verbs and verbs of judging into their study.

8 John R. Gregg investigates in *The Language of Taxonomy. An Application of Symbolic Logic to the Study of Classificatory Systems*, published in 1954, the role biological classification and takes into consideration the history of taxonomy. He writes:

"From the very beginnings of the science of biological classifying it has been the custom to generate taxonomic systems by selecting some set of organisms and repeatedly subdeviding it on the basis of specifically stated membership criteria. But, until Linnaeus’ time it was not invariably the case that the resulting subsets ... themselves became the object of classificatory attention." (pp.30-31)

9 Father as a concept has many different semantic values which are each bound to context. One interesting interpretation of father can be found in social and political context: father, here, expands to a descriptive model of a certain type of societal perception. It is talked about a patriarchal order. Not only has the name remained as descriptive term for the male headship, but in our modern society it also developed a negative connotation in the
10 Hirsch's essay about a normative evaluation of the sciences can be considered a philosophical examination. The author includes relationships between objects and the sciences, and presents a methodological investigation including an thoughts about time and space.

There is no date to be found of when the essay has been published. (see also 17)

11 Hopper and Thompson explain the traditional categorization of noun and verb and discuss in their paper whether or not those two classes could be considered as universals or not. Here, the problem of how to define noun and verb and how widely those terms may be applied. They also address the prototypicality in the area of grammar and grammatical categorization.

12 Laura Martin wrote an article about "'Eskimo Words form Snow': A Case Study in Genesis and Decay of an Anthropological Example", published in American Anthropologist, number 88 (1986), pp.418ff. She presents a historical survey of the investigation of the snow terms in Eskimo.
13 In literary terms one could describe this phenomenon as a chiasm.

14 For easier access to the reader, all quotations from de Saussure are taken from the English translation by Wade Baskin.

15 Terence Hawkes considers, as well as I do, de Saussure as the starting point of modern structuralistic theory. He writes:

"We can begin with the work of Ferdinand de Saussure, a Swiss linguist whose work forms the groundbase on which most contemporary structuralistic thinking now rests." (p.19)

16 The source of that quote is unknown, and quoted from Linguistisches Woerterbuch 3 (1985), by Th. Lewandowski.

17 No publication date to be found. (see also 10)

18 As well as for de Saussure's quotations, I preferred here the available German translation from the Ecrits vol II, edited by Norbert Haas.
BIBLIOGRAPHY


Foucault, Michel. 1982. This is not a Pipe. Berkeley: University of California Press.


Hopper, Paul J. and Thompson, Sandra A. The Discourse Basis for Lexical Categories in Universal Grammar. Language 60. 703-752.


Tyler, Stephen. The Said and the Unsaid.

TABLE 1

THE CONE-PRINCIPLE