## Analysis

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## CHAPTER FIVE: ANALYSIS

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In the following analysis two types of names of mushrooms will be distinguished: (i) the Czech and the English counterparts to the scientific names and (ii) the Czech and the English popular names. In this way we should be able to compare the three sets of the official names in Czech, English, and Latin/Greek among themselves and then to proceed to the comparison of the popular names in Czech and English. As we hope to show later, the boundary between the 'official' and the popular names is easy to draw in Czech while in English it is less distinct.

## 1. SCIENTIFIC NAMES AND THEIR CZECH AND ENGLISH COUNTERPARTS

The number of Czech names, both scientific and popular, in the main corpus is higher than the number of the English names, scientific and popular: 1741 Czech names, 1572 English names. In addition to the cases where some species may be more current in one part of the world than in another part, the differences in numbers are not to be overestimated. Although mushroom picking is more popular in Central Europe than in the English-speaking countries, the existence of so many Czech names and the absence of English names in many cases is connected with
the tradition how books on mushrooms are written. In the Slovak and Czech popular books on mushrooms (and even in some scientific books) every species is given a Slovak and/or a Czech name. If a new scientific name is being introduced into the book, it is translated into Slovak and/or Czech in accordance with established naming procedures. The Czech names then change with the changes in the taxonomy and in the scientific terms, as was shown in previous chapters. In English books, it is not usual to give an English name, unless it is well established. There are exceptions to this: COOKE 1871, MCKNGHT 1987 and NONIS 1993. COOKE calqued the scientific names of that time, MCKNIGHT is less literal in his translation but does not stop at genera, he introduces even English names of families, and NONIS calques the scientific names of the modern time. However, the English names invented by the three authors are not used in any other book. If there is no English name, the other books use the scientific name only. There are even popular books that give very few English names, eg NLSSON 1977, 1978. Attempts by COOKE and others mean that theoretically there could be as many English names of mushrooms as there are in Czech. The actual usage, however, limits the English names to the current species. In scientific writings only scientific terms, internationally recognized, are used.

If we compare the international scientific names (for practical purposes referred to as 'Latin' further on, in spite of objections mentioned in a footnote earlier) with their Czech and English counterparts, we notice two basic differences between the Czech and the English names. We can use Frondose Polyporus - Polyporus frondosus - trsnatec lupenitý as an example. The first difference is in the lexical identity of the English and the scientific names and the second one is in the word order. While the English name is arranged in the usual order modifier + head, the Czech name is organized in a reversed order. The first difference is to be discussed under the analysis of the elements of names and the second difference under the analysis of the names as naming units.

### 1.1 Elements of names

In the following analysis the names of the mushrooms will be first divided into theirs elements, ie into head and modifiers. This kind of division should make it possible to analyse the meanings of words used in the names with greater precision. If a name of a species is taken as a whole its meaning may not be easy to define. There are names the meaning of which is clear, eg Straight Coral Fungus is a name describing the shape of the mushroom but Ashy or Golden or Grey or Purple Coral Fungus are names describing the shape and the colour of the species. Crimson Wax Cap combines the description of the colour, of the property and of the shape of the mushroom. Separate discussion of the heads and of the modifiers as a first step has the advantage that the necessary criteria for classification can be defined more clearly.

An analysis of the Czech popular names of mushrooms was published by SVATOPLUK SEBEK (1968). Its results will be discussed later when the English and Czech popular names are analysed here. For the time being let us only show
that his analysis of all the names in one group meant that one-word names of the type bélinka, citrónek, modřinka denoting colour were classified in the same group as binominal names of the type červený špičnik. The binominal name expressed both colour and shape.

The separation of the modifiers from the heads to be introduced here may result in disagreement between the Czech and the English names eg when the Czech modifier denotes the same feature of a species as the English head: Brown Roll-Rim - čechratka podvinutá, Common Inkcap - hnojnik inkoustový, ${ }^{35}$ Dead Man's or Devil's Fingers - dřevnatka kyjovitá (if we accept a certain degree of similarity between fingers and clubs). In some other cases the English modifier refers to the same feature as the Czech head: Fly Agaric muchomürka červená, Birch Fungus - březovnik obecný, Tinder Fungus ohñovec obecný. Cases like these, however, are not very numerous, they do not reach one per cent of the corpus.

### 1.1.1 Heads

### 1.1.1.1 Descriptive and non-descriptive heads

Although constant research into the taxonomy of fungi has produced a number of changes in the classification, this may not be fully reflected in an increasingly descriptive character of the new names. The reason is in the layer of traditional names, eg Latin suillus, boletus, Czech smrž, lany̌ž, English truffle, mushroom. These traditional names have no descriptive features.

The percentage of descriptive heads in the three languages is the following:
Czech:
126 descriptive heads and 32 non-descriptive heads out of 158 , ie nearly 80 per cent of descriptive heads

| D | 79.7 | ND 20.3 |
| :---: | :---: | :---: |

Fig. 5.1

## Latin:

162 descriptive heads and 20 non-descriptive heads out of 182 , ie 89 per cent of descriptive heads


Fig. 5.2

[^0]English:
98 descriptive heads and 92 non-descriptive heads out of 190 , ie 51.6 per cent of descriptive heads

| D | 51.6 | ND | 48.4 |
| :---: | :---: | :---: | :---: |

Fig. 5.3
It is obvious from the data that the total numbers of heads in the three languages are rather low and differ from language to language. The low numbers can be explained by the fact that this is not a frequency count, in which case all the 1572 English names etc would be counted. The differences between the three languages are given by the frequency of certain nouns, eg the Czech hrib corresponds to the Latin boletus, boletinus, gyroporus, leccinum, suillus, xerocomus. Similarly, the English puffball corresponds to the Latin calostoma, calvatia, lycoperdon, tulostoma, and stinkhorn corresponds to anthurus, pallogaster, phallus, simblum.

The highest percentage of descriptive heads is in the Latin names. This can be easily explained because there are only a few non-descriptive heads in the Latin terminology, most of which are borrowings from other languages, especially from ancient Greek and Latin:
agaricus: New Latin term, introduced by JOHANN JAKOB DILLENIUS (DILLE, 16871747, German botanist, professor of botany at Oxford since 1721) and taken over by CAROLUS LINNAEUS (CARL VON LINNE, 1707-1778), from Latin agaricum, from Greek $\alpha$ ץapıkóv, according to DIOSKÚRIDÉs based on the name of Agaria, a town in Sarmatia [an area between the Vistula and the Volga, now partly Poland, partly Russia and partly the Ukraine; Agaria was probably on the Sea of Azov, a bay of the Black Sea]; the hunting community of that area were told to eat mushrooms; another explanation is that the species was imported from Agaria; the name agaricum was used by GAIUS PLINIUS SECUNDUS, together with boletus, fungus, suillus; the form agaricus is older than DILLE: it is used in the The Laud Herbal Glossary, cf. STRACKE 1974.
amanita: NL amānīta, prob. from Greek $\alpha \mu \alpha v \tau \alpha 1$, pl., 'a sort of fungi', perhaps named after Mount Amanon in Cilicia [an ancient country in SE Asia Minor, later a Roman province, now SE Turkey]
boletus: Latin bōlētus, from Greek $\beta \omega \lambda i \tau \eta \zeta$, perh. from $\beta \omega \lambda \omega \varsigma$ 'clod of earth'), bovista: NL, from German bofist, bovist 'puffball', from vohe she-fox' + vist, vīst 'breaking of wind'; cf. English dialectal names bullfeist and feist for a puffball, MC (= Main Corpus) No [431]),
helvella: NL from Latin helvella 'small varieties of vegetables', dim. of helvus; from Latin helvus 'light-bay coloured'), hydnum: NL, from Greek vסvov truffle'), leccinum: Italian 'fungus'),
morchella: NL, from German morchel 'morel'), mycena (Greek $\mu$ úk $\eta$ ),
peziza: NL, from Latin pezica, pezita, from Greek $\pi$ ȩ̧́ı 'stalkless mushroom'; perhaps akin to Latin pedere 'break wind'; cf. bovista above; cf. the botanical name of many puffballs lycoperdon 'wolf' + 'breaking of wind'; cf. Czech popular name of a puffball pšoukavka, MC [429]; also mentioned by PLINIUS, cf. Chapter One)
suillus: NL, from Latin suillus),
tuber: NL, from Latin tūber 'hump')
Heads derived from personal names, krombholzia, kuehneromyces are also regarded as non-descriptive. Some of these honorary names are easy to recognize, eg the modifiers ceciliae, kauffmanii, Mary's, smithii, but some of them may be less obvious, eg Longula, Lenzites, Rozites. The names of mushroom based on geographical names are regarded as descriptive here and similar to names describing the habitat of the species, eg dung, field, oak, wood. Some of the geographical names are self-evident, eg californicus, mexicana, but some of the latinized ones may be obscure, eg novaboracensis 'of New York', suecica 'of Sweden'. The geographical name usually indicates where the species was discovered, which in some cases may not be identical with the area where it is widely distributed: suillus sibiricus grows in western North America.

The percentage of descriptive heads in Czech is slightly lower than in the Latin terminology, nearly 80 per cent, which means a higher percentage of nondescriptive heads. Bedla, hřib, chr̆apáč, lanýž, opeňka, pečárka, ryzec, smrž are names known from CLARETUS. Kosmatka, kržatka, kustřebka, rážovka, rovetka are more recent names but they lost their descriptive character, if they had any, just as the names from CLARETUS. (Other names from CLARETUS preserved their descriptive character: hadovka, křemenáč, kuřátnik, liška, pýchavka etc; cf. Chapter SIX.)

The ratio of descriptive and non-descriptive heads in English differs noticeably from the ratios in Czech and in Latin. The main reason are the Latin names taken over into English: agrocybe, armillaria, clavaria, clitocybe, coprinus, cortinarius etc. They are descriptive names in the Latin terminology but they cannot have a descriptive character in English because they are not composed of elements known from other English words. The traditional English names are much less numerous: blewit, chanterelle, morel, truffle, mushroom.

A number of the English heads regarded as descriptive are originally nondescriptive nouns used metaphorically, ie there are instances of semantic shift based on metaphor. ${ }^{36}$ It seems that when the metaphor is obvious it refers to a certain feature of the mushroom, eg the shape of the mushroom is indicated by names like buttons, caterpillar, fingers, saddle, saucer; kačenka, ouško, ban̆ka, popelnička.

[^1]The number of cases of Czech semantic shifts based on metaphor is relatively small. There are thirteen nouns in the main corpus: baňka, kozák, kyj, špička, ucho; kačenka, kurátečko, kuřátka, lopatička, ousko, popelnička, stopečka, zvoneček. The metaphor is based on similarity in shape (popelnička: its empty dry bodies remind us of small dustbins - PILAT 1969.34, transl. by JH ) although the colour of kuřátka may be also important. The number of English semantic shifts is higher:
antlers, balls, beacon, bootlaces, bracket, buttons, cakes, cap, caterpillar, club, conk, coral, cowpat, crown, cup, drops, ear, fan, fingers, funnel, gypsy, head, hedgehog, hood, horn, leg, mitre, nest, oxtongue, oyster, parasol, prince, saddle, saucer, shank, spindles, spot, stalk, staghorn, stool, tooth, tuft, umbrella, urn, vase, wings; dunce cap, goat's beard, liberty cap; horn of plenty, man on horseback, pick-a-back, roof nail.

Nearly all the. English semantic shifts are again cases of metaphor based on similarity in shape, eg bootlaces, conk, mitre. In this respect they belong to the same type as the Czech cases of metaphor. The difference in numbers is easily explained by the Czech translations of some of the English metaphors: bonnet - helmovka, caterpillar - housenice, club - kyjanka, coral - korálovec, jelly - rosolovec; cup - zvoneček, ear - ouško etc. In the first group of translations the Czech names are based on the most frequent method of word-formation in Czech, on derivation. In the second group the Czech names are also based on metaphor. There is another group of English semantic shifts, however small, which is not based on metaphor: cap and stalk.

The Collins English Dictionary defines cap as 'a covering for the head' and also as 'the pileus of a mushroom or toadstool'. ARORA defines cap as 'the caplike part of the fruiting body which supports the spore-bearing surface' and pileus as 'the cap of a mushroom'. Cap occurs in a number of names, in some of which its reference is to the whole mushroom, eg death cap, panther cap, slimy beech cap. In other names the reference is to the top part of the mushroom, eg brown cone cap, velvet cap. Yet even in the second case the final reference is to the mushroom as a whole. We may claim then that the first semantic shift from 'a covering for the head' to 'the pileus of a mushroom or toadstool' was based on metaphor but that the shift from 'the pileus' to the mushroom as a whole is based on metonymy. Even more convincing are the names with stalk. Stalk is defined as 'the main stem of a herbaceous plant' (CED) and as 'the stemlike structure that supports the cap in most mushrooms' (ARORA). This meaning is present in names like stalked puffball, stalked saucer. In Big Blood Stalk, Milk Stalk, Rough Stalks the final reference is to the mushroom as a whole. Gill and ring in Bell-shaped Mottle Gill, Common Split Gill, Gray Pink Gills, Rough Ring are also cases of metonymy.

While cap and stalk are used as mycological terms referring to parts of mushrooms head, hood, leg and shank are words referring to parts of mushrooms on the basis of metaphor. But the names Common Cone Head, Fibre Head, Sooty Head; Rusty Hood, Scarlet Hood; Black Leg, Blue Leg; Rooting Shank, Spindle Shank, Tough Shank are again based on metonymy. This is not
the case with the Czech names: there are no names like *lysá hlava, *limec, *čepice but we have lysohlớvek, límcovka, čepičatka. There is one exception among the Czech popular names and that is cervenolupen.

What types of semantic shifts are used in the third language in the comparison, Latin? ${ }^{37}$ We find similarity between English and Latin. The second elements of clitopilus, dermocybe and rhodophyllus are names of parts of mushrooms and are used here to refer to a mushroom as a whole just as the English cap and stalk.

### 1.1.1.2 Semantic analysis of heads

### 1.1.1.2.1 Latin, English and Czech heads taken separately

The division into descriptive and non-descriptive heads was the first step in the semantic analysis of the heads. Leaving the non-descriptive heads aside, we will concentrate on the descriptive heads and decide what these heads refer to, eg the shape of the mushroom, its properties, colour, habitat or time of occurrence.

The largest number of the Czech heads describes the shape of the mushroom, eg bañka, číšenka, hadovka, helmovka, korálovec, kyj, límcovka, ouško, penizovka, špička, zvoneček. The second largest group is formed by heads denoting a property of the mushroom, eg dřevnatka, klihatka, lesklokorka, plešivka, rosolovec, štavnatka, kožohlav. The third group of heads describes the colour of the mushroom: černoušek, hnědák, ohnivec, pestřec, rudoušek, sazovka, tmavobélka. A small group of heads refers to the habitat of the species: hnojnik, pařeznik, polnička, and one head indicates the time: václavka.

A similar pattern of distribution is found with the Latin heads: the largest group is the one describing the shape of the mushroom (astraeus 'similar to a star', conocybe 'cone head', galera 'helmet', mitrula 'small mitre', otidea 'similar to ear', rhizina 'small root', tubaria 'possessing a trumpet') and the second largest group refers to some property of the species (calostoma 'beautiful mouth', calvatia 'bald', limacium 'slug', psilocybe 'naked head', xerocomus 'dry boletus', xylaria 'wooden'). The third largest group again is about the colour of the mushrooms (fuligo 'soot-coloured', fuscoboletinus 'dark brown boletus', melanogaster 'black stomach', rhodocybe 'red head', russula 'reddish'). There is one small group describing the habitat (coprinus 'pertaining to dung').

The first two groups in the English heads are similar to the preceding statistics. The largest groups are the heads describing the shape of the mushroom: club, coral, fingers, hood, nest, slipper, stool. The second largest groups indicates some property of the species: deceiver (called so because 'the colour, shape and size varies a great deal, PHILLIPS 1986.43), jelly, miller (it has mealy smell, ibid.), puffball, slippery Jack, tinder fungus. Third in size is a group

[^2]which did not appear in the two other languages and which we for lack of a better term call metaphorical. It contains names like chicken in the wood, chicken of the wood, flowers of the tan, jack o'lantern, man on horseback, old man of the woods, prince, witch's butter ${ }^{38}$ and names like false morel, false truffle, mock oyster.

The three diagrams represent the percentages for S (hape), P (roperty), C (olour) and M (etaphor) in the three languages. The diagram also show that the percentages of other meanings are insignificant.

CZECH

| S |  |  | P |
| :--- | :--- | :--- | :--- |
|  | 48.4 | 28.6 | 18.2 |

Fig. 5.4
LATIN

| S |  |  | P |
| :--- | :--- | :--- | :--- |

Fig. 5.5

## ENGLISH

| S |  | P | M |
| :--- | :--- | :--- | :--- |
|  | 62.9 | 20.0 | 13.3 |

Fig. 5.6

### 1.1.1.2.2 The meanings of Czech, Latin and English heads compared

The analysis of the meanings of the heads in the three languages taken separately under 1.1.1.2.1 was a necessary step before the three languages can be compared.

If all the synonyms, especially in English and Latin, were mechanically included in the comparison between the three languages, an enormous number of combinations would arise. Therefore preference was given to those English names which were more frequent, ie quoted in more than one book. Preference was also given to those members of the synonym series which belonged together, eg coprinus disseminatus - hnojnik nasety and psathyrella disseminata - křehutička rozsetá, while the combinations coprinus - křehutička and psathyrella - hnojnik were not considered at all. On the other hand, if eg the Czech name hřib corresponds to a number of Latin names all the combinations were counted.

38 All these names are clear instances of popular names in English. As they are used in books as counterparts of scientific names we must include them in the present analysis.

The first comparison is between the Latin and the Czech heads. The most numerous group is composed of descriptive heads with the same reference, eg rhodophyllus - červenolupen, clavaria - kyjanka, strobilomyces - šiškovec. In the following diagrams this group is labelled by the equal sign (=). This group usually includes also a few pairs of descriptive heads the meanings of which are not identical but very similar, eg caloscypha - pohárovka, agrocybe - polnička. If their number is high enough to be represented in the diagram the sign for 'is approximately equal to' $(\approx)$ is used. The third sign is $\neq$ 'is not equal to' and it is used either for pairs of descriptive heads, eg clavariadelphus kuřátkovnik, sarcoscypha - ohnivec, or pairs of heads one of which is nondescriptive, eg polyporus D - chřapáč ND, ceriomyces D - pstřen̆ ND, mycena ND - helmovka D , leccinum ND - křemenáć D . The same sign is used for pairs of non-descriptive heads, eg tuber - lamyzz, suillus - hřib.

## LATIN and CZECH

| $\begin{aligned} & \overline{=}+= \\ & \mathrm{D}-\mathrm{D} \end{aligned}$ | $\stackrel{\neq}{\mathrm{D}-\mathrm{D}} 29.1$ | $\stackrel{\neq}{\text { D-ND }}$ (19.6 |
| :---: | :---: | :---: |

Fig. 5.7
The diagram reveals a strong group of descriptive pairs where the meaning is identical (the 40.7 per cent includes 6.5 per cent of $\approx$ cases, eg agrocybe - polnička). The second largest group is also composed of descriptive pairs but with different meanings. The numbers of non-descriptive/descriptive pairs and of nondescriptive pairs are very low, 6.5 and 4.0 per cent respectively.

Fig. 5.8 summarizes the results for the English and the Latin heads. The categories are the same as for the Latin and the Czech pairs: D-D (descriptive + descriptive), either with the = sign, eg cup - ciboria, milkcap - lactarius, or with the $\approx$ sign (only three pairs, eg nest - crucibulum), or with the $\neq \operatorname{sign}$ (eg earthstar - myriostoma, peel fungus - caloscypha), D-ND (descriptive + nondescriptive, eg mitre - helvella, roofnail - mycena), ND-D (non-descriptive + descriptive, eg blewit - rhodopaxillus, morel - gyromitra), and ND-ND, eg lenzites - lenzites, mushroom - agaricus.

ENGLISH and LATIN

| $=/ \approx$ | $\neq$ | $\neq$ |  |
| :---: | :---: | :---: | :---: |
| D-D | D-D | ND |  |
| 12.3 |  | 40.7 |  |

Fig. 5.8
The diagram for English and Latin differs substantially from that for Latin and Czech (Fig. 5.7) in two areas. While the $\neq$ group of the D-D pairs is strong in both
cases, the $=/ \approx$ group in English and Latin is more than three times weaker than in Latin and Czech. This shows the dependence of the Czech names used in Czech popular books on the official nomenclature, and, vice versa, the relative independence of the English names. The second difference is in the $\neq$ group: the majority of these cases, apart from the D-D pairs, is based on ND-D pairs in English and Latin and on D-ND pairs in Latin and Czech. This is connected, of course, with the percentages of descriptive and non-descriptive heads in Latin and English as shown in Figs 5.2 and 5.3: 89 per cent of descriptive heads in Latin and only 66 per cent in English.

The lower percentage of descriptive heads in English is also reflected in the comparison of English and Czech meanings where the $\neq$ ND-D category is the strongest with 36 per cent (eg morel - ucháč, truffle - jelenka).

## ENGLISH and CZECH

| $=/=$ $D-D$ 12.1 | $\stackrel{\neq}{\text { D-D }}$ | D-ND 15.0 | $\begin{array}{cc}\stackrel{\neq}{\text { ND-D }} & \\ & \\ & 36.0\end{array}$ |
| :---: | :---: | :---: | :---: |

Fig. 5.9
The English and Czech percentages are similar to those for English and Latin not only in the ND-D category mentioned above but also in the D-D categories, but for $=/ \approx$ and $\neq$ relationships.

The final comparison in this part of the analysis is between the three languages. As Fig. 10 shows, the percentage of identical meanings is low, lower than in the previous statistics, the percentage of $\neq$ D-D-D trios (eg cap - paxillus - čechratka, earthball - scleroderma - pestřec) is within the limits of the $\neq$ D-D categories in Figs 7 to 9. The second largest groups are the ND-D-D heads, ie a non-descriptive head in English and descriptive heads in Latin and Czech, eg agaric - stropharia - límcovka, chanterelle - cantharellus liška. There are two groups with slightly over 10 per cent each: $\neq$ D-D-ND, eg cucumber slice - macrocystidia - kržatovka, saddle - polyporus - choroš, and $\neq$ ND-D-ND, eg agaric - psalliota - pečárka, mushroom - armillaria čiriovka.

ENGLISH, LATIN and CZECH

|  | $\begin{gathered} \neq \\ D-D-D \\ 30.7 \end{gathered}$ | $\begin{gathered} \neq \\ \mathrm{D}-\mathrm{D} \\ -\mathrm{ND} \end{gathered}$ | $\neq$ ND-D-D 25.3 | \# ND- DND |  |
| :---: | :---: | :---: | :---: | :---: | :---: |

Fig. 5.10

### 1.1.1.3 Formal analysis of heads

This part of the analysis should show the percentages of compounds, derivations etc in the Czech, Latin and English heads.

Derivation is generally the most frequent way of forming new naming units in Czech and this is confirmed by the names of mushrooms. Nearly two thirds of the Czech heads are derivations, including 10 per cent of diminutive derivations (helmovka, hnojník, korálovec, kyjanka, pařeznik; černoušek, čišenka, křehutička). About twenty per cent of the heads are compounds, very often artificially sounding combinations (červenolupen, kožohlav, krásnorůžek, lesklokorka, mnohokrčka, rudočechratka) and about 12 per cent are simple words (bedla, hlíva, lanýž, pstřen̆, ucho).

Derivation is the strongest method of word-formation even among the Latin heads referring to mushrooms (armillaria, cortinarius, lactarius; boletinus, crucibulum, urnula) but with a very small majority over compounds (caloscypha, clitocybe, ganoderma, melanogaster, tricholoma). As the number of heads analysed is less than 200 we must regard the figures given here as approximate.

The English heads differ from the Czech and Latin heads in a substantial way. There are two strong groups in English, simple words (cakes, club, coral, grisette, shank) and compounds-and-collocations (cowpat, mazegill, roof nail, spike cap, stinkhorn). About ten per cent of the heads are attributive phrases, eg coral fungus, tough shank. The formation of this group, instead of putting fungus, shank etc into the simple nouns, may be justified by the fact that they are further modified by adjectives, eg ashy coral fungus, beautiful coral fungus, crested coral fungus; clustered tough shank, greasy tough shank, spotted tough shank. The other groups are very small: there are eight phrases (chicken in the wood, trumpet of death), four phrases with the adnominal case (goats' foot, pig's ears) and four cases of derivation (deceiver, eater, miller, sickener).

The proportions of the various ways of formation are again summarized in three diagrams where D stands for 'derivation', ${ }^{39} \mathrm{C}$ for 'compound/collocation', $S$ for a 'simple' word, A for 'attributive phrase', P for phrases and G for adnominal case:

## CZECH

| D | S | C |  |
| :---: | :---: | :---: | :---: |
|  | 67.2 | 19.3 | 13.5 |

Fig. 5.11

[^3]LATIN


Fig. 5.12

## ENGLISH

| S |  |  | C |  | A |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 41.0 |  |  | 35.2 | PGD |
|  |  |  |  |  |  |

Fig. 5.13
The gender of the Czech nouns is prevailingly feminine: 58.3 per cent feminine, 39.2 per cent masculine and 2.5 per cent neuter. The proportions in Latin are more balanced: 42.9 per cent feminine, 39.0 per cent masculine and 18.1 neuter.

### 1.1.1.4 Origins of Heads

If we look at the origin of the Latin and of the Czech heads we can see that they are Latin (and Greek) and Czech words, either traditional names of mushrooms like suillus, hřib or newly formed descriptive names like astraeus, hvězdäk. The origin of the English names is more varied. We can distinguish five types:
(A) traditional English names of mushrooms, eg blewit, champignon, chanterelle,
(B) English names of parts of mushrooms used metonymically, eg cap, gill, ring, shank,
(C) English common words used metaphorically, eg club, head, hood,
(D) anglicized Latin terms, eg bolete, polypore. They are regarded as anglicized either on the basis of their form, eg agaric vs agaricus, bolete vs boletus, polypore vs polyporus, and/or because they are recorded in current dictionaries: amanita, russula.
(E) Latin terms, eg psathyrella, ramaria, rhodocybe.

It is obvious from the previous discussion that types B and D have only a few members. The strongest group, with 49.5 per cent, is type C, followed by type E with 40.0 per cent. Type A is again not very numerous.

## ORIGINS OF ENGLISH HEADS

| C | 49.5 | E | 40.0 |
| :--- | :--- | :--- | :--- |

Fig. 5.14

### 1.1.2 Modifiers

The analysis of the modifiers in the Latin, English and Czech names of mushrooms will follow the same procedure as the analysis of the heads, with the addition of a frequency count.

### 1.1.2.1 Frequency

The number of heads was about 200 hundred for 620 species, which was favourable for a frequency count but a detailed count has not been taken. The reason was that the result would be a survey of the frequency of species described in the books, which may be of interest to mycologists. Instead, some frequency data were mentioned in the description of the corpuses: fimgus, mushroom and cap, taken together, occur in 370 names. The total number of English modifiers analysed here is 1,482 . It is less than the total number of English names of species, which is 1,572, because some species have single-word names, eg blewit, cep, commander, miller, prince, and some other species have what we may call phrasal names, eg flowers of tan, old man of the woods, plums and custard, urchin of the woods. The frequency of modifiers may be more interesting for the present discussion because it is more concerned with the naming process and because it can be expected to be more varied than the occurrence of heads.

The most frequent modifiers are those describing some colour, in the following order: yellow 38 occurrences, red 35 , orange 23, brown 23, black 20, gold 19, grey 17, white 17, purple 16. The second most frequent adjective, however, does not describe the mushroom in any way: common with 37 occurrences. The rest of the modifiers are distributed among adjectives describing the habitat where the mushroom grows, the time it grows, its shape, its taste, its properties: 6 bitter, 6 blushing, 6 coral, 6 field, 6 giant, 6 jelly, 6 rough, 6 sticky, 6 violet, 7 club, 7 earth, 7 honey, 7 horse, 7 spring, 8 cluster, 8 little, 8 slime, 8 winter, 9 milk, 9 oyster, 9 pine, 9 snow, 10 cone, 10 pink, 10 scarlet, 10 velvet, 11 birch, 11 shaggy, 12 green, 12 sulphur, 13 fairy, 13 wood, 14 blue, 14 false, 14 scaly.

The other end of the frequency scale is also interesting. There are 307 modifiers which occur only once in the corpus, eg ashy, autumn, bishop's, bronze, canadian, clean, crimson, dazzling, dwarf, english, fleecy, hoax, Jersey cow, masked, pearl-studded, pungent, quivering, saucered, smeared, split, twisted.

A few of the modifiers with a single occurrence are very untraditional and they were all used by ARORA, the American author of Mushrooms demystified. The modifiers express his personal attitude, not lacking a sense of humour: boring, not so tedious, righteous red, sunny side up, totally tedious (cf. a quotation from Arora in Chapter Three). ${ }^{40}$

40 The following specimens of ARORA's colourful language are offered here as refreshment for the reader: 'One of my fifteen "five favorite flavorful fleshy fungal fructifications." Like myself, it is thin, tough, and dark, and like myself, it goes largely unappreciated.' (667). 'There's a subtle gap between the mushroom in the book and the mushroom in the bush,...' (23).

### 1.1.2.2 Descriptive and non-descriptive modifiers

The division into descriptive and non-descriptive names is less obvious with the modifiers than it was with the heads.
The modifiers and the heads share one type of non-descriptive naming unit, the personal names. With the heads it was krombholzia etc, with the modifiers it is Ben's, Caesar's, Clinton's, Cook's, King Alfred's etc. The number of these nondescriptive modifiers in English is statistically insignificant, 0.8 per cent, and cannot be indicated in the diagram. About 7 per cent of the English modifiers are formed by names of real characters, eg king, queen, pope, of fictitious characters, eg angel, devil, dryad, elf, fairy, witch, of animals, eg bug, bull, cow, donkey, elephant, frog, goat etc, and of people, eg dead man's, old man's, poor man's, gypsy. In the descriptive - non-descriptive classification these modifiers are labelled as semi-descriptive and in the analysis of their meaning under 1.1.2.3 they will be usually added to modifiers expressing properties. Modifiers like the English common, Latin vulgaris, Czech obecn $y^{41}$ are also regarded as non-descriptive and their percentage is again very low, 1.1 per cent in English.

ENGLISH HEADS

| D | 51.6 | ND | 48.4 |
| :--- | :--- | :--- | :--- |

Fig. 5.3
ENGLISH MODIFIERS

| D | 98.1 |
| :---: | ---: |

Fig. 5.15
The diagrams for Latin are very easy to compare because the percentage of nondescriptive units is 11 per cent for the heads and 2.2 per cent for the modifiers:
'Mushrooms partially eaten by mammals or insects are not necessarily fit for human consumption (one animal's meat is another's poison)' (24).
When talking about the edibility of the mushrooms he may say 'unknown' but he may add 'and like most of us, destined to remain so.' When talking about the edibility of Death Cap, Amanita phalloides, muchomùrka zelend he says: 'DEADLY POISONOUS! ... The flavor, incidentally, is described by survivors as excellent.' On the edibility of a mycena he says: 'Who knows?', at the next mycena he says 'Who knows? Who cares?' and at the next one 'Who knows? Who cares? I don't.' ARORA develops this, mycena after mycena, into 'Who knows? Who cares? I don't. Do you? Do you care if I do? I won't if you don't.'
41 The forms of the Latin and the Czech modifiers have been changed to masculines because the preservation of the three genders would create a distractive effect.

LATIN HEADS

| D | 89.0 | ND |
| ---: | ---: | ---: |

Fig. 5.2
LATIN MODIFIERS

| D |
| :---: |

Fig. 5.16
The ratios are very similar in Czech as Figs 5.4 and 5.17 show.
CZECH HEADS

| D | 79.7 | ND20.3 |
| :---: | :---: | :---: |

Fig. 5.1

## CZECH MODIFIERS



Fig. 5.17

### 1.1.2.3.1 Semantic analysis of English, Latin and Czech modifiers taken sepa-

 ratelyNearly all modifiers are descriptive, as was shown in the preceding paragraphs, which means that the semantic analysis will be based on about 1,300 modifiers. This number is lower than the number of English names of species, which is 1,572, because the following types have been left out for this particular analysis: (i) more than 35 one-word names, eg Blewit, Chanterelle, The Sickener, (ii) about 15 names which either cannot be analysed into an modifier and a head or have an of-modifier and we have called metaphorical, eg Jack-o'-Lantern, Plums and Custard, Urchin of the Woods, (iii) cases where the same modifier is used with a different head in English and the Latin and Czech names are the same, eg Crested Clavaria, Crested Coral, Crested Coral Fungus - Clavaria cristata kư̌átečko hřebenité, Orange Cup Fungus, Orange EIf Cup, Orange Fairy Cup etc - aleuria aurantica - mísenka oranžová, and (iv) popular names.

The categories in the analysis are the same as with the heads: the shape of the mushroom, including its size, then the colour and the properties. The shape, the colour and the properties are the three main features of the species described in their names, both in the heads, except English, and in the modifiers. The other features are the habitat and the time of the year when the species grows.

As Fig. 5.18 shows, the colour, the properties and the shape of the species are equally represented in the modifiers. Although there is a certain degree of repetition of some modifiers, the number of words used to describe the three features of the species is relatively high. Ley us adduce some examples of how the colour of mushrooms is described. In addition to straight colour adjectives, eg bay, buff, fawn, indigo, orange, red, we find words referring to objects as typical bearers of that colour, eg brick, copper, dove, flaming, honey, ivory, lead, lemon peel, leopard, snow, soot, straw, sulphur. The shade or hue of the colour may be indicated by a compound, eg blood red, cinnabar red, grass green, grayish white, milk white, olive grey, red hot, red wine, sea green.

In seventeen cases, the colour of the mushroom is combined with some other feature of the species, eg brown birch, buff meadow, red slimy, brown cone, yellow cowpat. These multiple modifiers were usually included in the colour class.

The modifiers describing the properties of mushrooms do not form a monolithic group. The modifiers can be subdivided into several sub-groups, referring to

- the appearance of the species and to the impressions they inspire, eg beautiful, dazzling, handsome, marvellous, modest, ugly,
- their taste, eg bitter, delicious, peppery, tasteless,
- their scent, eg anise-scented, coconut-smelling, fragrant, garlic, malodorous, pungent,
- their effect, eg deadly, destroying, emetic, poison, purging,
- their surface, eg crustike, engraved, gem-studded, glistening, hairy, lackluster, silky, slime, smooth,
- their flesh, eg buttery, elastic, fatty, gelatinous, greasy, hard, jelly, soft, tough, watery, waxy, woolly,
- various qualities, eg deceiving, milking, quivering, sweating, sometimes in opposing pairs like clean - dirty, damp - dry.

The third major group of modifiers describes the shape of the mushroom. It may be a straight description of the shape by means of an adjective or sometimes by means of a compound, eg bulbous, branched, chambered, conic, elongate, flat, hemisphaeric, narrow-capped, round, stubby, twisted, or it may be a description based on metaphor, eg adder's tongue, antler, bell-shaped, bird's nest, bonnet, bootlace (called so because 'it spreads by black, boot-lace like cords, called rhizomorphs, RAYNER 1979.72), bracelet, buckler, button, carnation, caterpillar, club-shaped, conch, crown, cucumber, cup, ear, egg-shell, fircone, flowerpot, funnel, goat's lip, hoof, horsetail, lion's mane, nutshell, onion, parasol, pear-shaped, pig's ear, saddle-back, shellfish, shoestring, soft slipper, spindle, turban. The number of examples of the metaphoric names indicates that this is the strongest group while the straight description of the shape and of the size are much smaller groups. The size of the mushroom is described by adjectives like big, dwarf, giant, great, large, lilliputian, little, long-stemmed, miniature, tiny robust, short, small, thick.

The fourth type of modifier in Fig. 5.18 is the one referring to the habitat. The habitat may be a particular tree, eg aspen, beech, birch, cedar, conifer, elm, fir, larch, oak, pine, poplar, or it may be a more generally defined place, eg barnyard, bog, cellar, desert, dung, field, forest, house, manure, meadow, moor, pasture, sand-dune, silvan, suburban, wood. This type of modifiers include geographical names like American, Canadian, English, Finnish, French.

The last group of modifiers specifies the time when the species grows, its season. The group is very small, only 2.1 per cent, yet interesting. In addition to the names of the four seasons, spring, summer, autumn, winter, and to two names of months, march, may, we find mushrooms with a very broad timing of growth, early, late, perennial, and a mushroom with a very precise time of growth, Saint George's Mushroom (St. George's day is April 23 in the Englishspeaking countries and April 24 in this country, cf. the Czech name cirívka májovka). The time of growth of another species is defined indirectly: haymaker's toadstool, kropenatec otavni. The name, however, has a synonym which misses the precise timing and is misleading: Lawn Mower's Mushroom. Taken literally, it would mean that the species grows every two weeks.

The statistical aspect of the way the heads and the modifiers contribute to the description of the species is shown in the following diagrams. As the numbers for the modifiers include the non-descriptive modifiers, however small in numbers, the table for the heads has been adapted from Figs. 5.3 and 5.6 to include the non-descriptive heads in one table with the meanings ( S -hape, P-roperties, M-etaphors, Non-Descriptive, C-olour, H -abitat).

ENGLISH HEADS

| S | 41.5 | 13.2 | M |  | ND |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Fig. 5.18
ENGLISH MODIFIERS

| C 29.6 | P 29.5 | S 28.8 | H 7.8 |
| :---: | :---: | :---: | :---: |

Fig. 5.19
The basic distribution of types and sub-types of Latin modifiers is similar to that for the English modifiers: a very small percentage of non-descriptive modifiers ( 2.2 per cent), three major types, describing properties, shape and colour, and two smaller types, 5.8 per cent of modifiers describing the habitat and 2.5 per cent specifying the time.

In the English modifiers the three major types had nearly 30 per cent each and in the Latin modifiers the average percentage is also about 30 per cent. The strongest group are the modifiers denoting some property of a species:

- the appearance of the species and the impressions they inspire, eg calopus 'beautiful', decorus, formosus 'lovely', gracilis,
- their taste, eg deliciosus, edulis 'edible', esculentus 'edible', insulsus 'tasteless', piperatus,
- their scent, eg camphoratus, alliaceus 'garlic/onion-scented', foetens 'have a stale nauseating smell', glyciosmus 'sweet-smelling', pyriodorus 'pear-scented',
- their effect, eg emeticus 'causing vomiting', inquinans 'staining', torminosus 'causing dysentery', officinalis 'pharmaceutical'
- their surface, eg asper 'rough', comatus 'hairy', mucidus 'slimy', nudus, viscosus,
- their flesh, eg elasticus, mollis, gelatinosus,
— various properties, eg flaccidus 'flabby', fragilis, illudens 'deceiving', infractus 'humble', purus.

The shape of the mushroom may be described (i) by an ordinary adjective, (ii) by a descriptive compound or (iii) by a metaphorical expression. Examples:
(i) descriptive adjectives: concentricus, conicus, echinatus 'spiny', elatus 'tall', giganteus, hemisphaericus, obtusus, semiglobatus,
(ii) descriptive compounds: calopodus 'with a beautiful leg', camarophyllus 'with arched gills', cavipes 'hollow-stemmed', densifolius, polygrammus 'with several lines', sphaerocephalus 'with a round head',
(iii) metaphorical expressions: caligatus 'resembling a shoe', campanellus 'small-bell-shaped', caput-ursi, infundibuliformis 'shaped like a funnel', ophioglossoides 'resembling a snake's tongue', ovatus 'egg-like', papilionaceus 'closely resembling a butterfly', patasatus 'with a wide-brimmed head', umbelliferrus 'carrying an umbrella'.

The colour of a mushroom may be referred to by a colour adjective or by the name of an object as typical bearer of a colour. Examples of the first type are adjectives like albus, badius 'brown', cinnabarinus, citrinus, luteus 'yellow', miniatus 'red', purpureus, roseus, rufus 'red'. The object serving as the name of a colour may be ash - tephroleucus, brick - sublateritius, coal - carbonaria, deer - cervinus, dove - columbettus, egg yolk - vitellinus, grass - graminicolor, lead -lividus, parrot - psittacinus, smoke - capnoides, soil - argillaceus, vinegar - acetabulus.

The habitat may be (i) near a particular tree, eg aegeritus 'poplar', betulinus 'birch', dryophilus 'oak-loving', (ii) in a certain type of terrain, eg arenarius 'sand', pratensis 'meadow', rivulosus 'brook', or (iii) 'a geographical area, eg bohemicus, fennicus 'Finnish'. The time of growth may be a season (vernus, aestivus, brumalis), a month (marzuolus), a day (georgii), a particular season (foenisecii 'hay-making'), or a more general term (perennis, praecox, serotinus 'late').

The diagrams for Latin are similar to those for English. A new table for the heads combines the descriptive and non-descriptive groups with the meanings of the heads.

## LATIN HEADS

| S |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: |

Fig. 5.20

## LATIN MODIFIERS



Fig. 5.21
The Czech modifiers display a similar distribution as the English and the Latin ones, with two minor differences. While the modifiers describing the habitat represented only 7.8 per cent in English and 5.8 per cent in Latin, in Czech they represent 10.0 per cent, and while there were 1.9 per cent of nondescriptive modifiers in English and 2.2 per cent in Latin, there are 4.6 per cent in Czech. These shifts slightly reduced the percentages of the three major categories of properties, colour and shape to an average of about 27.7 per cent.

CZECH HEADS

| S 38.6 | $\stackrel{\mathrm{P}}{22.8}$ | C 18.2 | ND 20.3 |
| :---: | :---: | :---: | :---: |

Fig. 5.22

## CZECH MODIFIERS

| $\mathrm{P}_{28.2}$ | C | S | H |
| :--- | :--- | :--- | :--- | :--- |

Fig. 5.23
The sub-division of the modifiers referring to some properties of the mushrooms is the same as with the other two languages:

- the appearance of the species and the impressions they inspire, eg nádherný, pưvabný, odporný, okózalý,
- their taste, eg medotrpký, hořký, lahodný,
— their scent, eg zápašný, libovonný, nevonný, ${ }^{42}$
- their effect, eg lékařský, vrhavka, zhoubný,
- their surface, eg drsný, lepkavy', plstnaty', plysovy',
- their flesh, eg tuhonohy', huspenity', mékhy', tvrdy',
- various properties, eg veselý, smutný, chabý, klidný, ménlivý.

In addition to colour adjectives, eg bilý, černý, červený, the colour of a mushroom may be indicated by referring to a typical bearer of that colour, eg blankytný, čokoládový, hlinožlutý, jodový, karafiátový, lososový, makový, méděnkový, merun̆kový, sirožlutý, slámožlutý, sněžný, trávozelený, zemni. Compounds either indicate a shade or hue, eg bělofialový, černohnědý, kaštanověhnědý, olivovožlutý, plavooranžový, or specify the part of the mushroom of the particular colour, eg černovýtrusový, červenolupenný, hnédovláknitý, krvomléćný, modronohý, zlatozávojový, žlutomasý, or add another feature of the mushroom, eg černohuñatý.

The shape of the mushroom, including its size, may be described (i) by an ordinary adjective, eg dirkovaný, kadeřavý, nizký, obrovský, podvinutý, primý, stlačený, veliký, zprohýbaný, (ii) by a descripúive compound, eg bezprstenný, cibulonohý, dlouhokrký, krátkostopkatý, kulohlavý, širokolupenný, or (iii) by a metaphorical expression, eg bedlovitý, čepcovitý, číškovitý, jazýčkovitý, nálevkovitý, pupkatý.

The habitat may be (i) near a tree, eg březový, bukový, dubov́́, (ii) a kind of terrain or a specific place, eg bahenní, horský, lesomilný, lučni, mrvní, pisečný, podhorský, polní, severský, trávní, (iii) or a geographical unit, eg český, finský. As for time, we have jarní, letní, zimni; májovka, ríjnový; havelka, svatojánsky; pozdní, raný, otavní, pomrazka.

42 A colourful survey of the various smells of the mushrooms is given by Kavina. To save space, only one name of a species is used in the following translation: The result of the interesting chemistry [zajimaveho chemismu] of the mushroom cells are the various smells produced by the mushrooms, about the nature of which we know next to nothing. Some tricholomas, entolomas and hydnums have a mealy smell, other hydnums smell of coumarin, in the same way as the tonka bean, woodruff and melitot do. The clitocybes, psalliotas and trametes issue an anise scent, some clitocybes have a faint cinnamon scent, inocybes smell of fruit, one of the hygrophoruses has an almond smell. Lactarius camphoratus has a camphor scent when fresh and a chicory scent when dried (and a curry scent according to its English name - JH). The truffles issue a very strong scent, the Coconut-scented Milk Cap smells of fresh made coconut cakes. Tuber mesentericum and Nectria moschata have a strong smell of musk while Tricholoma irinum and Puccinia sccaveolens are violet-scented. Garlic Marasmius I and Garlic Marasmius 2 smell of garlic (but in the Czech names the first one is called 'cibulovy', onion-scented - JH). Marasmius porreus and Collybia porrea smell of leek. Clean Mycena has a pleasant scent of radish (helmovka fedkvicková) and Fairy Cake Mushroom smells of rotten radishes. Lilac Conifer Cortinarius smells of goats (pavucinec kozli), Golden Armillaria smells of bed-bugs, and Little Wheel Toadstool smells of cheese. White Truffle has a strong petrol or petroleum smell, Mycena alcalina and Hygrophorus nitratus smell of nitric acid, and Inocybe rimosa and Entoloma nidorosum smell of lye. Stinkhorns and Earth Fan have an unbearable cadaverous smell. The smell of Lactarius helvus reminds us strongly of a pigsty or of super-phosphate. (1919.76)

### 1.1.2.3.2 The meanings of English, Latin and Czech modifiers compared

When we want to compare the three languages we can think of three approaches. In the first approach, which we might call vertical, we compare data established independently for each of the three languages, in the second and in the third approach, which we might call horizontal, we base the comparison of the species and its names in the three languages. In the second approach we operate with two languages and in the third approach we compare all three of them.

The first approach was in fact prepared in the preceding part of the analysis and the preceding chapter. Diagrams $5.19,5.21$ and 5.23 showed a more or less stable proportion of the three major types of modifiers: the percentages of colour modifiers were 29.6 for English, 26.6 for Latin and 28.1 for Czech, the percentage of property modifiers were 29.5 for English, 33.0 for Latin and 28.2 for Czech, and the percentages of shape modifiers were 28.8 for English, 30.2 for Latin and 27.0 for Czech. This suggests that we may expect a high degree of agreement between the three languages once they are mutually compared.

The first two languages to be compared are Czech and Latin. The previous analyses confirmed a higher degree of dependence of the Czech names on the Latin names. The following analysis should indicate a more concrete idea of the degree of dependence.

If we leave out repeated pairs, eg seven occurrence of rysavý - rufus, žlutý - luteus, six occurrences of černý - inquinans, namodralý - cyanoxanthus, etc, we find agreement in 74.2 per cent of the Czech-Latin colour pairs and disagreement in 25.8 per cent of these pairs. For a pair to be classified among the majority type with agreement, the colour names may be identical, eg nachový - purpureus, oranžový - aurantiacus, or similar, eg nigricans - černobilý, claroflavus - chromový, spadiceus 'bright brown' - čokoládový, subpurpureus - krvomléčný. Most of the disagreements are species where a colour modifier in Czech has a counterpart in Latin describing property or shape, equally distributed, eg floccopus 'woolly' - černý, illudens - olivov', cyathiformis 'cup-shaped' - fialový, equestris - zelánka. A very small minority of the disagreements, 3.4 per cent, is formed by pairs where the colour in Czech is different from that in Latin, eg bicolor -- červený. These figures seem to not to agree with the percentages in Figs. 5.21 and 5.23, according to which the difference between Czech and Latin colour modifiers was 0.4 per cent ( 27.0 and 26.6 per cent, respectively), ie there should be about five more colour modifiers in Czech than in Latin. The difference here is more than fifty modifiers. This can be easily explained by the fact that some Latin colour modifiers form pairs with Czech modifiers of property, shape and habitat, eg orichalceus 'copper-red' nádherný, brunneus - svazčitý, cinereus 'grey' - mrvni.

The proportion of agreement and disagreement between the Czech and Latin pairs expressing properties is 65.7 to 34.3 per cent. The pairs expressing agreement are eg mutabilis - ménlivý, subdulcis - nasládlý. The strongest group among the pairs not showing agreement, with about 42 per cent, is formed by pairs with different properties in Latin and in Czech, eg hirsutus 'hairy' -
brvitý, virosus - jizlivý, mucidus 'slimy' - porcelánový. About 27 per cent of the pairs not showing agreement contain a Latin modifier of shape and about 22 per cent contain a Latin modifier of colour, eg camarophyllus 'with arched gills' - kozí, rutilus 'brown' - lepkavý.

In the third major group, expressing the shape of the species, the proportion of the agreement and disagreement is 74.8 to 25.2 per cent. Ostreatus ústřičný, maximus - největsi are examples of agreement, booted - krokodýli, togularis 'cloak-like' - prstenity', cinereus 'ash-coloured' - jamkaty', purus ředkvickový are examples of disagreement.

The next pair of languages is Latin and English. As the procedure is the same as with Czech and Latin, the types and sub-types, the examples and the percentages will be presented in a very brief way. Latin is the first language in the comparison so that when 'colour' is given as a sub-type of disagreement the Latin term denoting a property has an English counterpart denoting colour.
PROPERTIES:
agreement: 49.4 per cent: ink - atramentarius,
disagreement: 50.6 per cent: colour, 14.8 per cent: amarrus - purple, shape, 11.8 per cent: esculentus - beefsteak, habitat, 3.5 per cent: quietus - oak, other property, 18.8 per cent: felleus 'bitter' - geranium-scented
SHAPE:
agreement: 53.8 per cent: brevipes - short-stemmed, disagreement: 46.2 per cent:
property: 14.0 per cent: hemisphaericus - hairy,
colour: 11.2 per cent: bulbosus - honey, habitat: 3.8 per cent: semiglobatus - dumg, other shape: 14.8 per cent: duplicatus - collared
COLOUR:
agreement: 64.5 per cent: subpurpureus - purplish disagreement: 35.5 per cent:
shape: 10.0 per cent: cinnabarinus - coral, property: 7.7 per cent: dealbatus - sweating, habitat: 5.1 per cent: albus - Piedmont, other colour: 9.1 per cent: fumigatus - violet

The third pair of languages is English and Czech. COLOUR:
agreement: 61.1 per cent: leaden - olovový,
disagreement: 38.9 per cent:

property: 11.4 per cent: rysavý- pepper, habitat: 3.9 per cent: žloutkový- marure, other colour: 8.0 per cent: žlutý - brown

Although Czech is the first language in this comparison the English side has not been overlooked. We can either start from the Czech end and find various English counterparts to the Czech modifiers, eg načervenalý - blood-stained, blushing, purple, red; červený - apricot, miniature, red, red-lead, scarlet, vermilion; žlutý - yellow, pale yellow, yellow-brown, or we can start from the English end and find various Czech counterparts, eg red - červený, granátový, načervenalý, rumélkový, ryšavý, sáarlatový; yellow - žlutý, citronový, chromový, nažloutlý, žloutkový, žloutnoucí, žlutavý. The lists also indicate that similar shades were accepted as counterparts, although the boundary was not easy to decide, eg scarlet was accepted as counterpart to červený but not to oranžový and orange was not classified as the English equivalent of červený.

The group of modifiers based on proper names is very small, only 1.6 per cent in the Czech - English corpus, yet it is interesting along the agreement - disagreement axis. Only four pairs are regarded as being in agreement, only a very liberal basis: Jidásiơv - jew's and Juda's, císařský - caesar's and royal. Sixteen other Czech names, eg Archeriv, Bernardùv, Candolleiv, Invaluiv, Patouillardiv, Schweinitziv, have English counterparts denoting colours, habitat, property and shape. This indicates a different tradition.
HABITAT:
agreement: 36.9 per cent: lesomilný —forest, disagreement: 63.1 per cent:
shape: 25.4 per cent: smrkový— penny bum, property: 18.4 per cent: březový - rough, colour: 13.1 per cent: luční - salmon, other habitat: 2.6 per cent: trávni - Scotch

## PROPERTIES:

agreement: $\mathbf{4 5 . 0}$ per cent: huñatý - fluff
disagreement: 55.0 per cent:
colour: 18.2 per cent: útlý-rusty,
shape: 12.5 per cent: kravský - scaly,
habitat: 3.7 per cent: klidný - oak,
other property: $\mathbf{1 8 . 2}$ per cent: očesaný - luxuriant
SHAPE:
agreement: 46.1 per cent: trojitý - triplex disagreement: 53.9 per cent:
property: 15.4 per cent: podvimáý - naked, colour: 13.1 per cent: obrouský - snow, habitat: 4.1 per cent: stlačený - pasture, other shape: 17.8 per cent: vysohyं - parasol
In Fig. 5.24 to 5.26 the percentages of agreement and disagreement are given and the boundaries between the two are indicated by short vertical lines.

## CZECH AND LATIN MODIFIERS



Fig. 5.24

## LATIN AND ENGLISH MODIFIERS



Fig. 5.25
CZECH AND ENGLISH MODIFIERS


Fig. 5.26

CZECH, LATIN AND ENGLISH MODIFIERS

| P | C | S | H |  |
| :---: | :---: | :---: | :---: | :---: |
| $={ }^{\prime}{ }^{\text {F }}$ | 54.6 ${ }_{\text {a }}{ }^{ \pm}$ | = ${ }^{\prime}{ }^{\prime}$ |  |  |
| $43.6,56.4$ | $54.6,45.4$ | $45.1,54.9$ |  |  |

Fig. 5.27
It has already been mentioned in the analysis of the heads that the dependence of the Czech names on the Latin ones is higher than the dependence of the English names. Figs 5.24 to 5.26 confirm the same relationships for the modifiers. The degree of disagreement between Czech and Latin is lower than the degree of disagreement when English is compared with Latin or with Czech.

Fig. 5.27 summarizes data from the comparison of all three languages. When pairs of languages were compared, the percentages of disagreement in the category of properties ranged from 34.3 per cent in Czech \& Latin to 55.0 per cent in Czech \& English and in the comparison of all the three languages this percentage reached 56.4 per cent. Similarly, the percentages in the category of shape ranged from 25.2 per cent to 53.9 per cent and in the Czech \& Latin \& English comparison it reached 54.9 per cent. The respective figures for colour were 25.8 to 38.9 per cent and 45.4 per cent. In all these areas the percentage of
disagreement rose when the three languages were compared, which is the expected result.

The disagreements in modifiers are not surprising and its main source is variation within the three languages. Let us illustrate this by a few examples: the same species may be called hlizovitý (S) and zelený (C); lupenity (S) and dubový (H); obecný (ND) and žlutoprstenný (C); vysoký (S) and jedlý (P); jarní (T) and bily (C); larch (H) and grayish (C) and viscid (P); thick-foot (S) and scarletstemmed ( C ) and bitter ( P ); amethystinus ( C ) and calosporus ( P ); lacunosus ( S ) and cinereus ( C ); badius ( C ) and tumidus ( S ) and vaccinus ( P ), etc.

Variation in modifiers is not limited to the choice between colour, shape, property etc. We find variation within the areas of colour, shape, property etc. In the area of colour we may come across species which are purple-tipped and redtipped and pink-tipped; verdigris and blue-green and green; black and slategrey; blue-and-yellow and green; vermilion and orange and red; badius 'brown' and picipes 'pitch-black foot'; ryšavý and oranžové hnédý, etc. In the area of shape we find variation of the type collared - saucered; grooved - beaked; ramosus 'branched' - clathroides 'latticed' - coralloides; trubkovitý nálevkovitý - rohový. As for properties, a species may be waxy and lakcluster; hairy and shaggy and velvety; deceiving and luminous, etc. There are interesting cases of modifiers referring to the season when a mushroom grows. The Czech pair letní - svatojánský may be a case of hyponymy but the English pairs spring - summer and autumn - winter indicate a substantial difference.

In addition to variation between colour, shape, property etc and to variation in colour etc. we have a third type of variation in modifiers based on synonyms. A property of a species may be referred to as turdý or tuhý; smrdutý or zápašný; huñatý or vlnaty; smeared or greased; beautiful or handsome; the shape of a mushroom may be described as vysoky' or ztepily; straight or upright; shoestring or bootlace; hare's ear or donkey's ear; the colour of a fungus may be denoted as tygrovaný, panterový, pardálový in Czech, leopard, tiger in English (a different species from the Czech one), and pardalotus, pardinus, tigrinus in Latin.

The three types of variation have been demonstrated (i) on examples taken from two languages at a time, a few pages earlier, and (ii) on examples from the three languages taken separately, in the preceding paragraphs. We should add some more examples based on the comparison of the three languages. Before we do so, an explanation is due about Figs 5.24 to 5.27. The diagrams have to be very simple and distinguish only agreement and disagreement. The percentages of disagreement thus combine percentages of disagreement corresponding to the above-described two types of variation: between the areas of colour, shape etc and inside these areas. The two types of disagreement were dealt with separately in the text preceding the diagrams: the variation inside the area of colour, shape etc was mentioned as 'other colour', 'other shape' etc.

Variation in the choice of colours should not be surprising once we know something about mushrooms. Let us quote from some of the books: 'bright red to scarlet when moist, quickly fading as is dries to orange and finally yellow'

ARORA 1986.113, 'bright orange ... Several color forms occur, including one with an olive cap and another with yellow gills' ARORA 1986.113, 'yellowbrown, grey-brown, olive-brown to black-brown' DERMEK \& LIZON゙ 1980.432, 'olive-yellow, pale-brown, often yellow to yellow-orange, sometimes even pale carmine-red' DERMEK \& LIZOŇ 1980.418. ${ }^{43}$ Habitat has an important influence on the colour of the mushroom. The first example is a case of agreement and the other three are cases of disagreement: sulphur - chrysorrheus 'golden' - zlatomléčný; copper - olearius - olivový, olive-grey - olivaceoalbus - olivověžlutý, blue - aeruginascens - méděnkový. If the English name says 'apricot', the Latin name says 'pale reddish' and the Czech name says 'red' we accept this as agreement because apricots are of different colours.

When trios of names referring to the shape of a fungus are compared doubts may be raised as to the shape of some objects. The names club-shaped - saccatus - hruškovitý were classified as not identical because the shape of the sac(k) although 'club' and 'pear' look very similar. There is more similarity int the names bell - conicus - náprstkovitý, classified as 'agreement'.

Cases of disagreement among the names referring to some property of a mushroom are perhaps easier to classify. The names pear - pyriodorus 'pearscented' - jablečny', garlic - alliaceus 'garlic-like' - cibulový cannot be viewed as identical even if two of the names are in agreement and the three names have something in common. A stronger contrast justifying classification as 'disagreement' is present in the following names: curry-scented - camphoratus - kafrový, coconut-smelling -glyciosmus - sladkovonný and gera-nium-scented - felleus - žlučový.

When some names denoting the season were mentioned earlier the Czech pair letni - svajojánshý was regarded as a case of hyponymy and so can be the name March - marzuolus - jarni. The relationships in winter - brumalis řínový, however, cannot be viewed as hyponymy because October is not a winter month.

The examples quoted up to now were instances of variation within the areas of colour, shape etc. The following examples are instances of variation between the areas of colour, shape etc: nutshell (S) - pudicus ( P ) - zardélý (C), green (C) - furcatus (S) - bukovka (H), beechwood (H) - mairei (N) - nd́dherný (P). Two of the three may refer to the same area, either as in stump (S) - alcalinus ( P ) - louhovy ( $\mathrm{P}=$ ) with agreement or as in slender ( P ) - spumosus ( P -) - borovy $(\mathrm{H})$ with disagreement in the meaning within the area of properties.

When only two languages were compared a few pages above the whole area was usually divided into five groups: agreement and four types of disagreement. When three languages are compared the number of groups rises enormously and the percentages are very low. To make the following boring survey as short as possible only one example will be quoted for each type and the areas will be shown by an abbreviation. If two languages refer to the same area, the meanings

43 It is well known that habitat has an important influence of the colour of a mushroom.
may agree or disagree. Thus there are two levels of agreement and disagreement. The higher level is agreement and disagreement among the three languages within the area of colour, shape etc, the percentages of which are shown in Fig. 5.27, and the lower level is agreement and disagreement between two languages. If no percentage is given at the end of the line, it is lower than one per cent from the whole corpus. The percentages given with some examples, however, are percentages within the area of colour, shape etc, corresponding to the agreement - disagreement percentages given for every area. The starting language is Czech:


| crowned S coronatus $\mathrm{S}=$ smrkovy' H spring T aestivalis T- dubový H |  |
| :---: | :---: |
| summer T aestivalis $\mathrm{T}=$ dubovy' H |  |
| woodland H sylvestris $\mathrm{H}=$ bukon' $\mathrm{H}-$ |  |
| NAMES: AGREEMENT: | 19.0 per cent |
| Caesar's N caesareus $\mathrm{N}=$ cisarrský $\mathrm{N}=$ |  |
| NAMES: DISAGREEMENT: | 81.0 per cent |
| green-staining P abietimus H Invaliv N |  |
| orange C caesareus N cisarsh ${ }^{\text {aj }} \mathrm{N}$ |  |
| suburban H candolleams N Candolleiv N |  |
| salt-loving P bernardii N Bernardiv N |  |
| octopus S archeri N Archeriv N |  |
| tree H auriculus S Jidásion N |  |
| ear S arriculus $\mathrm{S}=$ Jidảsio N |  |
| NON-DESCRIPTIVE: AGREEMENT: | 5.1 per cent |
| common ND vulgaris ND obecríy ND |  |
| NON-DESCRIPTIVE: DISAGREEMENT: | 94.9 per cent |
| plum C prumulus $\mathrm{C}=$ obecrnj́ ND |  |
| common ND melaleucus Cobecn' ND |  |
| hard-skinned P citrinus C obecnj ND |  |
| razor-strop S betulimus H obecny' ND |  |
| litle S communis ND obecní ND |  |
| yellow C esculentus P obecn' ND |  |
| pine H ponderosus P ponderoskovy ND |  |
| common ND perlatus P obecný ND |  |
| false P igniarius P - obecmy ND |  |
| tinder P igniarius $\mathrm{P}=$ obecní ND |  |
| willow S igniarius P obecnj ND |  |
| May T esculentus P obecn' ND |  |
| sweetbread P orcellus S obecn' ND |  |
| thick-foot S pachypus $\mathrm{S}=$ hrísit' $^{\prime} \mathrm{ND}$ |  |
| PROPERTIES: AGREEMENT: | 43.6 PER CENT |
| sweet-scented P odorus $\mathrm{P}=$ vonnj' $\mathrm{P}=$ |  |
| PROPERTIES: DISAGREEMENT: | 56.4 PER CENT |
| black C badius 'brown' C - smolonohy' P |  |
| plum C prumuloides $\mathrm{C}=$ mechovkovity P |  |
| pine H rutilus C lepkeny P |  |
| delicious P lateritius 'brick-coloured' C pravy' P |  |
| mutshell S leucothites C zardèly P |  |
| horse P arvensis H ovčí P - |  |
| sorrel S orellamus H plysový P |  |
| larch H laricimus $\mathrm{H}=$ slizkj P |  |
| beechvood H mairei N nádherny P |  |
| warty P francheti N drsmy P - |  |
| Clinton's N clintoniamus $\mathrm{N}=$ s sličný P |  |
| orange-brown C volemus 'filling the palm' P syrovinka P - |  |
| purple C amarus P hořkj́ $\mathrm{P}=$ | 12.8 per cent |
| dunghill H speciosus P okázaly $\mathrm{P}=$ |  |
| waxy P laccatus P - lakov' $\mathrm{P}=$ | 9.3 per cent |
| bitter P scrabrosus 'rough' P - hořky' $\mathrm{P}=$ |  |

porvder-puff P torminasus 'causing dysentery' P - kravsky' P -
weeping P lacrymabunchum $\mathrm{P}=$ sametová P - $\quad 4.6$ per cent
clustered S hydrophilus P vodomilný $\mathrm{P}=\quad 7.6$ per cent
maned S comatus 'hairy' P obyčejn' P-
spring T semiliber P polovoln' $\mathrm{P}=$
yellow-stalk C epipterygius 'with a small wing' S slizky P
Canadian H tuberaster S slepák P
common ND galericulatus 'capped' S tuhonohy' $\mathbf{P}$
nitrous P leptocephalius 'with a fine head' S ojinenny' P -
Ben's bitter P radicans S medotrpky $\mathrm{P}=$
scurfy S macropus 'long' S-py̌rity' P
fused S confluens $\mathrm{S}=$ statmy P
SHAPE: AGREEMENT: 45.1 per cent
bell S campanellus $\mathrm{S}=$ zvonečkov' $\mathrm{S}=$
SHAPE: DISAGREEMENT:
54.9 per cent
white C albus C=kadeřany S
field H pratensis $\mathrm{H}=$ stlačeny' S
common ND pratensis 'meadow' H stlačeny'S
stalked S rhenamus 'Rhine' H krákostopkaty S=
candle-smuff'S hypoxylon ‘under wood' H parohaty' S-
purple Cpurus P redkvickovy S
pig's P perlatus P - chřapácovy' S
friendship P socialis $\mathrm{P}=$ bezprstenny' S
giant S corius 'leatherly' P huézdicovity' S -
hoof S fomentarius 'tinder' P kopytovity' S=
gray C placomyces ‘flat' S perličkovy' S-
sulphur C fascicularis S svažitýS $=$
pine-fire H inflatus S nadmutý $\mathrm{S}=$
King Alfred N concentricus S louhatý S=
common ND semiorbicularis S polokulovity' S=
naked P involutus S podvimuty $\mathrm{S}=$
chambered S sphaerocephalus S- kulohlavy S-
bishop's S mitra S= jamkaty S-
autumn T infundibuliformis S nálevkovitý $\mathrm{S}=$
perennial T perennis $\mathrm{T}=$ pohárkovity' S
TIME: AGREEMENT:
12.5 per cent
3.7 per cent
winter T brumalis $\mathrm{T}=$ zimni $\mathrm{T}=$
TIME: DISAGREEMENT:
13.1 per cent
10.5 per cent
5.7 per cent
pinewood H hypothejus 'like sulphur' C pomrcazka T
dingy P portentosum P- havelka T
scurfy S furfiracea $\mathrm{S}=$ zimni T
English Haestivus T letni T =
destroying P verna T jarni $\mathrm{T}=$
stalked S brumale T zimni $\mathrm{T}=$
winter T brumalis $\mathrm{T}=$ rijinová T -

### 1.1.2.4 Formal analysis of modifiers

There are two basic types of modifiers in the English names of mushrooms: adjectival and nominal. The adjectival modifiers form a small majority over the nominal ones in the ratio of 56 to 44 per cent.

The adjectival modifiers are further divided into one-adjective modifiers, the strongest single group with 37.4 per cent and two-adjective modifiers with 12.2 per cent of the whole modifier corpus. Half of the two-adjective modifiers are cases of -ed derivation, eg green-tipped, purple-spored, hard-skinned, hol-low-stemmed, and a quarter of them designate colour combinations, eg black and purple, blackish purple, black purple. The smallest group of adjectival modifiers with only 6.4 per cent is formed by noun-adjective combinations, eg pestle-shaped, salt-loving, saw-gilled, sea-green. The -ed derivations are again the strongest group here.

A similar division applies to the nominal modifiers. One-noun modifiers are the strongest type with 25.4 per cent of the whole modifier corpus. Then there are two smaller types, the adjective-noun combination with 8.5 per cent and the noun-noun combination with 5.3 per cent. The first of these can exemplified by brown birch, brown cone, brown ear, brown funnel, brown hay, brown ring, brown stain, and the second one by gas-tar, goat moth, goat's lip, horse tail, jelly antler, Jersey cow. The smallest group in the nominal type of modifier are the possessive forms with 4.8 per cent.

The division into adjectival and nominal types of modifiers in English, with some of the larger sub-type, is shown in the following diagram to which are added the respective diagrams for Czech and Latin. The difference between English on one side and Czech and Latin on the other is very obvious.

ENGLISH MODIFIERS


Fig. 5.28
CZECH MODIFIERS


Fig. 5.29

## LATIN MODIFIERS



Fig. 5.30
The 6.5 per cent of Czech nominal modifiers indicated in diagram 5.29 is composed of 4.5 per cent of nouns and of 2.0 per cent of genitives. The nouns serving as modifiers are rare yet worth enumerating:
holubinka bukovka, ryzec černohlávek, čirivka havelka, hřib kolodéj, ȟ̌ib kovär, krásnoporka kozi noha, hrïb hrísti, ciriivka májovka, krásnoporka mlynáťka, strmélka mlżenka, choroš orís, Stavnatka pomrazka, muchomirka rizovka, hrib satan, choros's slepák, hrib strakoš, ryzec syrovinka, holubinka vrhavka, čirivivka zeld́nka, hři žlučnik.

Half of the Latin nominal modifiers are nouns, eg brevipes, caput ursi, cornucopiae, pes caprae, and half are genitives or possessive forms, eg archeri, judae, georgii, mariae.

The basic distribution of modifiers as done above was the first step in the formal analysis. The second step is concerned with word-formation processes. The nominal modifiers were described in the first step and thus only the adjectival modifiers are to be analysed.

The high frequency of the -ed suffix meaning 'having' was already mentioned above for the two-adjective and the noun-adjective modifiers. The -ed derivations occur also in the one-adjective type, eg gemmed, gilded, gilled, granulated, greased, grooved, hooded. They are not the strongest group this time. About half of the one-adjective modifiers are non-derived adjectives and among the derived adjectives the two most conspicuous types are the -ed and $-y$ derivations, with 14.1 and 11.6 per cent respectively of the adjective-modifier corpus. The following diagram, however, gives the percentage of the -ed derivation at 32.8 because the data for two-adjective, noun-adjective and oneadjective modifiers have been consolidated into one figure. The -ed adjectives are the strongest type among the derivations and their percentage is higher than that of the rest taken together. The runner-up, with 10.7 per cent, is the $-y$ suffix meaning 'somewhat like' or 'characterized by', eg flaky, fleecy, greasy, hairy.

The main percentages in the English adjectival modifiers are summarized in Fig. 5.31 printed further on together with the diagrams for Czech and Latin.

In a number of the English names we find competition between various word-formation processes, usually in the synonymous names referring to the same species: (i) converted nouns compete with derived adjectives: PEPPER bolete - peppery bolete, POISON pie - poisonous mushroom (both referring to Hebeloma crustuliniforme, slzivka oprahlá), SNOW morel, snow mushroom (Gyromitra gigas, ucháč obrovský) - snowy meadow cap, snowy wax cap (Hygrocybe nivea, stłavnatka sněžná), SOAP tricholoma - soapy tricholoma; CLUSTER crumble cap - clustered psathyrella (Psathyrella hydrophila, kře-
hutka vodomilná), LATTICE stinkhorn - latticed stinkhorn. (ii) converted nouns compete with adnominal cases: COW boletus (Suillus bovinus, klouzek kravský) - cow's head (Morchella hybrida, smrž polovolný), DOG stinkhorn - dog's stinkhorn, DONKEY ears - donkey's ears, HAYMAKER mushroom haymaker's toadstool. (iii) two suffixes compete: CLOUDY cap, cloudy funnel cap - clouded agaric, clouded mushroom (all referring to Clitocybe nebularis, strmělka mlženka), GREASY club foot (Collybia butyracea, penizovka máslová) - greased web cap (Cotinarius collinitus, pavučinec modronohý), CRACKING - cracked: red-cracking bolete, red-cracked bolete. (iv) the competition is between two verbal bases (in English, at least): DECEIVING clitocybe (Pleurotus olearius, hliva olivova) - deceptive lactarius (Lactarius deceptivus, ryzec klamný), DESTROYING angel (Amanita virosa, muchomůrka jizlivá) destructive pholiota (Pholiota destruens, šupinovka zhoubná). (v) in one case three different forms compete: LEATHER earthscale (Agrocybe erebia, polnička lysá) - leathery mycena (Mycena galericulata, helmovka tuhononá) leatherly panus (Panus torulosus, parezník pletový). There are not sufficient cases of competition for any thorough analysis but even so some of the forms can be explained, eg cow's head is like bear's head in that they refer to a typical shape of head while cow bolete is a bolete for cows or of a colour typical of a cow. Destructive Pholiota and Deceptive Lactarius are based on the Latin names. Donkey Ears seem to be an exception because in all the other cases the adnominal form is used: Elephant's Ears, Hare's Ear, Jew's Ear(s), Juda's Ear, Pig's Ears.

While in the English modifiers eight derivational suffixes were used in the Czech modifiers their number is thirteen and their frequency is distributed between 22.4 to 0.2 per cent. Another difference between the English and the Czech modifiers is the rarity of competition in Czech. We found siškový - šiškovitý and ředkvickový - ředkvickovitý. The situation in Czech corresponds to the situation in Latin where the cases of competition are also very few: dryadeus - dryinus, cornucopiae - cornucopioides. The explanation is clear from what has been said about the mushroom names in Czech and Latin on one hand and in English on the other. The Latin systematic, artificially arranged terminology is reflected in the Czech names while in English the names are more independent of Latin.

Not all cases of derivation in the Czech modifiers are in agreement with the general usage. While špičatý, ušatý, plstnatý can be regarded as acceptable forms, kruhatý, hroznatý, vlnatý, skvrnatý do not fit into the derivational pattern and should be replaced by kruhovitý, hroznovitý, vlnitý, skrvnitý. We have similar feelings when we look at some of the Czech compounds: hlinožluty, rýhonohý, snéhonohý. The necessity to condense two meanings into one word resulted in compounds which have no counterparts in standard Czech, eg rakočervený, kostkoruký, modroruký.

ENGLISH ADJECTIVAL MODIFIERS

| NON-DERIVED | -ed | $-y$ |  |
| ---: | ---: | ---: | ---: | ---: |
| 41.7 | 32.8 | 10.7 |  |

Fig. 5.31
CZECH ADJECTIVAL MODIFIERS

| NON-DERIVED |  |  |  |  |  |  |
| ---: | :---: | :--- | :--- | :--- | :--- | :--- |
| 31.1 | -ový | 22. 4 | 11 | -ov <br> itýy |  |  |

Fig. 5.32

## LATIN ADJECTIVAL MODIFIERS

| NON-DERIVED | atus |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 49.7 |  | osus |  |  |  |  |

Fig. 5.33
As the diagrams cannot show all the percentages we list the figures here:
ENGLISH: non-derived 41.7, -ed 32.8, -y 10.7, -ing 8.4, -ish, -ly, -an, -en 6.3 per cent.
CZECH: non-derived 31.1, oový 22.4, -ný 11.4, -ovitý 10.2, -atý 6.3, -ý 5.3, -itý 3.1, -ní 2.9, -ský, -aný, $-i,-i v y^{\prime},-c ̌ c_{i},-t y^{\prime} 6.3$ per cent.

LATIN: non-derived 49.7, -atus 11.6, -osus 7.2, -inus 5.5, -eus 4.5, oides 3.1, aceus 3.0, -arius 2.6, -ius 2.2, and 19 other suffixes 10.6 per cent.

### 1.2 Names as naming units

### 1.2.1 Frequency of names

The following survey is based on the occurrences of common English names in English popular books about mushrooms. A similar survey for Czech and Latin is not necessary because every species has a Latin name and every species mentioned in a Czech popular book has a Czech name, as has already been mentioned several times.

The indexes of common names in fourteen English books were compared and only three names appeared in all of them: Death Cap, Amanita phalloides, muchomůrka zelená; Fly Agaric, Amanita muscaria, muchomůrka červená; Honey Fungus, Armillaria mellea, václavka obecná. In the first two cases we can speak of an identity between a species and a name. Such an identity is not characteristic of this type of count, however as the third name shows. Honey Fungus is used in eleven books, two books use Honey Mushroom and one book uses three synonyms: Honey Mushroom, Honey Agaric, Honey Armil-
laria. The species has other English names, though less frequent ones: Honey Tuft Fungus, Bootlace Fungus, Bootlaces, Shoestring Agaric, Shoestring Fungus, Oak Fungus. It is obvious then that this type of count records names only and that if some kind of species frequency were to be done for the Englishspeaking countries, the Latin names would have to be used. The Honey Fungus/Mushroom/Agaric is also an example of what is understood by a name of a mushroom. If two or three names referring to the same species differ only in the presence of Fungus or Mushroom or Agaric, the names are counted as one naming unit. This rule also means that cases like Panther and Panther Cap are regarded as two different names (referring to the same species).

One name, Sulphur Tuft (Hypholoma fasciculare, tfepenitka svazčitá), appears in thirteen books and six names are used in twelve of the fourteen books, not in the same twelve, though: The Blusher (Amanita rubescens, muchomůrka růžovka), False Chanterelle (Hygrophoropsis aurantiaca, lištička pomerančová), Field Mushroom (Agaricus campestris, peđárka polní), Horn of Plenty (Craterellus cornucopioides, stroček trubkovitý), Oyster Mushroom/Fụngus (Pleurotus ostreatus, hlíva ústřičná), Parasol Mushroom (Macrolepiota procera, bedla vysoká). The fourth position according to frequency belongs to six names with eleven occurrences: Chanterelle (Cantharellus cibarius, liška obecná), Destroying Angel (Amanita virosa, muchomůrka jízlivá), Giant Puffball (Calvatia gigantea, pýchavka obrovská), Horse Mushroom (Agaricus arvensis, pečárka ovčí), Orange Peel Fungus (Aleuria aurantia, mísenka oranžová), Shaggy Parasol (Macrolepiota rhacodes, bedla červenajíci). The following three names appear in ten books: Cauliflower Fungus (Sparassis crispa, kotrč kadeřavý), Liberty Cap(s) (Psilocybe semilanceata, lysohlávka kopinatá), Witches' Butter (Exidia glandulosa, černorosol bukovy). The rest of the frequencies is to be given in a brief survey only:
Nine books: 9 names: Beefsteak Fungus, Cep, Dryad's Saddle, Earthstar, St. George's Mushroom, The Sickener, Tawny Grisette, Wood Blewit, Yellow-staining Mushroom. Eight books: 14 names: Birch Polypore, Bird's Nest Fungus, Blackening Russula, Candle Snuff (Fungus), Common Inkcap, The Deceiver, Fairy Ring Champignon, False Death Cap, Lawyer's Wig, The Miller, Red-cracked Boletus, Saffron Milk Cap, Shaggy Ink Cap, Woolly Milk Cap.
Seven books: 13 names: Amethyst Deceiver, Blewit, Brown Roll Rim, Dead Man's Fingers, Dung Roundhead, False Morel, Grisette, Jew's Ear, ${ }^{44}$ Morel, Poison Pie, Rooting Shank, Stinkhorn, Ugly Milk Cap, Wood Woolly Foot.
Six books: 14 names: Caesar's Mushroom, Common Pumball, Dog Stinkhorn, Earth Tongues, Fetid Russula, Glistening Ink Cap, Horsehair Toadstool, Pear-shaped Puffball, Penny Bun, Rufous Milk Cap, Shaggy Pholiota, Slippery Jack, Spindle Shank, Weeping Widow.
Five books: 20 names: Brown Birch Boletus, Chicken of the Woods, Clouded Agaric, Coral Fungus, Earth Balls, Emetic Russula, Fawn Pluteus, Jack O'Lantern, King atfred's Cakes, Larch Boletus, Little Wheel Toadstool, Oak Milk Cap, Old Man of the

44 The better name of the species Juda's Ear, appears in only two books.

Woods, Panther, Slimy Milk Cap, Split Gill, Spotted Tough Shank, Velvet Shank, Yellow Brain Fungus, Yellow Cow-pat Toadstool.
Four books: 25 names: Bay Boletus, Bitter Bolete, Brick-Red Hypholoma, Broad-gilled Agaric, Common White Inocybe, Common Yellow Russula, Dry Rot Fungus, Ear Pick Fungus, Fairy Ring Mushroom, Jelly Babies, Lilac Mycena, Panther Cap, Pine Spike Cap, Red-banded Cortinarius, Russet Shank, Shaggymane, Soap-scented Tricholoma, Soft Slipper Toadstool, Sulphur Tricholoma, Tawny Funnel Cap, Tinder Fungus, Trooping Crumble Cap, White Truffle, Wood Hedgehog, Yellow-cracked Boletus. Three books, two books, one book: the rest of the corpus.

The appearance of a name in more books on mushrooms is an indication of the popularity of that name. There is yet another way how the popularity of a name is shown: the same name is used to refer to different species. This kind of homonymy does not exist in the official terminology but is frequent with popular names and will be discussed further on in this chapter. The homonymy among the English names is similar to the homonymy of the popular names but is not based on popular usage as the following list of names shows. All the names are binominal and the authors of the homonyms must be writers on mushrooms. Most of the names are used to refer to two species but there are exceptions referring to three species.
Birch Boletus 2, Blackening Russula 2, Bleeding Agaric 2, Chestnut Boletus 2, Common Puffball 3, False Morel 2, Field Mushroom 2, Forest Mushroom 2, Fork-gilled Russula 2, Garlic Marasmius 2, Green Russula 3, Honey Fungus 3, Horsehair Fungus 2, Larch Boletus 2, Orange-Cap Boletus 2, Orange Peel Fungus 2, Pear-shaped Puffball 2, Pigs' Ears 3, Pine Cone Fungus 2, Purple Russula 2, Red Trufle 2, Ring Agaric 2, Scarlet Elf Cup 2, Scarlet Wax Cap 2, Stone Fungus 2, Tinder Fungus 2, Tufted Collybia 2,Witches' Butter 3, Yellow Pholiota 2, Yellow Wax Cap 2.

It has been mentioned several times that some species have more than one name. The highest numbers of synonyms for a species are among the popular names, eg 33 Czech popular names for Larch Boletus 1, Suillus elegans, klouzek sličný, or 33 English popular names for Common Puffball 1, Lycoperdon perlatum, pýchavka obecná. The numbers in the official names are lower as the following list of the English synonyms will show. To save space and to make the boring passages as short as possible, only species with ten to eight names are printed here because the lists for names with seven, six etc synonyms would be long and would gradually grow in length up to very long list of names with two or one name.

10
Hedgehog Fungus/Mushroom, Common Hydnum, Repand Hydnum, Spreading Hydnum, Yellow Spine Fungus, Spreading Hedgehog, Wood Hedgehog, Wood Urchin, Urchin of the Woods, Pig's Trotter

Elephant's Ears, Beefsteak Morel, Brain Gyromitra, False Morel 1, Lorel, Lorchel, Turban Fungus, Turban Top, Edible Gyromitra, Brain Mushroom

Anise Cap, Anisescented Clitocybe, Aniseed Toadstool, Anise Funnel Cap, Fragrant Agaric, Fragrant Clitocybe, Sweet-scented Clitocybe, Blue-Green Clitocybe, Sea-Green Clitocybe, Blue-Green Anise Mushroom

## 9

Saddle Cap, Saddle Back, Common White Helvella, Crisped Helvella, Fluted White Elfin Saddle, Fluted White Helvella, White Morsel Fungus, White Helvella, Wavy Lorchel

Staghorn Fungus, Antler Fungus, Sticky Coral Fungus, Stag's Horn Fungus, Jelly Antler Fungus, The Beautiful Horn, Yellow Tuning Fork, Staghorn Jelly Fungus, Coral Jelly Fungus

Bishop's Mitre, Black Morel Fungus, Black Helvella, EIfin Saddle, EIf's Saddle, Lacunose Helvella, Slate-grey Helvella, Fluted Black Helvella, Fluted Black Elin Saddle

Chicken Mushroom, Chicken of the Woods, Sulphur Bracket Fungus, Sulphur Fungus, Sulphur Polypore, Sulphur Shelf, Sulphur Shelf Mushroom, Sulphurous Mushroom, Yellow Bracket Fungus
8
Brown Birch Boletus/Bolete, Rough-stemmed B, Cow Fungus, Birch Rough Stalks, Rough Stalks, Common Scabre Stalk, Birch Scabre Stalk, Birch Bolete 1

Deer Mushroom, Deer Pluteus, Deer Toadstool, Fawn Agaric/Mushroom, Fawn Pluteus, Fawn-colored Pluteus, Common Fawn Agaric, Common Fawn Pluteus

Buff Cap(s), Buff Meadow Cap, Butter Mushroom, Butter Meadow Cap, Meadow Cap, Meadow Hygrophorus, Meadow Wax Cap, Salmon Wax Cap

Fairy Club Fungus, Club Clavaria, Large Club Clavaria, Dryad's Club, Giant Club, Fairy Club, Pestle-shaped Coral, Common Club Coral
Shaggy Milk Cap, Woolly Milk Cap, Woolly Lactarius, Poisonous Lactaria, Griping Toadstool, Pink-fringed Milk Cap, Powderpuff Milk Cap, Bearded Milk Cap

Shaggy Inkcap, Shaggy Mane, Shaggy Mane Mushroom, Shaggy Cap, Horsetail Agaric, Horsetail Mushroom, Lawyer's Wig, Maned Mushroom

### 1.2.2 Size of names

The Czech and the Latin names are all of the same size, consisting of a head and of a modifier. The English names range from one to five words. As the analysis concerns the English names only, without comparison with Czech or Latin, the names from the No Czech Equivalent Corpus have been added to the English names from the Main Corpus. Thus the total number is 1,820 names, out of which there are 37 one-word names, 1,161 two-word names, 562 three-word names, 59 four-word names and one five-word name. Fig. 5.34 shows that nearly two-thirds of the English names are two-word units.

## SIZE OF ENGLISH NAMES

| TWO WORDS |  | THREE WORDS |  |
| ---: | ---: | ---: | ---: |
|  | 63.8 | 30.9 |  |

In the count, hyphenated compounds, eg red-capped, blue-green, were regarded as one word. Compounds like inkcap were also regarded as one word and so were other names ending in cap even when spelled as two words, eg Butter Cap, Cone Cap, Crumble Cap, Death Cap, Dunce Cap, Funnel Cap, Meadow Cap, Milk Cap, Wax Cap.

The average length of an English name is 2.35 words, which does not differ substantially from the Czech and the Latin names.

The one-word names are either non-descriptive mushroom names, eg blewit, cep, chanterelle, grisette, morel, stinkhorn, or derivatives in -er, eg the blusher, the deceiver, the miller, the sickener, the stinker. Other names with the definite article are the goblet, the gypsy, the panther, the princess, the prince.

### 1.2.3 Word order in the names

The Latin names are of a model well known from other branches of science and introduced by LINNAEUS: the head comes first because it refers to the genus and is followed by a modifier which decides the species. In Czech, this word order separates the technical terms from common collocations, eg doba bronzová, zzláza přestojná, jelen sika from dnešní doba, levá noha, mladý jelen.

The modifier always precedes the head in the English names even when the English names are lexical calques of the Latin names, eg Frondose Polyporus - Polyporus frondosus, Lacunose Helvella - Helvella lacunosa, Emetic Russula - Russula emetica. The strict observance of the modifier - head order in English is in contrast with Czech where the Latin word order was taken over into the Czech official terminology and, as an exception, even appears in Czech popular names, eg holóbek fialový (but also fialový holoubek).

## 2. CZECH AND ENGLISH POPULAR NAMES

### 2.1 Czech names

A list of 1,100 Czech and Slovak popular names was compiled and analysed by SEBEK (1968). SEBEK analysed the meanings of the Czech and Slovak names with the following results: 65 per cent of the names denote properties of the mushrooms, 18 per cent denote the habitat, the way and the time of growth and the remaining 17 percent are other cases. The 65 per cent of names describing properties is further divided into names denoting colour ( 20 per cent), shape and surface (19 per cent), the properties of the flesh, such consistence, colour, including the colour of the milk, then the smell and the taste of the flesh ( 14 percent), and the quality of the mushrooms ( 12 percent).

As ŠEBEK partly applied criteria different from ours and as he included Slovak names, his list has been re-analysed.

When the Slovak names have been left out, the list contains 973 names of 163 species.

As Fig. 5.35 shows, the basic distribution of the areas of meaning of the popular names is similar to that of the official names, shown in Figs. 5.22 and
5.23, repeated here for the convenience of the reader. There are three strong groups: properties, eg hořcák, sladäk, panský hřib, psi houby, colour, eg žlutý janek, krvák, modřinka, rezoun, and shape, eg drštky, hnáty, palazór, dédkovo štětky, zaječí vejce. The fourth strongest group are names which cannot be deciphered as to their meaning, eg bolsevįk, mulička, porchovka. Habitat is described in 11.6 pert cent of the names, eg dubová špička, luční hřib, bučák, meznička, podlipnik.

## CZECH HEADS

| S 38.6 | $\frac{\mathrm{P}}{22.8}$ | $\begin{gathered} \mathrm{C} \\ 18.2 \end{gathered}$ | ND 20.3 |
| :---: | :---: | :---: | :---: |

Fig. 5.22

## CZECH MODIFIERS

| $\mathrm{P}_{28} .2$ | $\mathrm{C}_{28}$ | S | H |
| :--- | :--- | :--- | :--- |

Fig. 5.23

## CZECH POPULAR NAMES

| P 28.4 | $\begin{aligned} & \mathrm{C} \\ & 20.2 \end{aligned}$ | $\begin{gathered} \mathrm{S} \\ 17.9 \end{gathered}$ | $1 \stackrel{?}{2} .8$ | H 11.6 | T | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Fig. 5.35
An important feature of popular names has been pointed out by SEBEK: the popular names do not represent a systematic taxonomy. Various species are given the same name because they share one of the features, eg the flesh of the mushroom turns blue when damaged. ŠEBEK speaks of group names. We can add here that in popular usage the same name may be used for a plant and a mushroom, eg babka, biskupské čepičky, cikánka, dragoun, fajfky, kravák, lerpánek ${ }^{45}$ (see under 2.4 further on).

ŠEBEK offers an interesting explanation of a number of names referring to animals, eg hadí, koňshý, psí, žabí. They all indicate inferior quality of the mushroom.

According to SEBEK, about two per cent of the Czech popular names are of foreign origin, mostly German: aufserák < Aufseher, rutkup < Rotkopf. Some Polish names were taken over into Czech popular names in the border areas, eg gemba, gad'or.

[^4]Two features are noticeable in ŠEBEK's lists: synonymy and specialization. Examples of synonymy, however, should be researched in the field in more detail: Stinkhorn, Phallus impudicus, hadovka smrdutá, is called hadí vejce or jeleni skok or kobyli vejce in the Domažlice area, Man on Horseback, Tricholoma flavovirens, čirùtka zelánka, is called housátka or safránka in the Jilemnice area. The other feature, specialisation, seems to be more general. Let us quote three cases: (i) the name cikánka refers to The Gypsy, Rozites caperata, sluka svraskalá, in the Plzen̆ area and to Sooty Milk Cap, Lactarius lignyotus, ryzec černohlávek, in the Sázava area. In the Plzeň area, Lactarius lignyotus is then called kominiček. (ii) Tricholoma flavovirens is called kateřinka in the area of Ceský Krumlov and zelánka in the Nymburk area, where the name kateřinka denotes Blewit, Lepista personata, čirůvka dvoubarvá. (iii) Phallus impudicus has three names in the Domažlice area, as has already been mentioned: hadí vejce, jelení skok, kobylí vejce. In the Svitavy area, jelení skok denotes Deer Truffle, Elaphomyces granulatus, jelenka obecná, and so Phallus impuldicus is called smradoch there.

The size of the Czech official names is given by the dependence on the Latin names: two words, a head and a modifier. The popular names are shorter, their average length being 1.2 word.

SIZE OF CZECH POPULAR NAMES

| ONE WORD |  |  |
| ---: | ---: | ---: |
|  | 76.2 | TWO |

Fig. 5.36
Fig. 5.36 also shows that there are no Czech popular names consisting of three or more words.

### 2.2 English names

The number of English popular names available for analysis is much smaller than the number of the Czech names. The list of popular names in BRITTEN \& HOLLAND contains 106 names, including varieties of the same names like flab flaps, champillion- shampillion, deil's snuffbox - devil's snuffbox, fuss-ball -fuzz-ball - furze-ball, etc. Devil's snuffbox is also an example of overlapping between the 106 names from BRITIEN \& HOLLAND and the names as recorded in the main corpus. This is not a disadvantage in the end because some of the names from the main corpus will be included in the present analysis of the popular names. When these names were analysed in the previous chapters, it was done in contrast to the Czech and Latin names. In this chapter no direct comparison based on individual species is to be done. The Czech popular names were analysed as an independent corpus and the English popular names will be also analysed as an independent corpus.

The selection of the names from the main corpus is based on the nonidentity with the official Latin names, either in form, ie one-word English names like The Blusher are regarded as popular, or on meaning, eg Hen of the Woods is not identical with Polyporus frondosus, while Frondose Polypore is, or Stinking Parasol is not identical with Lepiota cristata but Crested Lepiota is fully identical with the Latin name and Crested Parasol Fungus is partly identical. The corpus of English popular names thus contains 374 names.

The English popular names reflect some of the myths about mushrooms: Amanita Muscaria, muchomůrka červená, is not only called Flybane but also Bug Agaric because it was smeared over bedsteads to destroy bugs. The fairies supply some more names in addition to those mentioned earlier: Fairies's Bath, Fairies' Table, Fairy Butter. Blind Ball, Blind Buff, Blind Harry, Blind Man's Ball, Blind Man's Bellows, Blind Man's Buff, Blind Man's Een are all names for the common puffball because people used to believe that it caused blindness if placed too close to the eyes.

As with the Czech names, we find the same name used for a different species in various parts of England: Jew's Ear refers, as it should, to Hirneola auricula-judae, ucho Jidásovo, but also to Scarlet Cup, Peziza coccinea, ohnivec Šarlatovy, in Cumberland, Devon and Suffolk, and to Scented Elf Cup, Peziza venosa, kustfebka žilnatá, in Yorkshire. Frog Cheese is the popular name of a boletus in Northamptonshire and of a puffball, also in Northamptonshire. Flaps mean either Field Mushroom, Agaricus arvensis, pecárka polní, in East Anglia, or Peziza cochleata in Yorkshire.

When the English popular names are classified according to their meaning, names referring to the shape, the properties and the colour of the species form the strongest groups, as was the case in all the previous analyses. The proportions of the three, however, differ distinctly from one another. The names describing the shape are the strongest with 35.3 per cent, 29.7 per cent of the names describe the properties and only 19.8 per cent of names describes the colour. These result are summarized in Fig. 5.37 and can be compared with the distribution of meaning in the officials names in Figs 5.18 and 5.19.

## ENGLISH HEADS

| S | 41.5 | 13.2 | M |  | ND 34.0 |
| :---: | :---: | :---: | :---: | :--- | :--- |

Fig. 5.18

## ENGLISH MODIFIERS

| C 29.6 |  | $P^{2}$ |  |
| :---: | :---: | :---: | :---: |

Fig. 5.19

## ENGLISH POPULAR NAMES

| S 35.3 | P 29.7 | $\begin{aligned} & \mathrm{C} \\ & 19.8 \end{aligned}$ | $9 ?$ | H |
| :---: | :---: | :---: | :---: | :---: |

Fig. 5.37
The size of the English popular names does not differ substantially from the size of the official names as far as the two-word names are concerned, as Figs 5.34 and 5.38 show. The one-word popular names are much stronger, their percentage being 19.2 while in the official names it was only 2.0 . The gains in this group are made up by the losses in the three-word group.

## SIZE OF ENGLISH OFFICLAL NAMES



Fig. 5.34

## SIZE OF ENGLISH POPULAR NAMES

| TWO WORDS |  | ONE | THREE |
| :---: | :---: | :---: | :---: | :---: |
|  | 58.2 | 19.2 | 17.1 |

Fig. 5.38
The average length of an English popular name is 2.08 words while the average length of an English official games is 2.35 words.

### 2.3 Frequency of popular names

The list of names in the main corpus show that most Czech popular names refer to various boleti, which is given by their popularity as food. Among the English names, the clear winner is the Common Puffiball, Lycoperdum perlatum, pýchavka obecná. In this respect Czech and English are in agreement because the number of Czech popular names for a puffball is comparable with the boleti. The explanation is in the shape of the mushroom and in the fact that it can be spotted very easily.

### 2.4 Names of mushrooms and names of plants, living creatures and things

Both in Czech and in English we find popular names of mushrooms which are polysemous because they refer to plants as well. Bishop's Mitre is also a name of a bug, Goat Moth and Grisette are names of moths ${ }^{46}$, Dead Man's Fingers is a

[^5]name of a coral. Bird's Nest, Canker, Earth Nut, Elephant's Ears, Frog Cheese, Goat's Beard, Hare's Ear, Old Man's Beard, Oxtongue, Pick-a-back are names of plants. Dead Men's Bellows refers to three plants, according to BRITTEN \& holland: Ajuga reptans, Digitalis and Pedicularis sylvatica. Jelly Baby is a small sweet made from a gelatinous substance formed to resemble a baby in shape'.
The following Czech popular names of mushrooms are identical with Czech popular names of plants:
babka, biskupské Cepičky, cikánka, čertovo lejno, doutnik, dragoun, dubovky, dubravnik, fajfky, hedvábnice, housáika, jeleni rižek, jeleni skok, kalhotky, kamenác, kartofel, kohouthy, kozi brada, kozi cecek, kozička, kravák, lerpánek, májovka, mllčñák, modrák, mysí ouška, pantofliček, pazourky, pocestnik, podliska, podzemek, prasivec, psi zub, pẏřavka, růzicka, řebiček, slepičky, smetánka, šedivka, tanečnice, topolovka, traviny, turek, tvarožnik, verpán, volshýjazyk, voñavka, vrani oko, zemák, zvonek, żlučnik.

Many of these names are general names referring to the colour or to the shape of the referent, which can easily be nearly any plant. This is confirmed by the fact that some of the names refer to more than one plant.

## 3. THE USE OF PROPER NAMES

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In this chapter we will continue in the remarks scattered in the previous chapters on the origin of the mushroom names and we will compare the subject field of mushrooms with the subject fields of stars, textiles and domestic fowl. ${ }^{47}$ The comparison, however, is to be very limited in scope because it will deal only with the use of proper names in the formation of technical terms within these fields.

### 3.1 Introduction

There are many well-known examples of common nouns derived from proper names, both in English and in Czech: E. boycott, china, Cz. hotentot, manšestr. Many other words of this types are not so transparent, eg saxophone (Adolph Sax, 1814-1892, a Belgian musical-instrument maker, who invented it), praline (César de Choiseul, comte de Plessis-Praslin, 1598-1675, whose cook invented it), E. coach, Cz. kočár (Kocs, a village in Hungary where coaches were first made in the sixteenth century).

The names may be names of persons, names of nations, geographical names, and trade names. The names of persons are usually names of those who invented a new thing or who came up with a new idea: guillotine (Joseph-Ignace Guillotin, 1738-1814), shrapnel (General Henry Shrapnel, British soldier, 17611842), both not very humane inventions, mackintosh (Charles Macintosh, 17601843), mansard (François Mansard, 1598-1666), silhouette (Étienne de Silhouette, 1709-1767), Cz. grázl (Johann Georg Grasel, murderer from the beginning of the nineteenth century, imprisoned at Špilberk), Cz. brajgl (Pieter Breughel the Elder, Peasant Breughel, c.1525-1569), Cz. montgomerák (an army-style raincoat fashionable in Czechoslovakia after WW2, called after the famous British commander; renamed to Dukla plást' after the Communist coup in 1948; the fashionable coat after WW1 was trenčkot <trench coat) and to remain in the area of fashion and warfare, the British commander in the Crimean war was Lord Raglan, 1788-1855.

The derivations from names are very transparent in the names of minerals: Rutherfordin, Woodhouseit, Nováčekit, Rosickýit.

When names of nations are changed into common nouns or used as attributes, the reason may not be very polite: Cz. and E. vandal, bohemian, Cz. cikán (= a liar), flamendr, hotentot, huronský řev, rus, šváb, tatar, E. apache (from French), German cockroach, Scotch coffee ('hot water flavoured with burnt biscuit'). In contrast to general expectation, it is not the French who lead the table with negative qualities in English but the Dutch: Dutch act ('desertion, escape, suicide' in American slang), Dutch courage (temporary boldness induced by drinking alcohol), Dutch feast (at which the host gets drunk before the guests), Dutch lunch and Dutch treat (each person pays for his or her own share of the expenses), Dutch reckoning (faulty reckoning), Dutch uncle (authoritative person), Dutch wife (artificial sexual partner). The long tradition of these collocations is indicated by a quotation from Theatrum Botanicum, The Theater of Plantes, by John Parkinson, London 1640. When describing Stinkhorn he refers to its Latin name Phallus as the Hollanders Working toole. The number of French collocations with negative meaning is lower: French disease and French pox (now rare, syphilis, francouzská nemoc), French leave (see further on).

In some cases the name of a nation may be distorted: Cz. brambor (Branibory), Cz. kravata (from German Kravalte from French cravate because Croat mercenaries in the French army in the Thirty Years' War, 1618-1648, were the first to wear scarves), E. bugger (from Old French bougre, from Latin Bulgarus; the Eastern Orthodox Bulgarians were condemned as heretics).

The use of names of nations is sometimes a case of pure fantasy, eg the names of some dishes, the 'Russian eggs' in Czech (hard-boiled) and in English (poached), and tartar sauce (of French origin) seem to be names chosen to make a dish attractive. The Czech 'vlašský salát' [Italian salad] has an explanation in folk etymology of the German Fleischsalat. A similar case is the Czech term corresponding to the English practical joke, ie 'kanadský žertik'.

A well-known Czech saying zmizet po anglicku is usually translated as to take French leave and is quoted as an example of Anglo-French courtesies. The two, however, should not be linked together. Let us quote the definition of to take French leave from modern British and American dictionaries:
British:
'to leave one's work/duty without permission' (OALD),
'absence from work or duty taken without permission' (LDCE, labelled as old-fashioned or humorous: The young soldier was punished for taking French leave to visit his girlfriend),
'an unauthorized or unannounced absence or departure' (CED, C18, alluding to a custom in France of leaving without saying goodbye to one's host or hostess),
'absence without permission' (COD, The Penguin English Dictionary),
unannounced or unauthorized departure (SOD).
American:
'an informal, hasty, or secret departure' (Webster's Ninth),
'an informal, hasty, or secret departure; esp. the leaving of a place without paying one's debts'
(Webster's Third),
'a departure without ceremony, permission, or notice: Taling French leave, he evaded his creditors.' (The Random House Webster's College Dictionary),
'an unauthorized, unnoticed, or unceremonious departure; act of leaving secretly or in haste' (Webster's New World Dictionary),
'informal, secret, or hurried departure' (Macmillan Contemporary Dictionary and Funk \& Wagnalls Standard College Dictionary),
'an informal, unannounced, or abrupt departure' (The American Heritage Dictionary), 'to absent without permission' (Oxford American Dictionary).

The meaning found in American dictionaries was originally the meaning in British English as well, as The Shorter Oxford Dictionary confirms. The HaisHodek dictionary gives both sides: 'zmizet po anglicku, prásknout do bot, ulít se z práce nebo povinnosti, ztratit se a nezaplatit dluhy'.

We may sum up by saying that the meaning of the phrase narrowed both in British and American English. The change in British English is a more substantial narrowing (to 'leaving without permission', Cz. 'ulit se') than the change in American English where the evasion from paying one's debts has been added.

Geographical names usually refer to places where a product was first made or from where it was introduced into Europe. In some cases the names can be recognized, eg madeira, Tokay, moldavite ( $=\mathrm{Cz}$. vltavin; Moldau is the German name of the Vltova), and in some cases they cannot be recognized easily, eg turedo (a country club in Tuxedo Park, New York), majolica (late Latin M jorica, modern Majorca), Cz. moldánky (taken over from German, probably a musical instrument of the Moldavian-Walachian shepherds). Once the name has been introduced and accepted it does not change. The Axminster carpet is called after a town in Devon where it was first made but the factory moved to Wilton in 1835, where another type of carpet, Wilton, had been traditionally made. Many textiles named after far-away places, from which they were originally introduced, are now produced locally.

An example of the cases when a geographical names is not connected with a product is the Czech colloquial word maglajs. It is based on the name of a

Bosnian town Maglaj, the site of a fierce battle between Austrio-Hungarian forces and the Bosnian muslims in 1878. The names of minerals are again very easy to understand: Minnesotait, Donbassit, Tirolit, and vltavin mentioned above.

The last group of names is based on trade names. The English aerosol, cellophane, hoover, walkman, the Czech darlink, karma, leukoplast are all trade names by origin. So is the latest Czech contribution to many languages of the world, including English: Semtex (recorded in The Shorter Oxford Dictionary). The use of trade names in modern times may present legal complications because the manufacturers protect their names. While cellophane and escalator can be used as ordinary words because their manufacturers did not take any legal action, copying machines cannot be called xerox machines any more because xerox is a trade name owned by Rank.

The high numbers of proper names turned into common names are indicated by the following list of such cases as recorded in a current dictionary, The Collins Concise Dictionary, under the letter D.

## PERSONAL NAMES

$\mathrm{E}+\mathrm{Cz}:$
daguerrotype, dahlia, daltonism, daphnia, darwinism, dauphin, davit, Daxy lamp, demijohn, Derby, derrick, Dewey Decimal System, dieldrin, diesel, Doberman, dolomite, Don Juan, Don Quixote, doubting Thomas, Douglas fir, Dow-Jones index, Downing Street, Down's syndrome, Draconian, -ic
E only:
dago (a Spaniard or a Portuguese), darbies (handcuffs), davenport (Br: desk, US: sofa), Davy Jones ('s locker) (the ocean's bottom), Debrett (a list of British aristocracy), Delilah (temptress), Derby (hat), derringer (type of gun), dickens (devil), dicky (a false blouse front), diddle (cheat), dobbin (a horse in children's tales), doily (a decorative mat), doll, double Dutch, drac(k) (unattractive), dukes (fists), dunce
Czonly:
drezina, (džinsy)

## GEOGRAPHICAL NAMES:

E + Cz:
daiquiri, Dalmatian, dalmatic, damascene, damask, Delf, Delphic, -ian, denim, Devonian, dollar, Doric, dumdum
E only:
demerara (brown cane sugar), donmybrook (a rowdy brawl), duffel, duffle, Dundee cake (rich fruit cake), dungaree (coarse cotton fabric)
Czonly:
debrecinský párek
NAMES OF NATIONALITIES:
$\mathrm{E}+\mathrm{Cz}$ :
Dutch auction, Dutch door, Dutch elm disease, Dutch oven
E only:
double Dutch, Dutch barn (without walls), Dutch courage, Dutch medicine (patent medicine), Dutch treat, Dutch uncle
Cz only:
dalaman, dalamánek (from French)

TRADE NAMES:
$\mathrm{E}+\mathrm{Cz}$
Dictaphone, Duralumin
E only:
daks (Austr.: trousers), Day-Glo (luminescent colour), Dodgem, doona (Austr.: continental quilt)
Cz only:
0
In the following paragraphs, the use of proper names in English and Czech will be shown in four areas: the names of stars, the names of textiles, the Czech names of domestic fowl breeds and the names of mushrooms.

### 3.2 The names of planets and stars

The older names of stars come from two sources: the names of gods and descriptive terms. The planets (from Greek planētēs 'wanderer', because they changed their position relative to the constellations) were given names of Greek and Roman gods: Jupiter, Mercury, Venus, and this was done even for those discovered later: Uranus in 1781, Neptune in 1846, and Pluto in 1930. The satellites of the planet Neptune are called Nereid and Triton after Greek gods. The constellations were either given names of gods and of mythological characters (Andromeda was the daughter of Cassiopeia and wife of Perseus) or their names were based on their shape (Libra, Leo, Pavo). Some of the stars have Arab names, eg Altair, Aldebaran. In modern times the names of astronomers are used to denote newly discovered stars.

The names of gods were also used in alchemy: Venus was the alchemic name for copper, Mars for iron, Saturn for lead.

### 3.3 The names of textiles

Astrakhan, karakul, krimmer, Persian lamb are geographical names by origin and they refer to various types of furs obtained from the skins of newly-born lambs. Similarly, the origin of some textiles is recorded in their names: cashmere, damask, marocain.

When the origin of the name is given in the following paragraphs, it is not the ultimate etymology which decides but the most likely language in which the word referred to a textile material. Thus we distinguish between Czech perlinkový, which is based on perla, which is of French and Latin origin, but was used to refer to a textile material in Czech (unless it was a case of semantic neologism under the influence of a foreign language) and between E . percale, Cz . perkál, which goes back to Persian parg lah 'piece of cloth'.

Another way would be to arrange the names according to the languages from which Czech or English took it over, eg Cz. kaliko was taken over from French but it was known in English in 1540 when it was imported from India and called Calicut cloth. As this is a study of the history of names, the name calico is classified under 'India'. If this were a study of the history of the Czech textile industry, the proper place would be 'France' because the word got into Czech from French (via German ?).

The survey shows that French was by far the richest source of textile terms, both in Czech and in English. English and German supplied roughly the same number of terms into Czech, followed by Czech domestic words and by words of Arabic origin. The remaining languages are less numerous.

The geographical and other names show a balance between European and non-European sources. The number of geographical names is roughly the same for the two areas and the personal names are all European and the names of nations are all non-European.
GEOGRAPHICAL NAMES:
European:
E. cambric, Cz kambrik, kembrik (< the Flemish name Kamerijk of French Cambrai); E. cretonne, Cz kreton (a village in France); E. donegal, Sl. donegal (a county in NW Ireland); E. denim, Cz denim (<Fr serge de Nimes); Cz haras (<Arras); E . jeans, Cz dżins (<jean fustian 'Genoa fustian); E.jersey, Cz žerzej; Cz krimr (<G Krimmer); Cz marengo; Cz mansestr, E . melton, Cz melton, Cz orleán, E . Oxford, Cz oxford, E. poplin, Cz popelin (< $\mathrm{Fr}, \mathrm{prob} .<$ Poperinge in Flanders); E. Cheviot, Cz Seviot; SI. Setlend, E. tweed, Cz tvid (< Scot. tweel, influenced by Tweed); E. tulle, Cz tyl (Tulle in France); E. Ulster, Cz ulstr
Non-European:
E. angora, Cz. angora (former name, until 1930, of Ankara); E. calico, Cz kaliko (< Calicut in India); E. cashmere, Cz kaŠmir, E. damask, Cz damašek, E. gauze, Cz gáz, gúza (< $\mathrm{Fr}<$ prob. from Gaza); E. jaconet, Cz žakonet (Jaggan thp $r$ in India); E. crepe de Chine, Cz krepdesín ( Fr ); E. levantine, Cz levantýn, E. marocain, Cz marokén; E. muslin, mousseline, Cz mušelin (< $\mathrm{Fr}<$ Mosul, a town in Iraq); E. nankeen, nankin, Cz nankin; E. organzine, Cz organtín (< Fr < It prob. <Urgench in Soviet central Asia); Cz panama; E. satin, Cz satén (< Fr < Arabic < Chinese Tseutung, modern Tsinkiang); E. surah, Cz surah (< Surat in India); E. shantung, Cz šantung, Cz tibet
PERSONAL NAMES:
E. batiste, Cz batist (<Fr. Baptiste); Cz brynel (< Fr ), Cz hubertusovina, Cz pepito (from a Spanish name); E. georgette, Cz Eoržet (<French Mme Georgette, a modiste); E. Jacquard, Cz žakár, zakkard (Joseph M. Jacquard, 1752-1834, the inventor); Cz tizian; E. zephir, Cz zeftr NAMES OF NATIONS:
Cz cirkas (< from the French name of the Circassians); Cz. kalmuk (< the Kalmuks/Kalmyks); E. ottoman, Cz . otoman; E . sarcenet, sarsenet, Cz sarsenet, sarsonet ( $<\mathrm{Fr}<$ Sarrazin)

## COMMON NOUNS:

French:
Cz aksamit, samet ( $<\mathrm{G}<\mathrm{Fr}<\mathrm{L}<\mathrm{Gr}$ hexamiton); E. bouclé, Cz . buklé, E. brilliantine, Cz brilantin, E. broché, Cz brošé; Cz buret, E. bourrette; E. chiffon, Cz sifón, E. cloqué, Sl . kloké; E. cotton (< Fr ? Arabic); E. crepe, Cz krep; Cz delén (< Fr voile de lain); E. dovetyne, Cz dyftýn; Cz drap; Cz dublé; Sl . dyšes (< Fr duchess(e)); Cz epingl; E. etamine, Cz. etamin; Cz flanel ( $<\mathrm{Fr}<\mathrm{E}<$ Welsh); E . foulard, Cz fulúrr, Cz froté; E . gabardine, Cz gabardén ( $<\mathrm{Fr}$ $<\mathrm{G}$ wallewart); E. gingham, Cz gingham (< $\mathrm{Fr}<\mathrm{Malay}$ ); Cz. goffé; Cz grogrén; E. jaspé, Cz żaspé; Cz kamafas (< $\mathrm{G}<\mathrm{Fr}$ ); Cz lrepon; Cz kriset, E . lamé, Cz lamé; Cz lavábl; Cz linon; Cz listr, Cz marcelin, E marquisette, Cz marhyzer, E . matelassé, Cz matlasé; Cz molton, E . moquette, Cz moket, Cz muliné; Sl . naté; Sl . ombré; E. plqué, Cz piké; E. plissé, Cz plisé; E. plush, Cz phy̌̌; E. ratine, rateen, ratteen, Cz ratiné; E. rayon, Cz rajón; Cz reje, rayé; Cz reverzibl, reversible (E. reversible); E. serge, Cz. serż; Cz. sparterle; Cz stramin (< Dutch < $\mathrm{Fr}) ; \mathrm{Cz}$ sanžàn (< Fr changeant); E. tarlatan, Cz tarlatán (prob. of Indian origin); Cz traver,
E. tricot, tricotine, Cz trikot, trikoť̀n; E . velour, Cz velur, E. voile, Cz voál, Cz žinylka. ženylka, Senilka
English:
Cz bobinet; Cz . glot (<cloth); Cz homespun; Cz kord, Cz koverkot, Cz . lastink, Cz . moleskin; Cz nylon; Cz rips (< $\mathrm{G}<\mathrm{E}$ ribs); Cz sil; Cz silk, Cz , silskin; Cz sirtynk, Cz. sotyš; Cz strruk (?); Cz tropiko, tropikal, tropik; Cz twill (related to cvilink); Cz velveton

## German:

Cz bavina, Cz cajk (< G); Cz cvilink, Cz drel; Cz drilich, rrylich, Cz flauš; Cz gródl; Cz . hedváb;; Cz kamgarn; Cz krul; Cz lodén; Cz vaffe; Cz véba (< G weben 'to weave')
Czech:
kristalin, xylolin (modem formations on Greek basis, < ?); sukno (< OChurchSlav. sukati); modrotisk ; perlinkové tkaniny (< perla); plátno; plst, silon; sýpkovina, serka, vina
Arabic:
Cz atlas; Cz barchet (from Arabic via German); E. cotton (< $\mathrm{Fr}<$ Arabic); Cz karmazin (< $\mathrm{It}<$ Arabic); Cz. kartoun; E. mohair, Cz. mohér (< Arabic mukhayyar 'choise'); E. moiré, Cz moaré (<F < Arabic mulhanyar)
Italian:
E. crinoline, Cz krinolin; Cz . fresko; Cz molino

Spanish:
E. brocade, Cz brokát (<Sp < It); E. merino, Cz. merino

Dutch:
Cz flór (<G < Dutch); Cz. kepr (<G < Dutch)
Hindi:
E. mull, Cz mul (< E < Hindi malmal); E. tussore, tusser, tussah, Cz tusor, tuzor (< E < Hindi tasar 'shuttle' < Sanskrit tasara 'wild silkworm')
Malay:
E. gingham, Cz gingan

Persian:
E. percale, Cz perkál ( $<\mathrm{Fr}<$ Persian parg lah ‘piece of cloth’); Cz tafi (<G < Persian)

Portuguese:
Cz flamenga (< Port)
Turkish:
Cz halina

### 3.4 The Czech names of domestic fowls

The main breeds of domestic fowls have the following names in Czech (according to HALLER 1969; the names in parentheses are English names of the breeds, if known to the author):
bilá leghornka (white Leghorn), koroptvi vlaška, ceská zlatá kropenka, minorka (Minorca), spanélka, andalusanka (Andalusian), hamburačka (Hamburg), bergský kolrhác, lakenfeldka (Lakervelder), vichodofriský racek, koxinka (Cochin), brahmánka (Brahma, Bramah), langshanka (langshan), orpingtonka (Orpington), faverolka (Faverolle), wyandotka (Wyandotte), rodajlendka (Rhode Island Red, Rhode Island White), plymatka (Plymouth Rock), sussexka (Sussex), hempširka (Hampshire), orlovka, dominikánka (Dominique), dorkinka (Dorking), chocholka, hudánka (Houdan), holandaanka, paduánka, chamois, holokrckka, malajka (Malay), napoleonka, indicky bojovný kar, stanoanglický bojovný kar, kar hedvábný (silhy, silkie, silk fowl), bantamka kocinská (Cochin Bantam), bantamka Sebrightova (Sebright), bantamka bojovná chabo, fénix (Phoenix fowl), yokohamka (Yokohama fowl).

Most of the above names are based on geographical names (brahmanka (Brahmaputra), dominikánka (Dominique, one of the islands in West Indies), faverolka (Faverolle in Northern France), hudónka (Houdan, a village in northern France), kočinka (Cochin in Vietnam), koroptvi vlaška, langshanka (Langshan near Shanghai), leghornka (from Leghorn, the English name for Livorno; the breed originated in Livorno but was developed in the United States), minorka (Minorca in Spain), wyandotka (Wyandots, a subgroup of the Hurons), plymutka (after Plymouth Rock in Massachussets, where the Pilgrims are supposed to have landed in 1620), yokohamka etc, altogether 24 names out of 40), and some of the descriptive names have geographical attributes (bergský kokrháć, indický bojovný kur, bantamka kočinská, altogether 6 names).

The names of breeds of domestic fowls seem to be a good example of the prevalence of geographical names used in the terminology. Out of forty names, twenty-four are derived from geographical names and another six have a geographical attribute. Only one breed is called after the breeder and the rest are descriptive terms (bojovný kur, holokrčka, chocholáč, kokrhác, kropenka) or names based on metaphor (racek).

### 3.5 Proper names in the names of mushrooms

In a small number of the names of mushrooms personal names are used to honour the mycologist who described a new species or his/her friend, and in a few cases the names of famous people are used. Eg the name of Caesar's Mushroom, Amanita caesarea, muchomůrka císařská, is explained by the fact that 'Julius Caesar and Claudius were both potty about it' (PHILLIPS 1986.7).

Many of the following names are of North American origin and have no Czech counterparts. If the name is quoted as English or Czech then it has no Latin counterpart.
PERSONAL NAMES:
heads:
krombholzia, kuehneromyces, lencites, oudenmansiella
modifiers:
archeri, arhenii, badhami, balloni, barrowsii, barsii, battarrea, Ben's, bernardii, birnbaumii, booniamus, caesareus, cajanderi, candollearnus, ceciliae, clintoniamus, colvini, cokeri, cookei, cooperi, copelandii, curtisii, earliams, ellisii, flettii, francheti, frostiana, gardnerii, georgii, harkensii, Hart's, Invaliv, josserandii, judae, keuffmanii, King Alfred's, kunzei, lakei, largentii, laurae, leaiana, lloydii, mairei, mariae, morgani, marraii, nancyue, nanfeldtii, overholsii, patouillardii, peckiamus, postii, queletii, ravenelii, rodmani, russellii, smithii, schweinitzii, stevensii, stumzzi, wrightii, zellerii, zollingeri
GEOGRAPHICAL NAMES:
heads:
agaricus, amanita, bulgaria
modifiers:
adirondackensis, americanus, bohemicus, californicus, Canadian, cubensis, English, fennicum 'Finnish', French mexicana, nowoboracensis 'of New York', oregonensis, Périgord, Scotch, sibiricus, suecica 'of Sweden', tennesseensis, texensis

### 3.6 Summary

The four subject fields differ in the way the proper names are used in the formation of technical terms. The differences can be linked with the following aspects:
(i) the proportion of natural and artificial development. In the field of stars and mushrooms there is zero influence of human activity because the artificial growing of a few species of mushrooms has not influenced the names of the species. ${ }^{48}$ The textiles are the result of conscious human activity where, for centuries, new products have been introduced on the market. Breeding is also a conscious human activity with history shorter than the textile manufacture. Yet textiles and breeding share the high proportion of international elements.
(ii) the amount of innovation. Closely linked with point (i), the amount of innovation is very high in the breeding and even higher in the textiles, where completely new materials are introduced from time to time.
(iii) the geographical distribution. The stars visible by the naked eye do not change their positions. The mushrooms grow in the same areas all the time and an appearance of a new species is very rare (see Footnote 33). Moreover, unlike textiles and fowls, they cannot be shipped over long distances and introduced into completely new environment.
(iv) the time span of the development. The development of the breeds of fowls was relatively shorter than the introduction of the various textiles in Europe. The mushrooms have grown here for about 350 million years and the stars have been in the sky since time immemorial.
(v) the fact that giving names after living human beings only begins in France in the seventeenth century, judging from examples quoted above, with praline ${ }^{49}$ and mansard. There is a difference between mackintosh and Grimm's law on one hand and the name-givers who call a star, a mineral or a mushroom after themselves.

[^6]
[^0]:    35 The species has another name, Common Inky Cap, where the English modifier corresponds to the Czech one. It could be also argued that in Inkcap the modifying element ink- has the same function as the Czech adjectival modifier.

[^1]:    36 For the use of metaphor in animal and plant names see callebaut 1990, and in mushroom names mátanoví 1989.

[^2]:    37 We must be aware that the English and the Czech names were formed by the native speakers of those languages while the Latin terms were formed by 'foreign' speakers of Latin.

[^3]:    39 The division here is strictly formal. Semantic shifts discussed at the end of 1.1.1.1 are classified here as simple names, eg kozák, kyj, ucho, or as diminutive derivations, eg kufátečko, lopatička, stopečka.

[^4]:    45 The popular names of plants have been taken from Magické rostliny by sCott Cunningham.

[^5]:    46 The original meaning of Grisette is 'a cheep grey dress fabric', then 'a French working girl',

[^6]:    48 There is a tendency, however, in the Czech terminology, to distinguish between the artificially grown zampión and the species that grow in the fields and the woods which should be called pečárka.
    49 In the case of praline, however, the inventor remained anonymous. As was mentioned above, the sweet is named after a French nobleman, whose cook invented it.

