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The Mental and Neural Representation of Names:
A Cognitive and Economic Point of View¹

Abstract: Interest in the study of proper names is a relatively late phenomenon in the fields of psycholinguistics and neurolinguistics. By now, however, a significant number of studies have been conducted related to this word group indicating that the category of proper names is also not unified in itself, even though it exhibits certain special features compared to common nouns. The neural aspects and psycholinguistic attributes of larger name types, personal names, place names, and brand names reveal differences. Brand names seem to have a special neurolinguistic and psycholinguistic status: they appear to be located in the mental space between common nouns and personal names, in the mental lexicon. Moreover, emotional and graphic information are also central in the mental representation of the elements of this name category. It was also found, however, that the two main types of brand names – coined brand names and common word brand names – are represented and processed differently in the mind. In my paper, after providing an overview of the key lessons learned from these experimental results, I present a semantic theory, the functional-cognitive model of meaning that enables us to interpret these differences. I also outline how we may describe the meaning of the different types of proper names in this model. Taking into account the complex mental representation of names, we may also interpret the functioning of names (especially but not exclusively brand names) as economic devices, while also noting that different name types show differences in this respect.

Keywords: neurolinguistics, psycholinguistics, meaning structure of proper names, ideal brand name

1. Introduction

This paper demonstrates that research in neurolinguistics and psycholinguistics on proper names, more specifically on brand names holds great benefits for other scientific fields and also has many practical applications. This kind of research, especially when comparing brand names with other proper names can help us to approach some old linguistic questions from a new point of view. Besides, linguistic (neuro- and psycholinguistic) analysis of brand names provides useful knowledge for creating effective new names. Generalizing from the idea of Vitevitch and Donoso (2012), this kind of ‘observation is important for developing brand names that have a higher likelihood of being successful in the market, especially in tough economic times, and may be useful in developing automatic brand name generators’ (2012: 697).

The first half of the paper (section 2) provides an overview of the research that has been done on proper names in the fields of neurolinguistics and psycholinguistics paying special attention to brand names, while focusing mainly on general, theoretical aspects, but also suggesting possible

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practical usage of these results. These studies are well-known within the given scientific field, but they are less known for experts in other areas of linguistics, among them onomasticians. This first part is followed by an even more theoretical section (section 3) in which I will demonstrate how knowledge of the mental representation of names can be used to shed new light on issues of name theory, such as the classification of common nouns and proper names and the meaning of proper names. I approach these issues from the point of view of functional-cognitive linguistics using a broadened frame.

2. Mental and Neural Representation of Names

Interest in the study of proper names is a relatively late phenomenon in the fields of psycholinguistics and neurolinguistics. By now, however, a significant number of studies have been conducted related to this word group (cf. e.g. Valentine & al. 1996, Yen 2006, Müller 2010, Brédart 2016, Reszegi 2016). Besides behavioral experiments (such as lexical decision tasks, priming and reaction time studies), studying patients with brain lesions as well as electrophysiological and imaging procedures are also among the methods that are used to explore the mental and neural correlates of the processing of proper names.

2.1. Common Nouns vs. Proper Names

It is generally believed based on studies conducted in psycholinguistics that the recall of proper names involves more difficulties than that of common nouns, various disfluencies (e.g. TOT) and mistakes (speech errors) occur in a higher proportion relating to them, and with age this phenomenon presents itself more intensively. Cognitive psychologists account for this phenomenon by a combination of factors: a) the special semantic status of Western-culture personal names, i.e., based on the name one cannot infer the physical or mental properties of the name-bearer; b) proper names cannot be substituted with a synonymous pair; c) among proper names there is a larger phonotactical variability; and d) the lower frequency of personal names.

Based on these assumptions, researchers had expected that recognizing proper names would need more time in lexical decision tasks as well. In these experiments, participants had to decide about each item on a random list of words whether it was an appellative or a proper name.² It turned out, however, that decisions on proper names were made significantly faster in both visual and auditory modalities (Müller 2010: 352–353, Yen 2006: 125–127). Although results contradict expectations concerning pace there is a difference between the two categories, which could be explained by the assumption of the special processing of proper names.

² There are many factors that may predict the speed and the accuracy of spoken word recognition, such as word frequency, familiarity, neighborhood effect, word length, imageability, concreteness, age of acquisition, etc., and it seems that even the word class might have an effect on it.

Studying patients with aphasia³ revealed that the impairment in the recall of proper names and common nouns may occur even independently of each other (double dissociation). There are cases where the patient's spontaneous speech production and interpretation may be deemed to be intact and it is only the recall of proper names that causes a problem. At the same time, it also happens that the recall of the common noun category may be impaired severely and only the recall of proper names remains intact (cf. Warrington & McCarty 1987); although it is more problematic to judge these examples since they appear in people with severe anomia. Moreover, there seems to be no major similarities between the different cases.

Examinations at the neural level, also found that there are partially different activation patterns for proper names and common nouns. Lexical processing is typically associated with the left hemisphere. However, results obtained by studies carried out using imaging procedures may indicate that proper names have a somewhat more bilateral and extended neural representation. A study of speakers of Mandarin Chinese using fMRI found that listening to proper names activates not only the usual brain areas in the left cerebral hemisphere, but also other regions of that hemisphere (regions within the precentral gyrus, superior temporal gyrus, subcortical regions) and certain regions of the right cerebral hemisphere (Müller 2010: 355). Extended neural representations of proper names are corroborated by other studies using imaging procedures and electrophysiological techniques as well (cf. e.g. Yamadori & al. 2002, Otsuka & al. 2005, Gorno-Tempini & al. 2001; Pisoni & al. 2015 and Semenza 2011 emphasized the role of the left anterior temporal pole and the left inferior frontal gyrus). This activity pattern was registered not only in the case of English-language speakers, but was also found in Italian, Japanese and Chinese-language speakers (Yen 2006: 129). The role played by these brain areas in naming is, however, controversial.

Although there are differences among research results that consider areas supposed to be engaged with the processing of proper names and common nouns, all such research found a kind of dissociation between them. Summarizing these results, it can be said, that common nouns and proper names are represented in partially different ways, and also to some extent processed differently in the mental and neural system.

2.2. Name Types with a Special Attention to Brand Names

When neurolinguists and psycholinguists examine the processing of proper names, they usually deal with personal names and generalize these results to the entire proper name category. However, when different name classes were involved in the experiments, it was found that the category of proper names is not unified in itself. The neural aspects and psycholinguistic attributes of larger name types, personal names, place names, and brand names reveal differences. Personal names and place names, although they activate slightly different brain areas, were found to elicit quite similar responses in behavioral experiments and neuroimaging studies (Yen 2006). Nevertheless,

³ Aphasia is an acquired language disorder that results from damage to portions of the brain that are responsible for language. Aphasia often affects only word-retrieval, it is called anomia.

brand names – that have come into the focus of attention only recently (cf. e.g. Gontijo & al. 2002, Lowrey & al. 2003, Crutch & Warrington 2004) – seem to have a special neurolinguistic and psycholinguistic status.⁴

On the one hand, brand names (names for abstract products – bank and insurance services, airlines, e.g. *Cathay* – and concrete products such as soft drinks and computers, e.g. *Coke, Kodak, Acer*) function similarly to common nouns in the sense of the choice reaction time compared with other proper name types. On the other hand, however, Gontijo and her colleagues employing the hemi-field tachistoscopic paradigm⁵ pointed out a larger right hemisphere involvement in the processing of brand names than in the case of common nouns, which shows brand names similar to proper names (2002: 330–340, Gontijo & Zhang 2007: 25–32). Based on these and some other findings (cf. Cheung & al. 2010, investigating the EEG coherence pattern associated with brand names), brand names appear to be located between common nouns and proper names (personal names and place names) in mental space, in the mental lexicon. The special neuropsychological status of brand names is also supported by the fact that emotional and graphic information is central in the mental representation of the elements of this name category.

Nevertheless, it was also found that the two main types of brand names – coined brand names and common word brand names – are represented and processed differently in the mind. Based on this difference, studies in psycholinguistics and neurolinguistics try to account for which linguistic features make brand names easy to remember, recognizable and attractive, and based on this research, studies attempt to determine the features of an ideal brand name. And that is the point where linguistics and marketing meet contrary to their different approach to their topic. As Rivkin and Sutherland explain it: ‘To linguists, a brand name is neither good nor bad but only another neutral object of study. To marketers, who are seldom academics, names are value-laden, and what determines good or bad is pragmatic and functional: names either sell goods or services, or they do not. Linguists acquire knowledge; naming makes use of it. For the latter, no linguistic terrain goes unexplored: each is relevant directly or indirectly.’ (2004: 13). The importance of a good brand name for marketers can be well documented by the fact that creating names became a profession, namers create “verbal identity” for products (Lutwak 2014), and there are even specializations within this field (e.g. pharma namers, cf. Gabler 2015).

⁴ Several studies deal with the neural representation of brands in general, for an overview of the current application of neuroscience to marketing (consumer neuroscience) see Plassmann & al. 2012.

⁵ The subject of the experiment is asked to fixate straight ahead on the center of a screen while visual stimuli are shown either on the left or the right side of the screen for about 0.15 seconds. This brief exposure is long enough for participants to perceive the stimuli, but short to prevent eye movements. In this way, all stimuli presented to the left visual field goes to the right visual cortex and the stimuli presented to the right visual field goes to the left visual cortex (due to the crossover of the visual pathways).

2.3. Processing of Brand Names and the Features of Good Brand Names

Different linguistic features (phonetic and phonological, semantic characteristics, even features of the written form) of the brand name may have an effect on its processing.

Considering the **phonetic** features, sound symbolism can be used mostly in the case of coined names (names that do not have a common word-based semantic meaning), which means that sounds can convey meaning about the product.⁶ Richard R. Klink (2000) pointed out that sound symbolism has a relatively large implication for the processing of unknown opac names: both the vowels (front vs. back) and consonants (stops vs. fricatives) of name forms were found to convey product-related information. Unknown products with invented non-transparent brand names containing front vowel sounds, as opposed to back vowels, are perceived as smaller, lighter (relative to darker), milder, thinner, softer, faster, colder, more bitter, more feminine, friendlier, weaker, lighter (relative to heavier), and prettier. In Yorkston and Menon's experiments, the car of a fictitious automobile brand was rated as larger (leg room, trunk space) when it was named as *Bromley*, compared with *Brimley* (2004, Armstrong 2010: 194). Consonants also evoke associations: brand names containing fricatives (*f, s, v, and z*), as opposed to stops (*p, t, b, d, g, and k*), are perceived as: smaller, faster, lighter (relative to heavier), sharper, softer, and more feminine.⁷ Initial plosives (*k, g*) also enhance memory for the brands (Vanden Bergh & al. 1988).⁸ Besides, voiceless stops were found to be more alive, daring, but associated with less luxury compared with voiced pairs. For instance, the first voiceless plosive of *Pentium* conveys energy, power and dynamism (Gabler 2015, Klink 2000: 10, Schrum & Lowrey 2007, Lowrey & Schrum 2007, for intercultural studies on phonetic symbolism cf. Schrum & al. 2012, Kuehnl & Mantau 2013).⁹ Sounds are also associated with emotional states. Yorkston and Menon (2004) pointed out that consumers gather and process this kind of information in an automatic manner. Results support the effects of phonetic symbolism even in children: at around age five children prefer words as brand names whose attributes connoted by the vowels are congruent with the product attributes (Baxter & al. Lowrey 2011).¹⁰

Besides phonetic and phonological features, the characteristics of the **written form**, the spelling also influence name-processing. Brand names have a consistent visual representation that is an integral part of the representation of the names, and which could be incorporated into people's retrieval strategies (Gontijo & Zhang 2007: 26–27). The effect of capitalizing was also discovered

⁶ This effect can be traced back to mammals: besides visual means, animals also use acoustic frequency to convey messages about size, aggression, dominance etc. (Ohala 1984).

⁷ Abel and Glinert (2008: 1866) analyzed the sound symbolic effect of names of cancer medications in the United States and found that voiceless consonants (*p, t, k, f, s*) may convey meaning such as 'fast-acting' and 'less invasive'.

⁸ Studies on brand names have suggested that orthography can moderate the sound symbolic effects of invented product labels (e.g. Doyle & Bottomley 2011).

⁹ Klink assumes that sound symbolism may have greater implication for the branding of services than for goods (2000: 18).

¹⁰ Some naming companies, especially in the field of pharmaceutical naming avoid semantically grounded names and create only "visual and aural names", i.e., word-like names based on the phonotactical features of the given language and sound symbolism (cf. Gabler 2015).

in further research: brand names were recognized faster if they were presented in their familiar upper-case format (*IBM, VOUGE, SONY*), compared with their lowercase one (*ibm, vounge, sony*), while common nouns do not have this effect (cf. e.g. Gontijo & al. 2002). Today there is a trend to convert brand names to their lowercase format (leaving only the initial capitalized, e.g. *Walmart* instead of *WALMART*; or using all-lowercase format, e.g. *facebook, amazon*), which could be an attempt to make brands appear friendlier (Perea & al. 2015, Xu & al. 2017). It was also pointed out that unusual spelling (e.g. *Kool-Aid*) also has a positive effect on remembering less familiar brands (Lowrey & al. 2003).

Semantic features of the names were found to have an impact on the processing of new brand names as well: semantic appositeness, fitting between the brand name and product attributes or product function can improve the sense of familiarity. Hillenbrand and his colleagues (2013) examined the effects of a) combinations of words referring to the advantages of the product (e.g. *Slimfast*), b) non-existing forms including real morphemes with decipherable meaning hinting at the benefits (e.g. *Duracell*), c) words with no relation to product's benefit (e.g. *Apple, Orange*), d) non-existing morpheme combination with no indication (e.g. *MetLife*) and e) non-words without any decipherable meaning (Hillenbrand's example, *Yahoo!* is controversial; see rather, e.g. *ixxéo* – the coined name of a naming company in Switzerland) on people's perception. Using new fictive investment (mutual fund) names this investigation pointed out the advantages of names that have an explicit or decipherable lexical meaning relating to the product (category a and category b). These names were preferred by the participants both in an expectation identifying task and in a reaction time experiment. This advantage was registered in the neural system also: these name forms trigger a much more heightened brain response in areas related to decision making than do brand names that do not contain such clues.

Based on fMRI, Hillenbrand & al. (2013) found differences even between these two categories (a and b) and pointed out the special preference of the so-called suggestive brand names (category b). There are different brain circuits involved in (economic) decision making (that is, deciding between two or more brands) in the cases of the two name types. The 'reasoning chain' (prefrontal cortex middle frontal gyrus, inferior frontal gyrus, inferior parietal lobule – associated with rational, conscious processing, Cooper & Knutson 2007) was activated by the elements of category a, i.e., brand names that consisted of words that hint at the expected benefit from the corresponding product explicitly. While the emotional chain (posterior cingulate, superior parietal lobule, temporal lobe, superior frontal gyrus – associated with emotional processing, Koenig & al. 2005) showed greater activation during processing nonword morpheme combinations with a decipherable hint at the expected benefits (category b). Evidence suggests that the emotional system could be more powerful than its rational counterpart (Hillenbrand & al. 2013: 304–306).

Psychological experiments also revealed the emotional power of **metaphorical** names. Metaphors seem to play a unique social and emotional role in our lives. It was found that processing a metaphor instead of a literal statement enhances our ability to find out what a person is thinking or feeling because metaphors create a sense of intimacy and improve our understanding of others'

emotions (Bowes & Katz 2015). Even metaphorical names could entice us to ‘dig deeper and try to understand the story they start’ (Zamora 2018), and as a consequence, we may feel closer to the issuer, to the brand. (To see how marketing industry can shape one’s behavior by using metaphors cf. Zaltman & Zaltman 2008).¹¹

There is quite a lot of information available today on mental representation of brand names. Based on such, one can conclude that there is no direct formula for an ideal brand name, the preferable phonetic, orthographic and semantic features are determined by the characteristics of the product and what the image marketers wish to suggest. As Kovács (2019: 43) summarizes, features of a “good” brand name cannot be defined on its own, without context, but only in a given time, in a given market.

Based on this brief overview, it also became clear that there are still many open questions connected to brand names and even proper names in general. Looking at phonological aspects, it would be useful to know, for instance, what kind of other sound related effects (suprasegmental features) might influence the image associated with a brand name; and to what extent sound symbolism could play a role in accepting new brand names; or whether sound symbolism has a facilitating or an inhibitory effect on retrieving brand names from the mental lexicon. Gaining knowledge on other aspects of brand names seems also important, e.g. whether the word category of the common word pair of brand names influences the consolidation of names in long term memory; and how metaphors and metonymies could be used in creating brand names and advertisements.

At the same time, it should be noted, that thus far research has been conducted mostly among speakers of English with an English name corpus (a real one or one created for the purposes of research). To be able to draw general conclusions from the results, there is a clear need to conduct studies of other languages as well. Moreover, it should also be explored how the English name forms work in the case of speakers of other languages – as opposed to names in their native tongue, i.e., how the semantic referent of the product name changes in relation to the cultural and behavioral differences between countries. Besides English, some other languages (e.g. Italian, French) also play a special role in marketing, where these foreign elements are used in order to activate people’s associations in relation to the given language and culture and connect them to the brand name.¹² Their real influence, however, is not clear enough.

3. Two Issues of Name Theory

Having provided a brief overview of the key lessons learned from experimental results, I will now demonstrate how this knowledge can help us shed a new light on issues of name theory, namely

¹¹ Lorena Pérez Hernández (2013) analyzed the special cognitive operations (domain reduction, domain expansion, mitigation etc.) which are used in wine names to activate the relevant and desirable associations.

¹² Chinese brand names are also becoming more frequent but we have only sporadic information on their effect on Western language speakers’ perception (cf. Fetscherin & *al.* 2015).

the classification of proper names and the meaning of proper names. These issues have been intriguing for thinkers engaged with language for quite some time. Previously experts could focus only on the language system when they tried to find answers. By now, however, knowledge about the mental system provides a new basis when approaching these issues.

In this section, I present the functional-cognitive model of language that enables us to interpret research results of neurolinguistics and psycholinguistics, because they share a common approach towards the cognitive system as both consider language as one of the cognitive processes, which is not independent of the other processes of the mind.¹³ After discussing the classification of proper names within the mental lexicon, I outline how we may describe the meaning of the different types of proper names using this model. Taking into account the complex mental representation of names, we may also interpret the functioning of names (especially, but not exclusively brand names) as economic devices and also note that different name types show differences in this respect.

3.1. Classification of Names

Language and as part of it, words exist and function in our brains, in our mental system. Based on research results, words seem to be part of a system, the mental lexicon that is organized based on similarities and differences of form and usage, i.e., word classes are not objective, a priori categories, but evolve in this inner system led by the basic mechanisms of the cognitive system (categorization, analogy, schematization, statistical learning, metonymy, metaphor, etc.).

Experimental results suggest that proper names like other words are elements of the same linguistic network within the cognitive system, the mental lexicon. Furthermore, considering their common features (they denote things) proper names and common nouns are both part of the main category of nouns. Nonetheless, based on their functional and grammatical differences, as well as their neurolinguistic and psycholinguistic attributes, proper names and common nouns create special subcategories within the main noun category. Thus besides the subnetwork of common words (common nouns) with lexical meaning, we can assume the emergence of onomasticon, that is, the subnetwork of names with proprial meaning, functioning independently to some extent within the mental lexicon (Nyström 2017: 41, 1998).¹⁴ Based on the organization of the mental lexicon, some researchers assume that a new name form becomes independent from its common word pair in the moment of using the structure as a proper name (cf. Tóth 2010: 27).

It has to be emphasized though that the two subnetworks do not become independent from one another entirely (cf. Nyström 2017: 42). Psycholinguistic studies show that when we process a

¹³ Sjöblom (2017: 458–459) also referred to the advantages of this approach when discussed the linguistic structure of commercial names.

¹⁴ Nyström (1998: 229) prefers using the terms on the same levels: onomasticon includes all the known proper names, while lexicon is the store of appellatives.

name, the common words recognized in the name form are also activated.¹⁵ But this connection is not necessarily strong, as a result of persistent proper name use and the consolidation of inhibition on the common noun network (process of entrenchment, cf. Langacker 1987: 59).

This kind of organization can be found within subcategories also. Automatic pattern recognizing mechanisms of the cognitive system organize further subnetworks (sub-subcategories), such as personal names, place names, brand names, etc. within the proper name category, and names of objects, names of artifacts, etc. in the common noun network. And this organization goes on even within subnetworks, among brand names the type of products, price of products, linguistic features of the name forms, etc. are all among these network organizing factors.

Neurolinguistic and psycholinguistic studies also revealed that some proper name classes are more typical representatives of the main category (personal names and place names) than others (such as brand names). This result might be explained by prototype theory borrowed from cognitive psychology (cf. Rosch 1978), that describes conceptual categories with more central and less central members. Besides conceptual categories, the various levels of linguistic categories (even word classes) are also organized prototypically, that is, within a given word class there are typical items (which can be featured by a lot of the characteristics of the class) and there are not so typical and even peripheral elements, as well. This kind of organization is present on different levels of word classes. Based on prototype theory, it could be assumed that brand names are represented on the border of the two noun categories, between typical common nouns (names of objects, body parts, etc.) and typical proper names (personal names and place names).

3.2. Meaning Structure of Proper Names

Proper names have a complex mental representation that includes not only the elements related to the word form and the characteristics of word use (language use) but also knowledge related to the entity designated by the name, that is, knowledge elements both for the type and the specific referent at the same time. When processing a name these knowledge elements are activated in a complex way – actually, they cannot be separated from one another. Thus we need a semantic model that is consistent with these findings, one that can explain all the features of proper names and name usage both on the mental and neural level as well as on the level of community.

The functional-cognitive model of language presumes that there is an organic, inseparable link between elements of language, the words, and the concepts created as a result of the cognitive processes. From a functional approach, language is a system of forms for conveying meaning in communication, which also means that every linguistic element has meaning. Setting out from such a functional-cognitive approach to mind and language, the linguistic representations, the meaning of words are closely related to our knowledge about the world (Geeraerts & Cuyckens 2007: 5). Cognition is based on perception and during the cognitive process the important elements

¹⁵ This connection is corroborated by priming experiments in cases of family names (Valentine & *al.* 1996: 72), similar organization might be supposed in cases of other name types also.

of perceptions are selected by the mind and arranged into schemes. The concepts emerge from these fixed patterns. And practically these schematic conceptual representations are the ones that function as meaning organically connected to a phonological structure. This type of knowledge can thus be interpreted as a network of units of knowledge arranged in conceptual domains (Langacker 1986: 4–6). These representations are subjective and dynamic, as individuals derive them from their own experience.

We also acquire and represent proper names in this way, which means that names also have a conceptual meaning and a complex semantic structure. At the same time, it is a striking feature of the meaning of proper names that they refer to a **single entity** – the basis of the conceptual meaning of the name is made up of the sum of knowledge relating to the single entity (cf. Langacker 2008: 317). And these knowledge elements are also organized in conceptual domains.

However, the **reference to type** is also present in the semantic structure of proper names (cf. Van Langendonck 1999). This can be clearly illustrated by the example of our hearing an unknown utterance that contains a name new to us. Langacker (1991: 59) gives as an example, when a person first encounters the name: *Stan Smith*. Our first reaction is to establish that we are dealing with a name, the name of a person, then based on the name form – using our former knowledge of names, patterns about names – we can infer the nationality, gender, etc. of the person bearing the name.

The acquisition of names takes place in the following way: when we hear a new name form for the first time, a very schematic primary representation of the name, the conceptual content of the name emerges as a result of type specification. This primary representation is later extended based on additional occurrences or specific experience. Thus, the semantic structure of proper names may be absolutely schematic for speakers and may be absolutely elaborated also, with many intermediate versions (Tolcsvai Nagy 2008: 39).

This complex meaning structure includes **cultural knowledge** (cf. Hoffmann 2010: 51–52). Actually, an abundant cultural knowledge is associated with a given name form. And as individuals learn about names during their social-linguistic socialization, as part of culture, a particular name is immediately capable of recalling certain cultural content associated with and related to it (e.g. in the case of place names a historical or current event, ethnographic feature, etc.). For instance, for Hungarian people *Eger* activates such historical knowledge as the siege of the castle of Eger by the Turkish in the 16th century, the victory of the Hungarians led by István Dobó, and it also activates the image of the castle of Eger, the minaret, the concept of Eger wine, etc. For those living there the representation of the *Eger* toponym includes numerous other pieces of information based on specific experience.

In the case of transparent name forms the recognizable elements also organize the representation of the name, as was mentioned above, there is a connection between the name and the given common noun in the mental lexicon. This kind of knowledge could be referred to as **etymological**

meaning.¹⁶ This component of the name form or the connotations evoked by it may all play a role in the perception of the object bearing the name.

The mental representation of linguistic elements includes other information beyond the conceptual, encyclopedic meaning: the use of a given linguistic form may express belonging to a group, community (certain social groups, regions, etc.); and it also may refer to relations within the group (relations between communicative partners). This type of **social meaning** (also called as indexical meaning, cf. Eckert 2008: 454), identity-signifying function of linguistic elements is not part of the frame of cognitive semantics but could play a special role in language use and is also an important feature of names. By choosing between different name forms we continuously designate our place in the world, the community, and in the speech situation. Even the name stock known by a given person is related to and refers to their social status and social connections.

Based on the above outline, in relation to names, rich and diverse knowledge is accumulated about the world, society, other people, and ourselves alike. The encyclopedic knowledge could be interpreted in a very broad sense in the case of proper names: identifying information, type meaning, cultural meaning, etymological meaning, social meaning are all parts of it (Reszegi 2020).

3.3. The Meaning of Brand Names

Brand names have a complex meaning structure also but could be considered special. Such names denote a product and categorize it into a class (type meaning), or from another perspective, they denote the class and each sample of this class. All of which means that in the representation of brand names the type component could be considered more prevalent, and that makes them similar to common nouns. Because of the singleness and naming procedure of the naming act they are also close to proper names (Berger 1976).

The conceptual knowledge about the brand is the base of the semantic content of brand names. This conceptual representation is formed on the bases of advertisements, slogans, and, of course, individual experiences. It contains information about the product class, quality, price, design, technical attributes, such as ingredients, characteristics, functional and psychosocial consequences or benefits, relationship with other products and these multimodal knowledge elements are arranged into cognitive domains. And, of course, brand names trigger emotions.¹⁷ For instance the *Harley Davidson* name is strongly associated with special feelings, and they are essential parts of the representation of this name. Thus in buying a Harley Davidson motorcycle one buys not only

¹⁶ These are so-called naive etymologies, based on speakers' linguistic knowledge, and are not necessarily the same as those that result from historical linguistics.

¹⁷ Emotional branding utilizes the psychological and neural characteristics of the mental system that emotions can overcome reasoning, cf. point 2.3., this marketing strategy appeals directly to consumers' emotional states, needs and aspirations (cf. Thompson & al. 2006).

the vehicle, but the feeling of freedom and American dream – while also reflecting taste and financial background (for this example cf. Kovács 2019: 37).

In cases of prototypical brand names, type meaning component might become so dominant for some consumers in the representation of the name, that it can result in changes in name use where the given brand name could be used to refer to the entire product category as a common noun.¹⁸ This kind of word use might spread into a bigger community, as happened in the case of *Matchbox* in Hungary, where the word came to denote all the small toy cars independently of any brand. Appellativized usage of a brand name could occur in more language communities (e.g. *cola*).

In the case of transparent or partly transparent brand names, the common word elements also influence the representation of the name. The non-transparent name forms also might evoke connections with other names and even common words based on similarities. These connections may play a bigger role at the beginning of using a brand name. Later other conceptual knowledge elements become more determining, but even so this etymological meaning component remains valid, as word association tests demonstrate (cf. Kovács 2019: 249–252).

The social meaning component also plays an important role in representation of brand names. This partly accounts for why brand names can be used to characterize consumers, considering their gender, lifestyle, financial background, age, nationality, profession etc. This can be illustrated with two simple lists of brand names, e.g. consumer 1: *Fiat, Kőbányai (a cheap Hungarian beer), Ico, F&F, C&A, Clatronic, HTC*; consumer 2: *Mercedes, Jack Daniel's, Parker, Strellson, Jack Wolfskin, Miele, Dyson, iPhone* (examples are cited from Kovács 2019: 37). Without any explanation, we can associate different characters with them, based exclusively on their brand uses.

The structure of cognitive representation – associations and activation patterns, the number and strength of connections, differences and similarities in relations – of brand names have a huge impact on the success of the brand. The importance of brand names is corroborated by blind tests: when people taste products without information about the brand, they often cannot differentiate between the product of their preferred brand and the product of another, or may even prefer the other product. But when brand names become known, preferences change (cf. Pelsmacker & al. 2007: 55).¹⁹

This complex meaning structure is the result of a long development in children's life. Achenreiner and John (2003) pointed out that age 3 is the starting point of brand recognition. At that age, however, brand names serve as simple perceptual cues that identify a given product. The next critical threshold in consumer socialization is at around age 12, when children associate brand

¹⁸ This linguistic process is a structural change between onomasticon and common noun network.

¹⁹ In a widely known experiment, blind testing showed a preference for Pepsi by 51% of the consumers, and only 44% preferred Coke Light. When brand names were known, however, the preference for Coke was 65%, and only 23% for Pepsi (Pelsmacker & al. 2007: 55).

names with conceptual meaning, conveying status, prestige, or trendiness, and based on them use brand names as an important cue in consumer judgements (McNeal 2007).

It has to be emphasized that although stored and activated knowledge elements are the basic part of semantic content, meaning emerges in the human mind as a result of a cognitive-constructive process within a given linguistic and situational context.

3.4. Other Name Types Behaving as Brand Names

Taking into account the complex mental representation of names, we may also interpret the functioning of other name types (especially place names and even personal names, e.g. *London, Rome, Cannes, David Beckham*) as economic devices because cultural knowledge and other associations – even emotions related to the place or the person – are also parts of that representation. The name, in turn, mediates this knowledge. Thus, the name may be seen as the symbol of the object (person or place) and can operate as brand names.

This phenomenon is mostly examined in relation to place names. Mueller and Schade (2012) reached similar conclusions when approaching this topic from the perspective of semiotics. Dealing with Bremen place names the experts emphasize that names similarly to other symbols play an important role in creating group identity. This group identity is an important component of the marketability of a given place (e.g. in terms of tourists, investors, qualified workforce, students, etc.). Toponyms, as the symbols of places, operate as brand names and are also part of brand strategy. Medway and Warnaby also argue convincingly that in recent years places have become similar to brands, i.e., the place name itself becomes the core of brand identity (2014: 153). They also pointed out the special features of place names in this regard.

Of course, cultural and historical knowledge related to places and thus to names may be positive or negative, and this influences the perception of both the place and the name. However, one of the specialities of place-name-brands is that even negative associations can become appealing: dark place marketing draws its appeal from death and tragedy (Medway & Warnaby 2014: 158).

In the case of place names even the different name variants with their partly different social meaning may be used as marketing tools conveying different messages. Terhi Ainiala (2013) examined the commercial use of slang variants of the name *Helsinki* from this point of view.

4. Summary

The main aim of this paper was to demonstrate that achievements made in psycholinguistics and neurolinguistics on the mental and neural representation of different name types have real and considerable benefits for onomastics and even for marketing, which can apply this knowledge. In the first part of the paper I gave a brief overview of these research results, that suggested a dissociation between common nouns and proper names, and the special status of brand names in the neural and mental system. Increased attention was paid to the mental representation of brand

names because of their significant economic status. Summarizing the related investigations, it turned out that different linguistic features (phonological, semantic, morphological and even orthographical characteristics) of the brand name form may have an effect on its processing and consolidation in long term memory. But the main conclusion of this section was that there is no direct formula for an ideal brand name, the preferable linguistic features are determined by the characteristics of the product and the brand image.

In the second half of the paper, my purpose was to demonstrate how psycholinguistics and neurolinguistics can help us give new explanations to old issues of name theory. I interpreted the mentioned research results from the point of view of functional-cognitive linguistics, another field of cognitive science. The dissociation and connections between common nouns and proper names, and the special status of brand names can be explained using the network model of mental lexicon and prototype theory. Besides, cognitive semantics provides an appropriate frame for describing the meaning structure (the meaning matrix) of proper names. However, besides the different meaning components of the frame, social meaning also needs to be built into the model. Based on this broadened matrix we can explain the contribution of brand names and even members of other name classes to the brand image creation and to the development of consumers' attitude and behavior towards the given brand.

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