Semantics of Proper Names. The Structure of the Mental Lexicon of Proper Names[1]

Małgorzata Rutkiewicz-Hanczewska
Poland

Abstract

The subject matter of this paper is the specificity of access to the mental lexicon of proper names, which specificity is exemplified by aphatic language disorders with accompanying anomia, i.e. name retrieval deficiency. The initial part of the paper deals with neurobiological bases of proper name retrieval, including the phenomenon of double dissociation. This phenomenon consists in a retained ability to name people and geographical places when the person is unable to name categories of common names, with a coexisting reverse pattern of anomia, i.e. a retained ability to retrieve common names when the person is unable to retrieve onyms, especially anthroponyms. The main part of the paper focuses on various methods applied to compensate for the naming process deficiencies which make it possible to describe the structuring of the mental lexicon of proper names.

* * *

Introduction

The lexicon is considered the nucleus of language. Each unit belonging to the lexicon, as a carrier of phonological, semantic and categorial properties, conforms to certain rules of grammar. Researchers are of the opinion that the lexicon largely determines the functioning of these rules. The lexicon contains words which represent a combination of sounds and meaning or gestures and meaning. Grammar as a computational system indicates which systems or sequences of specific words form meaningful utterances (Wunderlich 2006: 2).

Research into the Mental Lexicon

Individual words are connected with a corresponding meaning on the basis of a social contract. These connections are not permanent, because words and the meanings assigned to them are separate entities. The semantics of certain lexemes are changeable, e.g. becoming broader or narrower. In addition, lexical units are not an example of identical semantic representation: many of them correspond to several meanings, which emerge in various contexts (Reeves *et al*. 2005: 174-175). The nature of these connections, the location of lexemes, their structure and manner of arrangement, as well as the role of the lexicon in the grammatical system, have been objects of special attention from scholars specializing in various disciplines, particularly linguists, psychologists, psycholinguists and cognitivists.

Research into the concept of the mental lexicon began in the 1960s, connected with the study of the rules of semantic organization of common nouns (Forster 2002: 270-296).

Common-name retrieval processes are exceptionally complex and have not yet been fully understood. Several models of lexical access (to the mental lexicon) have been distinguished. The best known one is the logogen, connectionistic, cohort serial retrieval model (Reeves e*t al*. 2005: 189-201).

Research into the mental lexicon of proper names only started in the 1980s, much later than the study of the lexicon of common nouns. It was linked with proper-noun retrieval disorders experienced by people suffering from aphasia[2] (Semenza 1997: 120-121), but principally with the discovery of the phenomenon of double dissociation (Martins and Farrajota 2007). Double dissociation refers to the co-existence of two patterns of disorders: an ability to retrieve common names accompanied by an inability to retrieve proper names, and the reverse phenomenon, i.e. a retained ability to retrieve proper names and a hindered ability or inability to retrieve common names. Thanks to these observations we now know that access to the mental lexicon of proper nouns is much more complex than access to the lexicon of common nouns, and that there are separate paths of access to both of these lexicons (Semenza 2006: 890, Martins and Farrajota 2007, Semenza 2009: 347). Differences in the structure and functioning of these lexicons are thought to lie in individual semantics of proper names and general semantics of common nouns (Semenza 1997, 2006: 890, 2009). Researchers underline semantic uniqueness (exceptionality) of proper nouns, which is understood as being individual or meaningless (Yasuda *et al*. 2000). Common names refer to concepts, whereas proper names refer to entities.[3] This *object – name* relation is exceptionally sensitive in the case of proper nouns because here one can hardly talk of widespread neuronal networks (characteristic of common nouns), which are accessible and activated from different cognitive outputs (Semenza and Zettin 1989, Martins and Farrajota 2007: 1745).

As a result of these observed differences between the retrieval of common nouns and proper nouns, scholars have striven to build appropriate models of proper-noun production. The specific nature of proper-noun retrieval disorders makes it possible to distinguish several components of such a model, with several levels of proper-noun retrieval (cf. Schmidt *et al*. 2004, Semenza 2009). However, the present paper focuses not on the construction of a model of proper-name retrieval, but the architecture of the mental lexicon of proper nouns. One can observe this architecture in the study of naming processes, which are a fundamental aspect of linguistic processes.

---

[2] Aphasia is an acquired and usually permanent disorder of linguistic processes at various levels of functioning (phonological, semantic and/or syntactic), caused by destabilization of cerebral systems due to various types of brain damage (Pąchalska 2008: 156).

[3] This is the neuropsychologists' most common approach to the discussion of the essence of the meaning of proper nouns. The most important thing for neuropsychologists is the fact that *nomina propria* do not have a lexical meaning. We know, however, that the concept of the meaning of proper names is sometimes considered in other categories, namely motivational, emotive, pragmatic, structural, and connotative (Kaleta 1998: 25-27). According to this approach, proper names have a meaning which is much broader than that of common nouns (Gajda 2004: 24). In the opinion of van Langendonck (2002), this meaning is limited to the so-called categorial meaning, which is a semantic minimum retained in people's minds, representing their referential knowledge.

Compensating for Anomic Disorders Regarding Proper Names

The structure of the mental lexicon may be assessed not only in relation to the so-called norm, i.e. natural onomastic aberrations (such as slips of the tongue, language errors) but also in pathology. Naming deficiencies are known as anomia: the most crucial symptom of language dysfunctions following from cerebral strokes, brain damage, neurodegenerative diseases, etc. (cf. Semenza 1997, Kertesz 2010). Naming deficiencies are the most conspicuous in anomic (nominal, nominative) aphasia.[4] Simultaneously, these errors are a form of compensation for naming problems. Their nature makes it possible to reconstruct – at least partially – the structure of the lexicon in question. This paper will focus on aphasic disorders of proper-name retrieval (observed on the basis of a pictorial presentation) with basically retained access to conceptual (extra-linguistic) knowledge.

The different manners in which knowledge is disclosed in anomic disorders with regard to common nouns have been described and classified quite precisely in the aphasiological literature. It is well known that techniques applied to compensate for anomic deficiencies correspond to specific kinds of aphasia. Here, they will be attributed to the kinds of knowledge being retrieved (cf. Fig. 1): knowledge referring to a) an object (knowledge about something, somebody) or b) a sign (knowing who? What?). They are not discussed with reference to specific types of disorders, because the purpose of this paper is to present the mental structure of onomastic signs. Therefore, we will mostly be interested in compensating for naming disorders which initiate substitutive references to the target sign, because such compensation techniques are a kind of reference to the **semantic level (semantic linguistic knowledge)**, which determines the use of words and creation of correct utterances. Extra-linguistic knowledge about the meaning of objects and events belongs to the **level of conceptual information** (Mikołajczak-Matyja 2008: 19).

However, it should be pointed out that name-retrieval disorders are very frequently accompanied by forms used to mask a person's naming problems. Such forms consist in disclosing, in various ways, a person's conceptual knowledge about a specific object (its relation to other objects), and much less frequently about the sign itself.

---

[4] Frequently, it is a form of retreating, withdrawing aphasia. It may also be a primary deficiency that emerges after damage incurred to the cortical parietal-occipital-temporal junction. A person suffering from nominal aphasia does not have disorders of speech production or understanding. Such a person's deficiencies consist in difficulties with the retrieval (recollection) of names of various things and their characteristics, or names of activities (Rutkiewicz-Hanczewska 2012c: 299-300).

```
                              ┌─────────────┐
                              │   Referent  │
                              └─────────────┘
                             /               \
              ┌──────────────────────┐   ┌──────────────────────┐
              │      Knowing         │   │      Naming          │
              │(to know something    │───│(to know who? what?)  │
              │  about...)           │   │ linguistic knowledge │
              │non-linguistic        │   │                      │
              │  knowledge           │   └──────────────────────┘
              └──────────────────────┘
```
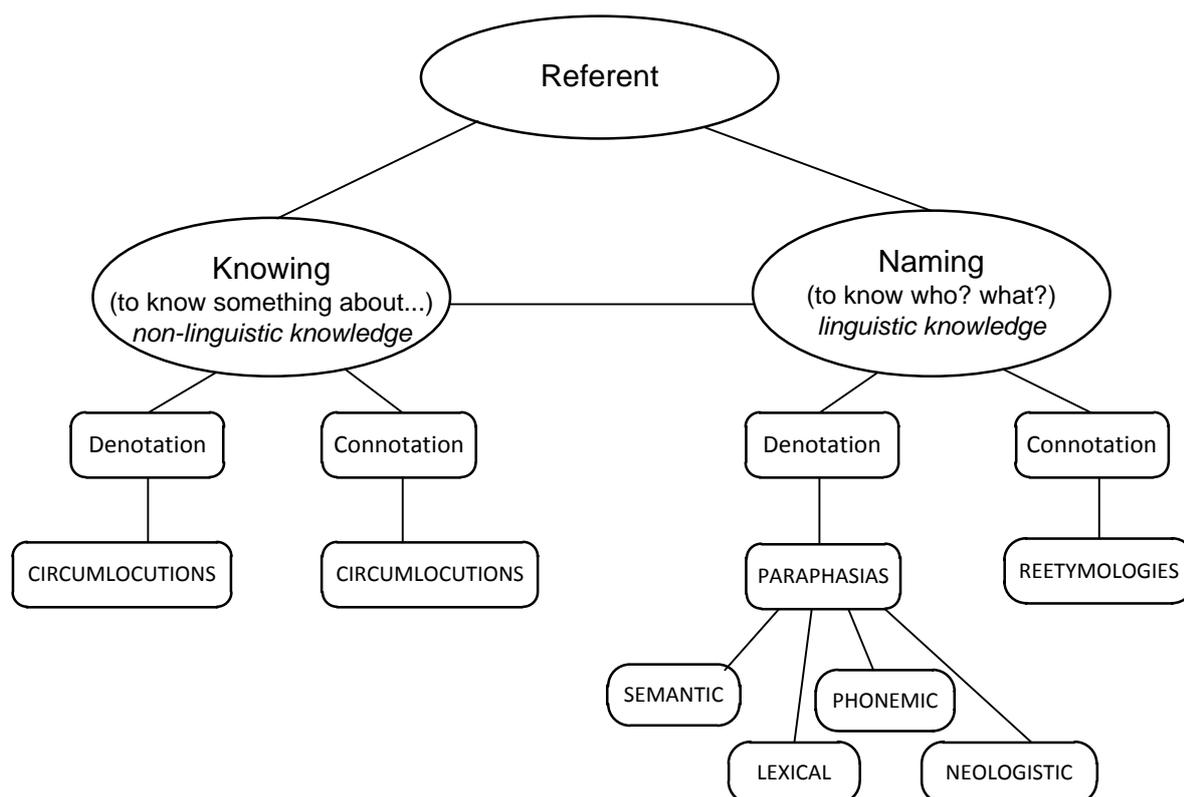
Fig. 1. Diagram of paths of verbal compensation for naming disorders in aphasia

Knowledge about an object as a form of compensation for naming disorders emerges in the form of periphrases, i.e. descriptions of the designatum that one is unable to retrieve. Such periphrases (circumlocutions) may be regarded as elements of knowledge regarding denotation or connotation. This depends on the type of information contained therein. The cognitive status of semantic features distinguished in this manner is divergent. Denotation is thought of as a set of objects of extra-linguistic reality, a scope of a specific referent (extension). Disclosure of such knowledge is thus connected with indicating a reference of the sign, which one is unable to retrieve due to anomia. To denote a name is to indicate a referent being named, by means of such reference. Consequently, knowledge resulting from the use of a linguistic sign is disclosed, i.e. a lexical definition is provided. For the common name *city* the sign is '*Kraków*, *Gdańsk*, *Warsaw*…', whereas a denotation of the name *Poznań* is '*city* (*on the Warta river*)'.[1]

  Apart from the pure reference, we can observe disclosure of knowledge resulting from associations with the object being denoted (objective connotation) or associations referring to

---

[1] In the case of proper names, it is not easy to distinguish denotation from connotation. Usually it is considered that connotative meaning comes into being as a result of initiation of interpretation processes during the reception of proper names, processes controlled either by the structure (form) of an onym or by properties of the referent to which such an onym refers. Denotative or referential meaning of proper names contains an objective description; it links a sign with a specific object in the extra-linguistic reality. Such meaning is assigned to names on the basis of a social contract concluded at the moment a specific name is being created (cf. Gajda 2004: 24). However, this contract (as opposed to a contract constituting a relation between a proper name and its referent) results from extra-linguistic properties (Grochowski 1993: 22-29). In the opinion of van Langendonck (2002), names cannot be denied a minimum meaning, i.e. an ability to indicate a category, for example *city, river, mountain*.

properties of the name and its structure (lexical connotation) (Kosyl 1978: 136). Connotations are usually not included in a lexical definition; they disclose knowledge about random associations with a specific referent of the name. These associations are personal in nature because they depend on a person's cognitive skills and his or her experience and knowledge. Instead of a target structure, aphasics provide periphrases with elements of knowledge relating to both denotation and connotation. Instead of the surname *Wałęsa*, they retrieve such knowledge as *man, surname* or *president* (denotation) or *he jumped the fence; his wife is Danuta; from Solidarity* (connotation). Usually this knowledge comprises connotations, but can also consist of denotations and – much less frequently – both at the same time.

Disclosure of knowledge about a sign – as stated above – is a less frequent form of compensation for proper-name anomia. However, on the basis of such forms, scholars can try to reconstruct the architecture of the mental lexicon of proper names. The present author undertook such an attempt in the observation of the aphasic speech of three patients suffering from subcortical aphasia (as such compensations take place in this type of aphasia). In clinical practice, aphasia is usually a result of damage to the cerebral cortex (the so-called cortical aphasia or simply aphasia). If it is accompanied by proper-name anomia, it is compensated for by means of disclosure of extra-linguistic knowledge about the referent (whenever proper names are concerned). Subcortical aphasia occurs much less frequently and for this reason, it used to be called 'aphasia without aphasia' (cf. Rutkiewicz-Hanczewska *et al*. 2012). Research shows that compensation for proper-name anomia occurring in this context takes place at the level of access to knowledge about the sign. Finding such patients (with subcortical aphasia and accompanying anomia) is not easy. Out of the 300 patients treated at the Department of Neurology and Vascular Diseases of the Nervous System, Poznań, Poland, in the period 2010-2014, ten patients were diagnosed with subcortical aphasia[2] and only three of them showed proper-name anomia clearly compensated for by means of access to the level of knowledge about the sign being sought.

The Structure of the Mental Lexicon of Proper Names

Utterances made by patients with aphasia show that, like the lexicon of common names (Łobacz and Mikołajczak-Matyja 2002), the lexicon of proper names is hierarchical in nature and its elements enter into specific semantic relations. Research into free associations, conducted in the area of psycholinguistics, has contributed to the development of various models of semantic memory based on a hierarchical relation (cf. Miller and Johnson-Laird 1976). The universality of tendencies to disclose the semantic hierarchization of vocabulary has been confirmed in various lexical lists (Kurcz 1976, Łobacz and Mikołajczak-Matyja 2002).

In aphasic speech, hierarchical relations manifest themselves by means of diverse types of so-called 'paraphasias', i.e. the use of variously distorted (or different) forms of the target word. Compensations (at the level of knowledge about the sign) encompass the following types of paraphasias: semantic, lexical (verbal), phonetic (phonemic), neologistic

---

[2] Some suffered from total aphasia (no word production) and some were diagnosed with aphasia without anomia.

and 're-etymological'. They are not associations with the target word, but are connected with a denotative nature of knowledge about the sign. Their form may ultimately be considered a result of association, but it is a consequence of an erroneous choice made when looking for a word in the hierarchical structure of the mental lexicon. Structures which consciously control the process of choosing may be regarded as results of association (connotation). Such structures may be found for instance in 're-etymologies' (see below).

Semantic paraphasias are references to words which are not the target words but which maintain a specific semantic relation between them. These references include various types of semantic systems consisting in substitution, opposition, partitiveness and hierarchy. Instead of seeking words in the mental lexicon, aphasics retrieve words that, for them, are meronyms, hyponyms, synonyms or antonyms (antonyms concern the retrieval of common nouns). In other words, they choose other units from the hierarchical structure of the mental lexicon. Most frequently, however, aphasics use substitutes that remain in the relation of partiality or hierarchization to the word being looked for. In the case of proper nouns it is the only type of retrieved substitutes among semantic paraphasias.

The relation of hyponymy arranges elements of reality in the categories of superiority and subordination, which means that the meaning of one word is included in the meaning of another word, e.g. *fruit – apple*, *flower – daisy*. Therefore, it is a differentiating and organizing relation (Mikołajczak-Matyja 2008: 31). The subordinate unit (hyponym) has a wide scope but a narrow meaning (content). Conversely, the superior word (hyperonym) has a narrow scope and a rich content. Therefore, semantic paraphasias consist in indicating, rather than the name being sought, its equivalent, i.e. one with the same meaning. Such meaning can be gradable, just as the relation of hyponymy is gradable. The following levels of hyponymy can be distinguished: proper name > name of a person > name of a person who practises a specific profession. A choice from the lower levels is a choice from among proprial co-hyponyms (cf. Rutkiewicz-Hanczewska 2012a). Referents of the names being mentioned thus belong to the same category. For example: presidents (*Janusz Carter* instead of 'Reagan'; *Bill Clinton* instead of 'John Kennedy'; *Lech Kaczyński* instead of 'Aleksander Kwaśniewski'); dictators (*Hitler the second* instead of 'Stalin'; *Jan Mussolini* instead of 'Lenin'); kings (*Charles II* instead of 'Mieszko I'); popes (*Jan Paweł II* instead of 'Benedict XVI'); singers (*Jarocka* instead of 'Santor'). Wrong names are sometimes provided during this kind of retrieval.

The above-mentioned paraphasias may also relate to retrieval of names from different categories of onyms, e.g. geographical names (toponyms) and personal names (anthroponyms). Thus retrieved onomastic units are related by means of a correct association, and can be considered as an attempt to reflect the relation of meronymy: *London* [Churchill] ('Churchill worked in the capital of England – London') or *Tunezja* [Tunisia] instead of *Afryka* [Africa].

Due to the specific nature of proper names – the relations of synonymy, polysemy or antonymy do not manifest themselves in the compensatory function. It should be added that also in the area of common names, aphasics (with 'post-stroke' aphasia[3]) utilize these

---

[3] Easier retrieval of names of general categories is typical of language disorders connected with neurodegenerative diseases.

substitutes much less frequently because they find it hard to retrieve names of categories. If synonyms occur in aphasic speech, they are stylistic synonyms, and therefore belong to different varieties and styles of language (cf. *kłaki* [tuft] instead of *włosy* [hair]; *łeb* [noggin] instead of *głowa* [head]). Polysemic and antonymic words are occasional and ephemeral.

The disturbed process of proper-name retrieval contains much fewer lexical (verbal) paraphasias. They consist in replacing a target word with a similar-sounding word that starts identically or similarly, but has a completely different meaning (e.g. *łapa* [*ława* – 'bench'], *muszka* [*muszelka* – 'shell'], *wujek* [*wózek* – 'trolley']). In fact, these words can hardly be discussed with reference to proper names. Usually patients oscillate between semantic and lexical paraphasias (e.g. *Paderewski* [Pavarotti]). Apart from a connection with the beginning of the name, there is a connection between referents (music).

The compensatory function of the onym-naming process is also performed by phonetic (phonemic) paraphasias, which resemble the target word, but do not exist in the lexicon of the language. This group contains names with substituted sounds: *Koziorowski* [Komorowski], *Kartaty* [Karpaty – Carpathian Mountains], *Lefer* [Lepper], *Redan* [Reagan]. Other frequent units include dissimilations, elisions, metatheses and epenthesis: *Karczyński* [Kaczyński], *Malaje* [Himalaje – the Himalayas], *Tuchosk* [Tusk]. However, this type of disturbed production of proper names manifests associations which are clearly lexicon-based, phonemic, connected with the target word. It is not an illustration of the connection with the referent of a specific sign, although the structure of the lexeme being sought is basically (in the case of names that are commonly known) comprehensible.

There are few data confirming the existence of neologistic paraphasias in compensation for proper-name retrieval disorders. Usually, observed patients search for onomasticons generally known to them. This group includes such examples as: *Jeryska* [Jaruzelski] and *Kamiczok* [Kaczyński]. Neither of these surnames is listed in *Słownik nazwisk współcześnie w Polsce używanych* ('The Dictionary of Surnames Currently Used in Poland) (Rymut 1993: 353, 461), although it does contain formally close structures: *Jerys* (three holders) and *Kamicz* (one holder). The structural elements *-ka* and *-ok* in the retrieved names are commonly used in Polish word formation, although they do not appear in the target forms. Due to the presence of certain sounds in the structure of the retrieved and target names, they can be regarded as a type of strong phonetic paraphasias.

Therefore, it appears that names are selected from a ready set of proper names. As there are few examples of such compensation in the retrieval of proper names, it is difficult to draw far-reaching conclusions. However, it can be presumed – at least for proper names – that a set of onyms is stored in the mental lexicon in the form of ready structures. As far as common names are concerned, there are two hypotheses on how they are stored in the mental lexicon. According to the first hypothesis, related to original words, every word is a separate entry in the lexicon; meanwhile, the decompositional hypothesis allows for immediate formation of words from single morphemes (Sandra 1990, Pinker 2000, Aitchson 2003, Harley 2003, Kurcz 2005). Researchers have proposed a hypothesis that it is possible to store full structures (also polymorphemic ones) in the mental lexicon on condition of their semantic non-transparency or high frequency, as well as inability to generate by means of morphological and syntactic rules (Pinker 2000). Proper nouns represent exactly this type of structure. In the case of proper nouns, the meaning of the whole does not result from the sum

total of meanings of constituent morphemes. This is because proper names do not have a lexical meaning, but they do have a denotative and connotative meaning.[4]

A characteristic method of compensation for proper-name retrieval disorders is 're-etymology'. This consists in a formal association with the structure of the name being sought: in the example *Green[s]* 'Zielony' [Verdi], the 'etymology of the surname is connected with the colour green' (Semenza and Zettin 1988: 718). Re-etymologies do not occur in the process of disturbed retrieval of common names; nor are they frequent in the retrieval of proper names. Their occurrence, however, is connected with the specific nature of proper names, which, though devoid of lexical meaning, have an exceptionally rich connotative meaning. Proper names acquire new connotations in usage, and so they contribute to the creation of new motivations. As a rule, they are generated subconsciously and reflect the speaker's purpose, as the speaker usually wants to find a justification for the name and discover the rule behind the connection between the sign and the object, i.e. the name and the referent (cf. Łobacz and Mikołajczak-Matyja 2002). A person using the name is determined to interpret it – as shown in the above-mentioned attempt to compensate for the user's naming deficiency.

Obviously, etymology is out of the question here, because it can only be ascertained correctly by a specialist, that is, a linguist. In our case one can talk about re-etymologizing because the newly produced connotative content may be (but does not have to be, especially with reference to transparent names derived from appellatives) incompatible with the original motivation of the onym. Such re-etymologization is founded on stereotypical associations of a notion defined on the basis of a specific name. A person retrieving the 'substitute' does so on the basis of associations evoked by the lexical meaning of the root of the target name (cf. Rutkiewicz-Hanczewska 2012b: 359).

Summary

The mental lexicon of proper names, similarly to the lexicon of common names, has a hierarchical structure. The question whether it is a single glossary or a complex mental representation of names is still open (Kertesz 2010: 46). Proper names are mostly arranged on a superior-subordinate basis by means of various types of relations (*part – whole*, *general – specific*, *native – foreign*, *real – fictional*) and in terms of commonly known categories (people, places, representatives of various professions or people with similar interests, e.g. musicians, athletes, journalists, politicians, rulers). They are not used to retrieve synonymic, polysemic or antonymic arrangement (in the case of common nouns it is also a less frequent method of compensation for anomia). It is hard to use this kind of substitute with regard to proper names; however, we can also observe synonymy or polysemy of proper names, only on a smaller scale than in the case of common nouns (cf. Krško 2002, Rutkiewicz-Hanczewska 2012a, 2013). Legitimacy of differentiation of antonymic relations is usually arguable (cf. Krško 2002, Rutkiewicz-Hanczewska 2012a, 2013). On this basis, it is possible to confirm the hypothesis about interconnection of two levels of meaning: the

---

[4] It has been proposed that such units of the mental lexicon should be referred to as cognitive morphemes (Marlsen-Wilson *et al*. 2002).

semantic (linguistic) level and the conceptual (extra-linguistic) one.[5] The latter seems much broader than the former (cf. the approach suggested by Aitchison 2003, Mikołajczak-Matyja 2008) because aphasic patients' naming deficiencies are usually compensated for by means of resorting to extra-linguistic knowledge, to the level of *knowing something about the subject.* It is easier to choose an element from a rich set of information than to look for content with a limited pool of this information. This limited source is the knowledge from the level of *who? What?* In the case of anomia, aphasic patients utilize this compensatory channel much less frequently. If they do use it, they refer to a denotative meaning of the signs being retrieved. Connotative meaning (at the level of knowledge about the sign) is minimal in the form of re-etymologies, phonetic paraphasias or neologistic paraphasias.

The findings on proper-name anomia outlined above confirm the opinion of Rutkowski (2005: 104) on the semantic value of proper names. He claims that the semantic value of proper names comprises not only the meaning of the form but also the meaning of the object being denoted, i.e. a set of properties or opinions assigned to this object. The first type of meaning is linguistic or systemic in nature, whereas the second goes beyond the sphere of language studies and displays features of encyclopaedic knowledge.[6] Research into proper names that takes account of properties connected with the rules of the naming act is 'not possible', according to Siwiec (2010: 9), in isolation from objects being named. These objects constitute such an extra-linguistic component of the nominative situation which component is directly connected with the cause and purpose of the naming. The question is, is there any point in looking for this two-layer knowledge (cumulated by proper names) in appropriate neuronal structures? Answering this question will require extensive further research on the brain.

As demonstrated above, name-retrieval processes are extremely complex and are not yet fully understood. However, errors in their functioning enable us to partially discover the rules of cerebral arrangement of this lexicon. Naming requires efficient association of 'information coming from various sensory modalities (therefore from various regions of the brain)' (Springer and Deutsch 2001). In our analyses one of these routes has been utilized, namely the route from a picture (referent) to a word (proper name). It is certainly worthwhile to analyse other routes applied for the purpose of compensating for disturbed ability to name (e.g. from a definition to a name).

Małgorzata Rutkiewicz-Hanczewska
Adam Mickiewicz University
Poland
rutkiewi@amu.edu.pl

---

[5] In cognitive methodology, separation of these two levels is considered unreasonable or even impracticable (Taylor 2001).
[6] Adoption of the first element of semantic value of proper names leads to them being considered devoid of meaning, whereas if the second constituent of this value is taken into account, names can be viewed as meaningful signs (cf. Rutkowski 2005: 101-106).

References

Aitchison, J. (2003) *Words in the Mind. An Introduction to the Mental Lexicon*. 3rd edn. Oxford/Cambridge, MS.: Wiley-Blackwell.

Forster, K.I. (2002) 'Accessing the Mental Lexicon'. In: Altmann, G.T.M. (ed.) *Psycholinguistics. Critical Concepts in Psychology*. London/New York: Routledge. 270-296.

Gajda, S. (2004) 'Narodowokulturowy składnik znaczenia nazw własnych w aspekcie edukacyjnym'. In: Mrózek, R. (ed.) *Nazwy własne w języku, kulturze i komunikacji społecznej*. Katowice: Wydawnictwo Uniwersytetu Śląskiego. 21-28.

Grochowski, M. (1993) *Konwencje semantyczne a definiowanie wyrażeń językowych*. Warszawa: Polskie Towarzystwo Semiotyczne.

Harley, T. (2003) *The Psychology of Language. From Data to Theory*. Hove, NY: Psychology Press.

Ingram, J.C.L. (2012) *Neurolinguistics. An Introduction to Spoken Language Processing and its Disorders*. New York: Cambridge University Press.

Kaleta, Z., (1998) 'Teoria nazw własnych'. In: Rzetelska-Feleszko, E. (ed.) *Polskie nazwy własne. Encyklopedia*. Warszawa/Kraków: Wydawnictwo Instytutu Języka Polskiego PAN. 15-36.

Kertesz, A. (2010) 'Anomia'. In: Whitaker, H.A. (ed.) *Concise Encyclopedia of Brain and Language*. Amsterdam/Tokyo: Elsevier.

Kosyl, C. (1978) 'Metaforyczne użycie nazw własnych' In: Szymczak, M. (ed.) *Z zagadnień słownictwa współczesnego języka polskiego*. Wrocław: Zakład Narodowy im. Ossolińskich. 133-143.

Krško, J. (2002) 'Mikroštruktúrne vzt'ahy v onymii'. *Slovenská reč* 67.3. 142-152.

Kurcz, I. (1976) *Psycholingwistyka*. Warsaw: Państwowe Wydawnictwo Naukowe.

Kurcz, I. (2005) *Psychologia języka i komunikacji*. Warszawa: Scholar.

Van Langendonck, W. (2002) 'Neurolinguistics Evidence for Basic Level and Associative Meaning in Proper Names'. In: Agrelo, A.I.B. (ed.) *Actas Do XX Congreso International De Ciencias Onomasticas. Santiago*. A Coruña. 921-927.

Łobacz, P. and Mikołajczak-Matyja, N. (2002) *Skojarzenia słowne w psycholeksykologii i onomastyce psycholingwistycznej*. Poznań: Sorus.

Marlsen-Wilson, W., Tayler, L.K., Waksler, R. and Older, L. (2002) 'Morphology and Meaning in the English Mental Lexicon'. In: Altmann, G.T.M. (ed.) *Psycholinguistics. Critical Concepts in Psychology*. London/New York: Routledge. 17-83.

Martins, I.P. and Farrajota, L. (2007) 'Proper and Common Names: A Double Dissociation'. *Neuropsychologia* 45. 1744-1756.

Mikołajczak-Matyja, N. (2008) *Hierarchiczna struktura leksykonu umysłowego. Relacje semantyczne w leksykonie widzących i niewidomych użytkowników języka*. Poznań: Wydawnictwo Naukowe UAM.

Miller, G.A. and Johnson-Laird, Ch. (1976) *Language and Perception*. Cambridge/London/ Melbourne: Harvard University Press.

Pąchalska, M. (2008) 'Patogeneza i neuropsychologiczna diagnostyka afazji'. In: Domańska, Ł. and Borkowska, A.R. (ed.) *Podstawy neuropsychologii klinicznej*. Lublin: Wydawnictwo UMCS. 153-194.

Pinker, S. (2000) *Words and Rules. The Ingredients of Language*. London: Perennial.

Reeves, L.M., Hirsh-Pasek, K. and Golinkoff, R. (2005) 'Słowa i znaczenia – od pojęć pierwotnych do złożonych struktur'. In: Gleason, J.B. and Ratner, N.B. (ed.) *Psycholingwistyka*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne. 173-247.

Rutkiewicz-Hanczewska, M. (2012a) 'Wstęp do semantyki onimicznej: nomina propria i nomina appellativa – inkluzja czy ekskluzja?'. Available online at: http://www.publib.sk/elpub2/FF/Olostiak3/pdf_doc/03-rutkiewicz-hanczewska.pdf

Rutkiewicz-Hanczewska, M. (2012b) 'Nazwy własne w przestrzeni społeczno-komunikacyjnej. Uwagi językoznawcy'. *Archiwum Fotogrametrii, Kartografii i Teledetekcji* 23. 355-363.

Rutkiewicz-Hanczewska, M. (2012c) 'Nomina propria i nomina appellativa – układy samoistne. O podstawach neuroonomastyki'. In: Łuc, I. and Pogłódek, M. (ed.) *W komunikacyjnej przestrzeni nazw własnych i pospolitych*. Katowice: Wydawnictwo Uniwersytetu Śląskiego. 299-315.

Rutkiewicz-Hanczewska, M. (2013) *Genologia onimiczna. Nazwa własna w płaszczyźnie motywacyjno-komunikatywnej*. Poznań: Wydawnictwo Poznańskie.

Rutkowski M. (2005) 'Kilka uwag o konwencji opisu wartości semantycznej nazw własnych'. *Onomastica* 50. 99-110.

Sandra D. (1990) 'On the representation and processing of compound words: Automatic access to constituent morphemes does not occur'. *The Quarterly Journal of Experimental Psychology* 42A. 529-567.

Schmidt, D., Buchanan, L. and Semenza, C. (2004) 'Sparing of Proper Nouns and Dates in Aphasia'. *Brain and Language* 91. 9-10.

Semenza, C. (1997) 'Proper Name – Specific Aphasias'. In: Goodglass, H. and Wingfield, A. (ed.) *Anomia. Neuroanatomical and Cognitive Correlates*. San Diego: Academic Press. 115-134.

Semenza, C. (2006) 'Retrieval Pathways for Common and Proper Names'. *Cortex* 42. 884-891.

Semenza, C. (2009) 'The Neurolopsychology of Proper Names'. *Mind & Language* 24.4. 347-369.

Semenza, C., Mondini, S., Borgo, F., Pasini, M. and Sgaramella, M.T. (2003) 'Proper Names in Patients with Early Alzheimer's Disease'. *Neurocase* 9.1. 63-69.

Semenza, C. and Zettin, M. (1988) 'Generating Proper Names: A Case of Selective Inability'. *Cognitive Neuropsychology* 5. 711-721.

Siwiec, A. (2010) 'Nazwy własne w perspektywie nominacji i komunikacji'. *Onomastica* 54. 9-24.

Springer, S.P. and Deutsch, G. (2001) *Left Brain, Right Brain: Perspectives from Cognitive Neuroscience*. New York/Basingstoke: W.H. Freeman.

Taylor, J.R. (2001) *Kategoryzacja w języku. Prototypy w teorii językoznawczej*. Kraków: Universitas.

Tranel, D. (2009) 'The Left Temporal Pole is Important for Retrieving Words for Unique Concrete Entities'. *Aphasiology* 23. 867-884.

Wunderlich, D. (2006) 'Introduction: What the Study of the Lexicon is About'. In: Wunderlich, D. (ed.) *Advances in the Theory of the Lexicon*. Berlin/New York: Mouton De Gruyter. 1-26.

Yasuda, K., Nakamura, T. and Beckam, B. (2000) 'Brain Processing of Proper Names'. *Aphasiology* 14.11. 1067-1089.