

# THE NATURE OF THE DISORDER UNDERLYING THE INABILITY TO RETRIEVE PROPER NAMES

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## ABSTRACT

Two patients with the syndrome of proper name anomia were investigated. Both patients were only able to produce around 50% of the names of contemporary celebrities, but performed significantly better on a task calling for naming of historical figures. The names of relatives and friends were spared in one patient, while the other retrieved names of people known since childhood much better than those of people familiar to him since the age of 25. Geographical names, names of monuments and masterpieces were preserved. The above dissociations are taken to imply that in moderately impaired patients, a temporal gradient effect concurs to modulate the severity of the naming block.

A similar impairment was found in both patients when they attempted to retrieve or relearn familiar telephone numbers. This finding suggests that the core of the disorder resides in the inability to gain access to words used to identify a single entity, regardless of whether they belong to the class of proper or common names.

Key words: proper names, anomia

## INTRODUCTION

The idea that proper names enjoy a special status from a linguistic and psychological point of view (Semenza, 1997) has received support from reports of brain-damaged patients, whose anomia was either restricted to this category of names or at least disproportionately severe compared to common names. The deficit shown by these patients was found not to involve proper name comprehension nor to be secondary to loss of semantic knowledge, as shown by the wealth of biographical information they were able to provide in response to photographs and names of famous persons. The finding that they showed the same degree of impairment in the oral and written modality and performed flawlessly on proper name repetition and reading tasks implies that not only the semantic store, but also the phonological output lexicon was intact and that the deficit occurred at the level of the pathways linking the semantic store with the lexicon store. By and large the dissociation between proper and common names has been taken to infer that the corresponding referents are processed separately within the semantic system, from where they establish discrete connections with the output lexicon.

The main distinction between these two classes of names is to be found, as indicated by their dictionary definitions, in the one-to-one relation that proper names entertain with the entities they designate. By contrast, common names

indicate all the members of a category. Consequently, proper names are endowed with a greater identifying power than common names, since they designate a single individual, but transmit no information on the attributes or distinguishing features of the entity they represent. If I refer to an unknown person as a lawyer, I specify his social and professional features, without distinguishing him from other lawyers, whereas if I say that his name is *John Smith*, I identify him unequivocally, but do not add anything new to the listener's knowledge of his biography. Another emphasized feature of proper names (Semenza, 1997) is that the link between them and their referents is less constrained and more arbitrary than that of common names, inasmuch as the same persons can be known by different names in the course of their life (Michelangelo Merigi became known as *il Caravaggio*, Henry Beyle as *Stendhal*), without losing their identity. No comparable change would be possible for objects. This loose relationship stems from the fact that the name of an individual entity is not part of an established set of words, each with its own meaning, as is the case for common names, but is contingent solely upon a discretionary choice and does not describe any of the attributes of the referent.

Proper names are not just used to designate people. They also point to geographical entities (cities, states, rivers, mountains, etc.), monuments (the Coliseum), famous masterpieces (the *Iliad*, the *Patetica*). The question is whether the impairment cuts across all these classes of proper names or is selective or preponderant for persons' names. At least for geographical names, there is evidence that in a number of cases (summarized by Hanley and Key, 1998) they are spared. Also naming monuments on visual presentation was within the normal range in one patient (Fery, Vincent and Brédart, 1995.) The question can be broadened to cover different types of people's names. Are names of familiar people equally impaired, independently of whether they refer to relatives and friends, contemporary celebrities or historical figures? The issue was neglected by the literature until recently, when Lucchelli, Muggia and Spinnler (1997) described a patient with anomia for the names of contemporary celebrities, but not for those of relatives or historical figures. A final issue, raised by the arbitrary link hypothesis, is whether the deficit is strictly confined to proper names or also extends to other classes of words, including common names, when they are presented in a format that does not exploit a well-established semantic relationship. There have been reports of patients who were impaired in learning semantically unrelated word pairs (Semenza and Zettin, 1989; Lucchelli and De Renzi, 1992; Hittmair-Delazer, Denes, Semenza et al., 1994), definitions of unknown words (Moreaud, Pellat, Charnallet et al., 1995), and colour-number associations (Lucchelli and De Renzi, 1992). These findings suggest that the basic deficit resides in the inability to learn arbitrary associations, independently of whether they concern proper or common names (Semenza, 1997; Lucchelli and De Renzi, 1992) and they, therefore, undermine the hypothesis that proper names are organized differently within the semantic store. However, one might quibble that the two types of deficit are not strictly comparable, as the retrieval of unrelated pairs involves anterograde memory and that of proper names retrograde memory.

In this study, we report two patients who presented the classical syndrome of

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