

President's Page

Echo-etymology, Echo-semantics

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It is estimated that more than 50,000 Greek words have been adopted by the Anglo-Saxon scientific literature. When these words are reabsorbed into Greek the result may be completely successful, or less so. The Hellenisation of foreign words often does not express the exact meaning in the modern Greek language. Typical examples are thalassaemia, dyssynchrony, and dysrhythmia, where the precise Greek equivalents would be Mediterranean anaemia, asynchrony, or arrhythmia. Applying Greek rules of etymology, thalassaemia signifies "blood in the sea", or "sea in the blood". Dyssynchrony denotes difficulty in synchronisation, while dysrhythmia similarly implies a difficulty in maintaining rhythm, not an arrhythmic pulse. Furthermore, even the correct spelling or syntax may sometimes lead to a complete transformation of meaning. Even a simple comma can alter the sense completely. *Ἦξεῖς ἀφήξεις οὐ ἐν πολέμῳ θνήξεις*, prophesied the Delphic oracle: "Leave, return, not die in battle." Or: "Leave, return not, die in battle." The person seeking guidance was left to decide where to place the comma.

One might ask in good faith, how important is it to observe the strict formalities of language? Is it going too far to equate the Byzantine with the stupidly pedantic? Or does something more important lie behind it? St. John the Evangelist provides the answer.¹

John's Gospel begins with the sentence, "In the beginning was the Word, and the Word was with God, and the Word was God." According to John, the Word and God were identical concepts, because they express thought and reason, which are the essential components of creation. This is the view of an eminent theologian, not a doubter of divine being.

There are, of course, many examples of the suc-

cessful translation of basic scientific concepts in cardiology. A typical example is the Greek version of the term "echocardiography" and its derivatives (echo studies, echo data, Echo Alaska, etc). One of the most important pioneers in echocardiography, Harvey Feigenbaum, adopted the term "echo" and formally established it in his first monograph in 1972. He used the term "echo" instead of "ultrasound" in order to stress the reflection of ultrasound, which in Greek is expressed by the word *ηχώ*. The method of a single ultrasound beam (M-mode) basically records an ultrasound reflected signal versus time, whereas two- and three-dimensional echocardiography examine the functional and anatomical structure of the heart in real time, as do other imaging methods such as computed tomography or magnetic resonance imaging.

From the grammatical point of view,³ a study of Greek grammar reveals that all third declension derivatives are formed from the root of the word as expressed in the genitive and not in the nominative case. Thus, for the word *η ηχώ, της ηχούς*, the root of the word is *ήχο*, and consequently all its derivatives should be written with omicron, provided one basic criterion is met: that the result should deliver the correct meaning. A grammatically accurate spelling should not be at the expense of semantic confusion.

A classical example is the word Argonaut, which is derived from the word *η Αργώ, της Αργούς*. In this case the word Argonaut cannot be semantically confused with another. On the other hand, the Greek words *ηχομόνωση, ηχοληψία, ηχογραφία*, mean sound (i.e. acoustic) insulation, sound reception, and sound recording, respectively. In consequence, spelling the Greek rendering of the word echocardiography and its derivatives (echo data, echo studies, Echo Alaska, etc.) with omicron in no way captures the sense of echo, namely

the idea of reflection. Thus again we resort to grammar. Grammar allows exceptions to every rule, when the rule in question does not produce the precise meaning. For example, the Greek equivalent of the word eosinophil, *ηωσινόφιλο*, and its derivatives should strictly speaking be written as *ηοσινόφιλο*, with the first o being omicron rather than omega. However, this word is excepted from the rule in order that it might convey the rosy shade of the eosin stain. Eosinophils absorb this substance and take on the characteristic colour of the dawn, which in the language of Homer is called *ηώ*. That is why the word *ηωσινόφιλο* is spelled with omega.

For the same reason, the word *ηχωκαρδιογραφία* should be treated as a grammatical exception in order

that it may be semantically correct, just like *ηωσινόφιλία* (eosinophilia).

I thought it worthwhile to offer a full analysis of this matter, so as to avoid any confusion regarding the distinction between the sense and spelling of the term *ηχωκαρδιογραφία* or *ηχώκαρδιογραφία*, as an accurate representation of the original term “echocardiography”.

References

1. The Gospel according to St. John. King James edition.
2. Harvey Feigenbaum. Echocardiography. Henry Kimpton Publishers. London, 1972.
3. Ach. Tzartanos. Grammar of New Hellenic language. Athens 1945.