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Towards the Scientific Status of Lexicography
(Based on the Analysis of Scientific and Applied Aspects of Lexicography)

In the process of our activities at the TSU Lexicographic Centre, we have often come across individuals (often these were quite respected and well-learned scientists), who think that lexicography is not a science, but instead it is merely a craft.

Also in the works of foreign linguists and, more surprisingly, lexicographers we have met similar statements to the effect that lexicography is not in fact a science and that it must be regarded merely as a 'craft' or, at most, applied science. For example, Pius ten Hacken, a well-known Dutch linguist, opines: *Lexicography is not a branch of empirical science. If that were the case, its products, dictionaries, should be interpreted as theories*. [...] *(T)hey should instead be interpreted as tools* [ten Hacken, 2009:417].

Such stereotypes lead some in Georgia even to question the very suitability for PhD dissertations of the research works and papers dedicated to lexicographic problems.

After many years of our working on many different dictionaries and dictionary projects, we have arrived at a firm opinion, one could also call it a conviction, that only extremely highly qualified and well-educated *scientists* can be capable of working on dictionaries and that, consequently, lexicography with its both theoretical and practical aspects is in fact a science.

First of all, let us try to understand why some people doubt that lexicography is a science.

We think that people are often led to such incorrect and somewhat naïve, in our opinion, conclusions by the applied significance of lexicography. Since a lexicographer's activity is aiming at its practical and utilitarian result – the compilation (in our Lexicographic Centre we prefer to use the term 'creation') of a dictionary, this kind of a linguistic reference-book, thus they conclude that working on a dictionary is some non-creative sort of human pursuit, which is essentially indistinguishable from, say, the compilation of a telephone directory.

Below, we shall try to prove the groundlessness of such views.

For example, physics and chemistry are used for purely utilitarian purposes in military-industrial complex of every country, but this does not mean that physics and chemistry are not sciences. Expanding the point, we arrive at the following "logical chain": the production of bombs and ammunition is not itself science, but participating (in various degrees) in the effort to design and produce the first atomic bomb were: Albert Einstein, J. Robert Oppenheimer (the head of so-called Manhattan Project) and other prominent scientists of the time (not only physicists, by the way). Experimental research and practical activities conducted by these scientists, which eventually ended in the production and successful testing of the first atomic bomb, cannot be deprived of their scientific component and called a "craft" merely on the grounds of their efforts' having such "trivial" and practical objective as the production of a powerful weapon of war. Perhaps, no-one will ever say that Albert Einstein, dubbed "the father of the atomic bomb," or the prominent nuclear physicist, Soviet dissident and human rights activist Andrei Sakharov, widely considered the "Father of the Soviet H-Bomb", were not scientists.

Without profound scientific knowledge and expertise, none of these individuals would have ever achieved anything in the practical field either.

Similarly, for all our respect, no-one would perhaps refer to a police officer in a patrol car, chasing a suspect or placing an offender under arrest, as a 'scientist'. On the other hand, however,

no-one perhaps will even think of denying that criminalistics[1] is a science and of equating the activities of the personnel employed at crime laboratories and of criminalists in general to the manhunt and detention operations conducted by "ordinary", so to speak, police officers. All the more so since, along with its traditional components, such as dactyloscopy, trace evidence analysis, geology, medicine, *etc.*, the present-day forensic science is unimaginable without profound knowledge of molecular biology and, in particular, without analysing and comparing DNA samples.

It was the scientists – biologists, geneticists and microbiologists, who discovered back in the 1980s that the DNA structure of each particular human being is unique and that a person's identity can be established based on his or her biological material (such as blood, saliva, sweat, tissues, *etc.*). Already then, the unique, person-specific structure of DNA was called "genetic fingerprints" and ever since the method called DNA profiling is most widely used by the forensic investigators. Only scientists with fundamental theoretical and practical knowledge of biochemistry, biology and molecular biology can work at a crime lab. The fact that the ultimate goal of their activity is quite practical and utilitarian (eventually, to detain and send to prison a criminal) does not mean at all that their job is merely a "craft" and is not much different from putting handcuffs on a suspect (which any policeman can manage).

Also we, lexicographers, when solving purely practical lexicographic problems, or in the course of some elementary generalization of methodological techniques, often find ourselves submerged in such depths of linguistic theories, issues of the interrelation of language and thought, as well as other scientific matters, that even asking the question as to whether lexicography is a science or not, seems to us hilariously unserious. By the way, the doctoral thesis of the author of the present article is dedicated to a problem which is purely practical lexicographically and, at the same time, rather complicated, profound and complex scientifically – namely, to the problem of semantic equivalence between lexical units from different languages.

As a matter of fact, in all above cases, whether it be nuclear physics, forensic science or lexicography, it is practically impossible to draw a distinct dividing line between purely scientific, on the one hand, and practical and applied, on the other hand, aspects of a scientist's work. In our opinion, this is altogether unnecessary and even an attempt to make such distinction is casuistry, rather than science.[2]

More specifically, in favour of the scientific nature of lexicography there can be put forward the following arguments:

(1) Lexicography has its own theory, its general theoretical basis. Along with other subjects, lexicography studies and classifies different types of dictionaries: explanatory (monolingual) and translation (bilingual) dictionaries, encyclopaedic dictionaries, and so on. By the way, a new type of dictionaries (mainly of learner's dictionaries) has emerged recently. This is so-called bilingualized dictionary. Such dictionary is produced on the basis of an explanatory (e.g. English) dictionary, where each headword is supplied with its equivalent in a target language (say, in Russian), but the English explanation is also retained. This results in some type of a combination of English-Russian and English explanatory dictionaries, that is, a whole new type of a dictionary, which can be defined as the "hybrid" type of dictionaries. According to latest research, dictionaries of the said type have higher cognitive value for language learners.

Similarly, modern lexicography actively studies the issue of target audience of dictionaries. This means the determination of the level of education, cultural background, linguistic and

[1] Aptly and symptomatically called otherwise "forensic science".

[2] Comical enough, when somebody tries to prove that lexicography is not a science, or is at most just 'an applied science', he/she is perhaps convinced that by being engaged in such a futile theoretical discourse, he/she is occupied with some kind of scientific activity, while much more socially useful activity – lexicography, for him/her and other like-minded theorists is not science at all.

lexicographic needs, *etc*. of the social stratum for which each particular dictionary is intended. The aim of such, so to say, social research is to ensure that each new dictionary will meet the needs and demands of its potential users.

We believe that such theoretical knowledge is of paramount importance for each person working on a dictionary. In the process of practical work however, lexicographers need to be familiar with other, much more essential postulates of lexicographic theory.

(2) Lexicography also has its practical, purely scientific aspect, which implies general knowledge of and the ability to use in practice different lexicographic methods and techniques.

In this connection, it needs to be stated that seemingly synonymous words and expressions from various languages rarely match exactly. Frequently, a word from one language is not lexicalized in another one, *i.e.* it has no single-word equivalent in the language in question. For example, English word '**brocket**' means *'a stag in its second year'*. In Georgian we have words/concepts like **ნუკრი** ([nuk'ri] *'fawn'*), **ხარირემი** ([xαriremi] *'stag'*) and so on, but there is no word in our language specifically denoting *'a stag in its second year'*. This, supposedly, happens because Georgian speakers do not find it necessary to single out from their surrounding reality two-year-old stags and do not use a special word to denote such fawns. Accordingly, this English word/concept remains non-lexicalized in Georgian. We could cite even more complicated cases of non-lexicalization. In order to render into Georgian the meanings of such non-lexicalized foreign words, lexicographers have both to use some empirically developed techniques (such as adding some brief explanations and thus introducing certain elements of explanatory dictionaries into bilingual ones, for example) and to study and apply international good practices in the overcoming of such difficulties. Personally we, the team of lexicographers working on the Comprehensive English-Georgian Dictionary (CEGD), found especially noteworthy and helpful the concepts and ideas expressed by Ladislav Zgusta (1924-2007), a prominent American lexicographer and lexicographic theoretician of Czech descent, styled as "the twentieth-century godfather of lexicography,"[3] about Explanatory (descriptive) *v* translational (insertable) equivalents [Zgusta, 1971].

In our opinion, the existence of such theoretical and methodological basis is an attribute of science, proving one more time that lexicography is indeed a science.

And finally (3), when working on a word or a particular meaning of a word for a dictionary entry, a lexicographer has to analyze and collate vast material (explanations, definitions, illustrative phrases and so on) retrieved from different, sometimes very numerous, explanatory or bilingual dictionaries and, afterwards, on the basis of the information thus obtained, to find an exact and precise equivalent for a word or a meaning of a (polysemous) word in question in the target language (Georgian, in our case.) **More specifically**, a lexicographer has to: **(a)** fully realize the exact meaning, the semantic essence of the word or expression basing on the definitions and illustrative quotations included in various dictionaries. This "essence", this semantic value of a word may be absolutely non-verbal and/or not lexicalized in our native (Georgian) language. (This means that the word may have no Georgian equivalent at all, as already discussed above.)[4] On the next stage **(2)** one needs to realize/figure out how this abstract,

[3] As Dutch lexicographer Piet van Sterkenburg refers to him [van Sterkenburg, 2003].

[4] Cases of so-called zero equivalence(In more detail, the subject is discussed in the article by Rufus Gouws and Danie J. Prinsloo [Gouws … 2008]).

non-verbal essence, idea or meaning can be expressed in the target language. Only thereafter becomes it possible **(c)** to select an exact equivalent in the target language.[5]
The entire complex of such difficulties makes lexicography (along with the deciphering of texts in dead languages) into one of the most difficult and, one could say, extreme branches of philology!
We believe, everybody must agree that this process, briefly described above, is absolutely unimaginable without considerable linguistic, lexicological, etymological and general scientific background knowledge, aided by some quite substantial intellectual faculties, which must be accompanied by the ability to process vast amounts of information and to work hard over prolonged periods of time. If such work is not scientific activity, so what can be called scientific activity then?

Conclusion

Thus, as we have seen, the conduct of full-scale lexicographic activity requires such profound linguistic knowledge, experience and competence, namely the natural ability to perform hard lexicographic labour and certain inborn intellectual capacities that, in our opinion, the question whether lexicography is a science must be given univocally positive answer.
Especially unsubstantiated and weak, in our view, is the argument by virtue of which lexicography is alleged to be a "craft" rather than a science because of its having applied, practical purpose and aspect. Only highly competent, broadly educated linguist can work on the creation of dictionaries. The work of such a linguist is creative and intellectual and in its process it is impossible to make distinction between its general theoretical and current applied and utilitarian aspects.[6]
Consequently, we find more acceptable the interpretation of lexicography expressed in the following phrase by Franz Josef Hausmann, prominent German lexicographer and lexicographic theoretician: *die Lexikographie ist eine wissenschaftliche Praxis, die das Erstellen von Wörterbüchern zum Ziel hat* [7] [Hausmann, 1985:368].
We think that such approach is more correct and adequate, giving a better idea of the essence of the subject.
As to the applied aspect of lexicographer's work itself, in our opinion, it deserves even greater appreciation on the grounds of lexicographer's finding socially useful application for his or her linguistic erudition, expertise and competence. And truly, instead of engaging in the production and presentation to the academic community of more "prestigious" and highly appreciated scholarly papers, which would earn him/her fame and respect, lexicographer is occupied with underappreciated work, which is no less (or maybe even more) beneficial for the society, than many scientific research papers are.

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[5] By the way, the process just described undoubtedly proves, in our opinion, the abstract, non-verbal and non-linguistic nature of thinking and entirely disproves so-called "Sapir-Whorf theory", though this is already a subject of quite another discussion.
[6] Exactly as in above cited examples, where we discussed the cases of physicists working on nuclear projects and biologists and geneticists working in crime laboratories.
[7] "Lexicography is a scientific practice aiming to bring dictionaries into existence".

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