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A FORGOTTEN 17th CENTURY ENGLISH PIONEER OF
LANGUAGES IN CONTACT

This paper has been written as a contribution to be added to those of all the authors who have already shown their wish to celebrate the seventieth birthday of Rudolf Filipović and to wish him many more years of fruitful work.

This paper calls attention to a forgotten English scientist, John Wilkins, who as early as 1668 printed his *Essay Towards a Real Character and Philosophical Language*. The work was undertaken at the request of the Royal Society. He was to invent a universal language and orthography which would enable men of all nationalities to communicate more adequately since Latin, then used by them, was inadequate for the communication of the new scientific ideas and discoveries, especially in physics and mathematics. Wilkins's *Essay* of some 700 pages presents a vast accumulation of material, collected by many experts, in many languages and branches of knowledge. His conclusions regarding grammatical categories, the nature and classification of speech sounds anticipate by three centuries the work of modern phoneticians and linguists, from the *Table of Eight Cardinal Vowels* formulated by D. Jones to the modern study of language by contrastive analysis.

Knowledge inherited by any generation from earlier ones is of necessity selected; and the selection is determined by many factors of which chance rather than merit or worth is often more influential. It is therefore one of the obligations of scholarship not only to look forward in its endeavours to extend the frontiers of knowledge, but to look back in order to rescue from obscurity works which, though apparently condemned to final oblivion, have more than purely historical interest for the present. Such a work, published three centuries ago, in 1668, is *An Essay Towards a Real Character and Philosophical Language* by John Wilkins. That the work should be resurrected in this article offered to Professor Filipović whose work has ranged so widely over the field of languages in contact seems particularly appropriate, since much of the vast linguistic material accumulated by Wilkins and the methods he used foreshadow the modern study of languages by contrastive analysis.

Wilkins spent his life mostly in Oxford, Cambridge or London. From 1648 to 1659 he was Warden of Wadham College, Oxford, at the time when scientific interest in the use of the microscope was superceding that of the

telescope; and his innovatory method of approaching the linguistic problem he was later to investigate, the invention of a universal language and orthography, was that of microscopic examination. During the Civil War, Wilkins moved to the Parliamentary stronghold of Cambridge where he became Master of Trinity College. He was removed from this post at the Restoration of the monarchy in 1660 and thereafter accepted a number of high administrative posts in the Church in London, Ripon, Exeter and finally Chester, where he held the office of Bishop until his death in 1672. In his later years he participated in the founding of Gresham's College in London »for the promoting of Physics, Mathematical and Experimental Learning«, out of which the Royal Society developed. This was officially founded by Royal Charter granted by Charles II after the Restoration of the monarchy. Wilkins was one of the first two Secretaries of The Royal Society. Among the Society's aims was the improvement of the international exchange of scholarly knowledge and understanding through the formulation of a »philosophical« language (i.e. a language whose elements were to be based on fundamental, hence universal, factual and conceptual knowledge) and a »real character« (i.e. a written form of communicating it). Wilkins accepted all the more readily the Society's invitation to undertake such a task since such a language would not only assist men to communicate more accurately — the international means of communication among scholars at this time was Latin and inadequate for expressing the new scientific ideas then fermenting — but »several of those pretended, mysterious, profound notions, expressed in great swelling words, whereby some men set up their reputation, being this way examined, will appear to be either nonsense or very flat and jejeune« (Wilkins 1668: v). Not only Wilkins but many learned men with him, especially members of The Royal Society, were exasperated by the endless, unfruitful theological arguments of this time.

The notion of attempting to invent a universal language was in the mind of several people about this time, for instance George Delgarno who, in his *Ars Signorum* published in 1661, expresses his deep appreciation of Wilkins' support and helpful suggestions. Wilkins seems to have been chosen by The Royal Society to undertake the work not only because of his already vast knowledge and imaginative thinking but because he was regarded as best able to co-ordinate his own thinking and work with that of others. In undertaking such a task Wilkins certainly saw it as requiring the assistance of specialists in many branches of knowledge. His initial step must be, he decided, to compile word-lists which he would organise into Tables. From these Tables he would decide upon the most appropriate categories to use in the final construction of his »philosophical« language and its orthography. To assist him in this compilation he turned to such eminent scientists as John Wray, sometimes called the father of English natural history, and Francis Willoughby, ornithologist and ichtheologist, one of the most important precursors of Linnaeus as well as friend and co-worker of Wray.

The *Essay Towards a Real Character and Philosophical Language* was apparently begun some time between 1657 and 1665. Most of it had been set up in print by 1666. This was the year of the Great Fire of London; and all

but two copies of the original printed text and most of the original manuscript were burned in the fire. The book was re-printed and published under the imprimatur of The Royal Society in 1668. Its significance was immediately recognised by the author's contemporaries. Its influence is said to have lasted well into the eighteenth century and at the end of the nineteenth Wilkins was still seen as holding »an honourable place in the history of phonetics« largely since his illustrations »though inaccurate, are the first in England to represent scientifically the phenomena of speech« (Ellis, 1869—1889: I.41, IV.999). Following its original publication the book itself was for three centuries never re-printed. Only in 1968 was a facsimile reprint published. This interval undoubtedly accounts for the obscurity into which the book and its author have fallen.

However, the substantial volume of some seven hundred pages was evidently not considered by Wilkins to be final when it first appeared in 1668, for in the Preface to it he invites criticism and comment. He was nevertheless convinced of the ultimate value of the vast accumulation of information in his Lists and Tables. In his Dedication addressed to the President of The Royal Society Wilkins (1668:ii) writes: »I am not so vain as to think that I have completely finished this great undertaking, with all the advantages of which such a design is capable... I am sensible of sundry defects in the several parts of this book... But what ever may be the issue of this attempt, as to the establishment of a real character and the bringing of it into common use among several of the nations of the world (of which I have very slender expectations): yet this I shall assert with great confidence. That the reducing of all things and notions to such kind of Tables as are here proposed (which is as completely done as might be) would prove the shortest and plainest way of the attainment of real knowledge that hath been offered to the World. And I shall further add that these very Tables (as now they are) do seem to me to be much better and readier a course, for the entering and training of men in knowledge«. Mindful of the correlation between the written language and »articulate sound« (speech) and perceiving that »voice and sounds can as well be assigned to figures [alphabetic signs] as figures to sounds«, Wilkins (1668: 385) concentrates on semantics, phonetics, lexicography, grammar and philosophy. From the results of his observation of the behaviour of many languages in contact in this way, he would then, he planned, set about devising the written form of a universal language.

By way of Introduction, *The Essay Towards a Real Character and Philosophical Language* starts with a brief survey of languages of the world. In this the author relies not only on earlier eminent writers on the subject (such as Scaliger) but also on his own observations and deductions. He then proceeds to the question of alphabets and defects in past unsuccessful attempts of others to invent a »real universal character« that »should not signify words but things and notions, and consequently might be legible by any nation in their own tongue; which is the principal design of this Treatise« (Wilkins 1668:133). He turns his attention to the representation of vowel sounds and the manner of indicating what he terms their »power« — both of which he considers to have been unsatisfactory so far. In English ortho-

graphy, he points out, the sound »i« is represented in six different ways: by 'e', 'ee', 'ie', 'ea', 'eo' and 'i' — and cites examples of each. This immediately indicates that his primary criterion for the »real character« is to be phonetic. He then identifies »equivocals« (by which he means words of the same sound but several meanings), synonyms (»which make language tedious«), anomalies and »differences... in very many words betwixt the *writing* and *pronouncing* of them... And it should seem very reasonable that men should either speak as they write or else write as they speak« (Wilkins 1668:18). Part One concludes with an indication of how he proposes to eliminate all confusions. »If to every thing and notion there were assigned a distinct *Mark*, together with some *provision* to express *Grammatical Derivation* and *Inflexion*; this might suffice as to one great end of Real Character, namely, the expression of our Conception by *Marks* which should signify *things* and not *words*« (Wilkins 1668:21). These marks should bear some relationship so as to assist memorisation. In Part Two Wilkins attempts to draw up Tables classifying and relating all the things and notions he has listed, grouped under various headings and sub-headings. They range from »The World and Natural Objects« to »Spiritual Action«, »Family Relationship« and »Water«. Under this last he for instance gives the sub-headings rain, dew, bubbles, cloud and so on.

Having disposed of the »scientific« part of the work Wilkins proceeds in Part Three to the »organical« that is, to Grammar, the »art of discourse«. This he sub-divides into two kinds, »Natural« Grammar (i.e. »Philosophical, Rational and Universal«) and »Instituted and Particular« Grammar (i.e. the particular rules and usages applying to any one language). While acknowledging that others before him have dealt with these, he considers that »all the Authors in some measure (though some more than others) were so far prejudiced by the common Theory of the languages they were acquainted with, that they did not sufficiently abstract their rules according to Nature. In which I do not hope, that this which is now to be delivered can be faultless; it being very hard (if not impossible) wholly to escape such prejudices: yet I am apt to think it less erroneous in this respect than the rest« (Wilkins 1668:297). With characteristic meticulousness he examines the qualities and functions of the various elements of speech such as nouns (and gender), adjectives (seen, like verbs, as being either active or passive and regarded by him as adverbial), prepositions, adverbs, conjunctions, verbs, moods, tenses (where he advances the interesting notion that »the Tenses in instituted languages are appropriated only to *Verbs*, yet 'tis very plain that according to the true Philosophy of Speech they should likewise be ascribed to Substantives; and this would in many respects be a greater advantage to Language« (Wilkins 1668:316). There is a highly original section on »transcendental particles«. Here many word-lists, reminiscent of Roget's *Thesaurus*, appear. There are, for instance, lists to illustrate oppositions or likenesses, diminutions and augmentation, male and female pairs, perfective and corruptive oppositions; and notions of continuing/discontinuing and permitting/hindering. Many words in these lists can be eliminated from the lexicon of



a universal language, points out Wilkins, by the use of hyphen and by inflexion.

In Chapter IX of Part Three the author has progressed to what he calls syntax but which embraces much more than is today generally included within this term since »besides the order required in Syntax, something ought to be subjoined concerning the *Quality* of vowels or Syllables, together with the several distinctions or *interpunctions* to be observed betwixt words and sentences. If for that part usually treated in instituted Grammars, styled *prosodia*, concerning the quality of Vowels, there needs not anything to be said here; because in a Philosophical Language every vowel is supposed to be in the writing sufficiently distinguished in this respect; every long Vowel having a note or mark to signify its prolongation«. Thus stress and intonation (or accent) must be indicated since these may be significant. He continues: »The expressing of any one syllable in a word, with a little *higher tune* and *longer time* than others, is to be expressed by an accent; as in the words Consent, Contrive, Compose, Having, Wisdom.« Wilkins has even observed that silence and silence-length may be significant and so must be recorded. In »Ancient« orthography the length of the pause, he explains, was indicated by a comma, colon or full-stop. Later the semi-colon was added; and he now rightly and very far-sightedly sees these as not only indicated length but intonation. »The use of the Points [punctuation] is to direct what kind of pause is to be observed and how the tenor of the voice is either to be continued or to fall« (Wilkins 1668:355). These indicated pauses are termed parenthesis, parathesis or exposition, erthesis or interrogation, ephonesis or exclamation or wonder or emphasis, irony and hyphen. The implication of each is explained. Of irony he observes that »though there be not (for ought I know) any note designed for this in any of the Instituted Languages, yet that is from their deficiency and imperfection. For if the chief force of Ironies do consist in Pronunciation, it will plainly follow, that there ought to be some mark for direction when things are so pronounced (Wilkins 1668:356).

After mentioning the contribution of others to the debate concerning alphabets and language, including Scaliger, Lipsius and Gill, Wilkins now offers his reader »several suggestions that are new, out of the common road and very considerable«. There follows a schematic Table of the classification of the organs of speech and method of articulation of speech-sounds which are themselves classified into dental, palatal, nasal and so on. His simple, lucid explanations, effected largely by Tables, are impressively modern. After listing lungs, throat, mouth and nose as the »Common« organs of speech he lists the »peculiar« i.e. palate, teeth, lips and tongue which are »active«. And he describes the manner in which the »peculiar« are activated in order to articulate the different type of sounds required.

Chapter X is devoted to vowels. These he defines in a manner still acceptable today, classifying them into long and short, »apert« (open) and »less apert«. To these he adds four semi-vowels and diphthongs. He identifies »eight simple different species of Vowels, easily distinguishable, whose powers are commonly used... I cannot deny but that some other inter-

mediate sounds might be found; but they would by reason of their proximity to others prove of so difficult distinction as would render them useless... those eight Letters before enumerated I conceive to be so many distinct species of Vowels, *formally different* in respect of their powers« (Wilkins 1668:357). It was to be more than two centuries before Daniel Jones formulated his Table of the Eight Cardinal Vowels and his theory of the phoneme. Consonants are classified, tabulated and described by Wilkins according to manner of friction and whether voiced or unvoiced (which he terms *breathed* or *non-breathed*). Next diphthongs, triphthongs, semi-vowels and compounded consonants« are identified and described. Part Three concludes with a phonetic version in contemporary (to him) English of *The Lord's Prayer* and *The Creed* and offers suggestions expressed in tabular form of how the characters of a universal language might be formed to comply with the criteria of simplicity with elegance, ease of distinguishability the one from the other and of some kind of relatedness. A set of diagrammatical drawings follows, showing the method of articulation of thirty-four sounds of speech (See illustration) which »will suffice to express all those articulate sounds which are commonly known and used in these parts of the World. I dare not be over-peremptory in asserting that these are all the Articulate Sounds which either are or can be in Nature; it being perhaps as impossible to reckon up all such, as to determine the just number of *Colours* or *Tastes*« (Wilkins 1668:383).

Finally Wilkins presents the Philosophical Universal Language which he has devised on the basis of all his classifications. Though it is »natural« for the spoken language to emerge first he will start by presenting his new language in its written form (indicating its pronunciation using English sound equivalents) since this is phonetic and it is easier to learn a written than a spoken language. Emphasizing here that the symbols of the alphabet must be designed to assist memory and understanding Wilkins repeats that his shapes have also aimed to be »comely and graceful to the eye« and to be clearly distinguishable one from another so as to avoid confusion in deciphering them. Also, for practical reasons, the characters have been designed for writing with »one *ductus* of the pen or at the most two« and have an underlying methodology whereby »those of the same common nature« have »some kind of suitableness with one another« (Wilkins 1668:386). In the devised notation all forty of the genera, material or national, identified in the Tables as basic, are represented by a common thick horizontal line (i.e. —) but each is modified by a mark or accent placed on or within that line (e.g.  or  or ). Thus the genus 'World' is ; 'God' is . 'Discourse' is ; 'Element' is ; and such like. A hook or dot or some other additional mark was added to indicate the species of genus. There was a correlation between the way in which the symbols were devised and the manner of their pronunciation. The symbol , for instance, is pronounced 'da', the symbol  is 'de' and so on.

It is impossible in this short paper to give a proper idea of the extent of the author's learning or to call attention to the many languages, not only European, with whose characteristics he had acquainted himself. But in

order to illustrate that his method of approach had been essentially comparative and contrastive, attention may here be called to the complete renderings Wilkins gives of translations of *The Lord's Prayer* and *The Creed* into his Universal Philosophic Language and written in his devised Real Character in fifty different languages. These include not only the major languages of the time such as Latin, Spanish, French, Italian but also Croatian, Dalmatian, Carnish, Serbian, Armenian, Persian, Russian, Danish, Lapp, Frisian, Irish and Coptic (Filipović 1977:202). Chinese also was to have been included but the Chinese version of *The Lord's Prayer* was burned with the original manuscript of the book in the Great Fire and to obtain another was a long and difficult process in the seventeenth century. The Chinese ideographs are however given.

Neither the universal language nor alphabet for representing it invented by Wilkins were to be adopted and Wilkins, as we have seen, was not so optimistic as to think that this would be so, though he did believe he had demonstrated the feasibility of this eventually being achieved. He was always conscious of the fact that the invented symbols must be easily capable of memorisation, particularly since the reason for his being invited to undertake the work had been entirely practical. »Though I have not as yet had an opportunity of making any trials, yet I doubt not«, he said in respect of the matter of memorisation »but that one of good capacity and memory, may in one month's space attain to a good readiness of expressing his mind in this way either in Character or Language« (Wilkins 1668:454). He sent a letter written in his Universal Language to Dr. Wallis, who returned an answer. »We did perfectly understand one another«, declared Wallis »as if written in our language« (Wallis 1678:17).

Wilkins's belief in the ability of »one of good capacity and memory« to learn his language in a month was perhaps too optimistic. But his understanding of the nature of spoken and written language, his vast accumulation of data and his analysis of it, his whole approach to the problem he attempted to solve were far ahead of his time. Had he lived in our present computer age might not he, using his huge accumulation of data and a similar approach, have achieved with the aid of a computer something impressively closer to his goal? The Dictionary of English words he regarded as the necessary corpus of words essential for a universal language, which was appended to the *Essay Towards a Real Character and a Philosophical Language*, may be of interest to today's linguistic innovators.

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S a ž e t a k

JEDAN ZABORAVLJENI ENGLISKI PIONIR JEZIKA U KONTAKTU IZ XVII STOLJEĆA

The Royal Society of London pozvao je Johna Wilkinsa da sastavi »filozofski jezik« (tj. jezik zasnovan na temeljnom, dakle univerzalnom, činjeničnom i pojmovnom znanju) i njegovu ortografiju, u skladu s nastojanjima društva da poboljša međunarodnu razmjenu znanstvenih spoznaja. Kao rezultat, 1668. god. se pojavio Wilkinsov *Essay Towards a Real Character and Philosophical Language*. Sljedeće je izdanje izašlo tek 1968. god., nakon dugog perioda u kojem je djelo bilo zaboravljeno.

U vrijeme kada mikroskop, umjesto teleskopa, ulazi u žižu znanstvenog interesa, Wilkins je primijenio mikroskopski pristup na istraživanje jezika te ga nadopunio kontrastivnom analizom. Uz pomoć mnogih stručnjaka za najrazličitija pitanja, on je sastavio ogromnu građu, organizirao riječi u tabele te iz njih izveo kategorije i glasove za završni rad na univerzalnom jeziku i ortografiji.

Primjenjujući načelo da bi trebalo »ili govoriti kako se piše ili pisati kako se govori«, Wilkins poklanja veliku pažnju fonetici. Između njegove i današnje klasifikacije suglasnika i samoglasnika mala je razlika, a navođenjem osam različitih, »jednostavnih«, samoglasnika on predskazuje dijagram osam osnovnih samoglasnika i teoriju fonema Daniela Jonesa. Osim toga, navodi i dijagram artikulacije suglasnika, ističe značaj označavanja intonacije te prilaže kontrastivne liste riječi, koje podsjećaju na Rogetov *Tezaurus*. Wilkinsova se ortografija temelji na horizontalnoj crti s razlikovnom oznakom na njoj ili unutar nje, a ilustrirana je primjerima iz pedeset jezika te cijelim Očenašem na engleskom. U prilogu se daje Rječnik engleskih riječi, koje se smatra ključnom leksičkom građom za univerzalni jezik.