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Language as the mirror of world order

On the 370th anniversary of the birth of G. W. Leibniz and 300th anniversary of his death

WYDAWNICTWO UNIWERSYTETU W BIAŁYMSTOKU

BIAŁYSTOK 2016

Reviewer: prof. Jerzy Kopania

Proofreading and editing: Rainer Lindheim

Cover design: Teodor Worona

Type-setting: Stanisław Żukowski

ISBN 978-83-7431-497-8

The volume has been financed by the Faculty of Law
of the University of Bialystok

University of Bialystok Publishing House
15-097, Białystok, 14 Marii Skłodowskiej-Curie Street
phone number: 857457120, e-mail: ac-dw uwb.edu.pl,
http://wydawnictwo.uwb.edu.pl

Printed and bound by: "QUICK-DRUK" s.c., Łódź

Zdigitalizowano i udostępniono w ramach projektu pn.
Rozbudowa otwartych zasobów naukowych Repozytorium Uniwersytetu w Białymstoku – kontynuacja,
dofinansowanego z programu „Społeczna odpowiedzialność nauki" Ministra Edukacji i Nauki
na podstawie umowy BIBL/SP/0040/2023/01

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INTRODUCTION

Leibnizian studies on language are an outstanding phenomenon, not only in connection with similar achievements made by 17th century thinkers, but also within the field of issues tackled by the philosopher and in respect of quality of the results presented by him. This is because Leibniz is a language theoretician who depicts fundamental relations between language and bases of human thinking, and he does it in an algebraic form. Leibnizian algebra of ideas was not only an important step in logics, but it was also the first attempt in history to construct algebraic theory relating neither to numbers nor space. Leibniz, as a language philosopher and logician, was discovered only on the brink of the 20th century, mainly thanks to E. Husserl, G. Frege, and G. Peano. Acquaintance with the philosopher's works can be contributed undoubtedly to L. Couturat who in 1908 published logical and philosophical works entitled *Opuscules et Fragments Inédits* – a very important supplement of Leibniz's monumental edition by C. I. Gerhardt, including seven volumes of philosophical works and seven volumes of mathematical works which were developed over nearly forty years in the second half of the 19th century. Leibnizian inspirations are the core of one of the most important mathematical works from the beginning of the 20th century, namely a book entitled *Principia Mathematica*, written by B. Russell and A. Whitehead. It can be stated that Russelian doctrine of logical atomism is essentially related to solutions accepted by Leibniz in *De Arte Combinatoria*. Similar inspirations in the field of the theory of meaning may be found in G. Frege's

works, where Leibnizian theory of identity is compared to Frege's contextual theory of meaning (*Bedeutung*).[1]

Leibniz's achievements within the field of a formal theory of language, appreciated after centuries, are closely related to his attitude towards a philosophical status of language which, according to Leibniz, has natural character just as much as the ability to think, on the strength of yearning which updates the ability to think and to create language thanks to external stimuli. Basically, the ability is of the same nature as the model of universal grammar presented by N. Chomsky, in connection with his theory of language competence, although Chomsky indicates, not quite rightly, that it has a Cartesian lineage. The same overinterpretation was made by another American scholar, K. Devlin. For here, on the cover of the Polish edition of his famous book entitled *Goodbye, Descartes. The End of Logic and the Search for a New Cosmology of Mind*[2] it can be read that the reflexion on language and human thinking played a prominent role in the history of philosophy and science. Today – at a time of studies on artificial intelligence and the development of informational techniques – psychologists', language philosophers', sociologists', and linguists' works became especially influential. Answers to the questions relating to what the human mind is and how we think are the keys to the fundamental problems of information technology. The birth of a new field – cognitive science which deals with the structure of the mind, thinking, and consciousness – became a challenge to the tradition of rationalistic philosophy and, at the same time, an important factor in the development of computer and communicative techniques. Devlin settles accounts with tradition whose shape, according to the author, is defined by Descartes, his philosophy, and, most of all, his methodology. Descartes can

[1] See H. Ishiguro, *Leibniz's Philosophy of Logic and Language*, second edition, Cambridge 1990, p. 8–16.

[2] K. Devlin, *Goodbye, Descartes. The End of Logic and the Search for a New Cosmology of Mind*, New York 1998.

be, of course, regarded as a symbol of the whole rationalism heritage. However, it seems that despite huge influence on modern philosophy, it is Leibniz, and not Descartes, especially in the respect of relation between language and cognition, who should be a main hero of an endless goodbye, for a complete recognition of the philosopher's idea can provide us with inspirations for new solutions in this field.

Here Leibniz, unlike Descartes who completely neglects materialistic research,[3] presents himself in a different role – as a natural languages researcher taking into consideration both the descriptive and diachronic perspective, the author of languages genealogy classification, and as a person who, despite inaccuracy and naivety, which are not possible to avoid when we consider the state of the art of the time, considers languages origins and their typology in a factual manner. His programme of studies on ethnic languages was of empirical character, and, although linguistics as a scientific field remained in the pre-theoretical stage, Lebniz may be recognized as a precursor of the methodology of materialistic linguistics in a synchronic, diachronic, and comparative sphere.

In this context, a Leibnizian attitude towards the relation between ethnic languages and the representation system inside the mind assumed by the philosopher gains in importance. Leibniz makes a clear distinction between the natural and psychological order of cognition, which is common to "angels and men and to all intelligences in general." This stable and constant order is an equipment of each mind, which leads to the recognition of the existence of a representation system – the language of thought or idea common to all minds, which is of a natural and potential character. The order is, in essence, different from the psychological order, and it is the history of human discoveries "which is different in many

[3] See H. Święczkowska, *La perspective platonicienne sur la langue chez Descartes et chez Leibniz*, in: M. Czarnowska, J. Kopania (Eds.), *Idea. Studia nad strukturą i rozwojem pojęć filozoficznych*, VIII, Białystok 1996, p. 60.

people" and is only revealed in a given ethnic language. Speech is the result which has its cause, and the cause is the representation system inside the mind. According to Leibniz, ethnic languages are of historical character; therefore, they are the carriers of a discovery order. The order has both a historical and a psychological dimension. An ethnic, external language is one of the most important means of expression of given cognitive states of its individual users, societies, and the whole of humanity. It partially explains why Leibniz connoted a mirror metaphor as a mirror of the mind. Although thinking itself extends far beyond language, the language reflects what is revealed in the act of consciousness, and it is the only tool allowing for the determination of the scale of cognitive disposition of the thinking mind.[4]

For Leibniz, ethnic languages, and, broadly speaking, all symbolic systems are the most important material to conduct studies on the history of culture and the civilisation of a given linguistic community. The key to the development of not only a given community, but also, in a wide perspective, the whole of humanity, lies, according to the philosopher, in improving symbolic systems, which are involved in cognitive processes. In essence, *Unvorgreifliche Gedancken*, whose message extends far beyond the particular affairs of only one nation, relate fully to the culture-producing, social, and civilisation function.[5] In this text, Leibniz himself reveals his linguistic fascination both in the sphere of the general theory of language and in less recognized in the philosopher's texts theory of language including its psychological, social, culture-producing, and, finally, political aspect.

Leibniz regards linguistic matter not only as a sphere of theoretical reflexion. It is, for the philosopher, the most crucial tool for

[4] See H. Święczkowska, *Harmonia linguarum: język i jego funkcje w filozofii Leibniza*, Białystok 1998, p. 71–76.

[5] It is worth connoting notes included in N. Davies' book entitled *God's Playground: A History of Poland*, relating to the role of the Polish language in the process of national heritage protection, especially during annexations.

the archiving and processing of human knowledge. This pragmatic, appropriable aspect of a linguistic sign is revealed in Leibnizian postulates relating especially to scientific and technical terminology. A well designed, adequate use of symbols serves the purpose of revealing new fields of knowledge, both in the spheres connected with science and with the practical side of human activity. For Leibniz, a linguistic text, especially a written word, has a cognitive and didactic value, since the programme of creating an enlightened, not only German, community is based on an assumption of common and unlimited access to scientific information, whose range is determined by the contents of libraries, archives, registers, as well as by the contents of latest specialized journals. Information exchange serves the purpose of shaping critical attitude which allows for the evaluation of past possessions. At the same time, it inspires creativity. Lebnizian obsession with order reveals itself in the projects of the systems of library information, as well as in the systematization of archives contents and building fundaments of public information systems. According to the philosopher, the enlightened society requires a new scientific work organization, promoting the exchange of creative thoughts between all participants of scientific life.

For Leibniz, science has an internationalistic dimension. It is a field free from political and social boundaries. However, it goes without saying that prosperity and a new quality of life for a given society depend on awareness of the importance of research work and fast implementation of its results. Popularization of the work results alongside with increasing understanding of the modernization processes depend to a large extent on the language of transfer. And here it is Leibniz who reveals himself as a thinker who recognizes the importance of a national language as the most crucial carrier for all civilization issues. Leibniz is convinced that public discourse should be run exclusively in a national language, because only the language, on one hand, guarantees communication leading to social unity, and, on the other hand, contributes to proper un-

derstanding of rights ruling the society and the world by the community.

Leibniz as a scholar claims that the key to intellectual community is the use of symbols which, subject to testimonial procedures, serves a purpose of building a universal system of knowledge. Leibniz as a thinker believes that the key to national community, capable of using all results of human activities, is communication with the national language behind it which is accessible for all members of a linguistic community. Journalistic and organizational activity for the improvement of the German language in Lebniz is, in my opinion, of complementary character regarding his projects of universal language, and, despite seeming contradictory, is consistent with them. Leibniz is fully aware of the fact that an ethnic language, a national language, is absolutely primary, and, tapping into the fact, he presents the project of building enlightened German society based on a linguistic fundament. In this activity, Leibniz reveals himself as a political thinker who, acting for national emancipation, uses, in a creative way, premises underpinning his philosophy.

I.

LANGUAGE AS A MIRROR OF THE MIND

1. The motif of a mirror

The Leibnizian attitude toward language is most fully expressed in the conviction that language is the finest mirror of the mind[1] and therefore the analysis of the substance of language should lead to a recognition of the mechanisms of the process of thinking itself. Language capacity, in a like manner as the capacity to think, is a function of the same intensity and the same endeavour which differentiates Man from other creatures. If this interpretation is on target, it leads us to the conclusion that any natural language system may be the subject of analysis. This results from the fact that every language "reflects" the natural order of ideas which potentially belongs to the intellectual equipment of all substances capable of reflecting about themselves as "Me."[2]

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[1] G. W. Leibniz, *Unvorgreiffliche Gedancken, betreffend die Ausübung und Verbesserung der Teutschen Sprache,* in: G. G. Leibnitii, *Collectanea Etymologica, illustration linguarum, veteris, celticae, germanicae, gallicae, aliaruminservientia,* cum praefatione Johannis Georgii Eccardi, Hannover, 1717, §1, quoted later as UG, paragraph. NE – G. W. Leibniz, *New Essays on Human Understanding,* transl. and edited by P. Remnant and J. Bennett, Cambridge 1981, III, vii, §6, quoted as NE, book, chapter and paragraph.

[2] G. W. Leibniz, *Die Philosophischen Schriften von G. W. Leibniz,* 7 vol., ed. C. I. Gerhardt. Halle, 1849–1863 (repr. Hildesheim, 1961), v. II, p. 53, quoted later as GP volume, page. G. W. Leibniz, *Philosophical Papers and Letters,* ed. L. E. Loemker, 2nd ed. Dordrecht 1969, p. 337, quoted later as L, page.

Indeed, this conclusion finds confirmation in many statements made by Leibniz regarding the relation between language and thinking and the knowledge accumulated in the language. The following is a fragment of *Analysis Linguarum* of 11 September, 1678 in which Leibniz writes:

"Although there are many human languages, all of them sufficiently developed to be suitable for the transmission of any science whatsoever, it is enough, I think, to consider one language: any nation can in fact make discoveries and direct the sciences in its own backyard."[3] Consequently, independent of the level of civilizational development of a given language society, it is capable of making discoveries and registering in the language the intellectual process whose aim is to broaden knowledge. Such thesis indeed lies at the basis of classical social anthropology.[4] Despite the fact that language studied in its historical perspective registers, as Leibniz acknowledges, the history of our discoveries, which is reflected in the example of those "who as Copernicans continue to say that the sun rises and sets,"[5] this does not impair Leibniz's conviction that languages are the best mirror of the human mind, and that a precise analysis of the significations of words would tell us more than anything else about the operations of the understanding. The motif of the mirror image appears in a number of Leibniz's texts. Let us consider how the relationship of reflection is to be understood and what the role assigned to the "mirror" itself is. It may be assumed that signs as well as language are essential to the understanding of the func-

[3] G. W. Leibniz, *Opuscules et Fragments Inédits de Leibniz*, extraits des manuscrits de la bibliothèque royale de Hanovre par Louis Couturat, Paris, 1903, (repr. Hildesheim, 1961), p. 352, quoted later as C, page. M. Dascal, *Leibniz, Language, Signs and Thought*, Amsterdam/Philadelphia 1987, p. 162.

[4] B. Malinowski, *Culture*, in: *Encyclopedia of the Social Sciences*, vol. 4, New York 1931, pp. 621–45.

[5] GP, IV, 459; L, 320.

tioning of the mind only when they are the basis of some direct method or when they are the only accessible means of reaching the contents of the mind itself. And also that the mind reflects itself in a mirror, even when this is the only means of learning anything about its nature. This does not lead us to the assumption that this mirror plays a role in the functioning of the mind itself. It seems that Leibniz has gone far from such a superficial formulation of the relationship between signs and thinking.[6] Language in Leibniz is integrally connected with the mind because according to him:

"All human reasoning is performed by means of certain signs or characters. Indeed, it is neither possible nor desirable that the things themselves or even the ideas of them be always distinctly observed by the mind. So, for reasons of economy, signs are used for them."[7] Matters connected with how language involves itself in thinking and what functions are assigned by Leibniz in this process will be considered in a separate chapter. Below we concentrate on the concept of expression which is fundamental for Leibniz.

2. Expression

The relation of reflection becomes clear in the context of another, wider concept – "representation" or "expression" – constituting the core of Leibnizian metaphysics. Let us note that "each created monad represents the whole universe"[8] and "each monad is a living mirror, or a mirror endowed with an internal action, and ... it represents the universe according to its point of view and is regulated as completely as is the universe itself"[9] because,

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[6] See M. Dascal, *Leibniz, Language, Signs and Thought, op. cit., Foreword,* X.

[7] GP, VII, 204; M. Dascal, *ibid,* 1987, p. 181.

[8] GP, VI, 620; L, 649.

[9] GP, VI, 598; L, 637.

since monads are, essentially, closed to any external influence in the process of representing the world, they turn to the content of their interior, finding there the ideas of things.

"Expression is common to all the forms and is a genus of which natural perception, animal feeling, and intellectual knowledge are species. In natural perception and feeling it suffices that what is divisible and material and is found dispersed among several beings should be expressed or represented in a single indivisible being or in a substance which is endowed with a true unity. The possibility of such a representation of several things in one cannot be doubted, since our soul provides us with an example of it. But in the reasonable soul this representation is accompanied by consciousness, and it is then that it is called thought."[10]

In Leibniz the notion of expression is a technical concept; therefore, it needs some clarification. In his essay *What is an Idea*, Leibniz explains that what is common to different forms of expression is that from the learning of the relations which it expresses we may achieve knowledge of properties corresponding to the thing expressed. The idea is what is in the mind. But as Leibniz writes:

"There are many things in our mind, however, which we know are not ideas, though they would not occur without ideas – for example, thoughts, perceptions, and affections. In my opinion, namely, an idea consists, not in some act, but in the faculty of thinking, and we are said to have an idea of a thing even if we do not think of it, if only, on a given occasion, we can think of it." According to Nicolas Jolley, Leibniz reduces the discussion of ideas to the discussion of the ways of thinking due to the formulation of ideas as a disposition to think in a given way.[11] The idea assumes therefore a certain closer ability or ease of thinking about a thing, the idea of which we have inside, although it is not a thought itself. This ability must lead, however, not only to thinking about the

[10] GP, II, 112; L, 339.

[11] See N. Jolley, *The Light of the Soul*, Oxford 1990, p. 162.

thing, but additionally, it has to express this object. In *Discourse on Metaphysics*, Leibniz develops this concept by writing:

"As a matter of fact, our soul always does have within it the disposition to represent to itself any nature or form whatever, when an occasion arises for thinking of it. I believe that this disposition of our soul, insofar as it expresses some nature, form, or essence, is properly the idea of the thing, which is in us and is always in us whether we think of it or not."[12]

The means of expressing things is based on the analogy of relations between a thing and what constitutes its expression. And therefore speech expresses thoughts and truths, characters express numbers, and an algebraic equation expresses a circle or some other figure. Resemblance is of no need here, for even if the idea of a wheel would not resemble a wheel, it is still possible to elicit from it the truth about the wheel itself.

The mind, therefore, thinks about a thing at that moment when its idea is formulated by it in a certain way. A question arises: does such interpretation assume thinking only at the level of consciousness? The idea of a thing summoned by the mind leads however, as Leibniz says, to thinking about the thing itself under one condition: when simultaneously the idea somehow expresses that thing. If an idea is a disposition to think in a particular mode, then these modes of thinking about a thing are connected with a set of possible forms for the expression of a given thing. Indeed, the concept of the idea of the thing seems to be in Leibniz integrally connected with a certain skill of expression. If we, however, are not able to "grasp" the idea of a thing in any form, does this mean that we do not possess this idea? Leibniz would strongly deny this. He would presumably answer that this idea, although present in the mind, is still in a state of "slumber", is potential, and as such contains all possible forms of expressing things. This results from the fact that:

[12] L, 320.

"we have all these forms in our own minds, and even from eternity, for at every moment the mind expresses all its future thought and already thinks confusedly of everything of which it will ever think distinctly."[13]

It is just a matter of activating an appropriate cognitive process which will release the disposition to reach out for one of the forms of expression. In relation to the above, one can not assume that we are talking about ideas as dispositions to think about things, which is correlated with expressing them: it is always conscious thought. These dispositions may lead to bringing about their actualization and then they may be interpreted as active dispositions. This does not contradict the opinion that the mind of an infant is able to grasp for example the idea of Turing's universal machine or express the quantum theory of gravitation. In the case of infants, as well as the majority of people, these ideas are in the sphere of potentiality, and although it is not known if they will ever achieve disposition to express these ideas on the conscious level, still their minds are programmed to achieve this or any other disposition leading to the expression of idea of things in question. We find the confirmation of such interpretation in the theory of substance. For Leibniz assumes that a given disposition is the result of cooperation of the so called "minute perceptions," imperceptible impressions which undergo processing of the mind.[14] The disposition, finding a basis in the actions of the mind, leads to expression – the representation of things. Admittedly, the ability for representation is vested in all substances, since "every individual substance in its own manner expresses the universe."[15] But, as we remember, in the thinking soul representation merges with consciousness and only then is it named thinking.[16] Such a formulation may lead, however, to the

[13] L, 320.

[14] NE, II, i, §15.

[15] GP, I, 383–84.

[16] GP, II, 112; L. 339.

conclusion that the inner system of representation in any monad is the same system which is also vested in thinking beings – the difference lying only in the fact that the thinking being is able to recognize the system thanks to the ability to think. This conclusion, however, is false, on the grounds that only minds are vested in the natural system of representation, labeled the natural order of ideas by Leibniz. An indispensable condition of thinking is the existence of something which one may think about. This "something" is for Leibniz the idea itself. Animals, having no ideas, are unable to think. They do, however, have some system of representation other than ideas, because their souls, just like other monads, express the world.[17]

3. Ideas as dispositions

Leibniz's theory of ideas is interpreted as a disposition theory. Such a manner of interpretation is indicated by numerous statements made by Leibniz, for example the one that ideas and truths are innate in us – as inclinations, dispositions, tendencies or natural potentialities.[18] The human mind by its nature contains the basis of certain concepts and theories only to be awakened in appropriate conditions by outside objects. Inborn ideas are inborn in the way that the mind draws them from itself; this does not mean that every mind begins as if from the whole stock of ideas and innate truths, or even that every mind ever reaches the clear knowledge of all those truths which can be drawn from it. According to Leibniz,

[17] Leroy E. Loemker in the introduction to his translation of selected writings of Leibniz (L, 42) expresses the opinion that on the level of unconscious perceptions, Man basically does not differ from other creatures. Thus, he accepts that obscure knowledge (*cognito obscura*) combined with access to unclear notions or ideas is also vested in animals. This, however, is in contradiction with the Leibnizian assumption concerning the lack of ideas in substances other than the mind.

[18] NE, Preface, p. 52.

however, there is no such barbarian who, in a matter important to him, would not reflect on the behavior of a liar contradicting himself. But such an almost instinctive use of the principle of contradiction does not mean that everyone knows this principle out of necessity. It means only that it is potentially innate, as are other mathematical truths. The proof of learning these truths is to become aware of them and the adequate expression of them. This potential character of innate ideas assumes a parallel invariability of the equipping of the human mind with the invariability of the whole human race. It is also suggested that aboriginal man had at his disposal the same set of truths and ideas which also constitute the intellectual stock of people living today. But this conclusion contradicts Leibniz's principle of individualization. The same equipping of minds results in their lack of differentiation. Leibniz safeguards himself against this consequence by treating ideas as dispositional. This differentiation corresponds to the range of dispositions, and it is possible to treat every single disposition as building from a certain initial state which we may call predisposition that finds its grounding in the unconscious perceptions of the mind and may be reduced to them.[19] In accordance with this, though the mind of an aboriginal man already had the predisposition to discover integral and differential calculus, only in Leibniz do we find that this predisposition has evolved into a full disposition.

Dispositional features of ideas are illustrated by Leibniz in the example of the marble block in which the form of Hercules already exists as if potentially contained within, although the sculptor has to make a big effort to extract it from the block. This allows us to assume that the mind possesses a certain disposition to find in itself such truths and principles for which it is initially programmed, just as the grain of the marble conditions the movement of the sculptor's chisel. We see here a fairly close analogy with the thesis of Descartes, which says that certain ideas are inborn in the same

[19] See N. Jolley, *The Light of the Soul*, *op. cit.*, p. 162.

way that certain family diseases, not because the "infants of these families suffer from these diseases in their mother's womb, but because they are born with a certain disposition or propensity for contracting them."[20]

4. Implicit knowledge

Let us note that in the description of the thesis of disposition, the assumption of Leibniz fulfills a very important role concerning the implicit character of inborn features. The fact that the concepts are inborn implicit in the mind means that "[this] should signify only that the mind has a faculty for knowing them; (...) it has in addition a faculty for finding them in itself, and the disposition, if it is thinking properly, to accept them."[21] Subsequently, the ability of learning notions alone is something different than disposition. As Jolley notices, Leibniz assigns a different sense to the concept of implicit knowledge than to dispositional knowledge. Jolley interprets dispositional knowledge as "express knowledge,"[22] whereas implicit knowledge is knowledge containing, for example, axioms. "The statement that the body is greater than the trunk differs from Euclid's axiom only in that the axiom restricts itself to precisely what needs to be."[23] "Thus, we use these maxims without having them explicitly in mind. It is rather like the way in which one potentially has in mind the suppressed premises in enthymemes, which are omitted in our thinking of the argument as well as in our outward expression of it."[24] Implicit knowledge is therefore,

[20] R. Descartes, *Notes Against a Certain Programme*, trans. E. S. Haldane and G. R. T. Ross, in: *The Philosophical Works of Descartes*, Cambridge 1911, I, p. 442.

[21] NE, I, i, §21.

[22] See N. Jolley, *The light of the soul*, *op. cit.*, p. 172.

[23] NE, IV, vii, §10.

[24] NE, I, i, §4.

as Leibniz claims, united with the certain ability to learn it or gain it. However, does this ability always lead to its revelation, or does the mind have access to it? We are referring here to Leibniz's differentiation between truths of reason and truths of fact. Truths of reason are necessary statements in the sense that they are apparent statements or they are reduced to them. Among the truths of reason, Leibniz differentiates primary truths which he names "identities", "because they seem to do nothing but repeat the same thing without telling us anything."[25] Among them he distinguishes two categories: affirmative or negative. Assuming the implicit character of these principles, he describes the mechanism of affirmative statements such as: "an equilateral rectangle is a rectangle" or "a square is not a circle." Leibniz claims that these statements have features of innate truths because when considering them we implement the principle of identity (and the principle of contradiction respectively), "for in thinking it, one applies the principle of identity and the principle of contradiction to materials which the understanding itself provides."[26] Thus, they constitute the exemplification of these innate principles and should not be treated as various truths, instead "regarding the axiom as embodied in the example and as making the example truth."[27] A child's acceptance of the statement "the mother is not the father" (meaning that it has the certain disposition to find this truth), consequently reveals the general logical principal of which the above statement is an example. The fact that a child has at its disposal certain implicit knowledge, which consists of, as Leibniz assumes, the principles of classical logic, is not sufficient, however, to its actualization. Thus, it is doubtful if a child, even after long training, could achieve the ability to reveal these principles, though it uses them efficiently on the intuitive level. In other words, a child does not possess the disposition to imple-

[25] NE, IV, ii, §1.

[26] NE, I, i, §18.

[27] NE, IV, vii, §10.

ment them consciously. Despite being devoid of this disposition, it cannot possibly be able to reveal them.

By this interpretation, having implicit knowledge is not sufficient to be transformed into disposition connected with its expression. But we should also remember that Leibniz, when discussing ability, in particular the ability to learn, did not have in mind exclusively "the bare faculty." As he writes:

"inactive faculties – in short, the pure powers ... are ... mere fictions, unknown to nature (...). For where will one ever find in the world a faculty consisting in sheer power without performing any act?"[28]

The ability to learn activates itself thanks to the potential characteristic of every mind which Leibniz calls effort (conatus, appetition). Ability joined with this power leads to a certain result – this result being the revelation of an appropriate disposition.

In *Meditations on Knowledge, Truth, and Ideas*[29] with reference to the division of ideas in Descartes, Leibniz conducts a detailed classification of ideas from the point of view of the role they play in cognition. The content of this treatise is also repeated in *New Essays...* in book II, chapters 29–31. The starting point of this classification is the division of ideas – and the knowledge which corresponds to them – into obscure (*cognitio obscura*) and clear (*cognitio clara*). An idea is obscure when it is not sufficient to recognize the thing represented by it. We deal with this, then, when we consider "some term which the Scholastics had defined poorly, such as Aristotle's entelechy (...) or other such terms of which we have no sure definition."[30] We may therefore assume that the mind remains in certain contact with such an idea as the representation of a thing; however, this state of knowledge does not lead to the identification of a thing. Obscure ideas can be interpreted on the ground of Leib-

[28] NE, II, i, §2.

[29] GP, IV, 422–26, L, 291–94.

[30] L, 291.

niz's metaphysics as perceptions which have not yet transformed themselves into apperception, although they may lead to it. Let us point out that Leibniz, accepting the division into obscure and clear ideas as a starting point, assumes at the same time that the mind always finds itself in a certain state of knowledge at which the lowest level marks obscure knowledge and not the lack of it. The mind, therefore, always has to possess from the beginning of its existence access to the ideas of things which is the consequence of the implicit character of these ideas. In the face of this, we may assume that there exist many truths we have access to on the perception level, however, the disposition to grasp them is lacking. For "the faculty of knowing innate notions" alone is only a prerequisite to having the "faculty for finding them in itself and the disposition to accept them."

5. Disposition and apperception

Leibniz clearly connects the ability of apperception with disposition when he writes that:

"to be aware of what is within us, we must be attentive and methodical (...). For thoughts are actions whereas items of knowledge (or truths), in so far as they are within us even when we do not think of them, are tendencies or dispositions; and we know many things which we scarcely think about."[31] Undoubtedly, the only means of reaching the content of the mind is to direct it to its natural abilities. Leibniz illustrates this process adducing the Platonic dialogue Menon in which Socrates, guiding a boy by asking questions, helps him to discover in himself innate laws of geometry.[32] Apperception alone demands, however, a certain impetus or a whole series of stimuli which direct the mind to its content

[31] NE, I, i, §25–26.

[32] NE, I, i, §5.

– thanks to, for example, the properly formulated questions by Socrates. It does not seem probable, however, that the state of full consciousness of the laws of geometry could be achieved by an infant, and Leibniz did not want to accept "that every innate truth is known always and by everyone"[33] although cases occur of children reaching these and other laws.[34] He was protected from such formulation by the assumption concerning the potential and possible features of ideas.

Leibniz in a way confirms the above understanding of the process leading to apperception by writing that "innate maxims make their appearance only through the attention one gives to them."[35] Admittedly, every man is equipped with the ability to reach an innate set of ideas, but the minds of children and savages on which Leibniz bases his examples are less spoiled and corrupted by custom and less molded by the learning which shapes this attention.[36] At this point we need to return to the notion of implicit knowledge. We may assume that this knowledge is vested in every mind. Supposing, however, it does not become the subject of reflection of the mind – the mind will not activate the disposition to reveal it; this means that it will remain in the area of those activities of the mind which are responsible for thinking on the level of unconsciousness. We are speaking here of activating the disposition, bearing in mind the fact that dispositions to act are based in Leibniz on a whole series of minute perceptions which cause "the mind has a disposition (as much active as passive) to draw (truths) from its own depths." But for this to happen certain stimuli are needed "to give the mind the opportunity and the attention for this, and to direct it toward certain necessary truths rather than

[33] NE, I, ii, §11.

[34] Example supplied by Leibniz in: NE, I, i §55.

[35] NE, I, i, §27.

[36] NE, I, i, §27.

others."[37] Maybe, therefore, implicit knowledge is interrelated with a series of predispositions or passive dispositions which properly stimulated allow for the elevation to the state of consciousness. This is what Leibniz has in mind when he writes, "that the less one knows the closer one comes to sharing with blocks of marble and bits of wood the advantage of being infallible and faultless. But unfortunately that is not the respect in which one comes close to them; and so far one is capable of knowledge, it is a sin to neglect to acquire it, and the less instruction one has had the easier it is to fail in this." Thus, Leibniz assumes that although in the initial phase, let us suppose at the time of birth, we are potentially equipped with all possible knowledge and we are ready to obtain it, the learning mechanism activates itself at the moment we receive proper impulses. At the beginning these are impulses originating from the outside – from the senses – because

"children should attend more to the notions of the senses, because attention is governed by need. However, we shall see later that nature has not 'taken pains to no purpose' in imprinting us, innately, with items of knowledge; for without these there would be no way of achieving actual knowledge of necessary truths in the demonstrative sciences, or of learning the reasons for facts; and we should have nothing over the bests."[38]

In this context Leibniz's comments connected with the intellectual capabilities of children become interesting. According to him, children in their first years of development do not differ much from animals in the externalized usage of the mind. Therefore, teachers who shape their behavior may implement the same methods as trainers of animals. These tools do not suffice, however, when we deal with those minds which are capable of taking advantage of them. Taking advantage means achieving the capability of remembering, discovering and judging, and these features are characteris-

[37] NE, I, i, §5.

[38] NE, I, i, §25.

tic only of intelligent beings. But since every mind, in fact, is closed to external influence, any impulse originating from the senses, according to the principle of pre-established harmony, corresponds with certain activities of the mind. If we assume that "every action of the mind is thought," a child's mind, as opposed to an animal's, is capable of transferring certain unconscious actions to the conscious level, while at the same time sorting them and finding explanations of them.[39] For Leibniz notices that:

"The human mind is analogous to a sieve: the process of thinking consist in shaking it until all the sublets items pass through. Meanwhile as they pass through, reason acts as an inspector snatching out whatever seems useful."[40]

What fundamentally differentiates man from animals is the ability to prove, to find rational connections between particular events. I. Hacking writes that "to be human is to be able to prove a little. A man 'who will not reason about anything' is, as Aristotle says, 'no better than a vegetable.'"[41] However, the approaching of the content of the mind itself is irrevocably connected, according to Leibniz, with the process of the shaping of the mind. He argues this in the following way:

"If someone looks attentively at more pictures of plants and animals than another person, and at more diagrams of machines ... and if he reads more imaginative novels ... then he can be said to have more knowledge than the other, even if there is not a word of truth in all that he has seen and heard."[42] Knowledge, then, is a certain process which reveals itself on its particular levels, and

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[39] G. W. Leibniz, *Sämtliche Schriften und Briefe*, herausgegeben von der Preussischen (jetzt Deutschen) Akademie der Wissenschaften zu Berlin, 6 Reihen, Darmstadt 1923, Leipzig 1983, Berlin 1950, VI, I, 275 (quoted later as AA volume, part, page); L, 88.

[40] C, 170.

[41] I. Hacking, *Why does Language Matter to Philosophy*, Cambridge, London, New York, Melbourne 1975, p. 69.

[42] NE, IV, i, §2.

Leibniz claims with full conviction that, for example, the knowledge of the rules of classical logic can be achieved only after one acquires the knowledge of mathematics, history and other subjects, for how can one order one's thoughts who has never thought of much?[43] But in another place he also notes that logic is built into thoughts,[44] and consequently, the science of logic is in effect a process of discovering what is already inside of us.

Let us inquire here: on what basis are we able to evaluate how much a child or any other intelligent being knows? A simple answer obviously is: potentially it knows everything. The above question, however, concerns essentially the dispositional knowledge which is able to activate the given mind. Approaching a possible answer will be the statement that the mind knows that which it is able to grasp in the act of apperception. But the state of gaining knowledge in truth is known only to oneself, and the only way to examine this state by another mind is through its externalization; for example, through language. And it seems that essentially this is what Leibniz means when he says that language is the best mirror of the human mind. We may therefore assume that the knowledge which we have at our disposal in an aware or conscious form (active dispositional knowledge) is that part of potential knowledge which is possible to express in some language. Dispositional character of knowledge is closely correlated with the ability of revealing it in the act of speech.

Leibniz clearly indicates that the "activation" of dispositions takes place through the process of education. A Man learning about the world through the senses learns to find a basis for the data referring to the content of his mind. One could obviously assume that every one of us is capable of discovering many truths independently of any contact with the world through the senses – this is what Leibniz claims with reference to arithmetic and geometry when he writes:

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[43] L, 468.

[44] AA, IV, i, 286; L, 89.

"one could construct these sciences in one's study and even with one's eyes closed, without learning from sight or even from touch any of the needed truths; although it is true that if one had never seen or touched anything, one would not bring to mind the relevant ideas. For it is an admirable arrangement on the part of nature that we cannot have abstract thoughts which have no need of something sensible, even if it be merely symbols such as the shapes of letters, or sounds; though there is no necessary connection between such arbitrary symbols and such thoughts."[45] Focusing on language, Leibniz in his argumentation refers to the metaphysical principle of pre-established harmony, according to which traces of the senses are indispensable for this harmony between the soul and the body to take place. It seems that this argument is of too high a caliber. One could ask how else than through language the process of learning takes place. We must agree here with the view expressed by the contemporary Platonist Hans-George Gadamer that consciousness never faces the world without language.

"Wir sind vielmehr in allem Wissen von uns selbst und allem Wissen von der Welt immer schon von der Sprache umgriffen, die unsere eigene ist. Wir wachsen auf, wir lernen die Welt kennen, wir lernen die Menschen kennen und am Ende uns selbst, indem wir sprechen lernen. Sprechen lernen heißt nicht: zur Bezeichnung der uns vertrauten und bekannten Welt in den Gebrauch eines schon vorhandenen Werkzeuges eingefuhrt werden, sondern es heißt, die Vertrautheit und Erkenntnis der Welt selbst, und wie sie uns begegnet, erwerben."[46]

This view is in accord with Leibniz's assumption present in his theory of the mind and his theory of language that linguistic interpretation of the world proceeds any thought and any learn-

[45] NE, I, i, §5.

[46] H. G. Gadamer, *Mensch und Sprache*, in: H. G. Gadamer, *Kleine Schriften*, vol. I, Tübingen 1967, p. 96.

ing.[47] Activation of the mind and activation of its disposition are in Leibniz inseparably connected with the existence of language. Language stands at the source of the process of learning which begins at the moment of our birth. It has a very important activating function. Throughout all of our education we are exposed to the impact of the word. Unconsciously immersed in the language we look for things and meanings corresponding to its particular words. At first:

"he takes care to put the words in the order that others customarily do, and contents himself with the thought that he could grasp their sense if the need arose. Thus a person is sometimes – oftener indeed than he thinks – a mere passer-on of thoughts, a carrier of someone else's message, as though it were a letter."[48]

However, having the possibility of "grasping" the thought itself with the assistance of other means of expression than the thought itself, we are capable of reflection on the content of the thought. For as Leibniz writes,

"although characters are arbitrary, their use and connection have something which is not arbitrary, namely a definite analogy between characters and things, and the relations which different characters expressing the same thing have to each other. This analogy or relation is the basis of truth."[49]

6. The natural and the psychological order of knowledge

Leibniz makes a clear distinction between the natural and the psychological order of knowledge. He assumes the existence of a natural order of ideas which is "common to angels and men and

[47] In this context Leibniz's comments contained in *Préface à la science générale* (C, 156) become essential – particularly the one which states that language precedes thought.

[48] NE, III, ii, §2

[49] L, 184.

to intelligences in general."[50] This order being fixed and unchangeable is the potential equipment of every mind. In consequence this assumption leads to the acceptance of the inner mind system of representation – a certain language of thoughts or ideas common to all minds. If, as Leibniz claims, the mind always thinks, from this it results that it thinks in a certain inner language. This inner mind system of representation corresponds with the whole apperception of the thinking substance – the soul and the mind. This does mean that all perceptions are conscious. The mind perceives the world according to its structure which finds its projection in the system of inner mind representation. It is not conscious of the whole structure and is able to interpret only those fragments which are perceived in the act of apperception.

It is difficult to judge if the above interpretation enables one to recreate Leibniz's real views connected with the representational character of unconscious perceptions. However, there are arguments which make this interpretation admissible. The first is the assumption that lowest on the cognitive scale is the unclear knowledge which is connected with unclear ideas; from this it appears that even an unclear idea is some sort of disposition to think and leads to expression which, however, is not possible to reach from the level of consciousness. The second is the Leibnizian idea of a universal algorithm which is labeled as the thread of thought – *filum cogitationis*.[51] Finally, the third, being supplemental to the previous one, is the belief concerning the existence of a language which was created by Adam, a language which is indeed unknown but whose essence consisted of a natural relationship between names and things.[52] In contemporary research con-

[50] NE, III, i, §5.

[51] See W. Marciszewski, *Why Leibniz should not have believed in Filum Cogitationis*, in: *Leibniz und Europa*, VI Internationaler Leibniz Kongreß, Hannover,1994, see also C, 351, and C, 153–57.

[52] Adamic or paradisaical language was the subject of great speculation in the 17th

nected with artificial intelligence appears an assumption that "unconscious processes could well be algorithmic, but at a very complicated level that is monstrously difficult to disentangle in detail."[53] However, the algorithm itself must operate on something and this something is presumably indicated by Leibniz as the natural order of ideas.

The assumption of the existence of the natural order of ideas which is the inner mind's system of representation, a certain language of the mind, is in accord with the rational tradition, and although Leibniz develops his theory of the activity of the mind enriching it with the theory of unconscious perceptions, its general assumptions refer, however, to the representational theory of the mind laid out by Descartes.[54] We find the source of this theory in the philosophy of Plato. Plato describes thinking as a silent conversation of the mind with itself. The process of thinking is understood as a discourse, which must assume language.[55] Wittgenstein, analyzing the views of St. Augustine, notices that:

"Augustine describes the learning of human language as if the child came into a strange country and did not understand the lan-

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century. Extensive discussion of this issue may be found in: H. Aarsleff, *Leibniz on Locke on Language*, in: H. Aarsleff, *From Locke to Saussure*, Athlone, London, 1992. M. Losonsky (1992, in: "Journal of the History of Philosophy", vol. XXX, October 1992, Nb 2). M. Losonsky, *Representationism and Adamicismin Leibniz*, in: *Leibniz and Adam*, ed. M. Dascal, M. E., Yakira, Tel Aviv 1993.

[53] R. Penrose, *The Emperor's New Mind*, Oxford, New York, Melbourne 1990, p. 411.

[54] N. Chomsky, *On the Nature, Use and Acquisition of Language*, in: *Mind and Cognition*, Blackwell, Oxford, Cambridge 1990, pp. 629–30.

[55] See Plato, *Theaetetus*, 189e–190a. Z. Vendler in his article *Wordless Thoughts*, in: Z. Vendler, *Language and Thought Antrophological Issues*, Hague, Paris 1977, p. 29–30), by interpreting this passage of the dialogue, maintains that Plato treats thinking as a conversation conducted by the mind in some ethnic language, for example Greek. Such interpretation seems to be controversial compared with the fact that, for Plato, language is secondary to thinking itself and constitutes only the initial phase of the learning process. See Plato, *Letter VII*. See also F. Sontag *The Platonist Concept of Language*, in: "The Journal of Philosophy", LI/25. 1954, 823–830.

guage of the country; that is, as if it already had a language, only not this one. Or again: as if the child could already think, only not yet speak. And 'think' would here mean something like 'talk to itself.'"[56]

Wittgenstein treats this opinion as absurd although it is fully accepted by present-day representational theory. J. Fodor, a representative of this trend of research, writes that:

"one cannot learn a language unless one has a language. In particular, one cannot learn a first language unless one already has a system capable of representing the predicates in that language and their extensions. And, on pain of circularity, that system cannot be the language that is being learned. But first languages are learned. Hence, at least some cognitive operations are carried out in languages other than natural languages."[57]

The assumptions of the existence of the inner language of thought is the starting point for many theories of representation developing at present, among which the theory of Noam Chomsky has received the widest acclaim.

Let us now turn to the sequence of discoveries singled out by Leibniz which is a certain psychological order and which Leibniz calls the history of our discoveries, different with different people.[58] Reaching apperception or reflection assumes a proper act of dispositions leading to thinking of this or that fragment of reality. Disposition, as we have written above, requires a certain impulse; Leibniz presumably would say: a certain anxiety to such reflective activity. These impulses which usually come from the external senses enable one, when they are properly strengthened, to reach the knowledge of a given thing which may be revealed on many levels of learning. Whichever level of cognitive advancement a given

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[56] L. Wittgenstein, *Philosophical Investigations*, transl. G. E. M Anscombe, Oxford 1958, 15e-16-e.

[57] J. A. Fodor, *The Language of Thouhgt*, New York 1976, p. 64.

[58] NE, IV, vii, §9.

mind has reached, it can be evaluated at the moment this knowledge is externalized. It is unquestionable that language plays here a first rank role. Revealing the content of the mind may be possible through art or an act of construction, a gesture or behavior, but it most fully reveals itself through natural language. One can obviously recall as an argument here the fact that language is the result of aspiration of the thinking substance. It is enough to state here that, by characterizing various levels of learning, Leibniz refers in fact to the language itself. Necessary premises are supplied here by the classification of the learning states set forth in *Meditations of Knowledge, Truth, and Ideas*[59] which is as follows:

Knowledge is either obscure or clear (*Est ergo cognito vel obscura vel clara*). Clear knowledge (*clara*) is either distinct (*distincta*) or confused (*confusa*). We deal with distinct knowledge when we have at our disposal "means" which enable us to recognize the thing represented (by them). Clear and distinct (*clara et distincta*) knowledge consists of the ability to enumerate features (*notae*) sufficient to recognize things. Clear and confused (*clara et confusa*) knowledge occurs, then, when we are not able to enumerate one by one those features (*notae*) which results in us being able to distinguish a given thing from others. Leibniz employs here the example of colors, tastes and smells, which are in fact distinguishable thanks to the evidence of the senses but not through features which are possible to be worked out (*non vero notis enuntiabilibus*).

Clear and distinct knowledge further divides into adequate and inadequate. Adequate knowledge consists of the ability to enumerate all features (*notae*) constituting the analyzed thing among which each feature individually is known also distinctly and clearly. If any of these features does not meet the criterion of distinctness, then, the knowledge is inadequate.

Let us draw our attention to the fact that the criterion of the ability to create definitions becomes essential in distinguishing par-

[59] GP, VI, 422–26; L, 291–95.

ticular learning states. Most difficult to interpret is the lowest state of knowledge (*cognition obscura*) because examples indicated by Leibniz do not explain much here.

It seems that obscure knowledge indicates a lack of whatever ability to define. This is knowledge which we have at our disposal only on the level of unconscious perceptions and as such it is not verbalized. We can interpret this type of knowledge as implicit knowledge, which is the nucleus of other learning states of the mind. We can describe the remaining levels of learning on the basis of the ability to create various kinds of definitions. For example, clear and confused knowledge (*cognition clara et confusa*) reveals itself at least as the skill to create an ostensive definition of the object whose idea we possess inside. Partial definitions indicate clear and distinct (*cognition clara et distincta*); nominal definitions indicate clear, distinct and inadequate knowledge (*cognition clara, distincta et inadequatea*); and real definitions indicate clear, distinct and adequate knowledge. We should, however, stipulate that this assignment illustrates only in a very large approximation the possibility of revealing the particular learning states of a thinking mind. These symptoms of what is invisible and takes place inside of the thinking mind itself are external, possible to observe and measure. Leibniz does not claim that we know only so much as we are able to put into words; this is contradicted by the assumption of the existence of obscure knowledge which is non-verbalizable. However, it can be assumed that all remaining forms of knowledge are possible to be reduced to the ability of expressing them in a language; that is, some external language.

Here a question arises: in what relationship to the inner language of thoughts does the natural language in all its variants remain? There is no doubt whatsoever that according to Leibniz "speech expresses thoughts and truths."[60] Language is the result which must have its source and for Leibniz this is the permanent

[60] GP VII, 263; L, 207.

and invariable order of ideas. According to him, natural languages have historical character and therefore are carriers of the order of discoveries. This order has a historical as well as psychological dimension. Language is vested only in a human being who is secondary to the mental structures, but consists of one of the most important means of expression of particular learning states of individual users, societies and the whole of Mankind. Language expresses these states thanks to the fact that there exists a certain analogy between all which is enclosed in the language and all that is contained in thoughts. Language refers directly to all which constitutes its source, to the inner world of ideas. Reference to the inner system of representation enables a progressive discovery of new areas which are gradually elevated to the level of consciousness thanks to the capabilities of their verbalization.

7. The problem of translatability

In this context one is astounded by Leibniz's strong conviction expressed in *Unvorgreiffliche Gedancken* that every language, even most limited, is able to express everything. He admittedly notices a certain difficulty, but it is for him rather a matter of form and statistics and not a matter of content because although everything may be expressed through paraphrases or description, the length of the utterance results in the fact that both the speaker and the listener lose the whole pleasure and the proper distribution of accents because it takes up the mind for too long.[61]

Every language can express everything: this means that it is possible to express all levels of learning accessible to the mind in any language with the assistance of means of expression attainable in that language. But such an approach to language leads to an assumption that it is so to say timeless and is equivalent to the lan-

[61] UG, §59.

guage of the mind. External language as perfect as the natural one reflecting the order of ideas given by God does not exist. Leibniz writes about "any" language having in mind "ethnic" languages. Assuming their timeless character would contradict the thesis of the historical features of natural languages.

The problem of "expressing" is for Leibniz resolved in this context into appropriate rules of language translation while he ignores fully the question of cultural distinction or the level of civilizational development of particular societies. These issues were of course a topic of consideration for the 17th century science that was due to the great openness of Europe to the world at that time. Leibniz himself was known for his great fascination with Chinese culture. Therefore, one is surprised at the simplified approach to this so very complicated matter especially when we compare it with Leibniz's views on the problem of the origin of human speech. Since the original image of the world is imprinted mainly in onomatopoeic words, let us remember that, according to Leibniz, primitive peoples had more instinct than reason.[62] How can it then be possible to establish and coordinate the rules of language translation as well as, in a wider sense, the rules of cultural translation? We could ask: is such coordination of the diametrically different states of learning of Man at various levels of civilizational development possible at all?

Leibniz was not ready to give an answer to a question formulated in such a way. He also did not notice a certain contradiction occurring at the theoretical level. The theory of innate ideas assumes the invariability of the equipment of the mind, which means that from the very beginning of his existence, Man had at his disposal a full set of ideas projecting the universe and the changes taking place therein. That which determined and still determines the individual character of every mind was the difference in the scale of activated learning dispositions accepted by Leibniz. This

[62] Gothofredi Guiliemi Leibnitii, *Opera Omnia, nuncprimumcolleta...* par LudoviciusDudens, 6 vol. Genève 1767, IV, ii, 187 (quoted as D, volume, part, page).

difference should also reveal itself in language. Of course this is possible to observe: it includes all verbal behavior of the user of the language, it also enables research of the consecutive stages of his intellectual development. This difference also manifests itself in full language competence through stylistic difference, richness of vocabulary, grammatical competence, etc. In the historical perspective, changes in the domain of the same language take place mainly in the lexical system, including grammar. Finally, we have differences between national languages. If, then, an indispensable condition of Leibniz's principle of individualization is the difference in the scale of learning dispositions of the mind which reveal themselves at the language level – and thanks to it become measurable – how then can one at the same time assume that what is expressed in the individual language of every user is reciprocally translatable? Since there are no two identical minds, then there are no two identical languages. We could further inquire about the translatability of different language systems, language in its original form and the German language of the 17th and 20th centuries. The only answer is the Leibnizian idea of prior established harmony thanks to which every change taking place in any given substance, and every movement of the mind results in the change of the remainder. But this is not a satisfactory answer.

Leibniz, by accepting the fact that languages are the best mirror of the human mind, based this assumption on developed language systems known to him which he researched throughout many years. The conclusions concerned this material which was preserved in written accounts, manuscripts, documents and other sources. He was not able, however, to interpret facts, as evidenced by his comments concerning languages of the newly discovered tribes: "they differ so much among themselves and are so different from us that we can say that these are a completely different breed."[63] One may presume that Leibniz had fundamental doubts

[63] AA, I, vii, 399.

here, and it is not clear if he would admit without hesitation that everything could also be expressed in these languages. Conclusions deduced by contemporary social anthropology rather rule out the possibility of such an approach. For it is accepted that "language in its primitive forms ought to be regarded and studied against the background of human activities and as a mode of human behaviour in practical matters. We have to realize that language originally among primitive, non-civilized peoples was never used as a mere mirror of reflected thought. The manner ... in which the author of a book, or a papyrus or a hewn inscription has to use it, is a very far-fetched and derivative function of a language. In this, language becomes a condensed piece of reflexion, a record of fact or thought. In its primitive uses language functions as a link in concerted human activity ... It is a mode of action and not an instrument of reflexion."[64] The above arguments may lead to the conclusion that essential problems exist impeding or making the translation of a primitive language to another developed language system impossible. One essential obstacle is, among other things, the reconstruction of the semantic system which is entangled in the pragmatic context. The problem of translatability is one of the main objections formulated against the contemporary theory of representation. It is pointed out that every description of a learning state of another mind is inadequate due to the lack of objective rules of translation as well as difficulties in establishing the tools of measurement of the accuracy of such translation. Questions of cultural translatability, of the learning states of people with damaged brains, and of children in the pre-verbal phase are also raised.[65]

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[64] B. Malinowski, *The Problem of Meaning in Primitive Languages*, in: C. K. Ogden, I. A. Richards, *The Meaning of Meaning*, New York, London 1951, p. 312.

[65] See P. M. Churchland, P. Smith Churchland, *Stalking with the Wild Epistemic Engine*, in: *Mind and Cognition*, Blackwell, Oxford, Cambridge 1990, pp. 301–302.

However, we may assume that all human language systems remain in a certain relationship with the same ideal system of representation projecting the order of the universe and that this system attempts to decipher Man. For Leibniz assumes:

"all individual created substances, indeed, are different expressions of the same universe and the same universal cause, God. But these expressions vary in perfection as do different representations or perspectives of the same city seen from different points."[66]

Human languages are the best observable result of the learning activity of the thinking substance. Because they exist there also must exist justification for this existence. This constitutes the previously mentioned inner system of expression. The imperfectness of our language fully renders the complexity of the learning processes taking place in our mind. But language refers only to those areas of thinking which are conscious thinking. Leibniz was aware of this fact, and its consequence was his theory of the mind whose essence is the assumption of the gradation of consciousness.[67] Assuming that the mind always thinks, Leibniz clearly indicated that all which we are unable to examine is unconscious thinking, for it is not verbalized. Thus the process of thinking goes beyond language, but language reflects all which appears to us in the act of consciousness, and in fact is the only tool enabling us to define the scope of the learning dispositions of a thinking mind.

[66] L, 269.

[67] See R. R. Dippert, *Leibniz's Discussion of Obscure, Confused, and Inadequate Ideas: Its Relevance for Contemporary Cognitive Science*, in: *Leibniz und Europa, VI Internationaler Leibniz Kongreß*, Hannover 1994, p. 177–84.

II.

ON THE METAPHYSICAL STATUS OF LANGUAGE

1. Linguistic appetition

In Book III of his *New Essays...* Leibniz notes that although the speech apparatus of some animals is similar to that in humans, meaning that they too are able to produce speech (at least physically), it is still difficult to find any appetition towards this goal. "So they must lack something that doesn't appear on the surface,"[1] that which would elevate them to a level of reason.[2] The ability to articulate language is, according to Leibniz, that what separates *Homo sapiens* from the rest of nature. This is the only argument supported by Leibniz in the dispute on the status of animals in his broad discussion with the Cartesian philosophical model. Similarly to Descartes, Leibniz deliberates on physiological reasons, admitting that animals can mimic human speech, although he refutes their linguistic abilities for different reasons than the other philosopher. According to Descartes, animals do not have language because of their complete lack of reasoning. Leibniz does not claim directly that animals do not speak because of their inability to think, but rather because they do not possess the necessary appetition to develop language.[3] Interestingly, Leibniz expresses this point only

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[1] G. W. Leibniz, NE, III, i, §1.

[2] G. W. Leibniz, *The principles of nature and of grace, based on reason*, in: G. W. Leibniz, *Philosophical Papers and Letters*, ed. L. E. Loemker, Dortrecht 1965, §4 (quoted later as L).

[3] See R. Descartes, *Discourse on the method*, www.earlymoderntexts.com/assets/

once (in *New Essays...*), although it should be significant in his justification of the differences between man and other forms of animal life. The main theme of *New Essays...*, however, is first and foremost a polemic with Locke's attack on the doctrine of innate ideas, but also, according to researches, a critical analysis of Cartesian philosophy.[4]

Anthropologists today find it obvious that "spoken language clearly differentiates *Homo sapiens* from all other creatures. None but humankind produces a complex spoken language."[5] They also point to the fact that the human brain is three times larger than the brains of apes, who are man's predecessors in the evolutionary chain, therefore indicating the relationship between these phenomena. Their interpretation distinguished two separate views on the origin of articulated language. The first assumes that this unique human feature was formed as a consequence of the development of the brain, which results in the fundamental difference between human language and the purely functional, impulse driven communication systems of animals.[6] This premise is the starting point

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pdfs/descartes1637.pdf. See also J. Kopania, *Funkcje poznawcze Descartesa teorii idei* [*Cognitive Functions of Descartes' Theory of Ideas*], Białystok 1988, p. 202–209 and *Descartes i Kant o użyteczności poznawczej języka naturalnego* [*Descartes and Kant on cognitive usefulness of natural language*], Warszawa 1996, p. 19–22. Both Descartes and Leibniz had a sound understanding of natural sciences. It may be assumed that they were familiar with the results of studies in comparative anatomy. In many places Leibniz disputes with Cartesian doctrines. This is significantly prominent in, for example, his letter to Herman Conring from 19 March 1678, in: G. W. Leibniz, *Die Philosophischen Schriften von G. W. Leibniz*, ed. C. I. Gerhardt, Halle 1849–1863 (repr. Hildesheim 1960), vol. 1, p. 193–199, (quoted as GP, volume, page).

[4] See N. Jolley, *Leibniz and Locke: A Study of the New Essays on Human Understanding*, Oxford 1984.

[5] R. Leakey, *The Origin of Human Kind*, chapter VII. Leakey writes that the "human ability to generate discrete sounds, or phonemes, is only modestly enhanced compared with this ability in apes: we have fifty phonemes; the ape has about a dozen. Nevertheless, our use of those sounds is virtually endless . . . As a consequence, the capacity of *Homo sapiens* for rapid, detailed communication and richness of thought is unmatched in the world of nature."

[6] See R. Leakey, *ibid.*

of Noam Chomsky's theory of language.[7] The other view claims that speech is the result of natural selection. This is the so-called continuity model, which finds the origins of speech in man's non-human ancestors.[8] Therefore, the question whether chimpanzees and gorillas are capable of actual verbalisation using sign language instead of speech is still the subject of heated discussion. Based on the results of research conducted by Konrad Lorenz, which indicate that there are, in fact, some forms of consciousness in animals, many scholars today agree with the idea that primates are able to communicate on an elementary level. Roger Penrose emphasizes that "it is a little churlish of some people not to allow this to be called 'verbalization'. Perhaps, by denying apes entry to the verbalizer's club, some would hope to exclude them from the club of conscious beings!"[9]

It must, therefore, be assumed that everyone who claims that the ability to use language is one of the fundamental differences between species must also adopt all of the philosophical consequences of this assumption. One of them is the notion that the knowledge of the structure of human language allows us to explore the mysteries of the human mind; another says that the structure of language parallels the nature of reality beyond the mind.[10] It seems that Leibniz accepts both of these consequences, claiming that "languages are the best mirror of the human mind and that a precise analysis of the meanings of words would tell us more than anything else about the operations of the understanding,"[11] and comparative studies of the grammars and vocabularies of different languages would be "highly useful both for understanding things, as their names often

[7] See N. Chomsky, *Cartesian Linguistics*, New York, London 1966.

[8] R. Leakey, *The Origin of Humankind*, chapter VII.

[9] R. Penrose, *The Emperor's New Mind*, *op. cit.*, p. 425–426.

[10] See I. Hacking, *Why Does Language Matter to Philosophy*, Cambridge, London, New York 1975, p. 69.

[11] G. W. Leibniz, NE, III, i, §6.

correspond with their qualities (...), as well as for understanding our mind and the marvelous diversity of its operation."[12]

Both of these theses, however important epistemologically, do not explain the origin nor the status of language itself. Being more immersed in language than the other thinkers of his time, Leibniz nowhere (unlike Descartes) explicitly points to its metaphysical status.[13]

2. Dependency of physics on metaphysics

Language in Leibniz is a resultant of an appetition and it seems that this "appetition" is one of the premises which makes it possible to determine the manner of its existence. Appetition (*conatus*) and the ability to perceive are two qualities constituting the essence of the Leibnizian concept of substance. These qualities differentiate substances, decide on their individualisation, and at the same time are the key to understanding the relation between the body and the mind. Any determinations on language must, therefore, be preceded by an introduction to Leibniz's theory of substances.

In Leibniz's *Hypothesis physica nova*,[14] written and published anonymously in 1671, the central theme is the issue of continuum. Assuming that continuity is infinitely divisible, Leibniz claims that there is an actual infinity of elements. However, there is no mini-

[12] *Ibidem*, III, ix, §9.

[13] J. Kopania notes that Descartes, from the standpoint of epistemological realism, assumes that understanding reality beyond the mind is possible both in terms of its independent existence, as well as its all properties; it can be understood, however, only indirectly, through the reality of ideas inside the mind. The separate metaphysical and epistemological status of reality beyond the mind must, therefore, imply the secondary ontic and semantic status of language. See also J. Kopania, *Funkcje poznawcze Descartesa teorii idei* [*Cognitive Functions of Descartes' Theory of Ideas*], *op. cit.*, p. 221 and *Descartes i Kant o użyteczności poznawczej języka naturalnego* [*Descartes and Kant on cognitive usefulness of natural language*], *op. cit.*, 28 and ff.

[14] GP IV, 177–240.

mum, neither in space nor in the body, meaning that there is no such part, whose size would be zero. The existence of such minimum would also allow the existence of as many minima in part and in whole, leading, according to Leibniz, to a contradiction. However, it must also be assumed that there are indivisible or non-continuous points, as otherwise objects and motions would have neither a beginning nor an end. The fundamental problem of continuity which Leibniz tried to solve is the following. Geometrical points, considered as parts of a space with the size of zero, simply do not exist. Therefore, in order to define the beginning and the end of an object or space, these non-continuous geometrical points must be equipped in a certain actuality, and Leibniz sees this actuality in what Hobbes called *endeavour* or *conatus* (appetition). Leibniz defines the term as the beginning of movement, and, therefore, the beginning of existence in the space, in which the object moves.[15] This appetition, *conatus*, modified semantically, becomes the basic element which endows Leibnizian substance.

The foundation of Leibniz's theory of substance is therefore laid with the concept of energy or force. By assuming this as his starting point, Leibniz emphasized that although nature must always be explained through mathematics and mechanics, it must be remembered that the laws of mechanics do not depend solely on mathematical continuity, but also on certain metaphysical causes.[16] Mechanistic principles should be complemented by certain metaphysical principles that also allow for an understanding of the human mind. "... I see no reason to add that the *mathematical principles of philosophy* are *opposite to those of the materialists*. Really they are the same, with just this difference: [the] materialists who follow

[15] See E. J. Aiton, *Leibniz – A Biography*, Bristol, Boston 1985, p. 32–33.

[16] *Letter from Leibniz to Arnauld from June 1686*, GP II, 58: "Il faut tousjour sexpliquer la nature mathématiquement et mécaniquement, pourveu qu'on sçache que les principles memes ou loix de mécaniqueou de la force ne dependent pas de la seule étendue mathématique, mais de quelques raisons métaphysiques."

Democritus, Epicurus and Hobbes confine themselves altogether to mathematical principles ... and hold that nothing exists but bodies; whereas the Christian mathematicians ... allow that there are also immaterial substances. What ought to be set up against materialism, therefore, are not mathematical principles (taking this phrase in its usual sense) but rather *metaphysical principles*. Pythagoras, Plato, and Aristotle had some knowledge of metaphysical principles, but I claim to have established them in my book Theodicy."[17]

Leibniz claims that the basic shortcoming of mechanistic physics is that it does not include dynamic factors which exist naturally. He believes that dynamism rather than mechanism corresponds to phenomena. Leibniz attacked Cartesian physics in *Brevis demonstration errorismemorabilis Cartesii* (A Brief Demonstration of the Memorable Error of Descartes). The paper was published in "Acta Eruditorum" in March of 1686[18] and jabbed mainly at Descartes's principle of the conservation of motion. Leibniz modified the principle, juxtaposing the principle of conservation of the sum of the multiplication product of mass and speed – with the principle of conservation of the multiplication product of mass and the square of speed, i.e. the sum of energy. Leibniz saw Descartes' error in the assumption that the force of motion and the value of motion are equal. Leibniz assumed that force could be derived from the value of the result of its action, such as the height at which the object was elevated to, and not the speed with which it moved. By replacing the Cartesian principle of the conservation of motion with the principle of the perfect equilibrium between the cause and its effect, Leibniz also uses it to derive metaphysical consequences; namely, he claimed that force, or energy, although measurable by its future effect, is something real, existing constantly in objects.[19]

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[17] G. W. Leibniz, *The Controversy between Leibniz and Clarke*, L, p. 677.

[18] *Mathematische Schriften*, ed. C. I. Gerhardt, 1846–1863, (repr. 1971 Hildesheim: Olms), vol. VI, p. 117–123 (quoted as GM).

[19] See E. J. Aiton, *Leibniz...*, *op. cit.*, p. 130–131.

In *Essay de dynamique*[20] Leibniz presents his theory of force in the form of a formal, logical proof, avoiding arguments which referred to metaphysical principles, although he did remind his readers that every effect is equal in its entirety to its cause. In this dissertation, Leibniz introduces the distinction between static force (*force morte*) and kinetic force (*force vive*). The former is constituted by pure appetition (*conatus*), remaining in a specific relation with kinetic force, which is the sum of all appetitions, and the relationship between the two the same as the one between a pint and a line. Elsewhere,[21] Leibniz explains the concept of *force morte* by referring to the infinite appetition of gravity centrifugal movement.

In *Specimen dynamicum* Leibniz indicates that force is an actual attribute of objects.[22] He introduces the concept of active force, discerning its two kinds: primary and secondary. "Primary force, which is nothing but entelechia (*entelechija a prote*), is an equivalent of the soul of substantial form, but also because of this it refers to general causes which are insufficient to explain phenomena."[23] This is because primary forces act only on the metaphysical level. When bodies collide, the primary force manifests itself physically as secondary force. Leibniz also deliberates on the concept of passive force, explaining that similarly to active force, it is distinguished into primary passive force and secondary active force. Primary resistance force constitutes that which scholastics call primary matter. Leibniz explains that primary passive force is a type of idleness (*ignavia*) or passiveness and resistance of objects which prevents them from acting on their own, until they are moved by other objects. Therefore, again primary passive forces act only at a metaphysical level because primary matter, or matter without form, is a pure

[20] See P. Costabel, *Leibniz et la dynamique*, Paris 1960, p. 97–106.

[21] G. W. Leibniz, *Mathematische Schriften*, VII vol, ed. C. I. Gerhardt (1846–1863, repr. 1971 Hildesheim: Olms), 233–234. Quoted later as GM, volume, page.

[22] GM VI, 234–254.

[23] GM VI, 234.

abstract. Real objects are composed of primary matter fused with a form, or active force, and are called secondary matter by Leibniz.

And so, similarly to Aristotle, Leibniz assumed that bodies are composed of form and matter. Every object acts accordingly to its form (entelechy) and are affected in accordance to its matter (*materia prima*). According to Leibniz, primary forces – both active and passive – act only at the metaphysical level; this makes it possible to refute any suggestions that, similarly to scholastics, he introduces substance forms as physical causes. Dynamics as a science studies describes only secondary forces because primary forces manifest only through the actions of secondary forces, and these are available for observation and measurement. Leibniz believed that the error that scholastics made lied not in their attachment to tradition, but rather in the ossification and self-centeredness of scholasticism, making them unable to adopt new techniques and discoveries. Nonetheless, contemporary philosophers, according to Leibniz, were wrong to completely reject scholastic tradition. Leibniz tried to reconcile tradition with contemporaneity by indicating that mechanistic philosophy stems from the negation of traditional metaphysical concepts. He believed that scholastic terminology could express a profound theory in a way that would be acceptable to supporters of each group.[24]

Leibniz embarked to explain the true concept of force,[25] taking into account the fact that the ancients knew only the concept of static force. Discovering that the concept of the body is incomplete without force, Leibniz was able to define several laws of motion, namely: all changes are gradual, every action creates a reaction; no force is produced without weakening the earlier force; the effect has the same force as its cause.

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[24] See W. Leibniz, *Eclaircissement des difficultés que Monsieur Bayle trouvées dans le système nouveau de l'union de l'ame et du corps*, in: GP IV, 523–524. See also G. MacDonald Ross, *Leibniz*, Oxford, New York, p. 75.

[25] See E. J. Aiton, *Leibniz...*, *op. cit.*, p. 195.

3. Appetition as the nature of substances

When translated to the language of Leibniz's theory of substance, the theory of force causes appetition to be the basic factor constituting the elementary units of being, which Leibniz calls monads or "true atoms of Nature."[26] These "true unities" have a formal priority before all bodies and should "be understood along the lines of our notion of souls."[27] In support of their existence, Leibniz refers to the idea of entelechies, or substantial form. Interestingly, Leibniz's attitude towards Aristotelean entelechy evolved over a relatively short time span. In his 1684 treatise entitled *De cognitione, vertíate et ideis*, Leibniz notes that Aristotle uses the term in a dim way and does not provide its nominal definition,[28] meaning that it is impossible to clearly indicate a concept which corresponds to this term; however, two years later in *Discourse on Metaphysics* he claims that substantial forms – such as entelechy or the soul – are necessary to understand the nature of substances.[29]

For Leibniz, entelechy is mainly a principle of action. Every substance, or monad, is the principle and source of its action: it's not passive, but shows an internal tendency for action and self-development. This means that there is some principle of activity or a primary force in a monad, which can be distinguished from the monad's current actions. The force or energy is therefore the nature of the substance itself. "The concept of forces or powers, which the Germans call *Kraft* and the French *la force*, and for whose explanation I have set up a distinct science of dynamics, brings the strongest light to bear upon our understanding of the true concept

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[26] G. W. Leibniz, NE, III, i, §3.

[27] G. W. Leibniz, *A New System of the Nature...*, L, 454.

[28] See GP IV, 422.

[29] G. W. Leibniz, *Discourse on Metaphysics*, §34, L. For more on this subject, see H. Burkhardt, *Adam' Mind and Body*, in: M. Dascal, E. Yakira (ed.), *Leibniz and Adam*, Tel Aviv 1993.

of substance."[30] Entelechy is, therefore, a positive tendency for action which is embedded in every monad and which involves that which Leibniz calls *conatus* or primary force. In a way, he equates the concept with the concept of the monad. "We could give the name 'entelechy' to all simple substances or created monads, because they have within them a certain perfection . . . ; there is a kind of self-sufficiency which makes them sources of their own internal actions – makes them immaterial automata, as it were."[31] This way, energy is ultimately that which constitutes substance, as "pure substances cannot be understood as lacking actions" and "actions lie in the nature of substances in general."[32]

4. Perception and appetition

There is no way to demonstrate with absolute certainty that the external worlds exist.[33] Still, "the existence of spirit is indeed more certain than that of sensible objects."[34] "And since I conceive that other beings also have the right to say *'I'*, or that it can be said for them, it is through this that I conceive what is called substance in general."[35] Leibniz connected the source of the idea of substance with self-awareness. "I believe that we have a clear but not distinct idea of substance, which comes in my opinion from the fact that we have an internal feeling of it in ourselves, who are substances."[36] However, as there are no two identical persons who could say the same *I* about themselves, in all of nature "there are

[30] GP IV, 469.

[31] G. W. Leibniz, *Monadology*, §18, L.

[32] G. W. Leibniz, NE, *Preface*.

[33] GP VII, 320.

[34] G. W. Leibniz, *NE II, xxiii*, §18.

[35] G. W. Leibniz, *Letter to Sophie Charlotte*, in: G. W. Leibniz, *Philosophical Essays*, trans. R. Arview, D. Gabor, Cambridge 1989, p. 188.

[36] *Letter to Burnett*, GP III, 247.

no indiscernible individuals." "To suppose two things indiscernible is to suppose the same thing under two."[37] In order to prove the thesis of the impossibility of two identical objects, Leibniz refers to one of the principles of his metaphysics, namely the principle of individualization (*principium identitatis indiscernibilium*). "... Every monad must be qualitatively unlike every other. That is because in Nature no two things are perfectly alike; between any two things a difference can be found that is internal."[38] However, there are also criteria for discerning monads which, according to Leibniz, constitute the qualities and internal operations of monads, namely its own *perceptions* and *appetitions* (*appétitions*).[39]

Leibniz poses perceptions and appetitions as the main attributes of substances. "The faculties of having perception and of acting, extension, solidity, are attributes or perpetual and principal predicates; but thought, impetuosity, figures, movements, are modifications of these attributes."[40] Two completely different things may share a common logical genus; reason and body are of the same logical or metaphysical category, but are different in their genus. Reason is nothing but a monad which individualizes the cavalcade of monads which constitute the body.

It is noticeable that Leibniz refers to the Cartesian distinction between attribute and modification, but the properties ascribed to these classes of concepts are completely different. In his letter to de Volder from June of 1703, Leibniz categorically denies that substances can have a single specific attribute constituting their nature or essence.[41]

The essence of the Cartesian concept of mind lay in the thesis of the transparency of the mind, according to which every mental

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37 G. W. Leibniz, *The Controversy between Leibniz and Clarke*, *op. cit.*, L, 687.

38 G. W. Leibniz, *Monadology*, §9, L.

39 *Ibid*, §14, 15, 19.

40 NE, *Preface.*

41 GP II, 249.

state is accessible to complete awareness. Leibniz challenged this claim by stating that "there are a thousand indications which make us think that there are at every moment an infinite number of perceptions in us, but without apperception and reflection, i.e. changes in the soul itself of which we are not conscious, because the impressions are either too slight and too great in number, or too even, so that they have nothing sufficiently distinguishing them from each other."[42] These perceptions originate from the action of an internal principle which "causes change, that is a transition from one perception to another," and this transition is called *appetition*.[43] It must be remembered that appetition is what constitutes substance, composing its nature. Therefore, there always is an "endeavour towards action – indeed there is an infinity of them in any thing at any moment, and these endeavours are never without some effect."[44] It may be assumed that a *perception* is a certain consequence of appetition. They is also a measure of this appetition because – as above – every effect is the measure of its cause. Perceptions are gradable. Their lowest degree are those perceptions we are not aware of (*petites perceptions*, *perceptions insensibles*). Leibniz gives an example of these by describing the roar of the sea. To hear this noise as we do, we have to hear its parts, that is the noise of each wave, although each of these little noises makes itself known only when combined confusedly with all the others, and wouldn't be noticed if the wavelet that made it happened all by itself. We must be affected slightly by the motion of this one wavelet, and have some perception of each of these noises, however faint they may be. If each of them had no effect on us, the surf as a whole – a hundred thousand wavelets – would have no effect either, because a hundred thousand *nothings* can't make *something!*"[45]

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42 G. W. Leibniz, NE, *Preface*.

43 G. W. Leibniz, *Monadology*, §15, L.

44 NE, II, i, §2.

45 NE, *Preface*.

Perceptions constitute the essence of Leibnizian monads. Each is a transitory state containing and presenting multitude in unity, that is in a simple substance. In his *Principles of Nature and Grace Based on Reason*, Leibniz clearly demonstrates the distinction between perception and awareness, arguing the theory of substance against the Cartesian concept of the mind. He notes that "there is a good distinction between *perception*, the internal state of a monad that represents external things, and *awareness* [apperception], *consciousness*, or the reflective knowledge of that internal state. Awareness is not given to all souls, and no soul has it all the time. It was for the lack of this distinction that the Cartesians went wrong, by regarding perceptions of which we are not aware of as nothing – a naively unscientific view like the view of folk who regard *imperceptible bodies as nothing*."[46]

It may be understood that Leibniz equates awareness with apperception, which suggests that this distinction concerns our common consciousness, connected with every day activities, and unconscious experiences encountered in dreams or when we are incapable of conscious action. Researchers also point to a different interpretation stating that Leibniz connects consciousness with the ability to say *I* about oneself, indicating also that there is a connection between self-awareness and self-knowledge. Unconscious perception is a state of consciousness, but it is unconscious in the meaning that we are not aware of it.[47] The theory of unconscious perception is a consequence of the Leibnizian "law of continuity." Leibniz noticed that nothing happens immediately as "everything goes by degrees in nature, and nothing by leaps," meaning "that all this makes one indeed think that the noticeable perceptions also arise by degrees from those which are too minute to be observed." Also, "in virtue of these insensible variations, two individual things

[46] G. W. Leibniz, *The Principles of Nature and Grace*, §4, L.

[47] See N. Jolley, *Leibniz and Locke...*, *op. cit.*, p. 108.

cannot be perfectly alike, and that they must always differ more than *numero*."[48]

By claiming that every substance generally possesses something that may be called appetition and perception, Leibniz makes the cognitive capacity of substances the basis for their classification. He reserves the general name of monad or entelechy for substances whose activity, we would say, is close to a minimum, and whose beginning seems to be the capacity solely for unconscious perceptions. The monads whose perceptions are connected with memory or feeling are called souls by Leibniz, and those souls which are equipped with the capacity for perception connected with memory and awareness, are capable of understanding, are called "rational souls" or spirits.[49]

Here we may ask the question of what is perceived by a given substance and how it is done. A perception is always a perception of one thing by another, let us say, by a rational soul using something which may be considered a perceiving apparatus. Leibniz provides the term *perception* with a technical meaning, and in no way identifies it with its common definition. Perception does not mean seeing or noticing an object using the sense of sight, as all rational souls have perceptions which are independent from any sensory organ. "Perception cannot be explained by a mechanism . . ."[50] He cannot agree that "images of things are *conveyed* [Leibniz uses the English word] by the organs of sense to the soul. For it is not conceivable by what passage, or by what means of conveyance, these images can be carried from the organ to the soul."[51] This remark is closely related to other properties of substances that can be found in the foundation of Leibnizian theory of monads.

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[48] NE, *Preface.*

[49] G. W. Leibniz, *The Principles of Nature and Grace*, §4, L.

[50] G. W. Leibniz, *Letter to Sophie Charlotte*, in: *G. W. Leibniz Philosophical Essays*, p. 192.

[51] G. W. Leibniz, *The Controversy between Leibniz and Clarke*, L., 711.

Firstly, a substance, according Leibniz, is indivisible and is a unity lacking shape and continuity. By calling monads "the true atoms of Nature", Leibniz expresses his strong objection against equating this term with the concept of substance proposed by Democritus and developed further by the 17th century atomists. "But *atoms of matter* are contrary to reason; and anyway an atom, if there were such a thing, would still be composed of parts and so wouldn't be a true unity after all. One part's being attached to another so strongly that they couldn't be pulled apart (supposing we could make sense of this) wouldn't alter the fact that these were two parts, one different from the other. It is only *atoms of substance*, that is to say real unities absolutely devoid of parts, that can be the sources of activity, the absolutely basic reasons for the composition of things (explaining why composite things have such togetherness, such non-basic unity, as they do have), and, as it were, the ultimate elements in the analysis of substantial things."[52]

Secondly, by equipping monads with the capacity for acting and perception, Leibniz firmly denied them the possibility to affect other substances. No substance affects another substance, and no substance is affected. "Monads have no windows through which anything could come in or go out!"[53] By closing the substances from the external, Leibniz opens them up towards the internal, giving them the opportunity to perceive the whole universe from the perspective of every monad. A monad finds the universe within itself. This means that the contents of perceptions cannot be obtained by substances by any external actions, but must be innate. The appetition of the soul, as we may remember, "never are without cause." "But how – Leibniz asks – could experience and the senses provide the ideas? Does the soul have windows? Is it similar to writing-paper or like wax? Clearly, those who take this view of the soul

[52] G. W. Leibniz, *A New System of the Nature...*, L, 456.

[53] G. W. Leibniz, *Monadology*, §7, L.

are treating it as basically a material thing. You may confront me with this accepted philosophical axiom: *There is nothing in the soul that doesn't come from the senses*. But an exception must be made of the soul itself and its states: *Nihil est in intellectu quod non fuerit in sensu, excipe: nisi ipse intellectus*. Now, the soul includes being, substance, one, same, cause, perception, reasoning, and many other notions that the senses cannot provide."[54] This seems to be a surprising epistemological consequence of the Leibnizian theory of substances.

The basic forms of substances, according to Leibniz, were created by necessity together with the world, and they are eternal. Every substance was created from the very beginning so that everything that is able to give it a body occurs within the substance by virtue of its presenting nature which was given to it with its existence. "Even before the decision about creation, God, perfectly knowing possible beings with all possible chains of occasional causes contained in a full idea of every substance, he chose the existence of those ... that would fit best his wisdom."[55] Simple substances are infinite in number, invisible in essence, and knowing them entirely is possible for the Divine Intellect. The only thing available to us in terms of infinite things – says Leibniz – is to explore them gradually, see their relations and laws governing them, and, first, at least be aware of their existence.

Although substances have cognitive capacity, it does not mean that their access to the content of perceptions is equal. Since every monad perceives the whole world, Leibniz does not deduce that every perception is a reflective action leading to awareness; in particular, he does not claim that unconscious perceptions resulting from other perceptions will transform into clear perceptions and that a substance is able to place them into an order of other experi-

[54] NE, II, i, §2.

[55] G. W. Leibniz, *A New System of the Nature*, L, 457.

ences. In other words, not every substance has an identical insight into the nature of perceptions and the capacity for understanding them. By presenting the theory of unconscious perceptions, Leibniz claims that it is possible to explain "how two souls, human or otherwise, of one and the same species never come forth perfectly alike from the hands of the Creator and have always each its original relation to the points of view which it will have in the universe."[56] This is one of the arguments in favour of rejecting the concept of *tabula rasa*, as providing a substance with the capacity for perception also entails the existence of objects of those perceptions. If, however, *the universe*, as the object of these perceptions, is external to the substance, the universe's idea must be perceived by the substance in itself.

Looking at perception from a metaphysical perspective as the result of substances' appetitions, Leibniz made it into a criterion that determines the significant difference between human beings and other organic creatures, especially animals.[57] Only humans are entitled to what Leibniz calls apperception or thinking (*cogitatió*) and what is the perception connected with reason. Essentially, the thing that decides about apperception is this particular appetition for perception, founded in the ability to realize the ideas of things and becoming aware of them. This results from the fact that "the creator of things and the mind inscribed in it the capacity for thinking, which allows it to deduce things exactly relating to that which results from the things themselves."[58] Gradual capacity for perception of each substance results therefore from the Creator's decision who, acting in accordance with the principle of perfection, created the best of all possible worlds.[59]

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[56] G. W. Leibniz, NE, *Preface.*

[57] See GP VII, 330–331.

[58] G. W. Leibniz, *Quid sit idea*, GP VII, 252.

[59] G W. Leibniz, *Monadology*, §48, L.

5. The relationship between the soul and the body – corporeal substances

When appetition and perception are analysed from the level of substances, they remain in a strict relation with the physical world. Leibniz often emphasizes that "all genii, all souls, all simple created substances, are always joined to a body, and that there are never souls entirely separated."[60] This assumption makes it possible to understand the essence of his arguments about this particular distinction.

In his letter to Arnauld dated 9 October 1687, Leibniz provides the following concept of a corporeal substance:

"[A]ssuming there is a soul or entelechy in animals or other corporeal substances, one must argue from it on this point as we all argue from man who is an entity endowed with genuine unity conferred on him by his soul, notwithstanding the fact that the mass of his body is divided into organs, vessels, humors, spirits, and that the parts are undoubtedly full of an infinite number of other corporeal substances endowed with their own entelechies."[61]

By "corporeal substance" Leibniz means any living creature, like, for example, animals. "Each monad, together with its own body, constitutes a living substance," and each monad also creates a centre of a composite substance and the principle if its unity (*unicité*).[62]

In the same letter[63] Leibniz explains that matter considered as mass itself, or mass which can be divided into parts, is a phenomenon, although a phenomenon which is well-founded, just like time and space, while its real unit is the living substance to which the matter belongs. He goes on to explain to Arnauld that not every

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[60] NE, *Preface*, p. 20.

[61] GP II, 120.

[62] G. W. Leibniz, *The Principles of Nature and Grace...*, §4.

[63] *Letter to Arnauld from 9 October 1687*, GP II, 111–129.

substance is a spirit, as, for examples, worms do not think. Until we find out about the operation of other forms, we are not able to fully understand them. For example, based on anatomical analysis, Malpighi established that plants can be included in the same category as animals, while the experiments conducted by Leeuwenhoek proved the existence of an infinite number of tiny organisms in a single drop of water. The existence of rudimentary life forms is also confirmed in Swammerdam's research. Each corporeal substance is therefore indivisible or real unit that is constituted by its soul or at least a dominating monad or entelechy. Otherwise we are dealing only with a phenomenon – a pile of rocks is a random aggregate, something that lacks substantial unity. Leibniz writes bluntly: "I think I have shown that every substance is indivisible and consequently every corporeal substance must have a soul or at least an entelechy which is analogous to the soul, since otherwise bodies would be no more than phenomena."[64]

Being the dominating monad or entelechy, the soul functions as a unifier for a given body, constituting its individuality. It can be said that the dominating monad, to some extent, coordinates the action of monads comprising a given body. However, we must remember that the dominating monad is not an ordinary sum of particular entelechies, as monads are indivisible. "Nevertheless, although it is possible that a soul have a body made up of animated parts or of separate souls, the soul or the form of the whole is not, therefore, composed of souls or forms of parts."[65]

In *A New System...* Leibniz further develops the ideas expressed earlier in his correspondence with Arnauld and writes: "by means of the soul or form there is a true unity – an absolutely single thing – which corresponds to what is called *I* in us. This can't occur in ar-

[64] GP II, 120–121.

[65] *Letter to Arnauld from 30 April 1687*, GP II, 100: "Cependent quoyqu'il se puisse qu'uneame ait un corps composé des parties animées par d'ames à part, l'ame ou forme du tout n'est pas pour cela composée des ames ou formes des parties."

tificial machines or in a simple mass of matter, however organized it may be. Such masses can only be thought of as like an army, a flock, a pond full of fish, or like a watch composed of springs and wheels."[66] We can find similar arguments in his letter to Thomas Burnett from 1699[67] and in *Principles of Nature and Grace Based on Reason*, where Leibniz states that "[e]very simple substance (or individual monad) is the centre and source of *unity* of a composite substance such as an animal; the central monad is surrounded by a mass made up of an *infinity* of other monads which constitute *its body*. The states of the central monad correspond to the states of its body, and in this way it represents things outside it – as though it were a kind of *nerve-centre receiving information from all around it*."[68]

In a letter to de Volder from July 1703, Leibniz lists five different degrees of complexity leading to the constitution of things. "I therefore distinguish: (1) the primitive entelechy or soul; (2) matter, namely primary matter or primitive passive power; (3) the monad completed by these two things; (4) the mass or secondary matter, or organic machine for which innumerable subordinate monads come together; and (5) the animal, or corporeal substance, which the monad dominating in the machine makes into one thing."[69]

When we consider that each real aggregate entails simple substances and that the appetition and perception lie in nature of simple substances, then every time these unities are transformed into an organic body, such as the human being, by endowing it with organs capable of understandings, God will also provide it with an understanding immaterial substance – reason.[70] However, the presence of the soul itself is not sufficient in itself to become con-

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66 G. W. Leibniz, *A New System of the Nature...*, L, 456.

67 See GP III, 260.

68 G. W. Leibniz, *The Principles of Nature and Grace...*, §3, L.

69 GP II, 252.

70 NE, IV, iii, §6.

scious about the operations of the brain. "More is requisite besides bare presence, to enable one thing to perceive what passes in another. Some Communication, that may be explained; some sort of influence, is requisite for this purpose."[71] According to Leibniz, this influence is present in the idea of "pre-established harmony." "The harmony or correspondence between the soul and the body is not a perpetual miracle, but rather the effect or consequence of an original miracle, worked at the creation of things, as all natural things are."[72] The soul does not breach the laws of the body and the body does not breach the laws of the soul, and all their actions are part of a system established by God. "Souls act according to the laws of final causes, through appetition, ends and means. Bodies act according to the laws of efficient causes, i.e. the laws of motion. And these two realms, that of efficient causes and that of final causes, harmonize with one another."[73] Each change, each new perception in a monad causes, in accordance with this harmony, change in all other monads. This occurs by virtue of the assumption that a monad, by constituting a separate universe closed to any external interaction, contains within itself the capacity to perceive these changes. The universe is an ordered system where every monad serves its function. Monads are connected in this pre-established harmony so that each is a specific reflection of this whole infinite system.

Leibniz constructs the physical world from elementary metaphysical points, building integrities which constitute the objects of our perceptions. That which is real is an infinity of living forms endowed with a force actualized in perpetual motion. As these objects are in perpetual motion, they must differ from the rest at every stage of their existence. The essence of objects lies in becoming, not

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[71] G. W. Leibniz, *The Controversy between Leibniz and Clarke*, L, 678.

[72] *Ibid*, p. 711.

[73] G. W. Leibniz, *Monadology*, §79, L.

being. Monads remain in an ordered relationship of coexistence to other monads, and the dominating monad "... is always connected with a body."[74] We can, therefore, easily suggest that the location of the dominating monad is determined in some way by the organic body, although monads still are not points in space and do not have in their essence any relative correspondence which would extend outside the phenomenal order.[75] All organic bodies, as we may remember, are composed of monads; therefore, what we experience, according to Leibniz, is an aggregation of monads, and is solely phenomenal. While the natural world is phenomenal, it is still a world of well-founded phenomena. "Everything other than simple monads is joined by perception only, by virtue of simultaneously being objects of perception."[76]

6. Reasoning and language

By endowing the external world with a phenomenal status, Leibniz clearly distinguishes in it the work of a Divine Architect, that is the organic world, contrasting it with the effects of the creative actions of man.[77] The natural world is a world of well-founded phenomena. Therefore, everything we experience through interaction with nature is corporeal, although composed of incorporeal substances. One does not need to be a philosopher to see a significant difference in the constitution of humans and other living

[74] NE, II, xxiii, §19.

[75] See *Letter to de Bosses*, GP II, 444.

[76] GP II, 304.

[77] Leibniz clearly states that human creations lack this substantial unity. Man is not able to give spirit to a machine. What we create is only an aggregation of substances. Through the lack of unifying substance – the soul is excluded from any capacity for thought. In today's discussions about artificial intelligence, such approach makes it impossible for a man to create a thinking machine. See R. Penrose, *Shadows of the Mind*, London 1995, p. 12.

creatures. Some philosophical premises are necessary, however, to support this difference at the level of epistemological capacity. Leibniz assumes that there are relationships between the cognitive abilities of the soul that unites the body and the organs of that body. "Nature has given highly seasoned perceptions to animals. We can see this in the care Nature has taken to provide animals with sense-organs that bring together a number of light-rays or air-waves, increasing their effectiveness by combining them."[78] It may be said that animals perceive more clearly because they have better sight, yet this perception will never form apperception, as animals lack the appetition leading to it. The appetition inscribed in the essence of nature of substances is coordinated with the operations of another organ, the brain, which, despite being part of many animal species' endowment, excludes any possibility to realize this appetition due to its construction. Leibniz explains that "animals go from one perception to another thanks to the fact that they once felt their connection." In other words, he believed that animals had memory. "For example, when you show a stick to a dog, it remembers how the stick hurt it on a previous occasion, and it whines or runs away."[79] Animals predict the consequences of their previous perceptions solely on the basis of the principle of memory. "This could be called inference or reasoning in a very broad sense. But I prefer to keep to accepted usage, reserving those two words for men, and restricting them to the knowledge of some reason for perceptions being linked together."[80]

The limit on the scale of animal perception is, therefore, perception connected with memory. Leibniz sets a perspective of the world for animals, and although it allows them to perceive certain cause and effect relations, it rejects them access to these relations.

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[78] G. W. Leibniz, *Monadology*, §25, L.

[79] *Ibid*, §26.

[80] NE, II, xi, §11.

This may be explained as follows. An animal sees and feels the external world through its senses, but it does not know what it sees. Memory allows the animal, as Leibniz claims, to have an "imagination"[81] of what moves them strongly and whose imagination it had before. Leibniz calls this ability feeling.[82] This type of perception never leads to the idea of the thing that the animal experiences through its senses, as it lacks the ability to become aware of it. "[B]easts are sheer empirics and are guided entirely by instances ... Their capacity to go from one thought to another is something lower than the reason that men have ... The sequences of beasts are only a shadow of reasoning, i.e. a mere connection in the imagination."[83] However, does this lack of the ability to reflect entail the absence of an internal system of representations in the animal's soul? Since each monad is a "perpetual living mirror of the universe," it seems that even if it is stripped from consciousness, it cannot be denied, by closing it from without, that there is something within it, something that corresponds to that external world. Leibniz avoids answering this question. He does not claim explicitly that animals have no ideas. He does claim, however, that if they had ideas, it could not be denied that they have a certain degree of reason.[84] Nevertheless, animals lack both reason and knowledge.[85] This leads to the conclusion that animals also lack ideas. The argument remains in close relation with the Leibnizian concept of ideas. An idea is the object of thought: "an idea is an immediate inner object" and "this object expresses the nature or qualities of things."[86] Therefore, since animals have no thoughts, there cannot be any objects in their souls.

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[81] *Ibid.*

[82] G. W. Leibniz, *The Principles of Nature and Grace...*, §4.

[83] NE, *Preface.*

[84] *Ibid*, II, xi, §11.

[85] G. W. Leibniz, *Monadology*, §29, L.

[86] NE, II, i §1.

The examples provided by Leibniz prove that the matter which significantly separates animals from man is their lack of the ability to construct and test hypotheses about cause and effect and to provide arguments. Although humans, according to Leibniz – in three quarters of their activities, behave like empirics, expecting, for example, a new day tomorrow only because it has always been like that up to now.[87] However, the sole ability to construct theories requires something more than the mere capacity for associating events. It needs the knowledge of "necessary and eternal truths," and this is given only to humankind. This knowledge "raise[s] us to the level of acts of reflection," we are self-aware. "And by thinking of ourselves in this way we think of being, of substance, of simples and composites, of what is immaterial – and of God himself." These acts of reflection provide the principal objects of our reasoning.[88]

The human mind is especially distinguished as it is the only one which was illuminated by God. So it is the continual action of God upon us that enables us to have in our souls ideas about all things. ... All effects express their causes, and so the essence of our soul is a particular expression, imitation or likeness of God's essence, thought and will, and of all the ideas contained in it. ... God is the sun and the light of souls, '*the light which lighteth every man that cometh into this world*' [John 1:9].[89] This, however, does not mean that every human has the opportunity at birth to look inside all ideas inscribed into his mind. If it was so, it would be contrary with Leibniz's principle of individualization. The same intellectual endowment entails the existence of undistinguishable minds. In order to keep this principle intact, the theory of unconscious perceptions becomes necessary. Leibniz claims that individualization occurs not on the basis of differences between intellectual endowment, but rather thanks to the different ways we arrive at the

[87] See G. W. Leibniz, *Monadology*, §28, L.

[88] *Ibid*, §29, 30, p. 303.

[89] G. W. Leibniz, *Discourse on Metaphysics*, L, 321.

knowledge about the contents of the mind itself. This constitutes the difference between the degrees of perception in every man. It is not true that "every innate truth is always known to everyone."[90] There are truths and ideas which cannot be known by us because at the time we possess only that appetition which manifests in unconscious perceptions; there are also ideas and truths that we found within through apperception. Leibniz's take on the theory of innate ideas is described as a dispositional theory. Leibniz himself states that "ideas and truths are innate in us as inclinations, dispositions, tendencies, or natural potentialities, and not as actual thinkings, though these potentialities are always accompanied by certain actual thinkings, often insensible ones, which correspond to them."[91] He explains, however, that apart from dispositions to acting there is also an appetition for acting, even infinite amount of them once and for all in an object. These appetitions are never without effect. It seems that this can be read as follows: the nature of the mind, like of other monads, is appetition and perception, as the effect of this appetition. The scale of the mind's appetition is therefore the same scale for determining the cognitive capacity in each of us; however, its ultimate goal is to achieve the highest degree of this scape, that is – apperception or a conscious insight into the world of ideas.[92]

Let us remember that perception (the ability to perceive) is for Leibniz one of the basic attributes of every substance; it is – we might say – a category which is modified by the capacity for apper-

[90] NE, I, ii, §20.

[91] *Ibid*, *Preface*, p. 11.

[92] Leibniz notices, for example, that "Idiots do not exercise reason, and they differ from some stupid persons who have good judgment, but, not having prompt conception, they are despised and disturbed as he would be who wished to play ombre with persons of distinction and thought too long and too often of the part he must take." (NE, ii, xi, §13) It means that in some cases, mental disorders prevent apperception or allow it only partially. Leibniz denies, however, that these people are always devoid of apperception. "It is not necessary for perception, ideas, or truths to be in our minds for us to think about them." (NE, *Preface*)

ception. It should be understood as the ability to think. The transfer from one perception to another is the result of an appetition. This appetition also becomes the key to explaining the nature of language. On numerous occasions, Leibniz states that every effect is the measure of its cause. Therefore, when Leibniz claims that, in the case of animals, "monkeys have [organs] apparently as suitable as ours for the formation of words, but they do not take the least step in this direction," it is because apes lack language, like other animals. "They must lack an invisible something," which constitutes the capacity for distinguishing ideas, and has its source in the cognitive dispositions of a reasoning mind.[93] It is easy to notice that although some animals are capable of speech, they never use signs to express general ideas, "and people who were deprived of the capacity for speech and words never stop to produce other general signs."[94] Animals lack the ability to create abstracts and their method of communication is not a language strictly speaking. What we observe in animals are only natural signals, without any signs of reflection.

Leibniz introduced the capacity for creating language from the same principal quality ascribed to every substance, namely – appetition. Language is, therefore, similarly to thinking, only a modification of the consequences of this appetition or, more generally, a modification of a certain type of appetitions. This means that the capacity for thought as well as the capacity for expressing thoughts seems to be treated equally by Leibniz. There is, however, a very close relationship between the two. The system of representations inside the mind allows the thinking mind to have access to the nature of things. There are many ideas in our minds which we know fairly well, yet they could not be conceived without the involvement of other ideas. The whole process of thinking about these ideas does not mean a direct access to particular simple ideas. Yet,

[93] NE, ii, i, §1.

[94] *Ibid*, II, xi, §11.

this is possible only because we have a strength or an ability to think these things when given the opportunity. An idea, therefore, requires an ability to 'trigger' it. It follows that there must be something in us that not only leads towards things but also expresses them. For Leibniz, this something is the idea itself, defined by him as "an immediate inner object, and ... this object expresses the nature or qualities of things."[95] As ideas are representations, there is also an exact representation between ideas and the properties of things.

Leibniz claims that we have a capacity to think about remote things, without having any idea about them; the Germans call this type of reasoning *fliegende Gedanken*.[96] Since there is "an order and connection in our ideas,"[97] thanks to the capacity for apperception we are able to arrive at ideas themselves and to their order as well. If we assume that the internal order of ideas is an internal system of representations of things and their mutual relationships, we may as well consider this system to be the language of our minds. Reconstructing this system is the key to fully understanding and knowing the world. This conviction led Leibniz towards a universal language and determined the direction of his research, as well as the manner for interpreting natural language.

Only rational souls are "capable of knowing the system of the universe, and of imitating aspects of it through sketchy constructions of their own."[98] Language is also a natural attempt to do so. All existing ethnic languages are effects expressing the same cause – the internal language of thoughts.[99] The fact that individual natural ethnic languages are all different because "... our needs have

[95] *Ibid*, II, i, §1.

[96] *Ibid*, II, xxi, §12.

[97] *Ibid*.

[98] G. W. Leibniz, *Monadology*, §83, L.

[99] See *Quid sit idea*, GP VII, pp. 263–264, and also M. Losonsky, *Leibniz's Adamic Language of Thought, Journal of the History of Philosophy*, vol. XXX, 1992, no. 4.

compelled us to leave the natural order of ideas, for this order would be the same for angels, men, and all intelligences in general and would have to be followed by us, if we had no regard for our interests. It has been necessary to attach thereto what the occasions and accidents to which our species is subject have furnished us; and this order gives not the *origin of the notions*, but so to speak the *history of our discoveries*."[100] *Therefore, every language illustrates the method of arriving at truth for every individual population, and is only a human attempt to achieve a divine order of the world, whose potential knowing is inscribed in every reasoning mind.*

Leibniz emphasizes that since every effect expresses its own cause and is its measure, it follows that studying various languages provides information about the structure of the mind itself. It also means that there are common internal language structures, a universal grammar to which all ethnic languages refer. The way these structures are reconstructed, different in each language, explains the individual character of arriving at truth in every category of language users. Languages, like their users – intelligent beings – are influenced by the Leibnizian principle of individualization or differentiation of things. The language of thoughts is realised through various languages which differentiate on many levels – each language recreates it from a different perspective, and its every user achieves full language competence at different times and in different ways, making them capable of analysing thoughts.[101]

External languages, as we may refer to ethnic languages, are also a consequence – according to Leibniz – of the need to communicate because "apart from the desire of making ourselves understood we should never have formed language . . . "[102] We may notice,

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[100] NE, II, i, §5.

[101] See G. W. Leibniz, *Analysis linguarum*, in: *Opuscules et Fragments Inédits de Leibniz*, extraits des manuscrits de la bibliothèque royale de Hanovre par Louis Couturat, Paris 1903 (repr. Hildesheim 1961), p. 351–354 (referred to as C; See Literature, source texts).

[102] NE, III, i, §2.

however, that there is an issue here in agreeing with this view with the concept of substance which entails strict individuality of particular beings. Since Leibniz's "monads have no windows through which anything could come in or go out,"[103] *meaning* that there is no interaction or communication between particular minds. The philosopher goes on to explain that between all substances there is a connectivity which is based on the idea that every change of a substance's state results in the reflection of this change in other substances, and since every monad, as we may remember, reflects the whole universe all the time, the monad must find the change in this universe within itself. This is possible through *pre-established harmony*. Therefore, by virtue of this harmony, what we observe to be communication can be reconciled with the Leibnizian concept of substance. It can be said here that, essentially, it is not the need to communicate, but rather the need to express or manifest thoughts being the force that results in language.

Leibniz constructs his theory of innate ideas based on the concept that "there is always a particular disposition to action, and towards one action rather than another," and apart from this disposition there is an appetition or endeavour which always has an effect.[104] This means that the natural appetition for language must manifest itself in the form of language. This appetition is determined by internal language structures, and these can also be called the language of thoughts or the language of ideas. Leibniz assumed that such universal structures are specific only to humankind. This assumption suggests that Leibniz supported a view, which has a long-standing tradition in Western philosophy, claiming that both mentally and behaviourally, humans are qualitatively distinct from animals. The concept is also supported by modern-day scholars who believe that language is a result of an evolutionary "leap," which occurred only once and was related to a rapid

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[103] G. W. Leibniz, *Monadology*, §7, L.

[104] NE, II, I, §2.

increase in the size of the human brain. Consequently, the leap endowed the human mind with certain universal language structures which determine specific difference.[105] In the words of one of the creators of this theory, Noam Chomsky, "Abstracting away from unknown mechanisms, we assume that the language faculty has an initial state, genetically determined, common to the species apart from gross pathology, and apparently unique to the human species. We know that this initial state can mature to a number of different steady states – the various attainable languages ... The process of maturation from the initial state to the steady state of mature knowledge is, to some extent, *data-driven*; exposed to data of English, the mind/brain will incorporate knowledge of English, not Japanese. Furthermore, this process of growth of the language faculty begins remarkably early in life. Recent work indicates that four-day-old infants can already distinguish somehow between the language spoken in their community and other languages, so that the mechanisms of the language faculty begin to operate and to be 'tuned' to the external environment very early in life."[106] Chomsky does not refer to Leibniz's concept of appetition, meaning the disposition of the mind which manifests itself, among other things, as a capacity for language. It seems, however, that the results of research indicated by Chomsky provide arguments which confirm the existence of appetition which ultimately resulted in human speech.

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[105] See H. Putnam, *The "Innateness Hypothesis" and Explanatory Models In Linguistics*, http://isites.harvard.edu/fs/docs/icb.topic1327223.files/Putnam%20item.pdf.

[106] N. Chomsky, *On the Nature, Use and Acquisition of Language*, in: W. G. Lycan (ed.), *Mind and Cognition*, Blackwell, Oxford, Cambridge 1990, p. 634.

III.

COGNITIVE FUNCTIONS OF LANGUAGE

1. Functions of the language sign

According to Leibniz, language signs and, more broadly, all symbolic systems, are involved in thinking processes and have a supporting function in the whole intellectual process. This conclusion is confirmed by the numerous statements of Leibniz, especially where the object of his attention is the system of natural language.[1] In *Unvorgreiffliche Gedancken...* the philosopher writes that words are not merely symbols for thoughts but also for things, and that we need symbols not only to transmit our opinions to others but also to support our own thinking.[2]

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[1] Let us quote here the fragment of Leibniz's manuscript which remains in Leibniz's Archives in the Niedersächsischen Landensbibliothek in Hannover, sign. IV, VII, B, 3,16 r where the author explains what he means by the function of sign: *La plus part de nos raisonnemens, sur tout ceux qui s'entremelent dans les principales veues, se font par un jeu de caracteres, comme on joue du clavesin par coustume en partie, sans que l'ame en cela s'en apperçoive assez, et forge les raisons avec reflexion. Autrement on parleroit trop lentement. Cela sert a mieux entendre comment (l'ame) le corps exprime par ses propres loix tout ce qui passe dans l'ame. Car ce jeu de caracteres peult aller loin et va loin en effect, jusqu'à un point qu'on ne pourroit penser des choses abstraites sans aide de caracteres arbitraires.* Quoted after M. Dascal, *Leibniz, Language, Signs and Thought, Foreword*, s. VII, Amsterdam/Philadelphia 1990.

[2] G. W. Leibniz, *Unvorgeiffliche Gedancken betreffend die Ausubung und Verbessrung der TeutschenSprache*, in: G. W. Leibniz, *Collectanea Etymologica*, Hanoverae 1717, §5: *Es ist aber bey dem Gebrauch der Sprache, auch dieses sonderlich zu betrachten, dass die Worte nicht nur der Gedancken, sondern auch der Dinge Zeichen seyn, und dass wir Zeichen nöthig haben, nicht nur unsere Meynung andern anzudeuten, sondern auch*

The idea expressed in *Unvorgreiffliche Gedancken...* is approached by Leibniz precisely in *New Essays...*,[3] but in fact he refers to the general definition of a sign presented in the table of definitions prepared around 1672:

"A sign is what we see (and understand) at the moment and, in addition to this, what we consider as united with something else under our or someone else's experience."[4]

Leibniz, as Dascal notes,[5] defines a multiargumental predicate x being the sign y for z in time i (where x is a variable for signs or rather medium of signs; y replaces what is being indicated; z refers to the users of signs; t refers to time parameters). To state that something functions as a sign, the definition requires the fulfillment of the following two conditions:

- x must be seen (experienced) by z;
- x must cause y (in the mind of z), under certain existing link between x and y, on the part of z. The whole process is situated in the time i.

According to this definition, the primary function of each sign is recalling its reference (meaning) in the mind of the interpreter (user) of the sign. Staying within this basic function and taking

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unsern Gedancken selbst zu helffen. Den gleichwie man in grossen Handels-Städten, auch im Spiel und sonsten nicht allezeit Geld zahlet, sondern sich an dessen Statt der Zeddel oder Marcken, biss zur letzten Abrechnung oder Zahlung bedienet; also thut auch der Verstand mit den Bildnissen der Dinge, zumahl wenn er viel zu dencken hat, dass er nehmlich Zeichen dafür brauchet, damit er nicht nöthig habe, die Sache iedesmahl so offt sie vorkommt, von neuen zu bedencken. Daher wenn es sie einmahl wohl gefasset, begnügt er sich hernach offt, nicht nur in äusserrlichen Reden, sondern auch in den Gedancken und innerlichen Selbst-Gespräch das Wort and die Stelle der Sache [zu] setzen.

[3] See NE, III, ix, 9 §3.

[4] G. W. Leibniz, *Sämtliche Schriften und Briefe* 6 Reihen, Darmstadt 1923, Berlin 1950, Leipzig 1983, later in the text referred to as AA (and quoted as volume, part, page) VI ii, 500: *Signum est quod nunc sentimus et alioquin cum aliquo connexum esse ex priore experientia nostra vel aliena judicamus.* See also G. W. Leibniz, *Opuscules et Fragments Inédits de Leibniz*, L. Couturat (ed.) Paris 1903, (later quotet as C), p. 497.

[5] M. Dascal, *Leibniz, Language, Signs and Thought*, *op. cit.*, p. 31.

into account the differences between users of signs and the things to which they refer as well as differences of time parameters, it is possible, however, to distinguish several additional features of the signs. The first distinction introduced by Leibniz immediately after the introduction of the above definition is the difference between the "informative" and "mnemonic" function of the sign. Signs that have an informative function are referred to as signs, whereas those with a mnemonic function are called concepts. According to Leibniz, words were invented primarily to support human memory, so they are marks (*notae*) for us on the same terms as they are *signs* for others.[6]

While making this distinction, Leibniz refers directly to Hobbes.[7] Therefore, it is useful to present the source of the difference between the sign and the concept in order to understand their different functions. According to Hobbes, philosophy consists of the knowledge achieved (acquired) by reasoning. Reasoning is a type of account whose basic operations are the sum and difference of ideas, concepts and thoughts. However, human thoughts are fluid and transient. Thus, the mind encounters a basic difficulty collecting them as a whole, organizing them or comparing them. The process of the thought analysis, and thus the acquisition of knowledge, must be accompanied by some tools – meaningful signs allowing us to return to past thoughts, reproduce their order and connections.[8] Hobbes calls such signs concepts. But the use of concepts is highly individualized and private. That is they support only a memory unit and disappear with the death of their users.

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[6] AA VI ii, 500.

[7] AA VI i, 278: "Verba enim non tantùm signa sunt cogitationis meae praesentis ad alios, sed et notae cogitationis meae praeteritae ad me ipsum, ut demonstravit *Th. Hobbes* principio Elementorum de Corpore."

[8] T. Hobbes, *De Corpore, 1,1,3* – subsequent numbers represent chapter, part and fragment, in: T. Hobbes, *The English works of Thomas Hobbes of Malmesbury*, W. Molesworth (ed.), London 1839–1845, vol. IV. See M. Dascal, *Leibniz, Language, Signs and Thougth , op. cit.*

A real progress of science is seen as the accumulation of knowledge acquired over generations, and it requires a system of signs which are common to many individuals. Such signs are called signs in the strict sense.[9]

For Hobbes, the difference between the signs and concepts comes down to the difference of function.[10] Signs serve to reveal our thoughts to others whereas concepts are to refer to themselves or to recall themselves to ourselves. Although both functions are very clearly distinguished, it appears that they are not independent for Hobbes. The mnemonic-recalling function of the concept is, in some sense, basic. While we can easily realize the concepts that are not signs, or those we use only for our personal use, without any communicative value, a reverse process is not possible. Therefore, to have a communicative function each sign should be a concept itself or it has to be connected with the concept which "ixes" the thought transmitted by that sign.

Priority or superiority of the mnemonic function over a communicative one is illustrated, according to Hobbes, by natural languages. Words or, precisely, names have a dual function of signs and concepts, but most of all they are concepts, and then signs. He claims that no name taken in isolation can fulfill a communicative function. It is simply lacking. Only when words and names come together in a sentence, do they begin to fulfill their sign function, that is, they transmit the thought of its recipient.[11]

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[9] T. Hobbes, *De Corpore*, I, 2, 2. See M. Dascal, *Leibniz, Language, Signs and Thought*, *op. cit.*, p. 32 and following.

[10] T. Hobbes, *De Corpore*, I, 2, 3.

[11] T. Hobbes, *De Corpore*, I, 2, 3: [...] *nomina per se singula* ***notae*** *sunt, nam cogitata revocant etiam solas, signa vero non sunt, nisi quatenus in oratione disponuntur et partes ejus sunt. Verbi gratia,* vox homo *excitat quidem in audiente ideam hominis, non tamen (nisi quis addat, est animal, vel aliud aliquid aequivalens) significat aliquam ideam fuisse in animo loquentis, sed voluisse eum aliquid dicere, quod potuit quidem incipere a voce* homo, *potuit vero etiam a voce* ***homogeneum****. Natura itaque nominis consistit primario in eo quod serviat quoque significandis, demonstrandisque iis rebus quas memoria tenemus.* Let us note that Hobbes recognizes the correct unit of communication, which is

It is worth noting here that Hobbes takes a particular point of view. Signs and concepts are treated by him as tools in the development of science and philosophy. In this sense, he concentrates rather on the language of science than on everyday language. Of course, he also indicates the use of language for pleasure and decoration, but it is a marginal use. However, a social function of language, conditioned by the existence of the social consensus as to how to apply signs, is nothing more but a transfer of knowledge necessary for the functioning of society from one generation to another.[12]

According to Hobbes, there is a certain hierarchy of sign functions, subordinated to the development of science. In order to achieve the advancement of knowledge, transmission of information is needed, because only in this way the experience of the past eras can be accumulated. But fragments of knowledge are acquired in reasoning. Therefore, it is necessary to be capable of indicating our thoughts and recalling their relationship. A hierarchy of sign functions can be represented as follows:

- advancement of knowledge;
- information, communication;
- discovery by reasoning;
- indication and recalling thoughts.

In accordance with the above-mentioned considerations, concepts, for Hobbes, have only the last function. This mnemonic function is essential for the remaining ones and in this sense all the others, especially reasoning, depend on the use of meaningful concepts. However, concepts, though necessary, serve a supportive role in the very reasoning. Reasoning (conversion) directly affects ideas and thoughts evoked by concepts – (*...animo, sine verbis, tacita cogita-*

a sentence, not a name or a word. This discovery could provide a starting point for the semantics of sentences, radically different from the traditional semantics, which focuses mainly on the word. Unfortunately, neither Hobbes nor his successors developed this idea.

[12] T. Hobbes, *Lewiathan*, eBooks Adelaide 2007, I, 4, 5.

tions ratiocinando addere et substrahere solemus).[13] The use of concepts in reasoning is, therefore, indispensable in the sense that in the mind they evoke the content that is necessary to start this process and sustain it. The reasoning in itself is a process of thinking in which there is no room for the use of any meaningful signs.[14]

It is only in this context that Hobbes's attack on algebraic symbolism is understood. He writes in *De Corpore*: "The so-called 'symbolics' used by many scholars who believe that it is truly analytical, is neither analytic nor symbolic. It is only a simple shortcut of mathematical accounts, but not geometric, because it does not add anything to the learning or teaching of geometry, and is just a quick and short summary of what has already been discovered by geometricians. Even if the use of symbols can facilitate the discourse of the judgements distant from each other, I am not sure whether this symbolic discourse could be considered as useful if things corresponding to the idea are taken into account."[15] Therefore, Hobbes argues that algebraic symbols allow only to shorten reasoning; their didactic value is also questionable. A symbolic discourse is secondary to the process of thought whose constitutive elements include ideas or performance, and that, in his opinion, is sufficient to challenge the cognitive usefulness of symbolism itself, its role is purely marginal. A sign does not constitute thinking

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[13] T. Hobbes, *De Corpore*, I, 1, 3.

[14] The interpretation of Hobbes presented here is proposed by M. Dascal (*Leibniz, Language, Signs and Thought*, *op. cit.*, p. 34); it differs from the interpretation presented by W. Kneale and M. Kneale in: *Developement of Logic*, Oxford 1962, p. 312 and others assuming that for Hobbes thinking is merely an operation on signs. The reason for these differences is a lack of certainty on this issue on Hobbes's part. In *Leviathan*, *op. cit.*, part I, chapter 5, he actually presents thinking as an operation on general names and adds that science is nothing more but the acquisition of knowledge being the consequence derived from names in the subject. Although at the beginning of the same part of *Leviathan* he shows this type of reasoning as a possible rather than necessary characteristic of all types of reasoning. Moreover, he assumes the existence of a purely mental discourse, different and completely independent of verbal discourse.

[15] T. Hobbes, *De Corpore*, III, 20.

being only capable of its acceleration; a mnemonic function is its basic function.

There is no doubt that Leibniz's views on the functions of the language sign were shaped by the critical analysis of Hobbes' works. In *Nova Methodus Docendaeque Jurisprudentiae* he lists mnemonics as one of the disciplines treating human 'habits' having to do with memory. Analytics and topos respectively deal with judging and discovering. To keep order, he also adds methodology; all these disciplines make didactics.[16] Leibniz accepts the existence of some objects of thought called judgements typical for men which we can recall, judge, discover and organize. Signs are only considered in terms of recalling. Thus, the analysis of signs is treated as part of mnemonics. It is interesting to note that what was said in the first edition (1667) is repeated by Leibniz in the second edition (1697). The only novelty is the inclusion of natural languages in the semiotic systems assigning them a mnemonic function as their primary function. Hence, linguistics is subordinated to mnemonics.

However, in his studies on mnemonics Leibniz is original and goes beyond his contemporaries. He draws attention to specific techniques of memorizing linking the sign with the sound, encoding information with the use of cryptograms; moreover, he analyzes signs and stylistic figures in terms of their suitability for archiving data. The sign constitutes the basis for mnemonics, being a sensuous object remaining in a definite relation to things.[17]

2. Symbolic thinking

The basic principle of mnemonics is the principle of economics. Our ability to memorize is limited, so we have to manage memory in the most efficient manner. A proper use of signs is the most im-

[16] *Nova Methodus...*, AA VI i, 277.

[17] *Nova Methodus...*, AA VI i, 277–278.

portant way to achieve this goal. For example, when Leibniz offers a compilation of the *Brevis of discussion*, he recommends the use of special signs that indicate how each argument for and against is part of the law elements and other laws. Thus, if the argument is based on the opposition (*a'contrario*), the suggested marking looks as follows: (when it relates to the similarity (*a'simili*): (), causes: 0–; effects: –0 etc.[18] The function of these signs is to point out the obvious relationship between the premises and the conclusion, the user is experiencing this kind of obvious relationship immediately, and symbolism allows him to capture all the dependencies immediately and without any effort. The word 'intuition' is a key concept here which captures the essence of such an approach. The possibility of obtaining such a result by means of signs makes symbolism an essential tool of reasoning.

Leibniz explains the essence of this mechanism by referring to arithmetic symbolism: "Suppose someone learns Arithmetic, including, e.g., the pythagorean table. What does he learn? Does he learn something new, except the words? When I learn that two multiplied by two is four, do I learn more than a numeral name, whose use – afterwards – in speaking and calculating is more economical? And yet, without such words, or any other constant signs in their places, Arithmetic would be completely useless for us. Therefore, it is true to say that he who learns only matters of reason, theorems, and definitions, does not in fact learn anything but how to use what is already known. Thus, nobody could calculate, especially with very large numbers, without names or numerical signs, i.e., if he had to imagine distinctly, for each number, all the units comprised in it. Who intended, could imagine distinctly the units contained in 1.000.000.000.000 in a time shorter than the age of Methuselah. And even if he could, he would forget the first units as he progressed towards the end."[19]

[18] *Nova Methodus...*, AA VI, i, 346.

[19] G. W. Leibniz, *On the demonstration of primary propositions*, in: M. Dascal, *Leibniz, Language, Signs and Thought, op. cit.*, p. 149.

Therefore, no long argumentation can do without the use of certain names or symbolism. It is thanks to them, according to Leibniz, that a huge number of things can be covered in the way that makes it possible to run through them very quickly, which would be impossible, if their definitions were used instead of the names and symbols. However, it is essential to note that a necessary condition for the correctness of the whole process of reasoning is the knowledge of the meaning of the symbols used, that is the ability to provide their appropriate definitions. The intellectual process, whose integral part is the operation on symbols, is called blind or symbolic thinking by Leibniz. "We use it in algebra and arithmetic, indeed everywhere."[20] There is nothing, in his opinion, that would be more common and necessary for all people. "If we were simultaneously aware of the arrangement of words clearly and consistently, blind reasoning itself would be sufficient for clear reasoning. That is why modern *Analysis Symbolica*, despite Hobbes' criticism, is so useful for quick and reliable reasoning."[21]

Analyzing the mechanism of thought, Leibniz indicates at least two types: idea processing and definition and sign processing (*Differentur inter processum per ideas edprocessum per definitions vel caracteres*).[22] In his opinion, the use of signs results in the following benefits: by marking ideas signs get rid of the ideas' liquidity which can make proper reasoning difficult and allow to take one simple look (of the mind) at a whole chain of thoughts (*totus noster cogitandi processus uno obtutu perspici*).[23] If it is true that the one who speaks, thinks (*qui loquitur cogitât*),[24] it follows that each operation on signs, any use of language is in a certain relationship, or even

[20] G. W. Leibniz, *Meditationes de cognitione, veritate et ideis*, in: G. W. Leibniz, *Philosophische Schriften*, vol. VII, C. I. Gerhardt (ed.), Halle 1846 (rep., Hildesheim 1960), IV, 423 (quoted later as *GP*, volume, page).

[21] *Demonstratio propositionum primarum*, AA VI ii, 481.

[22] G. W. Leibniz, *Leibnitiana. Elementa philosophieale arcanae de summa rerum*, ed. I. Jagodinski, Kazań 1904, p. 2.

[23] *Ibid*, p. 4.

[24] *Ibid*, p. 4.

causes an operation on ideas. Let us recall that in accordance with the Leibnizian theory of representation "speech expresses thoughts and truth ..., provided some analogy of relations has been preserved."[25] According to Leibniz, the analysis of thoughts itself is sufficient to discover and prove the truth. And if the analysis is consistent with the analysis of signs (*characters*) which we use to mark thoughts, some thought corresponds to each sign. It is possible, therefore, to provide an analysis of thought in a sensual way, leading it according to some mechanical thread, since the analysis of signs is also sensual.[26]

That mechanical thread that takes a man through a maze of human thoughts, which Leibniz metaphorically calls Ariadne's thread, is the only true way, "some sensual and simple tool to manage the mind, as lines outlined in geometry and forms of action given to arithmetic learners."[27] According to Leibniz, syllogisms have such a property. He even considers that "the invention of the form of syllogisms was one of the most beautiful, and also one of the most important products made by the human mind. It is a species of universal mathematics ... and it may be said that infallible art is therein contained."[28] For Leibniz, however, algebra is a perfect example of usefulness. In algebraic reasoning ideas corresponding to symbolism are neither caused nor present in the mind at any stage of arguing, for it would make the process of reasoning impossible. The mind would be busy just with ideas all the time which would block reasoning by being constantly invoked. This

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[25] *Quid sit idea*, GP VII, 263–264.

[26] *Analysis linguarum*, C, 351: *Ad inventionem ac demonstrationem veritatum opus est analysi cogitationum, quae quia respondet analysi characterum, ... hinc analysis cogitationum possumus sensibilem reddere, et velut quodam filo mechanic dirigere; quia analysis characterum quiddam sensibile est.*

[27] *Letter of Leibniz to Jean'a Gallois from September of 1677*, AA II i, 381: *La veritable méthode nous doit fournir un* Filum Ariadnes, *c'est à dire un certain moyen sensibile et grossier, qui conduise l'esprit comme sont les lignes tracées en geometrie, et les formes des operations qu'on prescrit aux apprentifs en Arithmetique.*

[28] G. W. Leibniz, *New Essays...*, Book IV, Ch. XVI, p. 559.

means that the mind is focused solely on signs and operations performed on them without directing attention to what they relate to. In this sense, algebraic reasoning is just a mere transformation of signs. This is possible only when there is a well-defined system of rules, which guarantees the truth of the results of such operations. Analyzing this standard way of thinking, Leibniz highlights several functions of signs. Signs present our thoughts to others having an informative function; they solidify those thoughts in our memory revealing a mnemonic function; they allow to shorten thoughts reducing their number to only a few – so it is possible to say that signs have a "compression" function as well as an arrangement function allowing one to grasp the whole chain of thoughts *uno obtutu*.[29]

[29] See *Leibniz's letter to Walter von Tschirnaus written in May 1678*, in: G. W. Leibniz, *Philosophical Papers and Letters*, L. E. Loemker (ed.), Dordrecht 1965, p. 193. See also H. Święczkowska, *La perspective platonicienne sur la langue chez Descartes et chez Leibniz*, in: "Idea. Studia nad strukturą i rozwojem pojęć filozoficznych" VII, Białystok 1996. To understand why symbolism can play such an important role in reasoning, let us refer to modern psychology and the study of memory. The model of memory is represented as consisting of two distinct mechanisms of storage. One is short time memory (STM) that captures information from the senses and keeps it for a very short period of time. This ability is limited so that the unit of information is only stored until it is replaced by another information unit. STM capabilities are estimated numerically: approximately it can accommodate seven such units. While stored in STM, such units of information can be encoded and transmitted to another mechanism or tool of memory – *long time memory*, whose possibilities are immesurably greater. If this process of transfer has been made, units of information are stored long enough. STM is limited to seven units of information, which are stored at the moment, but this restriction does not apply to the amount of information the unit contains. If we refer to the information theory, STM can accomodate not 7 bits, but rather 7 chunks of information. Bits and chunks differ in that the chunk may comprise many bits. For example, the number of six digits – 101101 – contains six bits of information. If each digit is considered as a separate bit or chunk, storing the total number covers almost the entire STM. But if you group the numbers in pairs, each chunk now contains two bits, while STM is used only up to some degree. See E. R. Hilgard, R. C. Atkinson, *Introduction to Psychology*, New York 1967, p. 328 and following and G. R. Miller, *The magical number seven, plus or minus two: some limits on our capacity for processing information*, in: *The Psychology of Communication*, London 1967, p. 33 and following. Referring to this data, M. Dascal claims that the Leibnizian *uno obtutu* can be identified with STM. See M. Dascal, *Leibniz. Language, Signs and Thought*, *op. cit.*, p. 38.

3. *Compendia loquendi* and dispute over universals

Although, according to Leibniz, the usefulness of signs fully reveals itself in mathematics, "blind or symbolic thinking" (*caeca vel symbolica cogitatió*) accompanies all reasoning processes.[30] An important role of supporting or improving the thought process is assigned to general and abstract. Leibniz even writes that he treats all of them *per modum loquendi compendiosum* for production (fiction) of the mind useful while calculating.[31] For it is "the art of classifying things into genere et species is of no little importance and of much use to both judgment and memory."[32] As Benson Mates notes, Leibniz did not believe in the existence of numbers, geometric figures or other mathematical objects; what is more, he did not accept abstract things such as heat, light, justice, goodness, beauty, time and space; he did not allow the existence of metaphysical objects such as concepts, judgments, properties, etc. The only units of his ontology were substances and their attributes, but sometimes he doubted even the existence of attributes. Such ontology reinforces a certain perspective on language; Mates claims that, basically, Leibniz was a nominalist.[33] Leibniz himself seemed to confirm that opinion writing that he saw no other way to avoid the difficulty in determining whether the characteristics of substance should be considered separately as part of a reality rather than the treatment of abstracts not as the real thing (*res*), but as shortcuts of speaking (*compendia loquendi*).[34] However, there are other

[30] *Meditationes de cognitione, veritate et ideis*, GP IV, 423.

[31] *Leibniz's letter to des Bosses March, 1706*, GP II, 305: *Utrasque enim per modum loquendi compendiosum pro mentis fictionibus habeo, ad calculum aptis...*

[32] NE, III, iii, 311, §9.

[33] B. Mates, *The Philosophy of Leibniz. Metaphysic and Language*, New York, Oxford 1986, p. 171 and following.

[34] G. W. Leibniz, *De accidentibus*, in: G. W. Leibniz, *Textes inédits d'apres les manuscrits de la bibliothèque provincial de Hanovre*, G. Grua (ed.), vol. II, Paris 1948, Volume II, p. 574.

statements made by Leibniz which contradict his nominalistic declarations. In *New Essays...* he writes that virtues, truth and species should not be dependent on us. "They exist in nature whether we know it and approve or not."[35] A little earlier he notes that "it is true you do not see justice as you see a horse, but you understand it no less, or rather you understand it better, it is no less in acts than directness or obliqueness is in motion, whether you consider it or not."[36] For generality depends on the similarity of specific things and this similarity is, according to Leibniz, reality." In similar subjects we detect their mutual feature which is nothing more than an *a priori* possibility of their existence. Leibniz calls these creatures *real abstracts* and they are accidents – entities added to the substance.[37]

However, it is difficult to find Leibniz's clear program declarations. Referring to the medieval dispute over universals, he wrote that a realists' axiom is as good as a nominalists' axiom as long as they are properly understood.[38] It is possible to get the impression that Leibniz deliberately avoids radical decisions in the dispute regarding the ontological status of universals directing his attention rather to purely grammatical or linguistic properties of phrases which mark abstracts or universals. He wrote in *Characteristica verbalis*: "Words are signs either concepts, as in the case of nouns, or of modes of conceiving, as in the case of other parts of speech. Concepts are viewed either in themselves or by accident."[39] Those

[35] E, III, vi, §39.

[36] *Ibid*, III, v., §12.

[37] NE, III, viii, §1. Leibniz clearly distinguishes between modifications and attributes. The ability to perceive and act, extent and permanence are, according to him, the attributes of the substance or, in other words, eternal and basic judgments. Thus, modifications of these attributes are: thinking, violence, shapes and movements.

[38] This ambiguous position of Leibniz on the issue of universals is revealed clearly in NE III, vi, §32.

[39] G. W. Leibniz, *Verbal characteristic*, in: M. Dascal, *Leibniz, Language, Signs and Thought*, *op. cit.*, p. 175.

that are taken in themselves, apart from the metaphysical object or subject, as well as the time, place and event are abstract concepts (*formalitates*), such as humanity, beauty and being triplelegged. Concepts taken *per accidens* express the convergence of many 'forms' in the same subject when it happens, for example, that the same subject has poetic and juridical abilities. Thus names, depending on the terms they cover, fall into the abstract ones, such as 'warmth', 'humanity' and precise ones, such as 'man', 'hot.'[40] Therefore one can say that the grammatical division of names into precise and abstract ones corresponds to the semantic division of terms into *per se* and *per accidens*. In the table of definitions once again Leibniz defines abstracts as entities (*entia*) which differentiate various predicates within the same subject. *Concretum* is where *entia* are included and what contains no contradiction.[41]

In his division of names into precise and abstract ones, Leibniz noticed some ambiguity accompanying different uses of precise names. Precise names such as 'man' or 'horse' may have different references. In *Introduction to Nizolius*, commenting on the position of nominalists who, as for instance Nizolius, claim that universals are nothing more but taking all the entities collectively and at the same time so that they are collective wholes, Leibniz agrees that when we say 'every man is an animal,' it means that all people are animals. However, in his opinion, it does not mean that universals are collective wholes as Nizolius claims for a whole (*totum*), marked by the phrase 'every man' has a distributive sense apart from a collective one. If, as Nizolius wishes, the phrases 'omnis homo' or 'omnes homines' meant the same thing as the human species, it would lead to absurd substitutions such as 'The human species is an animal.'[42]

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40 C, 437.

41 C. 437.

42 AA VI ii, 430.

According to Leibniz, this confusion of terms results in more serious consequences. If universals were nothing more but a collection of individuals which, as Nizolius claims, being precise totals are sets in the collective sense, it would be impossible to arrive at any knowledge on the basis of arguments; induction becomes the only possible way to increase knowledge. And on that basis, according to Leibniz, it is impossible to accept any perfect general sentence for it is necessary to stop at the judgment that all investigated cases are such and just such. Leibniz claims that true knowledge can only be achieved through the analysis of general sentences whose truth does not depend on induction, but on a general idea or a definition of terms. As he writes, practical and moral certainty of the sentence 'fire burns' is guaranteed by the following principles: 1. If in all cases the cause is the same, or similar, the effect will be similar or the same. 2. The existence of the thing that is not understood is not assumed. 3. Whatever is not assumed should be ignored in practice until you can prove it.[43] Defending the so-called general rhetoric against the Aristotelian logic and Renaissance dialectic, Marius Nizolius sought to exclude arguing as the acknowledged way of the explanation of the nature of things (as was taught by Aristotle). Nizolius wrote that if universals are false as it was said and proved, one can say that the whole dialectic they support fall down with them.[44] Leibniz's answer to this question is: This is false! Nominalists as well as others used Aristotle's dialectic and they were right. Although there is seldom some truth in what people attribute to things in their names, the thing itself is always preserved when we use names to explain things.[45]

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[43] AA VI ii, 431.

[44] A A VI ii, 451: *Nam si universalia ista falsa sunt, ut nos dicimus, et probaturi sumus, continuo una cum univesalibus cadit pene tota Dialectica, quae in illis tanquam columinis fundata est...*

[45] A A VI ii 451: *Hoc falsum est. Neque enim minus Nominales quam caeteri, Dialectica Aristotelis usi sunt, et recte quidem. Nam etsi in nominibus saltem vera sint quae vulgo rebus tribuebantur, salva res est; quando nominibus istis in explicandis rebus utimur.*

In other words, for arguing it would be enough if universals were pure names of things.[46]

Leibniz agrees, therefore, that the names of universals may not, in fact, have any relevance, but even as *compendia loquendi* they are helpful in proving and explaining the properties of things. By adopting this solution, Leibniz meant the nominalist definition of truth, especially in the version formulated by Hobbes. Indeed, Hobbes claimed that because truths of the mind result from definition, definitions have a purely arbitrary character; therefore, the same character is revealed by truths. Arbitrary definitions are nominal definitions. According to Leibniz, they refer only to the features necessary to differentiate a given thing from other things, and they are not sufficient to obtain certain knowledge unless it is somehow known that the defined thing is possible.[47] But although the definitions of names are dependent on our designation, the use and link of signs, according to Leibniz, is no longer optional. There is a constant correspondence between signs and things, which is the "foundation of truth."[48]

What does it really mean that it would be sufficient for proving if universals were pure names? It seems that Leibniz assumes that proving does not depend on the assumptions of semantic or ontological nature and can be built on a purely syntactic basis. Definitions of names, as nominal definitions, would have to meet only one condition that the defined thing is possible. Leibniz categorically states that we cannot have an idea of a circle. We can imagine it; we can have its definition and the idea of every property that a circle should have. But since we cannot imagine all of them simultaneously, we cannot have the idea of it. Only God has the insight

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[46] AA VI ii, 429: *...quo Universalia non sint in rerum natura (cum tamen sufficiat ad demonstrandum: nomina esse universalia)...*

[47] *Meditationes de cognitione, veritate et ideis*, GP IV, 424.

[48] G. W. Leibniz, *Dialogus*, in: G. W. Leibniz, *Phiolosophical Papers and Letters* (ed. L. Loemker), Dordrecht 1969, p. 184.

into the complex ideas of things because he can think of everything at the same time. Because of its limitations, the human mind is capable of recognizing the essence of the circle and other complex things only partly. But how can we be sure of the possibility of such an idea, that is the agreement of all the ingredients present in it, if we take into account our intrinsic limitations? Leibniz explains that "When we do not have an idea, its functions are performed by sensual or by definition, that is, a collection of signs. The place of idea is always filled by certain perception (*phantasma*), which is at the same time completely understood."[49] Therefore, Leibniz assumes that the possession of these sensory perceptions and definitions of a circle have the same value as the statement by experience that a circular object exists. In this sense, the formation and transformation of signs replaces the experience if it is not available. Therefore, signs allow to present our abstract thoughts in a 'visible' and 'static' way, and their juxtaposition is purely mechanical. Thus, argumentation conducted like this is a kind of calculation where definitions can be treated as syntactic rules allowing for the replacement of one chain of signs by the other. With this method we are able to make decisions about possibilities or, in other words, the consistency of such terms as infinity, perfection or set. Thus, according to Leibniz, to discover and prove the truth, the analysis of signs itself is sufficient, provided that the signs express some thoughts.[50]

However, the truth obtained in this way has the status of rational truth which, similarly to intuitive truth, does not require any proof. It is necessary to remember that, according to Leibniz, all rational truths refer to the sphere of possibility. Hence, it means that they are not existential judgments. Rational truths state what

[49] G. W. Leibniz, *Leibnitiana. Elementa...*, *op. cit.*, p. 6: *Ideam defectam in nobis supplet imago aliqua sensibilis, aut definitio, sive aggregatum characterum, in quibus nulla opus est similitudine. Semper ideae locum supplet phantasma aliquod, quod totum simul sentitur.* See M. Dascal, *Leibniz, Langue, Signs and Thought*, *op. cit.*, p. 51.

[50] *Analysis linguarum*, C, 351 and GP VII, 11–15.

would be true in any possible case, whereas true existential judgments depend on God's choice of some possible world. So when we say that 'a triangle has three sides' we do not state that there are triangular bodies, as well as when we predicate that 'a man is an animal,' we say nothing about the existence of man or animals although surely these statements relate to beings or universals. In fact, by treating them as possibility sentences Leibniz avoids decisions regarding their existence. Let us recall that when professing ontological individualism, Leibniz was a nominalist in ontology. If the world is made up, as he claimed, of substances and their attributes, universals do not exist in nature. But also there are no such objects as bodies, rainbows or sea. These are, according to Leibniz, aggregates which are the accumulation of substances, having the status of well-established phenomena. In fact, they are constructions of the mind which attribute their foundation to the coexistence of monads, remaining as their aggregates. For Leibniz, time and space are similar mental entities. Consequently, there is no obstacle to say that the same rational character is revealed by sets. In language, the attributes of substances and their modifications are corresponded by the predicates: is a man, is an animal, is thinking. Thus, the mind classifies objects according to the criteria whether the object fulfills the propositional function: x is such and such, dividing the objects into, for example, sets of people or animals. Such classification has its basis in the existence of property, which corresponds to the specified predicate; consequently, although universals do not really exist, they have their foundation in reality, and they are, as Leibniz calls them, *entia rationis*.[51] This interpretation seems to be confirmed by Leibniz's remarks on syntactic functions of general names: *Nomen Universale est vel subjectum, quod dicitur species vel praedicatum*.[52]

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[51] See Hans Burkhardt, *Adam's Mind and Body*, in: M. Dascal, E. Yakira (ed.), *Leibniz and Adam*, Tel Aviv 1993, p. 46.

[52] AA VI ii, 453.

Commenting on Book IV written by Nizolius, he wrote that when *omnis* is applied to the (specific) name in the singular, the sentence is a figurative sentence, for example *omnis homo est animal*, and it is synonymous with the right sentence: *omnes hominess sunt animalia*. Therefore, as he writes, "the supposition that universals in combination with singulars are real results from language."[53] One can assume that Leibniz is inclined to the contextual analysis in which a sentence is the basic unit of the analysis. It is clear in case of such sentences that a grammatical subject is not a logical subject, and the name *homo* is a predicate, like *animal*.

It seems that in the so-called dispute over universals Leibniz takes a pragmatic stand. In fact, he was concerned about the precise use of language and about adapting it to the needs of science. Arguing with Nizolius, he highlighted the ambiguity of terms which, when used inappropriately, may lead to absurd substitutions. To avoid this, he even postulated the elimination of abstract terms from the language of science.[54] He did not claim, however, that they are completely useless – abstraction is not a mistake, as long as one knows that it contains what is hidden.[55] In other words, if we use a term, we have to give its definition. Treating general and abstract terms as *compendia loquendi*, Leibniz, however, assigns them a particular function. If they are properly defined, as the signs of concepts present in our minds, they allow us to derive the truth about the nature of things. By "grabbing" the thought, a sign allows us to approach the idea of the thing or even replaces it when that idea

[53] AA VI ii, 448: *Universalium igitur imaginaria realitas extra singularia a sermone figura to orta.*

[54] Leibniz was quite consistent in questioning the usefulness of abstract names, especially in philosophy. This fact could lead to assigning him a nominalistic attitude. L. Couturat in *La Logique de Leibniz*, Paris 1901, p. 470 argues against such an interpretation, even when it comes to early ideas of Leibniz. C. S. Peirce shows the evolution of Leibniz's ideas from nominalism to realism. See M. Fisch, *Peirce and Leibniz*, *Journal of the History of Ideas*, 33, 1972, p. 485–496.

[55] NE, III, viii, §1.

is not available. It becomes essential, being sometimes the only tool in the process of cognition.

Signs and operations performed on them have a cognitive value only when they reflect the inner order of the idea or 'imitate' it on the basis of the assumption that the thing under consideration is possible. Nonetheless, this condition is not always fulfilled. Indeed, there are signs and actions that have no relation to the perfect order, and these, as we know, are the main cause of erroneous thoughts and judgments. How to get certainty that when we make some judgment, it is compatible with any part of this inner structure? Leibniz was aware of this difficulty when he wrote: "When I think of something and I cannot imagine anything bigger than this, what is it I am thinking about apart from separate thoughts about singular ideas (things) contained in the words 'something', 'bigger', 'imagine', 'no', 'can'? Separately, I have an idea of what I call 'something', what I call 'bigger', what I call 'thought' and I can think of them one after the other. But I have no idea of all of these things together. I link only words or signs and I only imagine that I have an idea of something of which nothing bigger can be conceived."[56] The same problem was tackled by him in *New Essays...* Analyzing the imperfection of words, Leibniz talks "of our uncertainty as to whether ideas are consistent when experience does not provide us with them being linked in the same subject." In this case it is necessary to recognize the need for "temporary definitions of sensual things when the experience is not sufficient to obtain fuller definitions."[57]

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[56] G. W. Leibniz, *Leibnitiana. Elementa...*, *op. cit.*, p. 4: *Cum cogito aliquid, quo majus cogitare non potest, quid aliud cogito, quam separatim ideas singulorum, quae sub his vocibus continentur, ut: aliquid, majus, cogitare, non, posse. Separatim habeo ideam eius quod voco cogitationem, itaque unum post alterum cogitans. Non ideas horum inter se, sed postea vocabula tantum seu characteres conjungo et fingo me ideam habere eius, quo majus cogitare non potest.*

[57] NE, III, Ch. ix, §9.

Leibniz says that in constructing this type of definition we should take into consideration our intrinsic imperfection, but also negligence and laziness, which, in his opinion, is a direct cause of errors.[58] This 'imperfection' can be reducible through the analysis of the definitions of the terms included in each language. According to Leibniz, "Everything doubtless returns to definitions which may extend even to primitive ideas. One and the same subject may have several definitions, but the knowledge that they agree with themselves must be learned by reason, by demonstrating one definition by another or by experience, by proving that they are constantly together."[59] It can, therefore, be concluded that the ability to get to know goes hand in hand with the ability to define. Improving cognitive abilities is conditioned by perfect mastery of the language. Bearing this in mind, Leibniz called for a review of German language dictionary resources, the creation of specialized dictionaries covering specialist vocabulary, etymological dictionaries, and the establishment of standards of linguistic correctness. He believed that "in time all languages of the World will be recorded and placed in the dictionaries and grammars, and compared together: this will be of very great use both for knowledge of things ... and for the knowledge of our mind."[60]

[58] *Ibid*, III, x, §4.

[59] *Ibid*, III, xi, §21.

[60] *Ibid*, III, ix, §9.

IV.

LANGUAGE AS A MIRROR OF CULTURE

1. Between objectivity and illusion

In a letter from 7th April 1699 written to Gabriel Spartvenfeld, Swedish thinker and erudite, Leibniz referred to a trend in linguistic research inspired by "not yet" the pure nationalism, but certainly by the argument on the priority of linguistic and cultural tradition, enhanced by the conscience of existence of fundamental national differences.[1]

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[1] H. Wieselgren (ed.), *Leibniz'bref till Spartvenfelt*, in: "Antiquarisk Tidskrift for Sverdge" 7 (3) (1884/85), p. 40: *Au resteilestplaisant de voir, comment chacun veut tout tirer de sa langue ou de celle qu'il affectionne. Goropius Becantus et Rodurnus de l'Allemand (sans distinguer les nouvelles inflextions de ce qui est de la langue ancienne), Rudbeckius du Scandinavien, un certain Otroski du Hongrois, cet Abbé François (qui nous promet les origins des nations) du bas Breton ou Cambien, Praetorius (auteur de l'orbis Gothicus) du Polonais ou Esclavon. Thomassin apresplusieurs autres Bochart meme de l'Hebreu ou Penicien, Ericus Allemand établi à Venise du Grec. Et je crois, si un jour les Turcs ou Tartares deviennent sçavants à notre maniére qu'ils trouverons dans leur langue et dans leurs pais des mots ou allusions, don't ils prouveront avec autant de droit que Monsieur Rudbeckius, que les Argonautes, Hercule, Ulysse et les autres Heros ont été chez eux et que les Dieux sont sortis de leur pais et de leur Nation. Ils trouvent bien des passages des anciens favorables à leur hypothese.* [...] *La verité est que les anciens parlent confusement et contradictoirement des choses, qu'ils ne sçvoient plus eux memes lors qu'ils ecrivoient de sorte queleur auctorités dans ces choses obscures sont à peu pres come les regles de l'Astrologie, sont on peut tirer tout cequ'onveut, su tout apres coup.* The argument over the priority of linguistic tradition had its origins in the end of 15th century intensive cataloguing action languages, first European, than of the Old World finally of the New World. Theoretical conclusions from at first purely mechanical arrangements of languages went in two directions: 1. determining of the original language, 2. determining of the relationship between the existing languages. In genealogical

A few years before, in an essay entitled *Analysis linguarum*, Leibniz expressed a conviction about the parity of languages. He wrote that when it comes to the contribution of a language to the process of cognizance suffice to consider whichever language since every nation is equally able to make discoveries.[2] Hence, we can suppose that Leibniz, the author of the genealogical classification of languages, conscious of differences between languages, especially historical differences, attributed them equal cognitive functions and did not divide them into "better" and "worse." This opinion is contradictory with Leibniz's other statements. It can be proved without any difficulty that he was not much different from Goropius Becantus (criticized by Leibniz) declaring the superiority of German over other European languages from the point of view of cognizance, and from a historical and cultural point of view, arguing that German is the closest to the primary language in its supreme form, and that it is particularly adapted to philosophy.[3] It seems that this discrepancy fully comes to light when we compare general linguistic theory, the origins of which are to be found in his texts on cognitive theory and representation, and the opinions formulated by Leibniz on the grounds of comparative and historical research which he

consideration nationalisms played certain role. The ambition of many researchers was proving that their language was the closest to the first language of humanity – the language of Adam. It was not, however, the nationalism in modern sense. Admittedly, the roots of nationalism develop from the same soil as the whole western civilization and go back to the beginnings of Jewish nation and ancient Greece, but the first contemporary national country was the 17th century England. As for the scholars mentioned by Leibniz in the letter, he means the sense of a certain linguistic and cultural superiority, common also to Hebrews and Greeks. See H. Kohn, *Nationalism: Its Meaning and History*, Princeton, New Jersey, New York 1955.

[2] G. W. Leibniz, *Analysis linguarum*, in: G. W. Leibniz, *Opuscules et Fragments Inédits de Leibniz*, extraits des manuscrits de la bibliotheque royale de Hanovre par Louis Couturat, Paris 1903, p. 352, quoted as C.

[3] GP, IV, 144. *Illud tamen asserrere ausim, huic tentamento probatorio atque examine philosophematum per linguam aliquam vivam, nullam esse in Europa linguam Germanica aptiorem, quia Germanica in realibus plenissima est et perfectissima.*

conducted. Linguistic historians claim that Leibnizian hypotheses on the origins of German succumbed to the same illusions which led other scholars criticized by him astray.[4] There are, however, some extenuating circumstances which admittedly do not justify the Leibnizian aspect of scientific reliability, but they contribute to the explanation of his attitude as a member of a particular linguistic and cultural community.

2. Seventeenth century Germany

The history of 17th century Germany is the history of a struggle to survive which involved political survival – maintenance of the statehood, of economy and above all it involved cultural survival and rebirth. The statement that people living in 17th century considered war rather than peace as a normal state in Europe seems not to be false. Numerous armed conflicts with a political, religious or social background went on in different parts of the continent. Still they all had less reach and consequences than a phenomenon called 'The Thirty Years' War.' Let the historians judge the reasons and the results of this great pan-European war.[5] Suffice to say that it was conducted in the name of religious and political security. What remains important for us is the fact that the war, in which great European powers took part, was generally waged on the grounds of belonging to The Holy Roman empire of The German Nation. The war causes tremendous material loss, extermination of the population, decline of crafts and trade; it left its impress on cultural life of 17th century Germany. The war and the years after it are called,

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[4] See S. Gensini, *Leibniz Linguist and Philosopher of Language: Between 'primitive' and 'natural'*, in: M. Dascal, E. Yakira (ed.), *Leibniz and Adam*, Tel Aviv, 1993, pp. 118–119, H. Aarsleff, *Leibniz on Locke on Language*, in: H. Aarsleff, *From Locke to Saussure*, Atlhone, London 1982, pp. 46–47.

[5] See G. Parker, *Wojna trzydziestoletnia*, in: A. Mączak (ed.), *Europa i świat w początkach epoki nowożytnej*, Warszawa 1992, part 2, pp. 98–135.

with some exaggeration certainly, the times of the most deep cultural collapse of Germany. Andreas Gryphius (1616–1664), a great lyrist and playwright of the German Baroque wrote:

Wir sind doch nunmehr gantz, ja mehr den gantz verheeret.
Der frechen Völker Schaar, die rasende Posaun
Das vom Blutt fette Schwerdt, die donnernde Cartaun
Hat aller Schweiss und Fleiss und Vorrathauffgezehert.

The Holy Reich (the Holy Roman Reich) was in a state of shock since the Thirty Years' War and French aggressions. Demographic catastrophe was deepened by the 1630–1640 plague. From the point of view of confession, the Empire was highly differentiated; the majority of the population was Lutheran, the minority Calvinist and the rest Roman Catholic. In this multicultural milieu, the German language with its poetry and memoirs of the bygone powers and magnitude of the Empire was the only common weal. Traditional North-South tensions based on religious criterion (Protestant Germany – Catholic Germany) subsequently adapted to the tastes of Enlightment (efficiency – education, ignorance – immorality), did not facilitate the survival of the imperial myth. In the second half of the 17th century, because of the threat from France, a real attempt to create imperial economic policy was undertaken. There were attempts to create common trade rules that could be followed by all Imperial countries. The Empire itself was not a country in respect of a modern or national monarchy. It rather constituted a general outline of a medieval monarchy.

Scientists, lawyers and theologians struggled for the endurance of the Empire, believing that national unity could be saved by internal reforms, the tradition in such domains as the law, especially the German law more ancient and better than Roman and canon law. Pufendorf, Reinking, Seckendorff, Arumnäus, Limäanaus, Conring, Chemnitz and Leibniz should be mentioned here.

The Westfalian peace agreement signed in Muenster in 1648 that ended the Thirty Years' War was, according to historians, the beginning of a gradual decomposition of the Reich, while for France

it opened the way to a 40-year political dominance in Europe. The second half of the 17th century could be labeled 'the French era.' The growth of its power, 'This expansion, this vigor, this glory are the signs of an intense vitality. France is an entity, a person, a moral whole. Her will to unity, her will to expand, follow one another like the steps in a logical process growing increasingly aware of itself.'[6] France gains not only political supremacy. Most astonishing is the development of its intellectual force. Since the beginning of the 17th century there is 'a miracle of perpetual profusion of masterpiece.' Processions of eminent scientists and philosophers led by Descartes, writers and artists shaped new currents of thinking affecting the scientific and cultural life of other European countries with their creations. French became the universal language of the European intellectual elite. Pierre Boyle wrote: 'The French language is the rallying point for all the countries of Europe. It is a language which we might truly call transcendental, for the same reason that philosophers bestow that epithet on natures which spread far and wide, and freely manifest themselves in every clime and country.'[7]

Paul Hazard observes that intellectual hegemony was until the end of the 17th century almost a family property: it remained in the Latin circle. During the Renaissance age it belonged to Italy, then Spain had its golden era, finally France took over the legacy.[8] England did not withdraw from the fight for political influence trying to frustrate the political plans of France, but on the cultural battlefield England managed to get ahead of France only at the beginning of 18th century. 'In 1702, no country in civilized Europe was in a more melancholic condition of intellectual emptiness than England; in 1712, not France itself could compare with us for copious and vivid production ... The little volume of dialogues, which

[6] P. Hazard, *The European mind 1680–1717*, transl. by J. Lewis May, Penguin Books, 1964, p. 77.

[7] *Ibid*, p. 80.

[8] *Ibid*, p. 70.

Berkeley issued under the title of *Hylas and Philonous* belongs to the *annus mirabilis* 1713, when Pope, Swift, Arbuthnot, Addison, Steele, were all at the brilliant apex of their genius, and when England had suddenly combined to present such a galaxy of literary talent as was to be matched, or even approached, nowhere on the continent of Europe.'[9]

If the conscience of the intellectual dominance of France was the source of frustration in Boyle's, Newton's and Locke's motherland, the country which in the second half of the 17th century created the foundations of modern experimental science, the country where numerous scientific societies had operated with Royal Society created 15th July 1662, how should we measure the feeling of cultural slavery in those European countries which fed themselves with the memories of lost power and were far behind from the point of view of civilization.

Historians of science agree that Germany was far behind France, England, Italy and also the Netherlands in terms of civilization. Experimental science was especially backward and even though Nurnberg was the center of European crafts, manual skills – crucial elements of laboratory work, essential in creating research instruments – were not used as a scientific base. Among the leading European researchers engaged in experimental research, the two that are mentioned are Johannes Kepler (1571–1630) and Otto Guericke (1602–1686).[10]

Although during the 17th century the number of German universities increased from 17 to 39, the increase was not the result of scientific enthusiasm. It was rather caused by decentralization of the Empire. Every sovereign, even the lowest, aimed at establishing his own university. The majority of those were very poor and the poverty was not material at all. The utmost issue was

[9] *Ibid*, words of Edmund Gosse quoted by P. Hazard, p. 87.

[10] M. Ornstein, *The Role of the Scientific Societies in the Seventeenth Century*, Chicago 1928, p. 165.

the lack of well-formed staff. The majority of universities were owned by Protestants (23), the rest were in Jesuit hands, except Salzburg university controlled by Benedictines. Religious values were dominant in Protestant and Catholic schools as well. Certain differences denoting the dissimilarity of education courses still remained. Protestant establishments laid emphasis on law and theology and usually had a medicine faculty. Catholic universities mainly formed philosophers. At the most progressive catholic university in Würzburg, 75% of the program was devoted to philosophy and rhetoric, while law constituted 7% and medicine 5%.[11] What was common to university education was the language – lectures were given in Latin. While Latin remained the language of universities and was the official language of German science of the 17th century, French became the language of enlightened intellectual, courtly and influential circles. The Germans, like other European nations, submitted to French replacing Latin bonding all Europeans with the language of the enemy. 'If some of our ancestors were to come back on earth – wrote Christian Thomasius in his *Discourse on imitating the French (1687)* – they simply wouldn't know us, degenerate hybrids that we are. Nowadays, everything about us has got to be French – clothes, cookery, language, all French. French are our manners, and French are our vices.'[12]

Martha Ornstein in her work entitled *The Role of Scientific Societies in the Seventeenth Century* observes that the civilizational backwardness of 17th century Germany was mostly visible in the degree of development of the national language.[13] While eminent French and English writers and scholars were writing in their mother tongue, German was merely the language of the uneducated masses. It is hard to believe that the restoration process of Germany, 'crushed and humbled to the dust, as she was, swept

[11] *Ibid*, pp. 227–229.

[12] P. Hazard, *op. cit.*, p. 81.

[13] M. Ornstein, *op. cit.*, p. 165.

and swayed,'[14] had its beginnings in the process of repair and development of the German language.

The realization of this program was the main goal of numerous scientific societies. It is characteristic that German societies at the beginning of their activity concentrated on the study of German and this was, so to speak, an initial stage which was to prepare the ground for other research. Meanwhile European scientific societies proceeded in experimental research. Language societies (Sprachgesellschaften) were modeled upon Florentine Academia della Crusca, the institution brought into being in 1582 by the poet Antonio Francesco Grazzini (1503–1582) and which was engaged in purifying Italian from chaff (in Italian – crusca).[15] One of the first societies is Fruchtbringende Gesellschaft (also called Palmenorden) created in 1617, aiming to cultivate the mother tongue and obligating its members to employ pure German. Poets and writers stood up for the language. Martin Opitz (1597–1637), recognized as the leading German poet, the same year published *Aristachussive de contemptu linguae germanicae*, pronouncing against the cult of ancient languages, and announcing the arrival of the grandeur of German.[16] One of the most radical societies was the Teutschgesinnte Genossenschaft, founded in 1643 in Hamburg by Philippe von Zesen. Its members decided to purify German from all foreign loan-words, even those functioning in the language for ages. Language societies attained the peak of their activity in the second half of the 17th century. These highly specialized institutions were the first real centers of scientific life and movement for the safeguard and renovation of cultural legacy coming to light in Germany.

[14] P. Hazard, *op. cit.*, p. 440.

[15] Académie Française engaged in language and literature research, which in 1635 cardinal Richelieu made the greatest public scientific institution in the country, also referred to the ideas spread by the same institution.

[16] See W. Czapliński, A. Galos, W. Korta, *Historia Niemiec*, Wrocław, Warszawa, Kraków, Gdańsk 1981, p. 349.

The founder of the Societas Eurenetica, society whose motto read as follows: 'Per inductionem et experimentum omnia', Joachim Jungius (1587–1657) wrote: 'It is absolutely true, that all arts and sciences, as for instance, the art of governing, the knowledge of weights and measures, of medicine, architecture, fortifications, could be lectured and spread in German more easily, more properly, perfectly and clearly than in Greek, Latin or Arab.'[17]

Although German universities in the 17th century were the ramparts of scholastic science with traditional curricula – Leibniz used to call the university educational system 'minism' – some signs of change, which were to lead to reform in the Enlightment era, were visible in the second half of the century. Revaluation of the attitude towards the mother tongue accompanied this process. Some professors had the courage to face the Latin domination, and one of the first who defended his mother tongue was Christian Thomasius.

Thomasius, known as the Luther of German university reform, professor of law at the conservative university of Leipzig in 1679 ventured to lecture in German for the first time. The incident was judged sacrilege, there were even attempts to clean the blackboard with holy water. Thomasius was, however, consistent, he raised German to a dignity of the language of instruction and published books in German. He argued that one ought to imitate the nations that use their mother tongues: 'Greek philosophers did not write in Hebrew, but in their mother tongue.'[18] Even though the scientists had a tremendous influence on shaping the national consciousness, especially by emphasizing linguistic unity, none of them could compete with Gottfried Wilhelm Leibniz in this field or in any other scientific domain.

[17] M. Ornstein, *op. cit.*, p. 167.

[18] M. Ornstein, *op. cit.*, p. 233.

3. *Unvorgreiffliche Gedancken...* – linguistic culture treaty

The above outlined social and cultural situation in Germany in the 17th century justifies Leibniz daring hypothesis related to the unusual role of German in the history of European civilization. This great philosopher and untiring scholar, conscious of the ravages made on the substance of national identity, used arguments of a psychological nature. They were to – as it seems – maintain the 'national spirit,' and it is hard to assume that Leibniz believed it was possible to supply any documentary evidence to support them. After all, they are contradictory with his studies in the history of German. Leibniz in his voluminous correspondence with Job Ludolf exchanged his assumptions regarding the direction of migration of German tribes and their origin, relating to accessible sources, but no comment on the primary role of this language appears there.[19]

The renovation and improvement of the national language, and restoration of its standing became the most important duties for Leibniz. He unfolded his renovation program in his dissertation *Unvorgreiffliche Gedancken, betreffend die Ausübung und Verbesserung der Teutschen Sprache*,[20] which, unfortunately, was not published in his lifetime. The dissertation deals with German but it has in our opinion a more universal characteristic. Leibniz's instructions and remarks might concern a specific ethnic language, and, understood this way, it could constitute a set of elements shaping the language culture of a given community.

In the very first sentence of his dissertation, Leibniz observes (not for the first time after all) that a language is the finest mirror of the mind and that improvement of the mind goes hand in hand

[19] GP IV, 144.

[20] G. W. Leibniz, *Unforgreiffliche Gedancken, betreffend di Ausübung und Verbesserung der Teutschen Sprache*, in: G. W. Leibnitii, *Collectanea Etymologica, illustrationi linguarum, veteri celticae, germanicae, gallicae, aliarum inservientia*, cum praefatione Johannis Georgii Eccardi, Hannoverae 1717. Quoted as UG, paragraph.

with the development of the language itself. Here, Leibniz refers to Greeks, Romans and Arabs. The same thought is present in his previous writings, among others in *Analysis Linguarum*. If a national language becomes a language of science, it has to be improved and adjusted to its requirements. According to Leibniz, the case of French and English speaks volumes about it. They achieved considerable progress in philosophical science, since having abandoned Latin they began to philosophize in their own languages. This made it possible for ordinary people and 'even women' to form their own opinion on the matter.[21]

Leibniz, a skilful politician and diplomat, while joining the struggle for the linguistic rebirth, refers to the achievements of the German nation and points to the domains in which Germans scored some success. He is aware of the fact that he cannot mention any scientific achievements, German scientists having recourse solely to Latin and letting their mother tongue take its own course. German could not develop properly being the language of the uneducated majority.[22] 'The majority' reached, according to Leibniz, a high level of knowledge in such areas as mining, hunting, forestry, mechanics and navigation. Specialized vocabulary adopted by other national languages is the evidence.[23] Leibniz also reminds of his nation's military victories and writes that a nation, which distinguishes itself by courage and prowess, is capable of intellectual effort. It is solely possible with the development of one's own language.[24]

Leibniz's reasoning is to a certain extent emotional; it is not, however, deprived of an important dose of common sense. Leibniz acts like a 'real psychologist' trying to cure German spirit severely experienced by war-time adversities. The Thirty Years' War among other things caused – he wrote – that 'our language was in a chaos

21 GP IV, 144.
22 UG, §9.
23 GP IV, 144.
24 UG, §4.

as well as our homes'[25] and after the war we were dominated by French power and language. 'France set (...) a model of elegance.'[26] He judged foreign influence differently than his contemporary linguistic purists. Being aware of hazards, Leibniz highlighted certain benefits resulting from interpenetration of different cultures. Germans learned about the prevention of contagious diseases from Italians, from the French they got knowledge on improving their military structures.[27] Furthermore, relations with French culture, which added some delicacy to a serious 'German nature', permitted some change in aesthetical tastes and lifestyle. The language itself was enriched by expressions introduced to German in a natural way, like plants that grow in a breeding ground.

Leibniz in general was against the usage of any foreign language in common everyday life as well as in any social, scientific or institutional activity. 'It would be shameful and scandalous – he writes – if our basic language, the one of our heroes vanished due to our negligence.'[28] Employing foreign languages, which could never be mastered by all, causes confusion in the way of thinking. One who is not aware of the various meanings of foreign vocabulary and expressions cannot write or think properly. Nothing good can result from adopting a foreign language, and there is a danger of losing freedom.[29] Leibniz, relating to documents from Imperial archives, writes that after analyzing them, one can make a thorough study of the progressive decline of German which in the times of Reformation still kept its integrity. The undertaking of a repair program with the aim of giving German back its due standing depends on the goodwill of scholars, ecclesiastics and educated social elites.[30]

[25] UG, §25.
[26] UG, §26.
[27] UG, §27.
[28] UG, §21.
[29] UG, §20, 21.
[30] UG, §24.

Leibniz presents his program by enumerating lacks and defaults which should be coped with. He highlights above all the lack of specialized terminology in such domains as logic, mathematics or theology. It is obviously due to secular addiction to Latin, the official language of science. Leibniz thinks, however, that it is not due to the German lack of skill which restrains them from improving their language but the absence of goodwill. If 'everything done by a simple man could be expressed well in German, undoubtedly matters proper to eminent and educated people, could be, if they were willing to do so, expressed well or even better in pure German.'[31] It seems that Leibniz returns to his own thoughts presented in a radical way in the *Introduction to Nizolius* 'if something cannot be expressed in common parlance it should be removed from philosophy.'[32] Similarly to *Introduction*, a certain incoherence of Leibniz's views can be observed. Leibniz maintains that in principle every colloquial language is to the same extent suited to the needs of everyday life and adjusts to the requirements of science. Development of science depends on formulating thoughts in a clear and precise way, especially in the mother tongue. It is, therefore, unimportant if we philosophize in English, German or French, the only important matter is that each of these languages follows the traces of our inventions and reflects in the best manner the inner order of thoughts. Thus, if Germans overcome some psychological barriers, they will be able to succeed in every domain by perfecting their language. In the struggle for the enhancement of a 'national spirit' this democratic sounding argument appeared too weak for Leibniz. He probably believed in a philosophical mission for the German language when he reached for more substantial measures of persuasion. Leibniz explained to his compatriots in a rather more publicist than scientific style that none of the European languages were as well adapted to the verification of various philosophical

[31] UG, §10.

[32] GP IV, 143–144.

doctrines as was German.[33] It is so because 'We Germans, we have got a special measure of thoughts, unknown to others ... Empty words, are void and foam and are not accepted in German.'[34] If we put aside arguments of a propagandist nature as the readers of *Unvorgreiffliche Gedancken*, we will appreciate the objective analysis of the mother tongue, especially in areas where – according to Leibniz – its specialization should take place.

The improvement of onomathology and the enrichment of a language, apart from the above mentioned, relates to such areas as morality, psychology (Leidenschafften des Gemüths), customs, management, national and internal services and politics as well as law.[35] Leibniz notices the need for protection and restoration of the German language not only as a means of every day communication but above all as the national official language of power and administration. National documents, legal deeds, the Government representatives should procure examples of appropriate use of the mother tongue to the people. It is also useful to read theological writings since even though theologians gave themselves up to fanatical fantasies, expressions and terms which testify the wealth of German are present in their works.[36]

Leibniz considers language a living system consumed by a disease. He enumerates the reasons for it, diagnoses and prescribes the treatment. An important element of this treatment are institutional activities engaging influential and educated representatives of 'higher' classes of society. Leibniz values the contribution of linguistic societies for the safeguard and restoration of German. He reminds us that the basic mottos of their activity were wealth, purity and transparence of the language. Even though Leibniz agrees on the general idea of their activity, he criticizes their pro-

[33] GP IV, 144.
[34] UG, §11.
[35] UG, §15, 67, 90.
[36] UG, §14.

cedures claiming that the members of the societies went too far clearing the German of any foreign influence.[37] There exist, according to him, fundamental difficulties in the selection of criteria allowing to decide on the right origin of expressions. Job Ludolf, a friend of Leibniz who refused cooperation with Palmenorden shared his doubts. In a letter to Leibniz in January, 22nd 1692 he wrote 'the first thing that must be decided is which words are to be considered foreign and which ones of native stock, for not everything associated with foreigners is foreign. Who would be so senseless as to assert that our ancestors lacked noses, ears, mouths, or eyes before learning these words from the Romans.'[38] Ludolf, just as did Leibniz, doubted the actual influence of linguistic societies on the change of linguistic behavior of common users, even though he observed some benefits resulting from their activity. The behavior in his opinion cannot be shaped by means of any law.

Leibniz postulates a methodic review of all German expressions. The foundations of a language – as he writes – are words, on which idioms grow. Vocabulary analysis should include both common parlance in all its environmental varieties and every possible dialect. Leibniz points out that though the written language is ruled by High-German, still Low-German, the Margraviate of Brandenburg dialect, the Swabian dialect, Bavarian and others should be treated equally. Languages related to German ought to be studied as well since there are some words and expressions having their source in German. Documents and texts written in Old German, Old Saxon, or Old Frankon provide valuable information. It should be added that Leibniz did not limit himself to postulates. Studying German dialects was one of his passions. In *Collectanea Etymologica...* one can find Low-German lexicon prepared by Leib-

[37] UG, §19.

[38] J. T. Waterman (ed.), *Leibniz and Ludolf on Things Linguistic, Excerpts from Their Correspondence (1688–1703)*, Berkeley, Los Angeles, London 1977, p. 23.

niz on the grounds of materials provided by Johan Justus Kelp, a clergyman from Brema.[39] Leibniz collaborated in this field with numerous scholars, he encouraged Gerhard Meier to initiate work on his lexicon of Saxon, Dutch and Danish.[40]

Linguistic material demands a detailed analysis and classification on the basis of which it is possible to isolate vocabulary belonging to common parlance, technical vocabulary, expressions typical of rural areas, and also words of foreign origin and archaisms. It is the starting point for works aiming at the creation of dictionaries and books, which would determine what we today call a linguistic standard. Leibniz observes the necessity to elaborate a German dictionary of colloquial speech, a specialist dictionary covering technical terms and an etymological dictionary containing information on the meaning and origin of expressions. He relates here to the experience of Académie Francaise and Florentine Crusca, but he also underlines the fact that the main objective of these institutions was merely to create colloquial speech dictionaries; however, the specialized vocabulary is not less important since thanks to it science can be understood, developed and spread.[41] One ought to ask representatives of all domains of science for help and cooperation in the elaboration of a dictionary of technical terms. Linguistic fluency, which is the essential element of the ability to express one's thoughts clearly, is to be achieved through knowledge of the meanings, origin and relations between expressions. This ability is developed through etymological dictionaries which enable to make a thorough study of a given nation. Since languages – as highlighted by Leibniz – are the oldest documents of humanity, Glossarium Etymologicum of German would permit to recreate the origins of the nation and would indicate its due role

[39] See *Leibniz's letter to Ludolf from April 17th 1692*, in: J. T. Waterman (ed.), *Leibniz and Ludolf on Things Linguistic...*, p. 25 and Waterman's commentary, p. 66.

[40] J. T. Waterman (ed.), *Leibniz and Ludolf on Things Linguistic...*, p. 31.

[41] UG, §36, 37.

in shaping European civilization[42]. It is characteristic of Leibniz to concentrate mainly on vocabulary. He does not devote much attention to other aspects of linguistic correctness. In his dissertation comprising of 114 paragraphs, only a few deal with grammar and rules of standardization of orthography. Leibniz observes that even though Germans have no room for shame when it comes to grammar, it is still nowhere near perfection. Indeed, he postulates the simplification of its rules; he observes, however, that real experts on the matter are absent amongst scholars.

Leibniz, advising to avoid barbarisms and provincialisms in formal language, tolerates the use of them in informal language. If they are appropriately used, they do not shock – in Leibniz's opinion – in the parlance of ordinary people. He is also quite liberal when it comes to the use of foreign expressions and phrases, but he advises avoiding them when one is not sure the interlocutor knows their meaning. Leibniz proves to have a lot of common sense when expressing his opinion about the language of national and legal documents, for unlike purists under the banner of Palemnorden he admits foreign technical terms, especially Latin ones which have been functioning for ages with the same meaning in the legislation of many countries.[43]

When considering the process of the naturalization of expressions of foreign origin in German, Leibniz notices that it is one of the ways of enriching a language, especially when the loan-words come from the same linguistic family. A thorough historical study of these expressions would permit the reconstruction of the source of Germanic languages.[44] Another way of adjusting the language to new needs is the creation of new words or conferring new meanings to existing ones. Acceptance of newborn expressions by a wide

[42] UG, §46, 48.

[43] UG, §82, 83, 85, 89, 92.

[44] UG, §67–72.

circle of users depends on – according to Leibniz – 'blind luck.'[45] It appears that the author is conscious that language is governed by its own laws, and it is possible to form it by propagating certain patterns of linguistic behavior and not by administrative actions.

Literature primarily provides models of such behavior. Leibniz spots exceptional role of poetry and sets certain norms of poetic language. And so poetic language should steer clear of foreign expressions, and words of unsound origin should be in recognized German. Their orthography should be standardized and adjusted to German orthography.[46] Here, Leibniz quotes the example of Martin Opitz, who outlined some theoretical instructions for German poetry and who as one of the first undertook actions in favor of the rebirth of national literature. Leibniz highlights an urgent need for disseminating such models, encouraging all who write in German to a productive attitude towards their own language.[47]

The program of repair should comprise all applications of a language. Leibniz, as the fervent adherent of public education, addressed scholars to present the results of their studies in their mother tongue and to undertake translations of the writings of eminent authors. The nation – in his opinion – was too long kept away from knowledge. Real scientists should not fear the language of their nation, mostly because the more accessible their knowledge is, the more witnesses there will be of their grandeur. A well developed language, like a well polished glass, improves the sharpness of thought and gives the mind a lucid clarity.[48]

The realization of this program ought to be assisted by organized institutional actions. Leibniz, an enthusiast of the idea of scientific societies, 'academic movement' that spread over 17th century Europe, led to the creation of the Science Academy in Berlin in 1700,

[45] UG, §76.

[46] UG, §95, 96.

[47] UG, §111.

[48] See M. Ornstein, *op. cit.*, p. 182.

the institution modeled upon the Royal Society and Académie Française. One of its statutory goals was the consolidation of 'fame, prosperity and significance of German nation, erudition and language.' Even though the creation of the Academy was Leibniz's personal success, still his ambitions were greater. Public access to knowledge would be guaranteed – in his view – by scientific societies only – modern centers of research and the popularization work that should be created in various cities belonging to the Empire and coordinated by the Academy.[49]

It is difficult to underestimate Leibniz's contribution to the rebirth of the cultural integrity of the German nation, the source of which was the language reflecting both its power and its decline. Paul Hazard wrote "the theory of Racial superiority had not yet come to the fore. The profound significance of the expressions 'native land' had not been fully gauged. No notion had been formed as yet of the dynamic potentialities of the idea of nationality,"[50] but the value of the most important binder which for people forming a society was language became visible. If we put aside Leibniz's arguments concerning the uncommon philosophical mission and paradisiacal origins of German, the *Unvorgreiffliche Gedancken* appear to be a universal treatise of history and the culture of a nation from the perspective of the history of its language. Writing about the intellectual potential of his nation, Leibniz informs the lecturers that it is initiated through language. The improvement of minds demands continuous improvement of the language since language is the mind's reflection and renders the best creative possibilities of its users. Moreover, it allows to recreate their aesthetic tastes, customs and character.

Leibniz did not have the privilege to rejoice the reach of the influence of his thoughts, *Unvorgreiffliche Gedcanken...* They were only published posthumously, but it did not take a century for

[49] *Ibid*, p. 195.

[50] P. Hazard, *op. cit.*, p. 443.

Kant, Goethe or Schiller to prove the admirable power hidden in their language. Johann Gottfried Herder, one of the most eminent representatives of the German Enlightment, referring to Leibnizian legacy, wrote that the most beautiful attempt to explore the history and to characterize the diversity of human intellect and heart would be a *philosophical comparison of languages*, for in each of them the intellect and character of a given nation is reflected. Finally, the most valuable *architectonics of human notions, incomparable logic, and common sense metaphysics* would emerge. The laurel of victory is not yet awarded, and another Leibniz will be honored when the right moment comes.[51]

[51] http://www.textlog.de/herder menschheit.html, http://www.odysseetheater.com/gothe/herder/ideen.html.

V.

ON SOME OF THE ASSUMPTIONS OF LEIBNIZ'S PROGRAMME OF ENLIGHTENED SOCIETY

1. Introduction

In one of the first points of *Unvorgreiffliche Gedancken*, a treatise written in the latter part of the nineties of the 17th century and published only after the death of the philosopher, Leibniz observes that "after science became powerful and military discipline had been established in Germany, German bravery distinguished itself once more in our times in great God-given victories against Oriental and Occidental enemies. The larger share of these victories was often fought by the less victorious and should receive recognition. Now it is desirable that the German intellect should also be no less victorious and should receive recognition. This must come to pass in the same way through good planning and diligence."[1] Leibniz refers to the heritage of the past when Germany was covered with glory. Since – he says – we were capable of victory, we are also capable of triumph in the domain of intellect, this, however, requires a scrupulous plan. One of the points of the plan is the restoration of the language and enhancement of its social and cognitive functions, but this is only a part of Leibniz's plan, the aim of which is to create an enlightened German society. His significant condition is a permanent and unlimited access to any human knowledge. The

[1] *Unvorgreiffliche Gedancken, betreffend die Ausübung und Verbesserung der Teutschen Sprache*, in: G. G. Leibnitii, *Collectanea Etymologica, illustration linguarum, veteris, celticae, germanicae, gallicae, aliarum inservientia*, cum praefatione Johannis Georgii Eccardi, Hanoverae 1717, point 4 (cited as UG, point).

knowledge is collected above all in libraries but also in archives or documentation centers.

2. Library

One should take into account that *Informal Thoughts* came into being during the period of Leibniz's important engagement in his management of prince's library in Wolfenbüttel, as in 1691 he was appointed to the post of manager of this institution and acted as it until his death.[2] The August's Library, which was founded by August the Younger, at the end of the 17th century, was one of the richest collections of print and manuscripts in the whole Empire.[3] Leibniz was an experienced librarian. His contact with collections of books began in his childhood. His father, Friedrich Leibniz, a professor at Leipzig University had at his disposal an abundant collection of books, which was the foundation for the education of the prospective philosopher. After his death, only his son was authorized to use the library, whereas beforehand its owner would give the run of the library to anyone interested. Leibniz was a librarian for the first time, being on duty on the court of baron von Boineburg. Thanks to the protector, he had access to one of the richest private collections of books, and his duty among others was to make up a subject catalogue for the needs of its users.[4]

Cataloguing the knowledge and the universal access to it from that moment became one of the ambitions of his life. The second half of the 17th century was the time of the reconstruction of Ger-

[2] See A. J. Aiton, *Leibniz – a Biography*, Bristol, Boston 1985, p. 175.

[3] See L. M. Newman, *Leibniz and the German Library Scene*, London 1966.

[4] G. W. Leibniz, *Sämtliche Schriften und Briefe*, herausgegegeben von der Preussichen (jetzt Deutschen) Akademie der Wissenschaften zu Berlin, 6 Reichen, Darmstadt 1923, Leipzig 1983, Berlin 1950 – (cited as AA, cited as vol, part, page) I, i, p. 380. Leibniz was extremely proud of his work, unfortunately, it is difficult to evaluate the quality of this enterprise since the catalogue was destroyed.

man library stock. The Thirty Years' War not only killed enormous numbers of people but also irrevocably destroyed abundant book collections. At the turn of the 16th and 17th century, Germany excelled in Europe with respect to heterogeneity as well as the size of its libraries. After the war, the imperial collection of books in Vienna, the court library in Munich, private collections, and a municipal library in Augsburg were the only library centers. It was only possible to restore this part of cultural heritage thanks to financial measures being in the hands of enlightened elites. Soon, duchy courts and Jesuit libraries became the only esteemed cultural centers.[5]

Leibniz was lucky to have spent most of his life in the service of sovereigns who understood the need for scientific development, the indispensable requirement of which was permanent access to sources and materials being part of collections of books of courts, and also its development through the purchase of not only historical works but also books and studies concerning latest achievements in all fields of knowledge. One such ruler was undoubtedly Johann Friedriech, the duke of Hanover, who proposed Leibniz, apart from that of post of counselor, also to the post of the first librarian of his library.[6]

After a few years abroad, where he worked in libraries of Paris and London and learned new techniques for collecting scientific information, he began vigorous reformatory activity. Having taken over the care of the duke's library, he proposed to transform the existing collection of 3310 volumes and manuscripts into a cohesive collection including every scientific field of knowledge. The quality of books was in his opinion more important than the quantity, so extending library collections was to be treated with a lot of caution and consideration. He presented his ideas in writing, mentioning in particular an urgent need for the completion of the

[5] See A. Hessel, *A History of Libraries*, Washington 1950, p. 55.

[6] See AA I, i, p. 508 and p. 515–516.

contents of the library with basic texts connected with theology, public and private law, medicine, mathematics, philosophy, literature, and history. Leibniz declares to choose only valuable publications, and he undertakes to keep track of new publications on the European publishing market thanks to private contacts with scientists publishing in English and in French scientific periodicals. One of his most significant declarations is the elaboration of easy methods of effective access to library resources through a system of catalogues or registers designed by Leibniz himself.[7] Another concept of the realisation of which he undertook was to prepare short summaries of books issued currently, as well as summaries of the content of all books in the library. Unfortunately, many of his ideas were not accepted by the duke, though it must be admitted that owing to Leibniz's financial contribution and energetic actions, there was a necessity to move the enlarged collection of books from the summer residence in Herrenhausen to Hanover. Unfortunately, the duke Johann Friedrich dies the same year and the new sovereign, duke Ernst August, considerably limits expenses on the development of the library.[8]

Leibniz's dream of common access to library resources for everyone interested did not come true at the court of Hanover. The library was accessible exclusively to court officials. Besides, it mainly contained the dukes' private collections, though it is worth adding that some of the Imperial libraries were opening their doors to readers needs through the introduction of fixed opening hours. For instance, the library of Wittenberg was open every day since 1534 similarly to the electoral library in Berlin founded in 1661. University libraries worked the same way. Theoretically there was a possibility to borrow books and manuscripts, but it depended solely on the goodwill of the owner of the collection. Scientists who wanted to use Imperial library contents in Vienna had to get a written

[7] AA II, vii, p. 15–16.

[8] See L. M. Newman, *Leibniz and the Library Scene*, *op. cit.*, p. 19.

permit from the Emperor himself. Students and professors of the University in Konigsberg needed the same kind of agreement from the rector.[9] Leibniz himself, during his work on the history of the Brunswick dynasty, sustained numerous hardships and limitations when accessing materials from libraries and archives of the Empire. Even his high scientific position did not help him; during the weeks or even months, he waited for access to sources in the libraries in Frankfurt, Augsburg and Munich.[10]

The fact that he accepted the post of a chief librarian in one of the best organized German libraries – the August Library in Wolfenbüttel – gave Leibniz a chance to build a modern scientific centre, collecting and elaborating data from all domains of science and culture. Its essential function was also to popularize knowledge and promote culture and art. In one of the letters to Friedrich von Steinberg, Leibniz describes his vision of the institution. The library is for him a kind of archive assuring an easy access to its collections unlike other big archives. It is a stock of the richness of the human mind accessible to anyone. One can find there information on the art of war, medicine, minerals, plants, animals, secrets of nature, astronomy, geology, civil and defensive architecture, decorative art as well as information on law, order, good administration, ancient and modern history, the duke's affairs and general culture, that is, on nice, practical and necessary affairs, and particularly on the affairs that contribute to the fight for the truth. The library, as he writes metaphorically, is a team of the most important people of all generations and nations who transmit to us their best thoughts. The library should be used not only by the nobles but also by everyone in need for studying.[11]

However, the creation of a centre promoting science and culture requires meeting at least a few conditions. Firstly, a wise and

[9] *Ibid*, p. 10.

[10] *Ibid*, p. 20.

[11] *Ibid*, p. 25.

enlightened ruler, secondly, adequate funds, thirdly, a constant inflow of new books, periodicals appearing on the publishing market. Leibniz was, of course, aware of all these criteria of which only one was partly fulfilled. For it may be admitted that both duke Rudolf August and his successor duke Anton Ulrich were enlightened people, not enough, however, to understand the essence of the relationship between the development of science and any knowledge, and the expenditure of money on generally understood education. Until 1708, it was hard to speak about important funds allocated to the development of the duke's library since 200 thalers did not cover current needs. Leibniz was trying to secure additional resources as he had done in the case of any other of his organisational activities. The idea of raising silk-worms should not be surprising as well as allocating the stamp tax from stamp duty in favour of the institution which he ran. Income from selling the duplicates, even if poor, seemed in this situation the most realistic. If we measured the degree of enlightenment of a sovereign by the expenditure of money, we should undoubtedly give the palm to the founder of the library duke August who spent 15–16 thousand thalers every year on the maintenance of the library, while during years 1705–1708, duke Anton Ulrich would spend exactly 851 thalers on the purchase of books, and the annual budget of the electoral library in Berlin until the end of the 17th century was scarcely 1000 thalers.[12]

The only way out for Leibniz was to create an optimal strategy of development of the collection of books through a scrupulous selection of new titles. One of the crucial criteria was the quality and originality of the works acquired. It was also important to include all the branches of knowledge present in the library in the development, bearing in mind that the price of books was a fundamental factor. In one of his letters, Leibniz writes that he prefers of course, those with a lower price. Moreover, he would prefer 30 less

[12] *Ibid*, p. 26.

interesting books than one voluminous work, which does not contain anything new, anything which was not already said.[13] Since the most important thing, according to Leibniz, is the contribution to the world of knowledge. Pretty original are his preferences concerning the size of the works purchased. Contrary to the trends of the time, he would often choose small publications, containing novelties, and postulated taking care of them in large libraries so as not to get destroyed.

Leibniz was a great admirer of the printed word. He was also a connoisseur of books, and his extensive knowledge enabled him to make conscious choices in almost every branch of science.[14] Leibniz took part in auctions, penetrated bookshops, corresponded with scholars from other countries asking them for information concerning new publications. Little is known, however, about all his efforts concerning his activity in this respect. On the basis of the correspondence, how much energy he devoted to negotiations with booksellers, owners of private collections or to the participation at book fairs can only be assumed.

Leibniz knew what kind of library he wanted. During his stay in Italy, in 1689, he prepared a list of the basic contents of a well designed collection of books. The bibliography comprised of about 2500 entries. However, it was not to be printed. Leibniz supposedly intended to present his idea to Emperor Leopold I during his visit to Vienna. Administering an institution, which on the day of its founder's death in 1666 comprised of 118000 volumes[15] and despite financial problems was still expanding, Leibniz was forced to catalogue its content and to arrange it according to his own concept. It is worth mentioning that the August Library was one of the libraries of that time organised in the most modern way, and the duke him-

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[13] G. W. Leibniz, *A letter to Herter from 1708*, in: J. Burckhard, *Historia Biblithecae Augustae*, Leibzig 1744–46, vol. III, p. 352, cited after L. M. Newman, *op. cit.*, p. 27.

[14] GP VII, p. 161.

[15] A. J. Aiton, *Leibniz*, *op. cit.*, p. 87.

self took part in the classification of works within the collection of books. A friend of duke August, baron von Boineburg, even persuaded him to publish the completed parts of the catalogue which would ensure a wider knowledge of the content of the library. For it included, amongst others, a valuable collection of books on reformation. Leibniz wanted to go even further and planned to prepare a full bibliography and complement it currently.

In two of his letters directed to duke Rudolf August and his brother Anton Ulrich, Leibniz included his plan to build a scientific centre, collecting and elaborating collections of periodicals, books, manuscripts and other documents, with a duty to universalize knowledge. The first one is from the 4th of June 1695, the second is not dated.[16] In these letters he repeats the ideas and assumptions present in letters to Friedrich von Steinberg and other addressees, and from the notes he kept. The most striking thing in the first text is a clear formulation of the fundamental purpose of the duke's library. Firstly, it should serve everybody. Secondly – here Leibniz uses a persuasive argument – it will augment the glory of sovereigns who collect and preserve this treasure for the common good.

A library, Leibniz writes, is a stock of all branches of knowledge and information, which can be helpful to all professions and all experts in human, divine, spiritual and secular concerns. In other words, it is a place where genuine religion can be propagated, the Bible can be interpreted, the history of the Church can be elucidated, but it should also serve studies of public order and good governing, research concerning the laws of nature which would enable to improve the quality of living. One of the assignments mentioned in the first text is promoting books containing descriptions of new achievements in the domain of science and inven-

[16] See G. W. Leibniz, *Two memoranda from Leibniz to Dukes Rudolph Augustus and Anton Ulrich on the Library at Wolfenbüttel*, in: L. M. Newman, *op. cit.*, p. 41.

tions.[17] A library should to not only teach but also give pleasure so it ought to contain essays on rhetoric, languages and poetry as well as scientific dissertations devoted to history or geography.

A library, as Leibniz underlines, should constantly extend its content. He enumerates publishing novelties which are in his opinion worthy of notice. These are, among others, admirable commentaries to the Bible, texts by the Church Fathers not published before and also important works in the field of theology. He points out works in the field of public and international law, helpful studies concerning public order, finance, trade, and politics. Leibniz also proposes to collect court judgements and other court decisions, which would serve studies on the application of law in practice. Above all, however, in one breath almost he mentions new studies from such domains as natural science, medicine, mathematics, engineering, optics, astronomy and practically from all remaining fields of knowledge.[18] The extensiveness of his knowledge and his great erudition are clearly visible in this part of the text which also certifies excellent familiarity with the publishing market.

The functioning of a library should be closely connected with academic life. Professors, students and every lecturer would then be able to benefit from its content. Moreover, according to Leibniz, public access to its resources will contribute in effect to the development of the whole duchy.[19] Again, we deal here with the postulate of accessibility to knowledge which often appears in Leibniz's journalistic texts concerning scientific life in Germany. The said common access is a necessary condition for the formation of a new enlightened German society conscious of its culture, and equipped with modern knowledge and competence in applying new technologies. Let us take notice here of the fact how incredibly up-to-date Leibniz's views are. The lack of understanding of his

[17] *Ibid*, p. 41.

[18] *Ibid*, p. 42–43.

[19] *Ibid*, p. 47 and p. 50.

educational postulates and activities is not surprising, noteworthy, however, is his optimism and determination in propagating ideas, the fulfilment of which will not be brought about before the next century.

3. Passion for order

In order to perform culture-forming, scientific, popularising and social functions, a library should be subject to rules of a particular order which would ensure easy and effective access to appropriate information.[20] This postulate ought to be considered in the context of the number of books and materials printed in the whole of Europe which increased extraordinarily thanks to the development of printing techniques. Inventories made up after the death of the owners of private collections and estimated content of libraries let us assume that between 1680 and 1780 in Western Europe, where the book appeared relatively early, its supply increased tenfold.[21] In the 17th century, there appeared at least a few important essays concerning methods of classification of library resources, catalogues, indexes and bibliographies indispensable in the organisation of modern libraries. Leibniz undoubtedly familiarised himself with the work of a French librarian Gabriel Naudé *Avis pour dresser une bibliothèque*,[22] he knew the essays by Georg Draudius and Martin Liepinus whose ideas he submitted to a critical examination in his essay *On division of sciences*.[23] When writing to the dukes on his project of access to library information, he had a grounded knowledge both in the sphere of theory as well as in practice. We would not go into the subject of Leibniz's ideas at

[20] *Ibid*, p. 43–4.

[21] See P. Chaunu, *La civilisation de l'Europe des Lumiéres*, Paris 1971, chapter IV.

[22] L. M. Newman, *Leibniz and the German Library Scene*, *op. cit.*, p. 10.

[23] *Ibid*, pp. 44–45, footnotes.

length – it is an ungrateful work for the historians of librarianship – we would only observe that he proposes to create a subject catalogue giving information on all the authors engaged in a given subject matter, the works of whom are in the library, and being an essential support for deceptive classification scheme demanding radical improvements proposed by the founder, the duke August.[24] Leibniz, even if he had at his disposal great organisation and substantial experience, did not publish in his lifetime any of his ideas concerning modern librarianship. His remarks on this subject would appear only in his private correspondence, and naturally had a limited reach. However, irrespective of the foundations of the methods for the classification of collections of books, apart from this passion for order, the aim of which is a direct access to knowledge, there is actually something extraordinary in the actions of Leibniz, for these actions are reinforced by a belief that the key to the happiness of all humanity is a common action of the scholarly community which will contribute to the development of all societies and their secure future. This co-operation of people of science is possible thanks to the web of integrated libraries, learned societies and academies.

4. Public information

Access to and the cataloguing of knowledge and successful management of the collection of data is not limited purely to the library itself. Leibniz valued the importance of information which would contribute to building a new community. On this matter there are three very interesting memoranda by Leibniz addressed to the duke of Hanover Johann Friedrich concerning improvements in the administration of public affairs.[25] Leibniz believed that social

[24] G. W. Leibniz, *Two memoranda...*, *op. cit.*, pp. 43–44.

[25] AA, I, ii, pp. 74–79.

welfare and harmony depend to a great extent on the knowledge of the sovereign about the state of the economy. He postulated, then, to introduce systematic research regarding natural resources possessed and also human resources in the context of numerical force as well as professional specialisation. Permanent monitoring of the currency value is extremely important in his opinion, as well as keeping balance between import and export. These instructions seem obvious today, but Leibniz asks the duke to keep them secret because the whole reform of the country demands a very detailed knowledge which is, for the time being, to remain inaccessible.[26] Creating and storing knowledge in the sphere of public affairs demands the creation of a web of institutions collecting and transforming data. And so Leibniz postulates the keeping of official registers of mortality, central administration of archives and within this, the creation of a system of easy access to this data. Another idea is to systematically print all current regulations in the sphere of law and administration in order to ensure common access to them. There is also an interesting proposal to create an information centre which would collect all data related to material property, raw materials and articles as well as books, and where every person interested would be given instructions on how to access the goods which they are looking for. Such a centre should also, in his opinion, publish informational materials. In these works we deal undoubtedly with a daring project of a reform leading to the construction of what is today called a 'knowledge society.'

An essential element of the creation of an enlightened community is also a permanent contact with latest scientific achievements. Specialist scientific periodicals should serve this purpose. The second half of the 17th century brings a new quality of information circulation. There are learning societies emerging along with periodically published collections of scientific reports. At the beginning of the century, the only information channel was private

[26] *Ibid*, pp. 79–89.

correspondence and direct contacts between scholars. Scientific periodicals constitute a bond of minds community which extends to the whole civilised world. Two first periodicals start appearing almost simultaneously in 1665 – these are the French *Journal des Savants* and published in English, London's *Philosophical Transactions* which are translated into Latin in Amsterdam for the use of the scholarly world of Eastern Europe. First German scientific periodicals appear in the seventies and are devoted to medical questions. In 1682, thanks to the support of the duke of Saxony, one of the most important German periodicals *Acta Eruditorum* is created in Leipzig and published every month.[27] Even though he was not its direct initiator, Leibniz took part in works on the program of the periodical from 1681 when for the first time he met the originator Otto Mencke, professor of philosophy, a man of great knowledge who corresponded with eminent European scientists. The aim of the periodical was to ensure permanent access to the most recent scientific achievements to German scholars. Aside from substantial cooperation, Leibniz was a regular author publishing in the periodical under the initials G.G.L.[28] *Acta Eruditorum* was a comprehensive paper, different from *Philosophical Transactions* which concentrated mainly on *science*. Its formula corresponded to a far more capacious German notion *Wissenschaft* since there were also publications from fields such as theology, law, history or religion. Even though *Acta* was published in Latin, which ensured an international reach to the periodical, the first issue was translated into French. It also had an admirable staff of authors – works by Leewenhoocke, Bernouille, Boyle, Hevelius and many others were published therein. One of its main goals was to document the achievements of German science. After a relatively short time, it became one of the leading European scientific periodicals.[29]

[27] M. Ornstein, *The Role of Scientific Societies in the Seventeen Century*, Chicago 1928, pp. 203–204.

[28] See A. J. Aiton, *Leibniz*, *op. cit.*, p. 115.

[29] See M. Ornstein, *op. cit.*, pp. 205–207.

Another extremely interesting enterprise is Leibniz's project of a great encyclopedic inventory of arts, which came into existence out of respect to human invention in solving the practical problems of everyday life and its influence on the development of scientific theories. If – he wrote – Galileo did not talk to waterworks constructors and did not learn from these artisans that the suction pump which sucks in water should not be lifted more than 30 feet, we would not be familiar with the secret of the weight of air, the vacuum machine, and barometer. While studying bandeaus, which surgeons used to ligate veins, Harley got the idea of blood circulation.[30] For when it comes to technical knowledge, as opposed to speculative sciences, we are not engaged in words but in things, the progress, however, achieved in mechanical arts in great part, is, as he claimed, still unknown to educated people. Since on the one hand technicians do not know the possibilities of the application of the results of their observations and experience, on the other hand scholars and theorists – he writes – do not know that the work of mechanics may contribute to the realization of their desideratum. If it was possible to assemble engineer's experience in a form of a body of information, then humanity, according to Leibniz, would be surprised by its might.[31] Practical experience, diffused among people who are devoted to different kinds of technical activity both in respect of quantity as well as importance, is superior to what has been written in books. Leibniz proves that the most valuable part of the treasure of which the human race would be able to dispose is still not recorded. Each mechanical craft, even the most trivial, has a first ranking significance to science.

Compared to speculative knowledge employing itself in general considerations, the history of the practical activity of man

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[30] G. W. Leibniz, *Die Philosophischen Schriften von G. W. Leibniz*, vol. VII, ed. C. I. Gerhardt, Halle 1849–1863 (repr. Hildesheim 1960), cited as GP, volume, page, vol. VII, p. 69.

[31] *Ibid*, p. 69–70.

seems to Leibniz to be the type of research that turns to things durable and useful to a community. Many scientists – he writes – entertain themselves chewing general considerations, while there exists a vast area where they could exercise their minds with durable and real things and to the advantage of the community at large. We need a *Theatre of Human Life* derived from the practical experiences of people, different from the one we were handed down by some scientists and which – even if so great – may be useful only when drafting court speeches and sermons. If at least one of the plays was lost, all our libraries would not make up for the loss. One of the most pressing assignments of the new culture is thus to record in writing all methods and procedures applied by technicians and craftsmen.[32]

5. Social communication

Access to scientific information, similarly as to any remaining knowledge, is limited not only by the possibility to use the resources. It is limited to a considerable degree by knowledge of languages. We shall notice one of Leibniz's extremely interesting projects when creating the Academy of Trade and Languages outlined in one of the mentioned memoranda to duke Johann Friedrich. Leibniz sees the need to instruct young people both on trade as well as on foreign languages, enabling them to develop international contacts. However, real and common access to the sources of knowledge is ensured by a good knowledge of one's mother tongue. The programme of actions in this sphere is one of Leibniz's life priorities. He lectures it almost in one breath in his essay *Unvorgreiffliche Gedancken,* repeating arguments and postulates which appear in other texts. He also sketches ideas which he will present in detail in later essays.

[32] *Ibid*, pp. 181–182.

The programme of reconstruction of the German language should, in Leibniz's opinion, include all use of the language. The nation – according to him – was kept away from knowledge for too long. Real scholars should not be afraid of the language of their compatriots all the more so as the more knowledge is accessible, the more there are witnesses of their might. A well-developed language is like perfectly polished glass, it increases sharpness of thought and gives the mind a perspicuous clarity. Leibniz makes an appeal to German scientists to present the results of their studies in their mother tongue "to this effect it would much help to see the examples of those who have written well ... It is thus not only necessary to draw on their writings and introduce them as models, but also to increase them, to set into good German the books of an old and even some new major authors, and to work out all kinds of beautiful and useful materials well."[33] Even documents in archives manifest the weak condition of the national language.[34] The mother tongue was left to itself, it developed exclusively thanks to uneducated people and this status quo demands, according to Leibniz, a pressing change and energetic actions to be undertaken not by single persons but by definite institutions.[35] Leibniz examines in detail the state of the German language and analyses the causes of its bad condition. He presents definite actions of reparation. He does not know yet that he is at the beginning of his road and that he acts solitarily. The society of knowledge, an enlightened society, is an idea which will be fulfilled, at least partly only by the end of the 18th century. Written language has its own levels which overlap on the level of spoken language difficult to access. The first level is delimited by the language of great treatises of science and philosophy, for a long time it was an exclusive domain of Latin. Since the eighties of the 17th century, Western Europe most often writes

[33] UG, 111.

[34] UG, 24.

[35] UG, 9, 30.

in mother tongues, at the same time French leaves English behind, whereas the East – German, Scandinavian, Danubian – has recourse to Latin as late as the 18th century. On the second level belles-lettres is placed, on the third the language of private correspondence and at last the language which is the most difficult to access, the language of users who have had some experience of written word present in archives thanks to preserved complaints, demands and permissions. Formation of enlightened societies proceeds gradually. As Pierre Chaunu writes, the dictionary of Enlightenment is on the first level around 1700 in Germany, and it reaches the fourth only in 100 years time.[36]

[36] See P. Chaunu, *La Civilisation de l'Europe des Lumiéres*, *op. cit.*, Introduction.

VI.

THE LEIBNIZIAN *UNFORGREIFFLICHE GEDANCKEN* AS A POLITICAL TREATISE

1. Introduction

Polish critical literature has given little attention to the analysis of Leibnizian political legacy. Leibniz as a politician, diplomat and an active participant of the European political scene, has largely been overshadowed by Leibniz – the grand duke of philosophy.[1] What is more, the philosopher's political publicism and his diplomatic engagement do not constitute a major trend of the analysis of the sources of contemporary political thought and the beginnings of the shaping of the new German community, that is, the modern state, society, and nation.

Leibniz did not unfold his ideas in a systematic way. They are scattered in his rich correspondence and writings, only a part of which was printed during his life. Leibniz's political publicism, frequently revealing contrasting threads, constitutes his reflection upon reality as seen by the thinker aiming at combining local interests of the state with the broadly understood interest of mankind. The philosopher's research objectivism is frequently faced with the practical approach of a mature diplomat. The whole of his political reflection is revealed by three major trends: a return to the religious union of the Western Christianity, Leibniz's attempts to

[1] An unpublished PhD thesis entitled *Jedność Europy, wspólnota kultury, interes państwa. Dylematy myśli politycznej G. W. Leibniza*, written by Julita Sitniewska and defended at the University of Silesia in Katowice in 2005, is the only comprehensive study of the issue in the Polish literature.

organize science treated as a tool of the development of the state, international collaboration and inter-cultural agreements, as well as the analysis of the notion of power and its attributes. However, as J. Sitniewska proves, it is impossible to discuss Leibniz's coherent system of political system as it is revealed by T. Hobbes or J. Locke.[2]

Frequently, commentators take a stand that Leibniz's political writings cannot be analysed without a prior consideration of the major assumptions of his philosophical system. Undoubtedly, certain ideas and projects present in political writings do become much more comprehensible when compared within this system. Nevertheless, one should not lose sight of the temporary pursuits the philosopher was aiming at, acting frequently on behalf of full political powers of his protectors, which is illustrated by *Specimen demonstrationum politicarum*, commissioned by baron von Boineburg and dealing with the support to be given to the candidacy of duke Philip Neuburg to the Polish throne after the abdication of King John Casimir.[3]

It is necessary to highlight here that Leibniz belonged to the supporters of the Holy Roman Empire of the German Nation as inheritors of Roman and Carolinian traditions. His political writings fully support the unquestionability of the emperor's authority as the highest secular power in the Empire and in Europe.[4] For him, the emperor is the first among equal rulers in Europe, a leader of Christians, whose duty is the protection of authentic faith and the direction of Christianity towards the highest virtue, which is proved in his *Unvorgreiffliche Gedancken*, a work devoted to a totally different subject. In his political publicism not only did Leibniz take a stand as a German devoted to the interests of his patrons, rulers

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[2] *Ibid*, typescript, p. 209.

[3] See G. W. Leibniz, *Sämtliche Schriften Und Briefe*, Darmstadt 1923, Leipzig 1938, Berlin 1950, IV, I, pp. 3–98 (quoted as AA, I quoted as volume, chapter, page).

[4] J. Sitniewska, *Jedność Europy, wspólnota kultury, interes państwa*, cited typescript, p. 148. See also G. W. Leibniz *Caesarinnus Fürsternerius*, in: P. Riley, *Leibniz Political Writings*, Cambridge 1985, p. 111.

of the German states, but he also revealed himself as a diplomat engaged in the protection of the position of the emperor at the arena of international politics against the aggressive politics of Louis XVI. The role of the Empire was perceived by Leibniz in a traditional way – as a guardian of European order. Moreover, he did not approve of French cultural supremacy whereby the French king was perceived by him as the main source of the problems the Empire was suffering from.

2. Political perspective of *Unvorgreiffliche Gedancken*[5]

This paper does not aim at the analysis of the whole of the Leibnizian political publicism. Nevertheless, it aims at highlighting the arguments for introducing the text *Unvorgreiffliche Gedancken* into Leibniz's output as a political thinker in that part where the philosopher deals with the problems that are absolutely fundamental in the issue of constituting the basis of the contemporary German community.

Contrary to such countries as France, England or Russia, at the turn of the 17th century, the Empire had formed neither a centralized structure of the state nor any state nation had been formed on its territory – a homogeneous union ruled centrally and inhabiting a certain area treated as a national state. That situation resulted in the reflection of the German intellectual elite and posed questions as to the future position of the Holy Empire as well as the question regarding the future of its German-speaking inhabitants in the context of the possibility of uniting them into one state nation whose causative factors would be a common confession, similar range of experiences and, finally, a common language. Starting

[5] G. W. Leibniz, *Unvorgreiffliche Gedancken, betreffend die Ausübung und Verbesserung der Teutsche Sprache*, in: G. G. Leibnitii, *Collectanea Etymologica, illustration linguarum, veteris Celticae, Germanicae, Gallicae, aliarumque inservientia*, cum praefatione Johannis Georgii Eccardi, Hanoverae 1917 (quoted as UG and the point).

from the middle of the 17th century, the necessity for elaborating the mechanisms leading towards the formation of a homogeneous nation and state became visible. Within German communities belonging to the Holy Empire of the German Nation, that aim was pursued by a social group whose role was frequently marginalized in contemporary political history, for its members had no political background and, therefore, could not influence the course of political actions in German states. On the other hand, their contribution was their engagement into the formation of German culture. It was also them who started a discussion of the political problems regarding the state, society or nation. Samuel Pufendorf (164–1694), Johann Joachim Becher (1635–1682) and Veit Ludwig von Seckendorff (1626–1692) belonged to the most significant thinkers representing that trend of the contemporary German enlightenment as well as (or perhaps, above all) Gottfried Wilhelm Leibniz.[6] Belonging to the wealthy middle class or nobility, those people owed their prestige almost exclusively to their university education which enabled them to hold a position in the state service in both the Empire and certain German states, Leibniz serving as the best example – holding a post simultaneously at the Hannover and Empire courts. This group is defined by the term **Bildungngsbürgertum**. The term can hardly be given its English equivalent. Researchers claim that the term **intelligence** in the sense of a social group or **educated middle class** serves as its nearest synonym. The place of that social class in the structure of German communities differentiated German states from the centralized English or French monarchies. What is more, it depended upon the feudal elites of power for generally it did not have any sources of income apart from the posts held, which is perfectly illustrated by the life situation of Leibniz.

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[6] See T. Namowicz (ed.), *Państwo a społeczeństwo. Wizje wspólnot niemieckich od oświecenia do okresu restauracji*, Poznań 2007, p. 8. Leibniz's contributions in this matter are especially emphasized by P. Chaunu in: *La civilisation de l'Europe des lumières*, Paris 1971, part 1, ch. 3.

T. Namowicz argues that discussion of the social, political and national character of the state remained a marginal issue for the remaining social classes, especially of the second half of the 17th century. Therefore, the elites of power, kings and dukes as well as the aristocracy connected with the ruling courts, were interested in keeping their *status quo*. On the other hand, the peasantry and uneducated middle class were characterized by their indifference towards issues of that character. The existence of many small states or the existence of one big state had no significance for the lower social class. The phenomenon of German federalism was a significant reason for the lack of interest in the processes of modernization. It was neither the Empire nor the territorial state but it was a bond with a small homeland being the most significant area of one's cultural or material existence that determined the identification of an individual as a member of the German community.[7]

According to statistics gathered around 1770, it was estimated that only twenty thousand people (0.1% of the whole population in the Empire) were interested in discourse regarding the situation in the Holy Empire. Undoubtedly, G. F. Leibniz was among the first ones to initiate that discourse. Initially, it focused on the problems of the state, which resulted from the special structure of the political life represented by the Holy Roman Empire of the German Nation. On the one hand, the place it was occupying in the history of the European statehood was marked by the idea of the universal Christian republic (*respublica christiana*). On the other hand, it was marked by the desire to highlight a national character of the Holy Empire. Characteristic is the fact that, although the term **Heiliges Römisches Reich Deutscher Nation** (the Holy Roman Empire of the German Nation) appeared after 1512, it was not until the end of the Empire in 1806 that a traditional medieval term **Heiliges Römisches Reich** was used in which the discriminant "German

[7] *Ibid*, p. 10.

nation" was omitted. It meant that in the European consciousness the Empire was not fully identified as a German state.[8]

A political treatise of 1648, which finished the Thirty Years' War, determined a political division of the Empire establishing over 300 sovereign territories in its structure. The Empire existed *de facto* as a conglomeration of territorial states. Although the majority was represented by German-speaking inhabitants, the territory of the Empire was also inhabited by people who did not speak or use German in their daily life (e.g. inhabitants of Czech, Hungary, the duchy of Milano, Lotarginia, etc.). On the other hand, many territories whose inhabitants spoke German did not belong to the Empire, which is well illustrated by the example of the Ducal Prussia which occupied the territories outside of the Empire.

Paul Chaunu argues that after 1680 the Empire gradually continued with the bits of political substance which remained after the demographic catastrophe of 1630–1640 and the Peace of Westphalia. A traditional North-South tension based on religious criterion (Protestant Germany – Catholic Germany), which was also understood as efficiency and enlightenment opposed to ignorance, did not simplify the survival of the imperial myth. In texts published in 1676–1689, while facing threats from France, there were some attempts made to establish common principles of trade to be used in every territorial state of the Empire. Peaceful Leibniz, being scientifically and intellectually close to Spinoza writing *Tractatus* to defend the lost Republican business and to Locke, a theorist of the winners of the Glorious Revolution, started a fight for the survival and protection of the traditional structure of the Empire, and his thought adopted the expression of a political challenge.[9]

The awareness of the connection of German states with the idea of the Empire as well as the recognition of the primacy of the Emperor over the German rulers along with the creation of the

[8] *Ibid*, p. 11.

[9] P. Chaunu, *La civilisation de l'Europe des Lumières*, *op. cit.*, part I, ch. 3.

definition of the sovereignty of German duchies within the boundaries of the Empire made Leibniz an enthusiast of the German federation as opposed to Pufendorf who linked federation with the collapse of the Reich.[10] According to Leibniz, the connection between the Empire and the German states was a sufficiently good model of the statehood. The philosopher's critique regarding that matter, it appeared, dealt with the lack of respect of the law by the members of that federation, which partly resulted in the reduction of the power of the Empire. Leibniz's attachment to the idea of the Empire as the community of the multitude of sovereign subjects creating its structure finds its justification when compared to the philosophical principle of *harmonia praestabilita* which is reflected by the political harmony of a number of singular political existence constituting a Reich.[11] Nevertheless, it seems that, though easy to be indicated, all references to the philosophical system of Leibniz should be treated cautiously for Leibniz proves the existence of the international legal subjectivity of German states,[12] fighting simultaneously for the equal political status of the dukes and the German electors within the Empire.[13] However, independent from his inconstancy of views on certain political issues, for Leibniz, undoubtedly, the Holy Roman Empire is the structure for which a better alternative can hardly be found. What is more, the structure is under the leadership of the emperor who is almost an immaculate ruler for Leibniz, which is illustrated by the portrait of Leopold I presented by the philosopher in his treatise *Mars Christianissimus*.[14] The unquestionability of the authority of the emperor as the supreme secular power in the Empire and in Europe whose duty was to protect real faith, to rule the universal church

[10] See S. T. Namowicz (ed.), *op. cit.*, pp. 69–82.

[11] AA, IV, ii, p. 291.

[12] AA IV, ii, pp. 296–297.

[13] See J. Sitniewska, *Jedność Europy, wspólnota kultury, interes państwa*, cited typescript, pp. 173–182.

[14] AA, IV ii, p. 481.

and to develop Christianity towards the highest virtue constitutes the content of the second point of *Unfforgreiffliche Gedancken.* While proving the significance of the principles constituting that community, Leibniz refers to it directly calling it the German Nation (**Die Teutsche Nation**).

At this stage a fundamental issue is being approached which demands a reference to the state of research regarding the beginnings of the formation of the German People's state. Critical literature reveals a view which claims that starting from the 18th century until the twenties of the 19th century, the existence of the German People's state cannot be discussed for that function was revealed neither by the Holy Roman Empire of the German Nation nor by any territorial state it consisted of. Instead of the one state representing one nation, there were several states inhabited by people being at variance defined as **German communities**. This term is opposed to the term **German nation** in the contemporary meaning of the word. Moreover, it was not identical with the imagination of what the Germans should be. Therefore, it is definitely stated that neither the German state nor the German nation as a political phenomenon really existed.[15]

Research regarding the general problems of the nation reveals two approaches enabling the description of the processes constituting the formation of the nation. The first one is known as the "instrumentalistic" approach found in the works of Hans Kohn, Benedict Anderson, Eric Hobsbawm or Ernest Gellner. The second one is referred to as the "constructivistic" one and is revealed by the works of Frederick Barth and Abwer Cohen.[16] The "instrumentalistic" approach assumes that the formation of the notion of the nation is an ideological construct talking about the participation in the "unreal" community (as opposed to the "real" one) where

[15] See T. Namowicz (ed.), *Państwo a społeczeństwo...*, *op. cit.*, p. 17 and the reference of the literature there.

[16] *Ibid*, p. 17.

feelings of a certain bond being formed referring to the mutual language, symbols, etc. Eric J. Hobsbawm defines bonds of this type as **proto-national**.[17] The "constructivistic" concept supplements the ideological conditioning discussed earlier by indicating in the human awareness the formation of boundaries in relation to other people, who are ethnically different, hence creating their own national identity.

Researchers argue that the issue of language, or more precisely, the existence of congenial variants (dialects) of German, was constitutive for **German communities** as a specific form of the existence of a certain proto-national community. It was already in the Middle Ages that the words **German**, *a German*, as well as **Germans** appeared.[18] Nevertheless, it is pointed out that those words signified a certain affiliation to the community referring mostly to the cultural phenomena. It is also highlighted that until the beginning of the 19th century, these words did not reveal any political connotations. Some researchers claim that the use of those terms appeared on grounds of the intuitive feeling of some bonds between the people speaking different dialects of the German language independently from the territories they inhabited. It also resulted from the need to define one's local as well as supra-regional identity in the situation of the fall of the Christian homogeneity of Europe and the creation of states in the west of the continent which were emphasising their individual national character, especially France.

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[17] E. J. Hobsbawm, *Nationen und Nationalismus. Mythos und Realitätseit 1780*, Frankfurt a. M 1991, p. 59 and following, cited after T. Namowicz (ed.), *op. cit.*, p. 18.

[18] *The Dictionary of the German Language* by Jakob and Wilhelm Grimm signifies the existence of those words already in the early Middle Ages but mainly in the form of an adjective, e.g. **deutsche Sitte** (German custom), **deutsche Tracht** (German outfit). On the other hand, the noun **German** to signify the person belonging to the German community appeared much more later and was rather rarely used. The term **Deutschland** is the latest (more frequenly used from the 16th century) which generally meant **das deutsche Volk** (nation/German peoples). This information is Niven in: T. Namowicz (ed.), *Państwo a społeczeństwo...*, *op. cit.*, pp. 18–19.

Therefore, from the very beginning, language was the main or even the exclusive element connecting people. As pointed out by some researchers, other terms, which are generally used nowadays such as mutual territory, mutual historical experience, mutual state or religion are not consistent with the reality of the German communities both at the beginning of the modern era and later.[19]

3. Language as a political project

It seems that all the above considerations, true in their general scheme, are difficult to preserve in a unitary perspective of the vision of the society, a state and nation as presented by Gottfried Wilhelm Leibniz. The philosopher proudly describes himself: I am German,[20] and he makes German character the basic foundation to raise the vision of an enlightened German society, the German nation, united in the framework of the conservative formula of the Empire, which, in his opinion, is consolidating German individuality in Europe. That vision is presented by him in *Unvogreiffliche Gedancken*, and the vision concerns the community Leibniz calls the **German nation**.

Leibniz creates the idea of a German community by referring to the common historical experiences, memories of the former power and German courage and valiance.[21] He points out common cultural output which is the outcome of writers and poets writing in German. Leibniz also shows the achievements of German legislation and the cultural outcome of the reformation movement. One can also find a reference to real Christian faith – Leibniz's peaceful attitude does not allow for the indication of its one and only form. Being a confessional Lutheran, he was serving his Catholic

[19] *Ibid.*

[20] AA IV, ii, p. 472.

[21] UG, 2, 3.

patrons for many years, and the biggest part of his life was devoted to the matter of building the unity of the church through his deep engagement into reunion attempts.[22] Finally, there is an element which is a necessary condition of the whole community's autonomy, that is, the language which envelops the integrity of the historical, cultural and spiritual experiences, recording the history of human discoveries.[23]

Hence, the philosopher notices and clearly qualifies all the conditions which ultimately define something that constitutes the essence of the idea of **nation**. It does not mean the real existence of a German nation in the modern sense of the term, but Leibniz designs that nation. The reconstruction and modernisation of the German language is the beginning of that project. For Leibniz, this is a matter of priority for it decides the realisation of other matters connected with administration, legislation, science and culture, uniting the German-speaking community into one national body.

As a researcher and an expert in the field of history, Leibniz frequently emphasizes cultural individuality, which is illustrated by *Dissertatio de origine Germanorum* (1697) or his rich correspondence with Job Ludolf regarding the German language. The text *Unvorgreiffliche Gedancken* is not free from emotional and ideological features. While presenting the program for the repairing and rebuilding of the language, first of all the philosopher highlights the insufficiency and defects which should be eliminated from the German language. He points out the lack of adequate terminology in many specialist disciplines. Latin, the official language of science, is to blame in this case. However, Leibniz notices that it is not the lack of abilities of Germans but the lack of their goodwill that prevents them from perfecting the language. For if "everything that

[22] See J. Sitniewska, *Jedność Europy, wspólnota kultury, interes państwa*, cited typescript, pp. 114–147.

[23] NE, III, i, §5.

a plain man does can be expressed in German, undoubtedly, the things that are more suitable for remarkable and educated people, if they only wanted, could be expressed very well or even better in the pure German."[24] It seems that Leibniz here goes back to the thought presented in a radical way in the *Introduction to Nizolius* where he argued that if something cannot be expressed in a colloquial language, it should be removed from philosophy. Similarly to *Introduction*, it is possible to notice a certain incoherence in his views. Leibniz claims that in principle every language corresponds, to the same degree, to the needs of everyday life and adapts to the requirements of science. Advancement in science depends on a clear and precise formulation of thoughts whose manifestation is best fulfilled in a native language. Therefore, it is not important whether philosophy is practised in English, German or French; it is only important that each of these languages follows the trace of our discoveries and reflects the inner order of thoughts in the best way. It appears that if Germans overcame psychological barriers, by perfecting the language, they would be able to achieve success in every field. In the fight to strengthen the "spirit of the nation" that democratic sounding argument seemed too weak for Leibniz. Adopting a rather more publicistic than scientific style, Leibniz explains to his compatriots that none of the European languages is as good as the German language to formulate and verify different philosophical doctrines. He argues that this is because "We, Germans, have a strange standard of thoughts that others are not familiar with ... and this is our language in itself for what can be expressed in it without borrowed, extraordinary words is something really reliable; the German language does not accept empty words that are not supported by anything but only by the foam of vain thoughts."[25]

[24] UG, 34.

[25] UG, 11.

Leibniz builds argumentation using his diplomatic and political skills. He refers to all achievements of Germans in fields where they have achieved any success. He is aware of the fact that it is difficult to point out a significant scientific achievement for he notices that German scientists used Latin, letting their native language take their course. Being the language of the uneducated majority, German could not develop properly.[26] To his mind, that majority achieved a high level of knowledge in such fields as mining, hunting, forestry, mechanics or navigation. This is to be proved by specialist vocabulary accepted by the languages of different nations.[27] Leibniz also recalls military victories Germans have participated in and writes that a nation that has given evidence of courage and valiance is capable of the same in an intellectual field. This is possible due to the development of one's own language.[28]

Although Leibniz's argumentation is emotional to some degree and slightly demagogic, it reveals a good deal of common sense for Leibniz behaves like a real psychologist making efforts to cure the German wretched spirit experienced by military misfortunes. He writes that among all, it was the Thirty Years' War that put "our language in a similar state of chaos as our homestead,"[29] whereas after its end Germany became dominated by French power and elegance. However, Leibniz evaluates all foreign influences in a different manner than language purists do. He does see possible threats, but he also highlights certain profits resulting from a mutual penetration of different cultures. It was from Italians, after all, that Germans had learnt how to prevent infectious illnesses, and French people taught them how to improve military structures.[30] What is more, an intercourse with French culture had

[26] UG, 25.
[27] UG, 9.
[28] UG, 4.
[29] UG, 25.
[30] UG, 27.

given some easiness to a serious "German nature" and allowed for the change of their aesthetic likes and lifestyle. The language itself had also been enriched with expressions which had entered the German language in a kind of a natural manner like plants given a new ground.

Nevertheless, Leibniz is generally against a common use of any foreign language in everyday life as well as in any types of institutional life. He writes that it would be a never-ending pity and shame if our major language, the language of brave people, was to decline due to our carelessness.[31] The common use of a language which is different from the national one, which is never acquired perfectly enough by everybody, also results in some chaos in the way of thinking. One who does not know all the meanings of foreign words and expressions cannot write well and thinks erroneously for nothing good can result from the acceptance of a foreign language and, moreover, it brings a danger of losing one's freedom.[32] Making references to the materials and documents comprised in the emperor's archives, Leibniz writes that their analysis allows for the observation of a gradual fall of the German language which used to reveal its purity during the Reformation. It is from the goodwill of scientific, ecclesiastic and educated elites that the introduction of the reparation program aiming at the restoration of the appropriate range of the German language depends.[33]

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[31] UG, 21.

[32] UG, 20, 21. The main point made here is that the acquisition of a foreign language at the level of its skills *stricte* does not bring the same psychological and social causes. Rightly but not consequently, Leibniz notices that not everything which can be translated verbally is equivalent in the sphere of verbal behaviour connected with actions of sociological and cognitive character. The language, being at the grammatical or systematic level, separated from the semantic sphere of its vocabulary, which to a great extent reveals an extra-linguistic character, is not the tool of building a community whose interest is marked exclusively by the symbolism or dictionary adopted from the outside.

[33] UG, 33.

4. Conclusion

A concern for the intellectual development of Germans connected with the actions for the protection and development of the whole cultural legacy of German people present in *Unvorgreiffliche Gedancken* is the expression of the thinker's stance who builds the conditions and future of his compatriots on strong and rational premises. They are a common approach to knowledge, a new organization of the education system, improvement of administration, a modern way of recording data and, above all, the protection and development of the language that Leibniz treats as the highest national property. The treatise is not the only text of Leibniz where he appears as a philosopher and as a German patriot. He notices the dependence on the wealth of the nation and its education even as a young man while writing *Einige Patriotische Gedancken*,[34] where he postulates the introduction of a national language into the schools of the entire Empire. Interesting is the fact that it directly refers to the moral renovation of the whole of German society which is to be guaranteed by a good grasp of the language for not only does it allow for the mastery of the art of reading, writing and counting, but it also implants many virtues and respect to God in people.[35]

Leibniz's project of the repair and improvement of the language is a mature plan aimed at building a new enlightened German society aware of their value, potential and power reflected by the language echoing the creative skills of its speakers. Although the plan was to be realized by the next century, it was done without any awareness of acting according to the ready-made philosophical or political plan. As a "social engineer," Leibniz failed to come into being as the inspirer of concrete modernization acts in cultural and social spheres. The fact that the text *Unvorgreiffliche Gedancken*

[34] AA, IV, iii. 359–365.

[35] *Ibid*, p. 264.

has been pigeon-holed to the philosophical output of the thinker resulted in a limited reception of a narrow group of receivers. Leibniz as a political thinker cast in his lot with Leibniz as a logician whose contributions in the development of logic and mathematics were only to be discovered in the 20th century. A lack of understanding of his contemporaries along with the negligence of his descendants has resulted in the fact that Leibniz, instead of becoming the father of the modern German nation, has been placed in the consciousness of Germans as an esoteric philosopher.

BIBLIOGRAPHY

Gottfried Wilhelm Leibniz's Writings

AA – *Sämtliche Schriften und Briefe*, herausgegeben von der Preussischen (jetzt Deutschen) Akademie der Wissenschaften zu Berlin, Darmstadt 1923, Leipzig 1938, Berlin 1950 – (cited as volume, part, page).

Collectanea etymologica, illustration linguarum, veteris, celticae, germanicae, gallicae, aliarum inservientia, cum praefatione Johannis Georgii Eccardi, Hanoverae 1717.

C – *Opuscules et Fragments Inédits de Leibniz*, extraits des manuscrits de la bibliothèque royale de Hanovre par Louis Couturat, Paris 1903 (repr. Hildesheim 1961).

D – *Gothofriedi Guiliemi Leibnitii Opera Omnia*, nuncprimumcolleta...par Ludovicius Dutens, VI Vol., Genève 1767 – (cited as volume, part, page).

Ermahnung an die Teutscheihren Verstand und Sprache besser zu üben, w: *Wissenschaftliche Beihefte zur Zeitschrift des Allgemeinen Deutschen Sprachvereisen* (Heft 29 Juli 1907) transcibed by P. Pietsch.

GM – *Mathematische Schriften*, VII Vol, Ed. C. I. Gerhardt (1846–1863, repr. 1971 Hildesheim: Olms).

GP – *Die Philosophischen Schriften von G. W. Leibniz*, I–VII, ed C. I. Gerhardt, Halle 1849–1863 (repr. Hildesheim 1960) – (Cite as volume, page).

L – *Philosophical Papers and Letters*, ed. L. E. Loemker, D. Reidel Publishing Company, Dortrecht/Holand 1965.

Leibnitiana. Elementa philosophicae de summa rerum, ed. I. Jagodinsky, Kazań 1913.

Leibniz, Political Writings, ed. by P. Riley, Cambridge 1985.

Nowe rozważania dotyczące rozumu ludzkiego, t. I, II, tłum. Izydora Dąmbska, PWN, Warszawa 1955, vol. I, II.

Oeuvres de Leibniz publiées pour la première foisd'après les manuscrits originaux, avec notes et introductions par A. Foucher de Careil, I–VII, Firmin Didot frères, fils et cie, Paris 1961–1875.

Philosophical Papers and Letters, ed. L. E. Loemker, ed. II, D. Reidel Publishing Company/Dordrecht – Holland 1969.

UG – *Unvorgreiffliche Gedancken, betreffend die Ausübung und Verbesserung der Teutschen Sprache*, in: G. G. Leibnitii, *Collectanea etymologica, illustration linguarum, veteris Celticae, Germanicae, Gallicae, aliarumque inservientia*, cum praefatione Johannis Georgii Eccardi, Hanoverae 1717. Also in: *Wissenschaftliche Beihefte zur Zeitschrift des Allgemeinen Deutschen Sprachvereisen* (Heft 30, April 1908) transcribed by P. Pietsch.

Wyznanie wiary filozofa, Rozprawa metafizyczna, Monadologia, Zasady natury i łaski oraz inne pisma filozoficzne, transl. S. Cichowicz, J. Domański, H. Krzeczkowski, H. Moese, PWN, Warszawa 1969.

References

Aarsleff H., *Leibniz on Locke on Language*, in: Aarsleff *From Locke to Saussure*, Athlone, London 1982.

Aarsleff H., *The study and use of Etymology in Leibniz*, in: H. Aarsleff, *From Locke to Saussure*, Athlone, London 1982.

Burchard J., *Historia Bibliothecae Augustae*, Lipsiae 1744–46.

Burkhardt H., *Adam' Mind and Body*, in: M. Dascal, E. Yakira (ed.), *Leibniz and Adam*, University Publishing Projects Ltd., Tel Aviv 1993.

Chaunu P., *Cywilizacja wieku Oświecenia*, transl. E. Bąkowska, PIW, Warszawa 1989.

Chomsky N., *On the Nature, Use and Acquisition of Language*, in: *Mind and Cognition*, Blackwell, Oxford, Cambridge 1990.

Costabel P., *Leibniz et la dynamique*, Herman, Paris 1960.

Czapliński W., Galos A., Korta W., *Historia Niemiec*, Ossolineum, Wrocław [etc.] 1981.

Czarnawska M., Kopania J. (red.), *Idea. Studia nad strukturą i rozwojem pojęć filozoficznych*, VIII, Białystok 1996.

Dascal M., *Leibniz, Language, Signs and Thought*, John Benjamins Pub. Co, Amsterdam–Philadelphia 1987.

Davies N., *Boże igrzysko*, transl. E. Tabakowska, Wyd. Znak, Kraków 2000.

Descartes R., *Rozprawa o metodzie właściwego kierowania rozumem i poszukiwania prawdy w naukach*, przekład T. Żeleński, PIW, Warszawa 1980.

Devlin K., *Żegnaj Kartezjuszu. Rozstanie z logiką w poszukiwaniu nowej kosmologii umysłu*, transl. B. Stanosz, Prószyński i S-ka, Warszawa 1999.

Dippert R.R., *Leibniz's Discussion of Obscure, Confused, and Inadequate Ideas: Its Relevance for Contemporary Cognitive Science*, in: *Leibniz und Europa*, VI Internationaler Leibniz Kongreß, Hannover 1994.

Eco U., *W poszukiwaniu języka uniwersalnego*, transl. W. Soliński, Wydawnictwo Marabut, Wolumen, Gdańsk–Warszawa 2002.

Fodor J. A., *The Language of Thouhgt*, The Harvester Press Limited 1976.

Gadamer H. G., *Mensch und Sprache*, in: Gadamer, H. G., *Kleine Schriften* vol. I, J. C. B. Mohr, Tübingen 1967.

Gensini S., *Leibniz Linguist and Philosopher of Language: Between 'primitive' and 'natural'*, in: M. Dascal, E. Yakira (ed.), *Leibniz and Adam*, University Publishing Projects Ltd., Tel Aviv 1993.

Hacking I., *Why does Language Matter to Philosophy*, Cambridge University Press, Cambridge, London, New York, Melbourne 1975.

Harsdörffer G. P., *Frauenzimmer Gesprächspiele*, 1641, reprint M. Niemeyer, Tubingen 1968.

Hazard P., *The European Mind 1680–1717*, transl. by J. Lewis May, Penguin Books, 1964

Hessel A., *A History of Libraries*, Scarecrow Press, Washington 1950.

Hobbes T., *Lewiathan*, eBooks, Adelaide 2007.

Hobbes T., *De Corpore*, in: T. Hobbes, *The English works of Thomas Hobbes of Malmesbury*, W. Molesworth (ed.), London 1839–1845, vol IV.

Hobsbawm E. J., *Nationen und Nationalismus. Mythos und Realitätseit 1780*, Frankfurt a. M 1991.

Ishiguro H., *Leibniz's philosophy of logic and language*, sec. ed. Cambridge University Press, Cambridge 1990.

Jolley N., *The Light of the Soul*, Clarendon Press, Oxford 1990.

Jolley N., *Leibniz and Locke: A Study of the New Essays on Human Understanding*, Clarendon Press, Oxford 1984.

Kohn H., *Nationalism its meaning and history*, Van Nostrand Company, Princeton, New Yersey 1955.

Kopania J., *Descartes i Kant o użyteczności poznawczej języka naturalnego*, Polskie Towarzystwo Semiotyczne, Warszawa 1996.

Kopania J., *Funkcje poznawcze Descartesa teorii idei*, Dział wydawnictw Filii Uniwersytetu Warszawskiego, Białystok 1988.

Leakey R., *The Origin of Human Kind*, Basic Books, New York 1994.

Losonsky M., *Representationism and Adamicism in Leibniz*, in: *Leibniz and Adam*, ed. Dascal M., Yakira E., University Publishing Project Ltd, Tel Aviv 1993.

Losonsky M., *Leibniz's Adamic Language of Thought*, in: *Journal of the History of Philosophy*, vol. XXX, October 1992, Nb 2.

MacDonald Ross G., *Leibniz*, Oxford University Press, Oxford, New York 1984.

Malinowski B., *The Problem of Meaning in Primitive Languages*, in: Ogden C. K, Richards I. A., *The Meaning of Meaning*, Harcourt, Brace and Co. Inc., New York, London 1951.

Malinowski B., *Culture*, in: *Encyclopaedia of the Social Sciences*, vol. 4, New York 1931.

Marciszewski W., Murawski R., *Mechanization of Reasoning in a Historical Perspective*, Rodopi, Amsterdam–Atlanta 1995.

Marciszewski W., *Why Leibniz should not have believed in Filum Cogitationis*, in: Leibniz und Europa, VI Internationaler Leibniz Kongreß, Hannover 1994.

Mates B., *The Philosophy of Leibniz. Metaphysic and Language*, Oxford University Press, New York, Oxford 1986.

Mączak A, (ed.), *Europa i świat w początkach epoki nowożytnej*, part II, Wiedza Powszechna, Warszawa 1991.

Metcalf J., *The Indo-European Hypothesis in the 16th and 17th Centuries*, in: Hymes Dell H. (ed.), *Studies in the History of Linguistics. Tradition and Paradigms*, Indiana University Press, Bloomington, London 1974.

Namowicz T., (ed.), *Państwo a społeczeństwo. Wizje wspólnot niemieckich od oświecenia do okresu restauracji*, Wydaw. Poznańskie, Poznań 2001.

Neumann von J., *The Computer and the Brain*, New Haven 1959.

Newman L. M., *Leibniz and the German Library Scene*, The Library Association, London 1966.

Noël J. F., *Święte cesarstwo*, transl. Maria Żerańska, Oficyna Wydawnicza Wolumen, Warszawa 1998.

Ornstein M., *The Role of Scientific Societies in the Seventeenth Century*, University of Chicago Press, Chicago 1928.

Parker G., *Wojna trzydziestoletnia*, in: A. Mączak (ed.), *Europa i świat w początkach epoki nowożytnej*, part II, PWN, Warszawa 1992.

Penrose R., *The Emperor's New Mind*, Oxford University Press 1989.

Pufendorf S., *O stanie Rzeszy niemieckiej*, in: T. Naumowicz (ed.), *Państwo a społeczeństwo: Wizje wspólnot niemieckich od oświecenia do okresu restauracji*, Wydaw. Poznańskie, Poznań 2001.

Putnam H., *The "Innateness Hypothesis" and Explanatory Models In Linguistics*, http://isites.harvard.edu/fs/docs/icb.topic1327223.files/Putnam%20item.pdf.

Robert J. M., *Leibniz, vie et oeuvre, suivi de L'Éloge de Fontenelle*, Agora, Paris 2003.

Sitniewska J., *Jedność Europy, wspólnota kultury, interes państwa. Dylematy myśli politycznej G. W. Leibniza*, maszynopis rozprawy doktorskiej, Uniwersytet Śląski, Katowice 2005.

Sontag F., *The Platonist Concept of Language*, in: *The Journal of Philosophy*, LI/25, 1954.

Święczkowska H., *O metafizycznym statusie języka w filozofii Leibniza*, in: H. Jakuszko, L. Kopeć (ed.), *W kręgu zagadnień filozofii XVII wieku*, Lublin 2009.

Święczkowska H., *Harmonia linguarum. Język i jego funkcje w filozofii Leibniza*, Wydaw. UwB Białystok 1998.

Święczkowska H., *La perspective platonicienne sur la langue chez Descartes et chez Leibniz*, in: *Idea. Studia nad strukturą i rozwojem pojęć filozoficznych*, VII, Białystok 1996.

Thomasius, Ch., *Von Nachahmung der Franzosen. Nach den ausgaben von 1687 und 1701*, G. J. Göschen, Stuttgart 1894.

Vendler Z., *Wordless Thoughts*, in: *Language and Thought Antropological Issues*, Mouton Publishers, Hague, Paris 1977.

Walker D. P., *Leibniz and Language*, Journal of the Warburg and Courtauld Institutes, Vol. 35, 1972.

Waterman, J. T., *Leibniz and Ludolf on Things Linguistic. Excerpts from Their Correspondence 1688–1703*, University of California Press, Berkeley, Los Angeles, London 1978.

Wieselgren H. (ed.), *Leibniz bref till Spartvenfelt*, in: *Antiqvarisk Tidskrift for Sveridge*, 7(3) (1884/85).

Wittgenstein L. (1958), *Philosophical Investigations*, transl. Anscombe, G. E. M., Basil Blackwell, Oxford 1958.

http://www.textlog.de/herder menschheit.html

http://www.odysseetheater.com/ gothe/herder/ideen.html