1. Introduction

In one of the first points of Unvorgreifliche Gedancken, 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 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 knowledge collected above all in libraries but also in the archives or documentation centers.

\(^1\) Unvorgreifliche Gedancken, betreffend die Ausübung und Verbesserung der Teutschen Sprache, w: G. G. Leibnittii, Collectanea Etymologica, illustrationi linguarum, veteris, celticae, germanicae, gallicae, aliarum inservientia, cum praefatione Johannis Georgii Eccardi, Hanoverae 1717, point 4. (cited as UG, point).
2. Library

One should take into account that *Informal Thoughts* came into being in the period of Leibniz’s important engagement in management of prince’s library in Wolfenbüttel since in 1691 he was appointed to the post of the manager of this institution and acted as one until his death.\(^2\) The August’s Library which was founded by August the Younger, was at the end of the 17\(^{th}\) century 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 professor of the Leipzich University had at his disposal an abundant collection of books, which was the foundation for education of the prospective philosopher. After his death, only his son was authorized to use the library whereas before, its owner would give the run of the library to anyone interested. Leibniz was librarian for the first time being on duty on the court of baron von Boinenburg. 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 became from that moment one of the ambitions of his life. The second half of the 17\(^{th}\) century was the time of reconstruction of German library stock. The Thirty Years War not only killed enormous number of people but also irrevocably destroyed abundant books collections. On the turn of the 16\(^{th}\) and the 17\(^{th}\) century Germany excelled in Europe in respect of heterogeneity as well as in respect of the size of libraries. After the war, the imperial collection of books in Vienna, the court library in Munich, private collections, and the only 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 hands of enlightened elites. Soon duchy courts and Jesuit libraries became the only esteemed cultural centers.\(^5\)

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\(^4\) G. W. Leibniz, *Sämtliche Schriften und briefe*, herausgegeben 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.

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

After a few years abroad where he worked in libraries of Paris and London and learned new techniques of collecting scientific information he began vigorous reformatory activity. Having taken over the care of duke’s library he proposed to transform the existent collection of 3310 volumes and manuscripts into a cohesive collection including every scientific field of knowledge. Quality of books was in his opinion more important than 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 a pressing need to complete the 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 French scientific periodicals. One of his most significant declarations is elaboration of easy methods of effective access to library resources through a system of catalogues or registers designed by Leibniz himself.\textsuperscript{7} Another concept the realisation of which he undertook was to prepare short summaries of books issuing currently, as well as summaries of content of all books in 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 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.\textsuperscript{8}

Leibniz’s dream of common access to library resources for everyone interested did not come true on the court of Hanover. The library was accessible

\textsuperscript{6} See AA I, i, p. 508 and p. 515–16.
\textsuperscript{7} AA II, vii, p. 15–16.
exclusively to court officials. Besides, it concerned the majority of the dukes’ and private collections, though it is worth adding that some of the Imperial libraries were opening their doors to readers needs through 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 as well. There was theoretically 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 agreement from the Emperor himself. Students and professors of the University in Konigsberg needed the same kind of agreement but from the rector.\textsuperscript{9} Leibniz himself during his work on the history of Brunswick dynasty sustained numerous hardships and limitations in the access to 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 the access to sources in libraries in Frankfurt, Augsburg or Munich.\textsuperscript{10}

The fact that he accepted the post of the 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 of 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 richness of 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, 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 everyone in need for studying.\textsuperscript{11}

However the creation of a centre promoting science and culture requires meeting at least a few conditions. Firstly – a wise and enlightened ruler,
On some of the assumptions of Leibniz’s programme of enlightened society

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 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 the duke August who spent on maintenance of the library 15–16 thousand thalers every year, while in years 1705–1708 duke Anton Ulrich would spend on purchase of books exactly 851 thalers, and the annual budget of the electoral library in Berlin until the end of the 17th century was scarcely 1000 thalers.  

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 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 interesting books than one voluminous work, which does not contain anything new, anything which was not already said. Since the most important, 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 fashion he would often choose little publications, containing novelties, and postulated taking care of them in large libraries so as they do not get destroyed.

Leibniz was a great admirer of 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, carried on correspondence 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 it can be only assumed how much energy he devoted to negotiations with booksellers, owners of private collections or on participation in book fairs.

Leibniz knew what kind of library he wanted. During his stay in Italy in 1689 he prepared a list of basic content of a well designed collection of books. The bibliography comprised about 2500 entries, was not however to be printed. Leibniz intended supposedly to present its idea to the Emperor Leopold I during his visit in Vienna. Administering an institution, which in the day its founder died in 1666 comprised 118000 volumes¹⁵ 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 to know that the August Library was one of libraries of that time organised in the most modern way, and the duke himself took part in classification of works of 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 among 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.

His plan to build a scientific centre, collecting and elaborating collections of periodicals, books, manuscripts and other documents, with a duty to universalise knowledge Leibniz included in two of his letters directed to duke Rudolf August and his brother Anton Ulrich. The first one is from ⁴th 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 in 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 glory of sovereigns who collect and preserve this treasure for the common good.

¹⁵ A. J. Aiton, Leibniz, publisher qtd., p. 87.
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 domain of science and inventions.\(^{17}\) Library ought to not only teach but also give pleasure so it should contain essays on rhetoric, languages and poetry as well, apart from scientific dissertations devoted to history or geography.

Library, underlines Leibniz, 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 decisions of courts, which would serve the studies on application of the law in practice. Above all however, in one breath almost he mentions new studies from domains such 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 is clearly visible in this part of the text which also certifies excellent familiarity with the publishing market.

Functioning of a library should be closely connected with academic life. Professors, students and every lecturer would be then able to benefit of 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 of 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 are Leibniz’s views, the lack of understanding of his educational postulates and activities is not surprising,

\(^{17}\) Ibidem, p. 41.
\(^{18}\) Ibidem, p. 42–43.
\(^{19}\) Ibidem, p. 47 and p. 50.
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noteworthy however is his optimism and determination in propagating ideas the fulfilment of which will not be brought about before the next century.

**Passion for order**

In order to perform culture-forming, scientific, popularising and social functions library should be subject to rules of a particular order which would ensure an easy and effective access to appropriate information. This postulate of Leibniz ought to be considered in the context of the number of books and materials printed in the whole Europe which increased extraordinarily thanks to development of printing techniques. Inventories made up after 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. In the 17th century appeared at least a few important essays concerning methods of classification of library resources, catalogues, indexes and bibliographies indispensable in organisation of modern libraries. Leibniz undoubtedly familiarised himself with the work of a French librarian Gabriel Naudé *Avis pour dresser une bibliothèque*, 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*. 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 practice. We would not go into the subject of Leibniz’s ideas at 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 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. Leibniz even if he had at his disposal great organisation and substantial experience he 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. How-

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23 Ibidem, pp. 44–45, footnotes.
ever, irrespective of foundations of methods of classification of collections of books, apart from this passion for order the aim of which is a direct access to knowledge, there is actually in actions of Leibniz something extraordinary, for these actions are reinforced by a belief that the key to happiness of the whole 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 a web of integrated libraries, learned societies and academies.

3. Public information

Access and cataloguing of knowledge and a 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 of a new community. In this matter there are three very interesting Leibniz’s memoranda addressed to the duke of Hanover Johann Friedrich concerning improvements in administration of public affairs.\(^\text{25}\) Leibniz believed that social welfare and harmony depends to a great extent on the knowledge of the sovereign about the state of 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 inaccessible.\(^\text{26}\) Creating and storage of knowledge in the sphere of public affairs demands creation of a web of institutions collecting and transforming data. And so Leibniz postulates keeping official registers of mortality, central administration of archives and in this, creation of a system of easy access to this data. Another idea is to print systematically 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

\(^{25}\) AA, I, ii, pp. 74–79.

\(^{26}\) Ibidem, pp. 79–89.
how to access the goods which they are looking for. Such a centre should also, in his opinion, publish information materials. In these works we deal undoubtedly with a daring project of a reform leading to construction of what is called today a ‘knowledge society’.

An essential element of creation of an enlightened community is also a permanent contact with the newest 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 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 is created in Leipzig and published every month one of the most important German periodicals Acta Eruditorum. Even though he was not its direct initiator, Leibniz took part in works on the program of the periodical from 1681 when he met for the first time 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 a 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. 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 published from the 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 had also an admirable authors staff – works of Leewenhoocke, Bernouille, Boyle, Hevelius and of many others were published there. One of its main goals was documentation of the achievements

of the German science. After a relatively short time it became one of the leading European scientific periodicals.\textsuperscript{29}

Another extremely interesting enterprise is Leibniz’s project of a great encyclopedic inventory of arts, which came into existence out of the respect to human invention in solving 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 Harvey got the idea about blood circulation.\textsuperscript{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 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 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.\textsuperscript{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 human race would be able to dispose is not still recorded. Each, even the most trivial mechanical craft has a significance of the first rank to science.

Compared to speculative knowledge employing itself in general considerations, the history of practical activity of man seems to Leibniz 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 \textit{Theatre of Human Life} derived from practical experience of people, different from the one we were handed down by some scientists and which –

\textsuperscript{29} See M. Ornstein, publisher qtd., pp. 205–207.


\textsuperscript{31} Ibidem, p. 69–70.
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

4. 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 an extremely interesting Leibniz’s project of creating the Academy of Trade and Languages outlined in one of the mentioned memoranda to the duke Johann Friedrich. Leibniz sees the need to instruct young people both on trade as well as foreign languages enabling to develop international contacts. However the real and common access to 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 Unvorgreifliche Gedancken repeating arguments and postulates which appear in other texts, he also sketches ideas which he will present in detail in later essays.

The programme of reconstruction of German language should include in Leibniz’s opinion all use of the language. The nation – according to him – was for too long kept away from knowledge. The 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 a perfectly polished glass, it increases sharpness of thought and gives the mind a perspicuous clarity. Leibniz makes an appeal to the German scientists to present the results of their studies in their mother tongue ‘to this effect it would help much 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 well all kinds of beautiful and useful materials’.33

Even documents in archives manifest the weak condition of the national

33 UG, 111.
language. 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 undertaken not by single persons but by definite institutions. Leibniz examines in detail the state of the German language and analyses 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, enlightened society is an idea which will be fulfilled, at least partly only at the end of the 18th century. Written language has its own levels which overlap on the level of spoken language difficult of 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 writes most often in mother tongues, at the same time French leaves behind English, 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 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. Forma-
tion of enlightened societies proceeds gradually. As writes Pierre Chaunu, the dictionary of Enlightenment is in Germany on the first level around 1700 and reaches the fourth only in 100 years time.

translated by Marta Jastrzębska

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34 UG, 24.
35 UG, 9, 30.
36 See P. Chaunu, La Civilisation de l’Europe des Lumières, publisher qtd., Introduction.