

# The Lockean Heritage in Jan Śniadecki's Experimental Philosophy and its Reception

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*Abstract:* This essay focuses on the reception of Locke in both published and unpublished writings by Jan Śniadecki (1756-1830), the prominent experimental philosopher and mathematician of the Polish Enlightenment. Śniadecki, who spent half a year in London in 1787, was familiar with the *Essay Concerning Human Understanding*. Remarkably, in his *Filozofia umysłu ludzkiego* [*The Philosophy of Human Mind*] (Vilnius, 1822), he identified himself as a confirmed, though critical, Lockean and claimed originality in developing the master's experimental psychology. Also, as a rector of Vilnius University, he propagated Lockeanism. The basic structure of this essay is as follows: First, it analyses Lockean concepts as interpreted by Śniadecki and puts them into the context of his criticism of two extremities: Kant's obscure transcendentalism and Condillac's idolatry of sensation. Secondly, it shows how, during the nineteenth century, these concepts were appropriated into the post-Kantian framework. More specifically, the essay discusses "Comments on the 'Addendum to the Essay about Philosophy'" by Vasilij P. Androsov, Russian Kantian and economist, and *An Introduction to and an Overview of Positive Philosophy* by Julian Ochorowicz, experimental psychologist and collaborator of Wilhelm Wundt. Finally, it portrays Śniadecki as an experimental philosopher that, like Locke, was in line with the early modern *cultura animi*, the conception of cultivating the mind. Thus, it highlights how digging into the past enriches recent Śniadecki scholarship by solving some interpretative inconsistencies, e.g., taking at face value Śniadecki's mockery confession of empiricism as defined by Kant.

*Keywords:* Jan Śniadecki, Condillac, Kant, experimental philosophy, empiricism.

## 1. Jan Śniadecki, “Lithuanian Jupiter” of sound philosophy<sup>1</sup>

Lockeanism pervaded the Polish Enlightenment, and one of its most prominent figures was Jan Śniadecki (1756-1830), “Lithuanian Jupiter”, as, not without a touch of irony, his contemporaries called him<sup>2</sup>. What showed him well deserving of this sobriquet was his rhetorical verve combined with a rather cavalier attitude, with which he combatted metaphysical romances, for example, the transcendental philosophy of Kant together with Romantic literature. Remarkably, Śniadecki earned the epithet “orator egregius” very early<sup>3</sup> and lived up to it throughout his career. Nevertheless, he was, par excellence, a fine mathematician and experimental philosopher, well travelled and familiar with discoveries of his time.

What matters for the present essay is that Śniadecki possessed first-hand knowledge of sound philosophy, as he calls it, *i.e.*, the philosophy of Locke and his followers, among others, Scottish commonsense philosophers.

Let us flesh this out with some biographical information. In the spring of 1787, Śniadecki went on a six-month journey to England to immerse himself in its scientific culture, buy instruments, and meet with prominent English scholars. During his stay, he paid a visit to Nevil Maskelyne in the Royal Observatory, Greenwich, and William Herschel in Slough to exchange ideas and conduct astronomical observations. It was with regret that Śniadecki left

<sup>1</sup> I wish to thank Peter Anstey, Tomasz Kupś, Dalius Viliūnas, and the anonymous reviewers of this journal for their insightful comments and criticisms. I am particularly thankful to Witold Więśław for sharing the results of his archival research on Jan Śniadecki. Last but not least, I thank my good friend and excellent translator, Małgorzata Buchalik, for helping me with my rusty Russian.

<sup>2</sup> “Fulminating of Mr Śniadecki”, as Prince Adam Jerzy Czartoryski put it in a letter to Szymon Malewski, rector of Vilnius University (Letter of 8/20 July, 1818 (Biblioteka Czartoryskich, MS 2993, pp. 459-60)), cited after:

T. Kupś, “Konkurs wileński. Fakty i hipotezy”, in T. Kupś, D. Viliūnas and J. Usakiewicz (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 4: *Konkurs na Katedrę Filozofii w Uniwersytecie Wileńskim w 1820 roku*, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2017, p. 26.

J. Słowacki, *Listy do krewnych, przyjaciół i znajomych: 1820-1849*, ed. by J. Pelc, Zakład Narodowy im. Ossolińskich, Wrocław 1959, p. 265.

For the allusion made by Maurycy Mochnacki (1803-34), see: M. Mochnacki, “O mistycyzmie”, in *Pisma krytyczne i polityczne*, vol. 1, introduction by Z. Przychodniak, ed. by J. Kubiak, E. Nowicka, Z. Przychodniak, Universitas, Kraków 1996, pp. 216, 433.

<sup>3</sup> Joannis Toryani *Catalogus Magistrorum in Universitate Cracoviensi promotorum ab a. 1562 - ad a. 1777*, MS 2674, Jagiellonian Library. Cit. after: W. Więśław, “Jan Śniadecki (1756-1830) - uczony, mąż stanu, patriota”, in *Roczniki Polskiego Towarzystwa Matematycznego*. Seria VI: *Antiquitates mathematicae* 1 (2007), p. 175.

England. However, while English philosophy was sound, English climate, in particular in autumn, was not<sup>4</sup>.

By contrast, Śniadecki did not honour German scholarship with a prolonged sojourn on his way back. The anonymous author of a review published in *Allgemeine Literatur-Zeitung vom Jahre 1815* reproachfully suggests that he feared exposing himself to demonised poisonous Kantian air<sup>5</sup>. There may be a grain of metaphorical truth in it. However, the fact is that Śniadecki studied in Göttingen in his earlier years, mastered German in three months, well enough to read Kant afterwards, and took private mathematics lessons with Abraham Kästner, the doctoral advisor of Georg Christoph Lichtenberg<sup>6</sup>. Later, he moved to France to meet Jean le Rond d'Alembert.

The excellent command of English that Śniadecki acquired during his stay in Germany and England transpires in his studious manuscript notes taken from books by English and Scottish philosophers (David Hume, Dugald Stewart, etc.) and interspersed with remarks that allow one to deepen insight into his published works<sup>7</sup>.

Another important fact is that Śniadecki's engagement with the sound philosophy of a Lockean bent had a considerable institutional impact. In 1803, under the liberal reign of Tsar Alexander I, the Schola Princeps Vilnensis became Vilnius Imperial University (Imperatoria Universitas Vilnensis). As Tomas Venclova, a Lithuanian dissident and poet, himself a graduate of Vilnius

<sup>4</sup> Z. Libiszowska, *Życie polskie w Londynie w XVIII wieku*, Instytut Wydawniczy "Pax", Warszawa 1972, pp. 248-50.

<sup>5</sup> [Review of] "Vermischte Schriften" by Jan Śniadecki (J. Zawadzki, Wilno 1814), in *Allgemeine Literatur-Zeitung vom Jahre 1815*, vol. 2, no. 162, col. 517-18.

<sup>6</sup> For Śniadecki's letters in French to Abraham Kästner, see: J. Śniadecki, *Korespondencja: Listy z Krakowa*, vol. 1: 1780-1787, ed. L. Kamykowski, Gebethner i Wolf, Kraków 1932.

Śniadecki about Lichtenberg: G.Ch. Lichtenberg, *Gesammelte Schriften*, ed. by die Akademie der Wissenschaften zu Göttingen und die Technische Universität Darmstadt, vol. 2: *Vorlesungen zur Naturlehre*, ed. by A. Krayer and K.-P. Lieb, Wallstein, Göttingen 2008, 2014 (online edition), p. XLIX. [[www.lichtenberg.uni-goettingen.de/seiten/open/2/XLIX](http://www.lichtenberg.uni-goettingen.de/seiten/open/2/XLIX)]

Cf. J. Śniadecki, *Pisma pedagogiczne*, ed. by J. Hulewicz, Zakład Narodowy im. Ossolińskich, Wrocław 1961, pp. 6-7.

<sup>7</sup> J. Śniadecki, The collection of manuscript lectures, works, notes, reviews about philosophy, logic, mathematics and metaphysics: 1809-28, 1511/1/26, vol. 4, Lithuanian State Historical Archives in Vilnius.

For the description of Śniadecki's manuscripts and notes preserved in the Lithuanian State Historical Archives in Vilnius, see: W. Więśław, "Nieznane rękopisy i notatki Jana Śniadeckiego w Archiwum Historycznym Wilna", in *Roczniki Biblioteczne* 50 (2006), pp. 167-77.

Śniadecki took English lessons in Göttingen to read Maclaurin and Simpson. Cf. Śniadecki, *Pisma pedagogiczne*, cit., p. 7.

University, points out, this was part of the empire-wide educational reforms aimed at the Europeanization of Russia<sup>8</sup>. That Vilnius University dominated in this project and eclipsed in numbers other universities of the Russian empire, e.g., in Moscow, Dorpat, or Petersburg, has been shown in a detailed study by a French historian, Daniel Beauvois<sup>9</sup>. Noteworthy, Jan Śniadecki served as the second rector of this influential institution (from 1807 until 1815). Also afterwards, his authority remained substantial and, in a sense, much-dreaded, as is mirrored in his above-mentioned sobriquet “Lithuanian Jupiter”. As Dalius Viliūnas remarks, under Śniadecki’s direction, the Vilnius school turned back from Condillac’s one-sided sensualism to Locke while saving the latter’s nuanced distinctions, like that between sense experience and interior reflection<sup>10</sup>. As a result, Śniadecki’s attitude elicited some, finally unfounded, concern that he would prove a biased judge of treatises sent by applicants for the chair of philosophy at Vilnius University in 1820<sup>11</sup>.

The above historical contextualization gives us a tool for examining and understanding Śniadecki’s Lockean concepts in their own terms, *i.e.*, with their oddities and incongruencies.

## 2. Śniadecki’s “Locke”, experimental psychologist and metaphysician

In his *Filozofia umysłu ludzkiego* [*The Philosophy of Human Mind*] (Vilnius, 1822), Śniadecki identifies himself as a confirmed Lockean, but he also claims originality in developing the master’s experimental psychology. It is a crucial methodological manifesto and, therefore, I will cite it at length:

<sup>8</sup> T. Venclova, “Four Centuries of Enlightenment: A Historic View of the University of Vilnius, 1579-1979”, in *Lituanus. Lithuanian Quarterly Journal of Arts and Sciences* 27 (1981), 2. [http://www.lituanus.org/1981\\_2/81\\_2\\_01.htm](http://www.lituanus.org/1981_2/81_2_01.htm)

<sup>9</sup> D. Beauvois, *Wilno: polska stolica kulturalna zaboru rosyjskiego 1803-1832*, trans. by I. Kania, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław 2010, p. 271.

<sup>10</sup> D. Viliūnas, “O stanie zdrowia filozofii wileńskiej w pierwszej połowie wieku XIX”, in T. Kupś, D. Viliūnas and J. Usakiewicz (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 4, cit., p. 177.

<sup>11</sup> Kupś, “Konkurs wileński. Fakty i hipotezy”, in T. Kupś, D. Viliūnas and J. Usakiewicz (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 4, cit., p. 46.

The competition winner was Józef Gołuchowski, a Romantic philosopher who wrote a treatise in a Kantian spirit.

For the philosophy of Gołuchowski, see e.g. K. Filutowska, “German Philosophy in Vilnius in the Years 1803-1832 and the Origins of Polish Romanticism”, in *Studies in East European Thought* 72 (2020), pp. 19-30. [doi.org/10.1007/s11212-019-09340-7](https://doi.org/10.1007/s11212-019-09340-7)

And just as this [English] nation laid the first foundations for sound philosophy in the works of Bacon, Boyle, Newton, and Locke, so now, while bringing it to perfection, it keeps its rightness and glory in the works of Hume, Reid, Dugald Stewart, Campbell, and others. The principle of this philosophy is: neither to add too much importance to sensations nor to build the glory of reason upon illusions and exaggerated abstractions; furthermore, to extract intellectual cognition not from opinions and speculations but from certain and commonly acknowledged phenomena; likewise, to avoid words and expressions, whose significations would not be neat and exact. In this work, I have assumed both these principles and the project of the English school. However, I have tried to present them in my way to redress their deficiencies [...] There are also two principles in which, in this work, I contradict both the French school and the English school. The first is to carefully distinguish a proposition and a statement requiring proof from a phenomenon that should remain unproven, and in this way, to avoid the false arguments abounding in philosophical writings that struggle to prove the being of bodies. The second is to abstract the activities and products of the higher powers of the soul not from common and vulgar thoughts but from sciences and skills, where intellectual forces are at their peak<sup>12</sup>.

This balanced path of sound philosophy runs between two extremities: the obscure German school (Kant), which falls into legerdemain philosophy and scientific deception, and the French school (Condillac), which tends, partly due to misinterpretations, towards degenerating into materialism and thus towards undermining religion and social order<sup>13</sup>. These extremities, however, surprisingly meet on the common ground of the reductionist approach to the creativity of the human mind. In his "Przydatek do 'Pisma o filozofii'". Rzecz czytana na sesji literackiej Cesarskiego Wileńskiego Uniwersytetu dnia 15 maja 1820 ["Addendum to the Essay about Philosophy". Read at the literary session at Vilnius Imperial University on 15. May 1820], Śniadecki shows this in a parallel that is as lucid as may be outrageous for the historians of philosophy<sup>14</sup>. Here is the gist of his argument:

While Locke claims that innate ideas are superfluous since the mind arrives

<sup>12</sup> If not stated otherwise, all translations are mine. J. Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, PWN, Warszawa 1958, pp. 249-50.

<sup>13</sup> *Ibid.*, pp. 248-49.

<sup>14</sup> J. Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma Jana Śniadeckiego o filozofii Kanta*, ed. by T. Szopowicz, Drukarnia Uniwersytetu Jagiellońskiego, Kraków 1821, pp. 84-85.

For a modern edition, see: J. Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, *cit.*, p. 217.

from sense impressions to generalisations without them, Plato's position is the opposite.

Condillac adopts Locke's philosophy but reduces all the powers of the soul to sensations. Thus the soul as a craftsman merges with both its materials and art. Remarkably, a similar comparison is to be found in *Histoire comparée des systèmes de philosophie* by Joseph-Marie Degérando<sup>15</sup>.

Kant, by contrast, adopts the philosophy of Plato. Nevertheless, he distorts it by introducing synthetic a priori judgements. According to Śniadecki, Kant's reasoning runs like this: Experience shows us how things are but not that they could not be otherwise. Still, certainty constructs itself upon necessity and universality and, therefore, requires synthetic a priori judgements that rest on the a priori representations of space and time of supposedly Pythagorean origin<sup>16</sup>. However much Kant may deny this, these a priori representations are innate notions infused into the soul by God, and Kant himself is an innatist in disguise<sup>17</sup>.

The above juxtaposition is mutually illuminating. Misled by speculations, Condillac and Kant are metaphysicians in the pejorative sense as defined by Śniadecki<sup>18</sup>. Both depart from their masters by believing that all people reason in the same and thus mechanical way. In their view, one can equal Newton, Euler, or Raphael simply by following the established rules of a given discipline, and this makes the concepts of genius and creativity redundant<sup>19</sup>. Here, it bears noting that, for Condillac, these set rules work like automatic mathematical substitution<sup>20</sup>.

This course was unacceptable for Śniadecki as a mathematician and a rector

<sup>15</sup> Cf. J.-M. Degérando, *Histoire comparée des systèmes de philosophie, relativement aux principes des connaissances humaines*, Henrichs, Paris 1804, vol. 3, p. 501.

<sup>16</sup> Cf. A. Woroniecki, "Zależność Jana Śniadeckiego od J.-M. Degérando (Przyczynek do poznania stosunku Jana Śniadeckiego do Kanta)", in *Przegląd filozoficzny* 7 (1904), 4, p. 416.

<sup>17</sup> As Woroniecki rightly observes, this argument is similar to that of Degérando. Woroniecki, "Zależność Jana Śniadeckiego...", cit., pp. 415-16. Cf. Degérando, *Histoire comparée*, cit., vol. 3, p. 549, n. I.

<sup>18</sup> Śniadecki's distinction between general (speculative) and particular metaphysics is similar to d'Alembert's. However, for Śniadecki, particular metaphysics is not only the experimental natural philosophy of the soul but expands to the collections of principles of other disciplines. Cf. P.R. Anstey, "Locke and French Enlightenment Histories of Philosophy", in *Studi Lockiani. Ricerche sull'età moderna* 3 (2022), p. 18.

<sup>19</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 216.

<sup>20</sup> Cf. Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 34: "All mathematicians know the language of algebra, as used by Euler and de Lagrange, but they are not Eulers or de Lagranges".

responsible for the civic and moral education of the youth<sup>21</sup>. Consequently, as already indicated, he steered Vilnius academic philosophy away from Condillac in the direction of Locke. His policy is all the more remarkable considering that Condillac had authored a textbook on logic, written at the request of the Commission for National Education<sup>22</sup> and used at schools in the whole Vilnius district<sup>23</sup>.

The big picture just presented is clear-cut. However, it does not exhaust the complexity of Śniadecki's approach. I will, therefore, go into further detail.

To start with, Śniadecki's criticism of Condillac runs throughout his works while forming a consistent whole. Most importantly, Condillac infringes the second principle postulated by Śniadecki in the above passage, and out of this arise his other erroneous arguments. In an extensive note about the term 'analytical method' and its translation into Polish, included in a treatise *O języku narodowym w matematyce* [About the Choice of Vernacular Language in Mathematics] (Vilnius 1813)<sup>24</sup>, Śniadecki expands on this as follows.

First, he observes that the fundamental principles Condillac gives us in *La langue des calculs* are much too generalised to be efficient. In this respect, as

<sup>21</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 189.

<sup>22</sup> É.B. de Condillac, *La Logique ou les premiers développements de l'art de penser: ouvrage élémentaire, que le conseil préposé aux Écoles Palatines avoit demandé, & qu'il a honoré de son approbation*, Paris 1780; Polish translation by Jan Znoska:

First edition: Condillac, *Logika czyli pierwsze zasady sztuki myślenia*, dzieło elementarne... na żądanie bywszej Komisji Edukacyjnej Narodowej dla szkół publicznych napisane i od niej aprobowane, a teraz z przydatkiem niektórych objaśnień i przypisów przez Jana Znoskę z francuskiego na polski język przełożone, w Drukarni Akademickiej, Wilno 1802. Dolnośląska Biblioteka Cyfrowa, <https://www.dbc.wroc.pl/dlibra/doccontent?id=7966>

Second edition: W Drukarni Diecezjalnej XX. Misyonarzów, Wilno 1808. Śląska Biblioteka Cyfrowa. <https://www.sbc.org.pl/dlibra/publication/3760/edition/3702/content>

Third edition: W drukarni A. Marcinowskiego, Wilno 1819.

The Commission for National Education (Komisja Edukacji Narodowej) was established on 14. October 1773. For more information, see e.g.: J. A Račkauskas, "The First National System of Education in Europe: The Commission for National Education of the Kingdom of Poland and the Grand Duchy of Lithuania (1773-1794)", in *Lituanus. Lithuanian Quarterly Journal of Arts and Sciences* 14 (1968), 4. [http://www.lituanus.org/1968/68\\_4\\_01Rackauskas.html](http://www.lituanus.org/1968/68_4_01Rackauskas.html)

In his "Filozofia umysłu ludzkiego", Śniadecki gives a historical example of the association of ideas: the design of King Stanislaw August to enlighten the nation immediately evokes, among other things, the establishment of KEN.

Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., p. 327.

<sup>23</sup> Kupś, "Konkurs wileński. Fakty i hipotezy", in T. Kupś, D. Viliūnas and J. Usakiewicz (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 4, cit., p. 97.

<sup>24</sup> J. Śniadecki, "O języku narodowym w matematyce", in *Pisma filozoficzne*, vol. 1, PWN, Warszawa 1958, pp. 48-52.



already noted, Condillac resembles metaphysicians, Jacks of all trades, masters of none, who, deficient in specialised mathematical or other knowledge, base their speculations ('exaggerations') on superficial common opinions.

Secondly, Śniadecki briefly examines these principles.

His point of departure is the statement: "All languages are analytical methods, and all analytical methods are languages"<sup>25</sup>. It follows from this that mathematics is nothing but language, language is nothing but an analytical method, and the analytical method is the fount of all knowledge and inventions<sup>26</sup>. However, Śniadecki denies it to be true, as there exist hidden algebraic pitfalls alien to assumed transparency, and not every problem is solvable by the analytical method.

In the same manner, Śniadecki dismantles three other rules<sup>27</sup>.

The first says that simple things are the easiest to perceive and invent. More specifically, the association of ten fingers with ten numerical units makes it evident that every finger can signify a different unit digit. Supposing this rule holds, everybody should be capable of discovering all mathematical truths and writing the same way as Condillac in *La langue des calculs*. However, this is not the case. Thus, the argument lapses into absurdity.

The second: invention is the perception of what we already knew but did not understand. According to Śniadecki, no mathematician would dare to claim that simply-worded explanations suffice to discover things.

The third: our reasoning proceeds from identity to identity, and the art of invention functions like a simple mechanism, e.g., that of the above-mentioned mathematical substitution.

Departing from Condillac, Śniadecki gives his own definition of analysis in the treatise "O rozumowaniu rachunkowym" ["On Calculus Reasoning"] (Vilnius 1818)<sup>28</sup>.

It bears noting that he attached much importance to this work. In manuscript excerpts from *Elements of the Philosophy of the Human Mind* by Stewart, written in Polish, Śniadecki insists several times that his critical dissection of arguments adduced by Condillac precedes and surpasses Stewart<sup>29</sup>. Equally

<sup>25</sup> É.B. de Condillac, *La Langue des calculs*, ed. by S. Auroux, A.-M. Chouillet, Presses universitaires de Lille, Lille 1981, p. 1.

<sup>26</sup> Śniadecki, "O języku narodowym w matematyce", in *Pisma filozoficzne*, vol. 1, cit., p. 49.

<sup>27</sup> *Ibid.*, pp. 50-52.

<sup>28</sup> Śniadecki, "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., pp. 133-37.

<sup>29</sup> Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 15: about Condillac's second exaggeration, *i.e.*, the claim that the mathematical sciences own everything to their



remarkable is the chapter "Nauki matematyczne" ["Mathematical Sciences"] from "Filozofia umysłu ludzkiego". Here, Śniadecki considers geometrical drawings and algebraic symbols as iconic aids that allow one to achieve the rigorosity of generalised reasoning and refers the reader to "O rozumowaniu rachunkowym" for details<sup>30</sup>.

The core of the analysis is, for Śniadecki, symbolic notation, *i.e.*, the analytical language unknown to the ancients, and its algorithms<sup>31</sup>. Remarkably, analytical language shines through its generality and brevity. Quantities and numbers abstracted from things disburden and speed up memory while garrulous common languages overload and slow it down<sup>32</sup>. Another crucial point is that,

phraseology and about Leibniz's *ars combinatoria*: "The author [Stewart] is deliberating about this visionary thought, makes objections and remarks, which are not as well presented as that what I said in my "Rozumowaniu rachunkowym". I have better explained all this. Syllogistic form possibly inspired Kant to introduce into thoughts form, upon which he erroneously built everything. That is why he did not connect the force of reasoning to the interior power and the fundamental reason but attached it to the superficial figure." Cf. D. Stewart, "Elements of the Philosophy of the Human Mind", vol. 2, ed. by Sir W. Hamilton, in *The Collected Works of Dugald Stewart*, vol. 3, Constable, Edinburgh 1854, pp. 104 ff.: "[SUBSECTION] 111. [...] Visionary Theories of some Logicians, occasioned by their inattention to the Essential Distinction between Mathematics and other Sciences. In a passage already quoted from Degérando, he takes notice of what he justly calls a rash assertion of Condillac, 'That mathematics possess no advantage over other sciences but what they derive from a better phraseology, and that all of them might attain to the same characters of simplicity and of certainty, if we knew how to give them signs equally perfect.'" Śniadecki, *The collection of manuscript lectures...*, 1511/1/26, vol. 4, cit., p. 17: "Finally, he [Stewart] analyses, refutes, and criticises Condillac's [concept] of analysis and is nearly in agreement with what I have already written about Condillac. I should work on this material according to the principles I outlined in 'O rozumowaniu rachunkowym'". Cf. Stewart, "Elements of the Philosophy of the Human Mind", vol. 2, cit., p. 272: "[SUBSECTION] 11. - Critical Remarks on the vague Use, among Modern Writers, of the Terms Analysis and Synthesis".

<sup>30</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., p. 340. Cf. Śniadecki about *demonstratio ocularis*, *ibid.*, pp. 339-40: "These first principles and foundations of geometry and calculus are simple and so evident that it is enough to know the significations of words to see their certainty and clarity that nearly glares on the eyes. There are no intricacies, no doubts in their concepts or language. It explains why proofs and conclusions drawn thence through a logical process are called *demonstration*, *i.e.*, exposing the truth to the eye."

<sup>31</sup> About Vieta's achievements as a turning point in the development of mathematics, see Śniadecki, *The collection of manuscript lectures...*, 1511/1/26, vol. 4, cit., p. 11. Cf. D. Stewart, "Elements of the Philosophy of the Human Mind", vol. 1, ed. by Sir W. Hamilton, in *The Collected Works of Dugald Stewart*, vol. 2, Constable, Edinburgh 1854, p. 204:

"The difference between the intellectual processes of the vulgar and of the philosopher, is perfectly analogous to that between the two states of the algebraical art before and after the time of Vieta; the general terms which are used in the various sciences, giving to those who can employ them with correctness and dexterity, the same sort of advantage over the uncultivated sagacity of the bulk of mankind, which the expert algebraist possesses over the arithmetical accountant."

<sup>32</sup> Śniadecki, "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., pp. 120-21.

while, e.g., in chemistry, it is correct to say that analysis is decomposition, in mathematics, it is not. Mathematical analysis usually begins with composition and ends with decomposition. To put it more precisely, it composes knowns with unknowns to express them in analytical language, and by distinguishing between knowns and unknowns, it decomposes compound expressions<sup>33</sup>.

It is, of course, the point on which Śniadecki disagrees with Condillac. The latter understands analysis generally, but the former does not. Nonetheless, Śniadecki has a broader target in view: Condillac's reduction of thought to mere sensation. His reason is that this reductionist approach involves destructive consequences for dreamy young minds and algebra as a discipline. Here appears David Hume – an ally nearly absent in the big picture that focuses on the opposition between the French and the German school.

The gist of Hume's position, to which Śniadecki refers, is that "[t]he most lively thought is still inferior to the dullest sensation"<sup>34</sup>, *i.e.*, vagueness increases with generality. It reinforces Śniadecki's claim that the more abstract metaphysics becomes, the more it slips into obscurity and insanity<sup>35</sup>. In his refutation of Condillac, Śniadecki assumes that it would be extremely difficult or impossible to construct a tenable proof for the identity of thought with sensation and, consequently, confines himself to a probabilistic argument. However, he takes for granted that the sense perceptions of things are more vivid and clear than their ideas. Therefore, our blurred thoughts can regain their lucidity only by being brought back to sense perceptions. And this precisely is what algebraic symbols do. Thus, contrary to Condillac's opinion, they turn out to be the brilliant invention of man and a work of art rather than nature.

While both Condillac and Śniadecki describe the clarity of algebraic notation in visual terms, only the latter considers it the mathematical counterpart of rhetorical *enargeia*, whose goal was, as Travis D. Williams puts it, to activate creative imagination or thinking<sup>36</sup>. According to Śniadecki, symbolic notation demands intense attention and constant reasoning from its readers. If not sufficiently engaged, they degrade themselves to common reckoners that do calculations mechanically, *i.e.*, without understanding the underlying mathematics.

In this, there is a crucial epistemic difference. While Condillac's peasant,

<sup>33</sup> *Ibid.*, pp. 134-39.

<sup>34</sup> D. Hume, *An Enquiry concerning Human Understanding*, ed. by P. Millican, Oxford University Press, Oxford 2007, p. 17.

<sup>35</sup> Śniadecki, "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., pp. 118-19.

<sup>36</sup> T.D. Williams, "Mathematical *Enargeia*: The Rhetoric of Early Modern Mathematical Notation", in *Rhetorica* 34 (2016), 2, pp. 163-211. <https://doi.org/10.1525/rh.2016.34.2.163>

guided by analogy, counts more naturally than cultivated mathematicians, forgetful of their origins, Śniadecki's illiterate rustic may have the talent of a Copernicus or an Ignacy Krasicki, the "Prince of Poets", and never discover it<sup>37</sup>. The reason is that while both Condillac and Śniadecki reject innate ideas, just as Locke does, Śniadecki is closer to Locke by granting the mind natural abilities<sup>38</sup>. Condillac, by contrast, replaces them with mere analogical thinking but has to pay the price for it. Namely, he vacillates between the conception of metaphysics as the foundation of a specific discipline (e.g., mathematical metaphysics) and the above concept of metaphysics as the vague and elusive foundation of everything<sup>39</sup>.

At this point, the question arises of what epistemically intrinsic motives lay at the root of Śniadecki's speculation-hostile approach. To shed light upon it, let us analyse a passage from *Filozofia umysłu ludzkiego*, partly dependent on Chapter VII of *Essays on the Intellectual Powers of Man* by Thomas Reid<sup>40</sup>. Here Śniadecki discusses the problem of the interaction between the body and the soul.

While calling the first concepts of sense impressions forms or shadows, Aristotle resorted to metaphorical language, and so did metaphysicians after him. More precisely, they imagined the soul as closed in a cave, seeing mere shadows of things, or compared it to a man in a darkroom with a small hole resembling a camera obscura. It is worth noting that, in the manuscript, Śniadecki adds

<sup>37</sup> Condillac, *La Langue des calculs*, cit., p. 38.

<sup>38</sup> See, e.g.: E. McNiven Hine, *A Critical Study of Condillac's "Traité des Systèmes"*, Springer, Dordrecht 1979, p. 184.

<sup>39</sup> For Śniadecki's definition of mathematical metaphysics, see: "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., pp. 127-28: "What, in my opinion, usually bears the name of mathematical metaphysics, i.e., a broad and general view of the whole discipline, consists of tracing such fundamental truths in all the branches of pure mathematics, putting them together, and connecting to the one truth, which rules over the whole realm of this knowledge. Nevertheless, it [mathematical metaphysics] should involve nothing except what calculus contains or what finds its foundation in it. To mix our phantasms or the vague principles of supposed philosophical metaphysics into this exact outlook is to fake science and turn this haughty capital of truth and evidence into a den of ignorance and dreams." Among these fundamental truths, Śniadecki enumerates, e.g., the principle of de Lagrange: 'new functions can be derived from each function', the algebraic principle: 'treating unknown quantities as known ones and connecting them'.

<sup>40</sup> For the manuscript draft of this passage, see: Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 120. Th. Reid, *Essays on the Intellectual Powers of Man: A Critical Edition*, ed. by D.R. Brookes, Edinburgh University Press, Edinburgh 2002, pp. 104-12. In the manuscript notes, Śniadecki also refers to Stewart's comments on Chapter VII of *Essays on the Intellectual Powers of Man* by Reid. Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 10. Cf. Stewart, "Elements of the Philosophy of the Human Mind", vol. 1, cit., pp. 93-96.

more detail: “Later metaphysicians, among them Locke”, which refers to the well-known passage of the *Essay* cited by Reid: “For, methinks, the Understanding is not much unlike a Closet wholly shut from light, with only some little openings left, to let in external visible Resemblances, or Ideas of things without;”<sup>41</sup>.

For the present, it is crucial to observe shifts in Śniadecki’s argument when compared to Reid’s. In Reid, it is Plato and not Aristotle who uses metaphors. In search of precision, Reid puts Plato’s thoughts about the relationship between the ‘thinking principle’ and the external world into Aristotle’s non-figurative terms and thus explains away the former’s ‘allegorical genius’. Śniadecki, by contrast, insists on Aristotle and his followers not being literal. In Śniadecki’s view, Aristotle’s and Locke’s hypothesis on the mechanism of understanding cannot aspire to be a philosophical, *i.e.*, rigorous argument (‘tłumaczenie filozoficzne’). It is beyond us to grasp how the soul conceives things that trigger the senses, and the concept of images as intermediaries between sense organs and the soul does not help much. Nonetheless, visual language, by being more compatible with the capacities of the human mind, may serve as a sensual explanatory tool (‘zmysłowe objaśnienie’) for intellectual phenomena. This line of thought justifies why we can count Śniadecki among the people about whom Reid writes:

I have met with persons professing no slight acquaintance with the *Essay* on human understanding, who maintained, that the word *idea*, wherever it occurs, means nothing more than thought; and that where he speaks of ideas as images in the mind, and as objects of thought, he is not to be understood as speaking properly, but figuratively or analogically<sup>42</sup>.

Despite their deficient rigorosity, such terms as imaginations remind us of algebraic symbols that visualise abstract proofs and thus make them lucid. (as spelt out in “O rozumowaniu rachunkowym”). This notwithstanding, the sense in which Śniadecki calls Locke a metaphysician here is pejorative. Since the activities of the soul are incommensurable with the activities of the body, the latter cannot explain the former. Locke, however, neglects this epistemic gap, and it is why Śniadecki plays Hume against him.

Śniadecki substantiates this by pointing out that the powers and operations of the human mind are accessible only through external or internal experience a

<sup>41</sup> J. Locke, *An Essay concerning Human Understanding*, ed. by P. H. Nidditch, Clarendon, Oxford 1975, II.xi.17, p. 163. Cf. Reid, *Essays on the Intellectual Powers of Man*, cit., p. 105.

<sup>42</sup> Reid, *Essays on the Intellectual Powers of Man*, cit., p. 136.

posteriori. External experience means the observation that focuses on external things, in this case, the products of the mind. By contrast, interior experience, in other words, reflection, focuses on what is happening inside the mind<sup>43</sup>.

This concept of experience a posteriori is part of a larger project: experimental philosophy founded on the laws of nature.

The first causes are beyond our reach, so claims Śniadecki. Therefore, principles based on speculation, such as the Cartesian immutability of God, turn out useless in search of the second causes, *i.e.*, the laws of nature<sup>44</sup>. The only safe way for the human mind is to proceed by observations, experiments, and reasoning armed with mathematics<sup>45</sup>. This fundamental gulf between the first and the second causes explains why it is only the conditions of sensation and thought (e.g., neither sense perception nor thought is possible without senses) and not their nature that we can subject to investigation. What arises from the above theory of causation is Śniadecki's criticism of Hume, which is also crucial for complementing the big picture.

More specifically, Śniadecki finds fault with Hume from the angle of vision

<sup>43</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., p. 277.

Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., pp. 238-39.

<sup>44</sup> P.R. Anstey, "Descartes on Laws of Nature as Principles", forthcoming. Cf. Descartes, "Principia philosophiae", in *Oeuvres de Descartes*, ed. by Ch. Adam & P. Tannery, vol. VIII, L. Cerf, Paris 1905, p. 62: "Atque ex hac eadem immutabilitate Dei, regulae quaedam five leges naturae cognosci possunt, quae sunt causae secundariae ac particulares diversorum morum, quos in singulis corporibus advertimus". Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., pp. 263-64. J. Śniadecki, "O filozofii", in *Pisma filozoficzne*, vol. 2, cit., p. 167: "The first principle of sound philosophy is not to search for things forbidden to human understanding and what has to remain an eternal mystery to it. Such is the status of the first causes, the first and most remote foundation of our knowledge." Subtle metaphysicians unproductively brooded over the ultimate causes of things because, as Śniadecki observes ("Rozprawa o nauk matematycznych początku, znaczeniu i wpływie na oświecenie publiczne", in *Pisma filozoficzne*, vol. 1, cit., pp. 15-16): "What we call 'give reason to' for a case or an experiment means only deriving one effect from the other more general effect. The more the connection of one effect extends, the better and more fundamental *physical* cause it is". About Descartes, as seduced by fierce imagination, see: *Ibid.*, p. 22.

<sup>45</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., pp. 350-51: "[...] with the aid of experiments, we can explain and extend natural phenomena perceived through observation or by chance. We can even derive and show their laws. However, we cannot reach their deep and mysterious cause as embodied in primary forces except by the power of reason." Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 190: "Every power of the soul and the body has its principles of action. But discovering these principles is the work and invention of man that considers the course, the activity, and the ways of a given power. These principles are certain and eternal not because they are infused by nature but because they are grounded on truths discovered by man. In the physical world, everything happens according to infallible laws, at which man arrives through observation and experience while reflecting upon them and applying them, *i.e.*, making use of his intellectual powers."

of the mathematician by selectively referring to some arguments from *Über die Wahrscheinlichkeit* [*On Probability*] by Moses Mendelssohn<sup>46</sup>. In the latter's view, Hume's doubts about the principle that there is no effect without cause find no justification. Given two phenomena so connected that one follows another, we reason that the latter is the cause of the former. If the same experience or experiment repeatedly gives the same result, probability increases. Consequently, the infinite number of experiments guarantees certainty<sup>47</sup>. It bears highlighting that the high degree of probability confirmed by specific cases is what English philosophers call 'faith'<sup>48</sup>.

What matters here is that Śniadecki, too, has written a treatise on probability ("O rachunku losów", Vilnius 1817)<sup>49</sup>, and its content suggests that he must have been aware of differences between himself and Mendelssohn but downplayed them in his critique of Hume. Let us flesh this out.

While Mendelssohn underlines "the uncommon fruitfulness of Wolffian definitions" contrasted to Bernoulli's<sup>50</sup>, Śniadecki omits Christian Wolff. The possible reason is that, as Edith Dudley Sylla shows, "Wolff's definition may put a greater emphasis on the ties between subject and predicate in a proposition to be known, in the sense of real-world causality, than do the definitions of Gravesande and Bernoulli"<sup>51</sup>. In other words, Wolff focused more on the epistemological aspects of probability, and so did Mendelssohn lacking confidence in his mathematical skills. For example, he made unfounded but, in his view, rational choices, *i.e.*, ascribed a probability of one-half to the causal and one-half to the non-causal connection between two given events after the first observation<sup>52</sup>. Moreover, in his argument against Hume's scepticism, Mendelssohn passed in silence over Bernoulli's weak law of large numbers. Śniadecki, by contrast, explains its utility at least in qualitative terms<sup>53</sup>.

To sum up, Śniadecki was too fine a mathematician to overlook these weak-

<sup>46</sup> M. Mendelssohn, "Über die Wahrscheinlichkeit", in *Philosophische Schriften*, Ch.F. Voß, Berlin 1771, part 2, pp. 260 ff.; M. Mendelssohn, "On Probability", in *Philosophical Writings*, trans. and ed. by D.O. Dahlstrom, Cambridge University Press, Cambridge 1997, pp. 241 ff.

<sup>47</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., p. 365.

<sup>48</sup> *Ibid.*, pp. 266-67.

<sup>49</sup> Śniadecki, "O rachunku losów", in *Pisma filozoficzne*, vol. 1, cit., pp. 99-116.

<sup>50</sup> Mendelssohn, "On Probability", cit., p. 235. Cf. Ch. Wolff, *Philosophia rationalis sive logica*, Renger, Frankfurt 1828, Pars II, sectio I, caput III: De certo, incerto atque probabili, pp. 578-93.

<sup>51</sup> E.D. Sylla, "Mendelssohn, Wolff, and Bernoulli on Probability", in *Moses Mendelssohn's Metaphysics and Aesthetics*, ed. by R. Munk, Springer, Dordrecht 2011, p. 46.

<sup>52</sup> Sylla, "Mendelssohn, Wolff, and Bernoulli on Probability", cit., p. 52.

<sup>53</sup> Śniadecki, "O rachunku losów", cit., pp. 112-14.

nesses. Nevertheless, he takes them in his stride to undermine Hume's argument on causation.

In this respect, Hume seems to be an unconvincing sceptic, and Śniadecki classifies him accordingly in the manuscript notes that show a more nuanced picture of the English Lockeanism:

The English school abided and still abides by the principles of Bacon and Newton. Locke described the powers and activities of the soul, overturned Platonists' false opinions about innate notions, and showed us how the human mind arrives at general concepts. Furthermore, he pointed out the necessity of language and its power taken together with both merits and flaws, put into order the sciences and human knowledge, and, finally, he taught us what is going on in the world of the mind and the realm of thinking.

Some followers of Locke, such as Hartley, Berkeley, and Hume, seduced by abstractions, went beyond the limits of human apprehension, and wishing to explain what is unexplainable have fallen into the reveries and weirdness of ancient idealists and sceptics.

Others, being more reasonable, stuck to the teachings of Locke, corrected and rectified his thoughts in some places, more orderly classified the intellectual powers, and endeavoured to describe the advantages and drawbacks of each while holding to the principle that just as the material world is to be known only through facts and sense phenomena, so too is the realm of the mind<sup>54</sup>.

All their deficiencies notwithstanding, Locke, Hume, and Condillac were appropriate figures of reference for Śniadecki in his battle against Kant's transcendentalism, *i.e.*, in the conflict between generally non-speculative and speculative approaches. Accordingly, the picture complicates even more.

As stated above, Kant and Condillac made a similar assumption that the human mind lacks creativity. However, this is just one part of the story. Another is confusing as it tells us that the symmetry: Locke-Condillac versus Plato-Kant only works because, in this particular argument, Śniadecki confines himself to a priori synthetic judgements. Remarkably, Śniadecki was well aware of this. In his manuscript notes, we find a contrastive comparison between Locke's and Kant's concepts of imagination<sup>55</sup>. In Locke, imagination builds its images, ideals, and plans directly upon data acquired by the senses or imitates them. Kant, on the contrary, separates imagination from sense images conceived as mere appearances and restricts it to the domain of pure reason,

<sup>54</sup> Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 181.

<sup>55</sup> *Ibid.*, p. 78.



which Śniadecki considers a strange and risky move. The questions on the margin, e.g., “How has Kant arrived at this?”, with excerpts from *Kritik der reinen Vernunft* in German, reveal Śniadecki’s thought process: hesitations and struggles that have finally prompted him to strike through the above comparison. As a result, in a printed response to the critical review in *Pamiętnik Lwowski [Lviv Journal]*<sup>56</sup>, Śniadecki carries out his critique against the fragmentation of imagination. ‘Imaginatio’ that, as the most forceful and vivid power of the human mind, produces works of art feeds itself on all the products of the soul<sup>57</sup>. Kant, however, artificially splits it into the empirical part conceived as a passive receptacle and the pure one confined to understanding.

To put it in a broader context, not only imagination but Kant’s entire system of thought is on the verge of collapse when confronted with the objections of experimental psychologists:

Do not the powers of the soul, taken from Plato and enumerated by Kant together with the latter’s intuitions, concepts, and ideas, need proof if Locke, Condillac, and all so-called *experimental psychologists* deny them?<sup>58</sup>

It is worth noting that Śniadecki intentionally uses the term ‘experimental’ and not ‘empirical’. The reason is that, for Śniadecki, ‘empirical’ is unequivocally negative in two senses: as a traditional term for a ‘bad physician’ that entirely relies on experience and as a Kantian term.

As for the first sense, in the manuscript excerpts from Stewart concerning d’Alembert, we find the remark that experience in medicine differs from experiments in physics. This art cannot belong to experimental physics. Therefore, it yields the classes of empirics, theoreticians, and prudent doctors, but not experimentalists<sup>59</sup>.

As for the second sense, in the manuscript version of “O filozofii”, Śniadecki sends packing the a priori foundations of knowledge and, at a stroke, dismisses the term: ‘empirical’, as borrowed by Kant from Wolff. More specifically, he stigmatises it as “humiliating, inappropriate and nonsensical since it refers to

<sup>56</sup> Cf. “Uwagi nad pismem Jana Śniadeckiego ‘O filozofii’”, in *Pamiętnik Lwowski* 2 (1819), 10, pp. 296-309.

<sup>57</sup> Śniadecki, “Przydatek do ‘Pisma o filozofii’”, in *Pisma filozoficzne*, vol. 2, cit., p. 213.

<sup>58</sup> *Ibid.*, p. 213.

<sup>59</sup> Śniadecki, *The collection of manuscript lectures...*, 1511/1/26, vol. 4, cit., p. 18. Cf. Stewart, “Elements of the Philosophy of the Human Mind”, vol. 2, cit., pp. 326-27. Cf. J. Le Rond d’Alembert, *Essai sur les éléments de philosophie*, ed. by R.N. Schwab, 2nd reprint of the edition of 1805 (Paris), G. Olms, Hildesheim 2003, p. 95.

a mountebank who does not stick to the customary rules of his art<sup>60</sup>. This word follows the false opinion that only a priori reasoning counts as genuine inference<sup>61</sup>. But to deprive reason of knowledge, as gained through experience, or question this knowledge as empiricism means demolishing all the foundations of commonsense<sup>62</sup>.

These expressive connotations of the word 'empirical' reveal deep sarcasm behind the confession of metaphysical sins Śniadecki addresses to the readers of "Przydatek do pisma 'O filozofii'"<sup>63</sup>. The transgressions are three: "First, I confess that I am searching for". Here, Śniadecki contrasts Kantian obscurity with carefully examined objects and precise thinking.

"Secondly, I confess that, from Kant's point of view, I am a materialist, my faith in immaterial beings notwithstanding". Śniadecki heaps this calumny on himself by claiming that sense data, and not pure reason, stand at the origin of the most abstract thoughts.

The climax of irony comes with the third trespass: "I am an empiricist since I neither know nor can I notice any thoughts, concepts or truths inborn in the human mind". And this is so despite Śniadecki's reservation that sense impressions, observations, and experiments are only the raw material of science and not science itself, which resorts to the mind to find connections between them and formulate general thoughts.

Here, Śniadecki dismantles Kant's distortive conceptual framework: it works like a hair-splitting machine that grinds out a long procession of dazzling new words for old things. It is in this context that he cites Degérando: "Frappé de la richesse de la broderie, on n'aperçoit pas les défauts du fond"<sup>64</sup>. This curiously reminds one of Degérando's defence of Locke, on whom the Kantian school unjustly laid blame for the empiricist fixation on single sense impressions<sup>65</sup>. Degérando points out that some German writers used to confuse 'empiricism' with 'experimental philosophy' ('la philosophie d'expérience') while "l'empirisme ne voit que l'extérieur du temple de la na-

<sup>60</sup> Cf. M.A. Katritzky, "Marketing Medicine: The Image of the Early Modern Mountebank", in *Renaissance Studies* 15 (2001), 2, pp. 121-53. <http://www.jstor.org/stable/24438804>.

<sup>61</sup> Śniadecki, The collection of manuscript lectures..., 1511/1/26, vol. 4, cit., p. 60.

<sup>62</sup> J. Śniadecki, "O metafizyce", in *Pisma filozoficzne*, vol. 2, cit., p. 162.

<sup>63</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., pp. 188-89.

<sup>64</sup> J.M. Degérando, *Histoire comparée des systèmes de philosophie, relativement aux principes des connaissances humaines*, Henrichs, Paris 1804, vol. 3, p. 546.

Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 218.

<sup>65</sup> Degérando, *Histoire comparée*, cit., vol. 3, p. 544.

ture; l'expérience pénètre dans son sanctuaire"<sup>66</sup>.

However close this resemblance may appear, it hides crucial dissimilarities between Śniadecki's and Degerando's lines of thought.

First, Degérando tells a long story about empiricism as undermining 'philosophie d'expérience' since antiquity while writing into it Hume and, with some qualification, Condillac<sup>67</sup>. In addition, he views Hume's relative scepticism, as he calls it, as the most elaborated form of empiricism<sup>68</sup>. Śniadecki, on the contrary, labels Hume neither an empiricist nor a sceptic in a Kantian sense<sup>69</sup>.

Secondly, they differ in the assessment of Kant's transcendentalism. As Sylvia Manzo shows, Degérando appreciates that Kant sheds light on the genuine needs of philosophy and, to meet them, seeks an eclectic middle way between extremities: dogmatism and scepticism, rationalism and empiricism, idealism and materialism<sup>70</sup>. Śniadecki, on the contrary, dismisses Kant's speculations as mere prolegomena to psychology and ethics<sup>71</sup>.

Although the Kantian spirit of reconciliation animates Degérando, it is modern experimental philosophy and not transcendentalism he chooses as a remedy to sectarianism. In his view, Locke's arguments are not strong enough to counter empiricism, and this task falls on the shoulders of the improved post-Kantian 'philosophie d'expérience'.

Śniadecki respects Kant as an exemplary virtuous sage but mistrusts his philosophy<sup>72</sup>. Consequently, he dismisses Kantian intermediaries and adopts Lockeanism enriched in method due to scientific discoveries.

Degérando and Śniadecki consider their choices as the route to progress in philosophy.

Albeit the two men have taken different paths, they meet again at the point where they question the Kantian search for the justification of knowledge.

According to Degérando, modern German philosophers that, dismissive of all their predecessors, endeavour to provide the first and last word for the foundation of knowledge end up in infinite foundational regress. It is precisely

<sup>66</sup> Ibid., vol. 2, pp. 359-60, n. I.

<sup>67</sup> Ibid., vol. 3, p. 444.

<sup>68</sup> S. Manzo, "Historiographical Approaches on Experience and Empiricism in the Early Nineteenth-Century: Degérando and Tennemann", in *Perspectives on Science* 27 (2019), 5, p. 662.

<sup>69</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 231.

<sup>70</sup> Manzo, "Historiographical Approaches on Experience and Empiricism...", cit., pp. 668-72.

Degérando, *Histoire comparée*, cit., vol. 3, pp. 550-51.

<sup>71</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 238.

<sup>72</sup> Ibid., p. 242.

this pitfall that Kant falls in. Supposing that the sense data are not primitive facts and lack foundation, their justification by a priori principles must be either dogmatic or hypothetical. If the first is the case, Kant commits the fault he reprehends. If the second, the abyss of regress opens up again. The solution Degérando offers consists of accepting some undemonstrable truths<sup>73</sup>.

In a similar, though more picturesque way, Śniadecki compares Kant's faulty argumentation to a bridge built above the impassable gulf between the primary and second causes. Curiously, it resembles Tasso's architecture of Armida, worthy of an eleventh-century witch and not an eighteenth-century philosopher. The one end of the bridge are appearances, and the other is absolutum, *i.e.*, zero, as Śniadecki puts it with the disgust of a mathematician<sup>74</sup>.

The complex interplay between the terms 'experimental' and 'empiricist' in Śniadecki's writings shows that his dependence on Degérando was more nuanced than Śniadecki scholars, among others, Adam Woroniecki and Dalius Viliūnas thought<sup>75</sup>. At the same time, it takes us to the next part of the essay: Śniadecki's afterlife as a Lockean empiricist.

### 3. *Reception of Śniadecki's experimental philosophy: Vasilij Petrovich Androsov (1803-1841) and Julian Ochorowicz (1850-1917)*

The reception of the writings by the influential rector of Vilnius University is a vast subject. Thus, I will confine myself to two cases: one contemporary to Śniadecki and one positivist. My goal is to illustrate the terminological comedy of errors where Śniadecki's experimental philosophy plays a leading role.

Let us set the scene. In 1823, Mikhail T. Kachenovskij, professor of Moscow University and the editor-in-chief of *Vestnik Evropy* [*The Messenger of Europe*], published very critical "Замечания на прибавление к статье о Философии" ["Comments on the 'Addendum to the Essay about Philosophy'"] by Vasilij P. Androsov, a student at his university at the time and a future economist and

<sup>73</sup> Degérando, *Histoire comparée*, cit., vol. 3, pp. 406-7, note I.

<sup>74</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 214.

<sup>75</sup> D. Viliūnas refers to A. Woroniecki's essay here: Viliūnas, "O stanie zdrowia filozofii wileńskiej w pierwszej połowie wieku XIX", in T. Kupś, D. Viliūnas and J. Usakiewicz (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 4, cit., pp. 179-80. Woroniecki, "Zależność Jana Śniadeckiego od J.-M. Degérando", cit., *passim*.

statistician<sup>76</sup>. Remarkably, he did so despite his sympathy with Śniadecki<sup>77</sup>.

Modern scholars, such as Thomas Nemeth and Alexei Krouglov, agree that Androsov possessed an excellent command of Kantian philosophy, unusual for Russian intellectuals of that time<sup>78</sup>. Therefore, not surprisingly, he could not stand either the tone of Śniadecki's reprimand or his arguments, in particular, because Śniadecki reduced transcendentalism to subtle but imitative patchwork philosophy. However, the picture is more complicated than this suggests since, in a way, Śniadecki and Androsov talk past each other.

To begin with, Androsov rightly observes that Śniadecki has misinterpreted the Kantian concepts of time and space as innate. In addition, he argues that it would suffice to read "Transcendental Aesthetics" to understand them correctly<sup>79</sup>. Here, however, Androsov misses his target. Contrary to his opinion, Śniadecki did read it carefully, which notwithstanding, he saw eye-to-eye with Degérando on Kant's having just disowned his latent innatism. Importantly, in Degérando's and Śniadecki's approach, innate ideas (Śniadecki's *cognitiones virtuales*) conceived, like in Descartes, as the modes of thinking bore some resemblance to Kantian a priori intuitions<sup>80</sup>. All this proves that Androsov did not become familiar with Degérando's interpretation. Nevertheless, this is not the end of the story.

Since a priori forms are one head of the bridge, and its construction is, in Śniadecki's view, epistemologically shaky, it does not surprise that the differences between the two men go deeper beyond specific concepts to the

<sup>76</sup> В. Андросов, "Замечания на прибавление к статье о Философии", in Вестник Европы [*Vestnik Evropy*] 128 (1823), 3-4, pp. 171-92. <https://viewer.rusneb.ru/ru/rsl60000084977?page=171&rotate=0&theme=white>

For the modern edition of Androsov's article, see: В. Андросов, "Замечания на прибавление к статье о философии" ["Zamechanija na pribavlenie k sta'e o filozofii"], in Кантовский сборник 4 (1979), 1, pp. 121-39. [https://journals.kantiana.ru/kant\\_collection/3839/10555/](https://journals.kantiana.ru/kant_collection/3839/10555/). For the Polish translation, see: W.P. Androsow, "Przydatek do pisma o filozofii", trans. by A. Kondrat, in A.N. Krouglov, T. Kupś, A. Kondrat, R. Specht (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 3: *Polemiki z Janem Śniadeckim*, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2016, pp. 109-34.

<sup>77</sup> Th. Nemeth, *Kant in Imperial Russia*, Springer, Cham, Switzerland 2017, p. 35.

<sup>78</sup> A.N. Krouglov, "Jan Śniadecki i polemika wokół Kanta w rosyjskiej prasie początku XIX wieku", in A.N. Krouglov, T. Kupś, A. Kondrat, R. Specht (eds.), *Recepcja filozofii Immanuela Kanta w filozofii polskiej w początkach XIX wieku*, part 3: *Polemiki z Janem Śniadeckim*, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2016, pp. 32-36. Nemeth, *Kant in Imperial Russia*, cit., p. 36.

<sup>79</sup> Андросов, "Замечания на прибавление к статье о философии" ["Zamechanija na pribavlenie k sta'e o filozofii"], in Кантовский сборник 4 (1979), 1, p. 127.

<sup>80</sup> Cf. Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 198: "Neither Plato nor Descartes assumed innate ideas themselves but only their seeds".

fundamental question about the justification of knowledge.

At the same time, Mr Śniadecki praises so-called experimental knowledge (опытные знания). This effort is in vain. Neither Kant nor the greatest castle-builders of rationalists have ever had doubts that sensations are the first means (первые средства) of our knowledge, with the only difference that empiricists (Эмпиристы) consider means to be a cause. All that really exists, so they claim, appears in a certain way and, consequently, affects the senses. Shut them, and we will have no knowledge about objects. But, so idealists argue, give a man the most perfect sense organs and take away his mind, and he, too, will know nothing. Nowadays, involvement in such petty disputes is useless and completely unnecessary. The last two centuries have shown how important it is for the sciences and man to combine speculation with experiments. In this consists the main thought of Bacon, and not in acknowledging the shackles of nature and giving up speculative thought altogether<sup>81</sup>.

Since Śniadecki lauds not the narrow empiricism but experimental philosophy that holds off from posing questions about primary causes, the above passage reads like a dialogue of the deaf. More precisely, while experimental philosophy does not confuse 'means' with 'causes', empiricism, as defined by Kant, does. Furthermore, a bridge that attests to progress in philosophy, is, in Androsow's view, already built there, where Śniadecki still sees an impassable abyss. To highlight this, Androsow weaves dead philosophers, like Bacon, into the history of empiricism as enmeshed in a dichotomy: empiricism-rationalism and overcome by criticism. Noteworthy, Androsow's historical approach to empiricism resembles Degérando's, with the crucial difference that the fear of the infinite regress deters the latter from inquiring into the foundation of knowledge.

Thus, as we have seen, the old concept of the experimental philosophy of Lockean bent was gradually fading in the post-Kantian frameworks, and eventually, Śniadecki became an empiricist forerunner of nineteenth-century positivism.

This change finds its exemplification in the writings by Julian Ochorowicz,

<sup>81</sup> Андросов, "Замечания на прибавление к статье о философии" ["Zamechanija na pribavlenie k stat'e o filozofii"], in Кантовский сборник 4 (1979), 1, p. 133.

Sadly, in the Polish translation by Aleksandra Kondrat, there are mistakes that distort Androsow's text, e.g., she translates "является в известном образе" ["it appears in a certain way"] as "jawi się nam w znany sposób" ["it appears to us in a known way"], furthermore, she renders 'средства' ['means'] as 'źródła' ['sources']. Cf. W.P. Androsow, "Przydatek do pisma o filozofii", trans. by A. Kondrat, in A.N. Krouglov, T. Kupś, A. Kondrat, R. Specht (eds.), *Recepcja filozofii Immanueli Kanta w filozofii polskiej w początkach XIX wieku*, part 3: *Polemiki z Janem Śniadeckim*, cit., p. 128.

a student of Wilhelm Wundt, a positivist psychologist, scientist, and inventor interested in occultism. In his novel *Lalka* [*The Doll*], Ochorowicz's schoolmate, distinguished writer Bolesław Prus (1847-1912), portrayed him as a young enthusiast of flying machines, Julian Ochocki, who, as the embodiment of positivist admiration for science, had "the features of Napoleon veiled by clouds of dreaminess"<sup>82</sup>. Importantly, Ochocki's vision is one of the conflicting choices encountered by the main character, a Siberian exile Stanisław Wokulski, and as such, it counterweights the latter's destructive romanticist love for the title doll, an aristocrat Izabela Łęcka.

Here, it bears noting that Śniadecki considered the eccentricities of romanticism as the offsprings of Kant's transcendental philosophy<sup>83</sup>. Therefore, should he have had the chance to read *The Doll*, his sympathies would have probably laid on Ochocki's/Ochorowicz's side, though not without some qualifications that I will go into below.

In his *Wstęp i pogląd ogólny na filozofię pozytywną* [*An Introduction to and an Overview of Positive Philosophy*], Ochorowicz sets up Śniadecki's position as proto-positivist by enlarging the historiographical story of Lockean and Humean empiricism. Empiricism, so claims Ochorowicz, disavows reason in favour of senses and, consequently, is at the other extremity of rationalism<sup>84</sup>. To reconcile this and other antinomies, Kant navigated towards eclecticism but failed:

Thus empiricists showed that rationalism was good for nothing, rationalists: that empiricism was good for nothing, and mystics: that both rationalism and empiricism were good for nothing. This situation was embarrassing for everybody except for dialectical philosophers since they are above every difficulty. [...] And there arises the great Koenigsberg thinker Kant who takes up the challenge of reconciling everybody. [...] To combat empiricism, he borrows weapons from idealism. Against idealism, he brings empiricism. And finally, he brings mysticism against them both. They all are beaten, but everyone takes consolation in that the others are too<sup>85</sup>.

<sup>82</sup> B. Prus, *The Doll*, trans. by D. Welsh, introduction by S. Barańczak, New York Review Books, New York 1996, p. 158.

<sup>83</sup> Śniadecki, "Przydatek do 'Pisma o filozofii'", in *Pisma filozoficzne*, vol. 2, cit., p. 237.

<sup>84</sup> J. Ochorowicz, *Wstęp i pogląd ogólny na filozofię pozytywną*, W drukarni J. Noskowskiego, Warszawa 1872, p. 35. <https://rcin.org.pl/dlibra/doccontent?id=6803>

<sup>85</sup> Ochorowicz, *Wstęp i pogląd ogólny na filozofię pozytywną*, cit., p. 19. Ochorowicz's narration strikingly resembles the mocking parody of the myth of empiricism by David Fate Norton. Cf. D.-F. Norton, "The Myth of 'British Empiricism'", in *History of European Ideas* 1 (1981), 4, p. 331.



In Ochorowicz's view, very similar to Śniadecki's, Kant arranged somebody else's flowers into an artificial bouquet and mislabelled his eclectic work as criticism. Nonetheless, a lesson Kant drew from Hume's scepticism somewhat softens this lack of originality<sup>86</sup>.

As the story continued, the pieces of this artificial patchwork, *i.e.*, in Ochorowicz's terminology, 'Kantian dualism' inherent in the Janus concept of reason (pure and practical), fell apart, which gave rise to post-Kantian empiricism also fuelled by the progress of natural sciences. In this development, Śniadecki represents a higher stage than Locke and is an intermediary between Johann Friedrich Herbart, an empiricist of a rather suspicious bent (*i.e.*, too much involved in speculations, like monads), and Auguste Comte. Most importantly, Śniadecki's contribution showed originality consisting of the two principles adduced in Section 2. Śniadecki was the first to identify concepts fundamental for the relationship between philosophy and exact sciences and thus provided a basis for later positive philosophy.

However, Śniadecki's empiricism was not impeccable. In support of this, Ochorowicz cites Polish philosopher and psychologist Henryk Struve (1840-1912). As Struve puts it, it is easy to be an empiricist and pretend that all knowledge derives from sense data if one takes general concepts for general phenomena<sup>87</sup>.

In this way, anti-Kantian positivist Ochorowicz subsumes Śniadecki's experimental philosophy under the narrow Kantian conception of empiricism, and thus his historiographical narration takes an unintentionally ironic turn.

Noteworthy, Ochorowicz associates the term 'experimental' with the laboratory psychology of Wilhelm Wundt, under whom he studied in Leipzig, and not with the treatises by John Locke or Śniadecki. Since some details of his critical assessment of Wundt are crucial here, I will briefly discuss them.

In his *Pierwsze zasady psychologii* [*The First Principles of Psychology*], Ochorowicz appreciates that experimental psychology has fostered international collaboration and focused on phenomena and not on the illusory nature of things<sup>88</sup>. However, a method needs to be commensurable with its subject matter, and that of Wundt is not. More specifically, experiments conducted

<sup>86</sup> Ochorowicz, *Wstęp i pogląd ogólny na filozofię pozytywną*, cit., p. 20.

<sup>87</sup> Cf. H. Struve, *Wykład systematyczny logiki, czyli nauka dochodzenia i poznania prawdy*, vol. I, W drukarni K. Kowalewskiego, Warszawa 1870, pp. 189-90.

<sup>88</sup> J. Ochorowicz, "Pierwsze zasady psychologii", in *Pierwsze zasady psychologii i inne prace*, PWN, Warszawa 1996, pp. 62-65.

with the aid of instruments conform with very few disciplines of psychology. Consequently, striving for precision that meets the standards of sciences ends up in imprecision, a stumbling block being the elusiveness of the soul and its activities.

This methodological dilemma emerges, for example, in the discussion about unaided direct self-observation.

Just like Śniadecki, Ochorowicz acknowledges its legitimacy, but Wundt does not, a demarcation line between these two approaches being Kant's criticism of psychology.

To cite Wundt, "Kant once declared that psychology was incapable of ever raising itself to the rank of an exact natural science"<sup>89</sup>. However, it is possible to find a way out of the impasse: "the experimental modification of consciousness by external stimuli" is what one needs to make "the indeterminate magnitudes of our psychical experiences" more precise<sup>90</sup>. By contrast, Ochorowicz's approach departs from this. In his view, no method of earlier philosophers, like Kant or Hegel, squares well with psychology because they cannot guarantee the status of science<sup>91</sup>. Therefore, Wundt and his student Ochorowicz differ in that the former is a moderate post-Kantian while the latter is a confirmed anti-Kantian<sup>92</sup>. In this sense, Ochorowicz is much closer to Locke and Śniadecki than Wundt. Still, in his eyes, both Locke and Śniadecki are not experimental psychologists but empiricists at different stages of progress towards positivism.

<sup>89</sup> W. Wundt, *Principles of Physiological Psychology*, vol. 1, trans. from the Fifth German Edition (1902) by E.B. Titchener, S. Sonnenschein, London 1910; Macmillan, New York 1910; Kraus Reprint, 1969, p. 6.

Cf. I. Kant, "Metaphysische Anfangsgründe der Naturwissenschaft", in *Akademieausgabe von Immanuel Kants Gesammelten Werken*, elektronische Edition: Korpora.org, vol. 4, p. 471. <https://korpora.zim.uni-duisburg-essen.de/kant/aa04/471.html>. Cf. e.g. P. Kitcher, *Kant's Transcendental Psychology*, Oxford University Press, Oxford 1990, pp. 11-12.

<sup>90</sup> Wundt, *Principles of Physiological Psychology*, cit., p. 7.

Cf. e.g. A.L. Blumenthal, "A Wundt Primer: The Operating Characteristics of Consciousness", in R.W. Rieber, D.K. Robinson (eds.), *Wilhelm Wundt in History: The Making of a Scientific Psychology*, Kluwer/ Plenum Publishers, New York 2001, p. 125.

<sup>91</sup> Ochorowicz, "Pierwsze zasady psychologii", in *Pierwsze zasady psychologii i inne prace*, cit., p. 69.

<sup>92</sup> About Wundt's critical continuation of Kant, see: W. Wundt, "Was soll uns Kant nicht sein?", in *Philosophische Studien* 7 (1892), pp. 1-49.

4. "Riddling confession finds but riddling shrift": modern scholars about Śniadecki's avowal of sins

The positivist transmission of Śniadecki's Lockeanism has induced modern scholars to stick on him the preassigned labels: 'consistent', 'partly inconsistent', or 'genetic empiricist'. I will, therefore, present a sampling of each classification and then confront them with the reconstruction of Śniadecki's experimental philosophy from Sections 2 and 3.

In his book *Jan Śniadecki: Polak i Europejczyk* [*Jan Śniadecki: Polish and European*], Józef Żuraw takes a broad view of Śniadecki's empiricist epistemology while referring to both the latter's confession and manifesto of the middle way between the French school and the German (Kantian) school, as quoted above<sup>93</sup>.

Specifically, Żuraw argues that Śniadecki declared himself an empiricist in good faith, and, in addition, not only was his empiricism original but also more consistent than the approaches of Condillac or Stewart. While both invented thought experiments with an imagined human being that experiences only a limited number of senses, neither convinced Śniadecki and, therefore, he sought a better solution<sup>94</sup>.

Since Śniadecki focuses on Stewart's argument, let us give some details about it. To start with, such a being would possess the same knowledge about the mind as we have but no information about matter, and its language "would be appropriated to mind solely and not borrowed by analogy from material phenomena"<sup>95</sup>. Consequently, Stewart concludes:

From these observations it sufficiently appears what is the real amount of the celebrated doctrine, which refers the origin of all our knowledge to our sensations; and that, even granting it to be true, (which for my own part I am disposed to do, in the sense in which I have now explained it,) it would by no means follow from it, that our notions of the operations of mind, nor even many of those notions which are commonly suggested to us, *in the first instance*, by the perception of external objects, are *necessarily subsequent* to our knowledge of the qualities, or even of the existence of matter<sup>96</sup>.

<sup>93</sup> J. Żuraw, *Jan Śniadecki: Polak i Europejczyk*, Wydawnictwo WSP, Częstochowa 1996, pp. 52-53.

<sup>94</sup> Żuraw, *Jan Śniadecki: Polak i Europejczyk*, cit., pp. 46-47.

Cf. Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., pp. 271-72.

<sup>95</sup> Stewart, "Elements of the Philosophy of the Human Mind", vol. 1, cit., p. 119.

<sup>96</sup> Ibid.

First of all, Śniadecki denies this while pointing out that albeit the higher faculties of the mind, as triggered by only two senses, would be severely handicapped, they would still convey knowledge about the existence of external things as causing sensations. In addition, he argues that scientific metaphysics, in this case, the metaphysics of psychology, builds itself on the generalisations that *necessarily follow* from specific effects<sup>97</sup>. But Stewart's conclusion is contingent and, consequently, not foundational.

This criticism notwithstanding, Stewart and Śniadecki are not in substantial disagreement, and Śniadecki's comment on Stewart's note about the stability of the Solar System, as demonstrated by Lagrange, brings evidence to it.

In note I, Stewart underlines that Lagrange's demonstration merely shows that the Solar System does not contain the elements of its decay. Consequently, it cannot mathematically prove that the Solar System, as dependent on the will of God, will last forever. And this weighs in on Stewart's concept of the fundamental laws of belief, which Śniadecki, on the whole, shares:

That this stability is a *necessary* consequence of the general laws by which we find the system to be governed, may, indeed, be assumed as a demonstrated proposition; but it must always be remembered, that *this necessity is only hypothetical or conditional*, being itself dependent on the continuance of laws, which may at pleasure be altered or suspended. The whole of the argument in the text, on the permanence or stability of the order of nature, [...] relates not to necessary but to probable truths; not to conclusions syllogistically deduced from abstract principles, but to *future contingencies*, which we are determined to *expect* by a fundamental Law of Belief, adapted to the present scene of our speculations and actions<sup>98</sup>.

In "Wstęp do *Filozofii umysłu ludzkiego*", Śniadecki similarly argues that we assume as principles statements and propositions for which rigorous proofs are not constructible<sup>99</sup>. For example, it is not possible to demonstrate that laws discovered in nature will continue unaltered in the future. Nonetheless, in

<sup>97</sup> Śniadecki, "O metafizyce", in *Pisma filozoficzne*, vol. 2, cit., p. 150.

<sup>98</sup> D. Stewart, "Elements of the Philosophy of the Human Mind", vol. 2, cit., p. 381.

For Stewart's fundamental laws of belief, see: D. McDermid, *The Rise and Fall of Scottish Common Sense Realism*, Oxford University Press, Oxford 2018, pp. 113-20. About the instability of the Solar System, as demonstrated by rigorous reasoning, see: J. Laskar, "Is the Solar System Stable?", in B. Duplantier, S. Nonnenmacher, V. Rivasseau (eds.), *Chaos: Poincaré Seminar 2010*, Birkhäuser, Basel 2013, pp. 239-70.

<sup>99</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., pp. 265-66.

their observations and predictions, astronomers do assume they will. In this context, Śniadecki remarks that de Lagrange's demonstration as strictly mathematical does not refer to God's general designs, and, therefore, Stewart's alleged critique is out of place.

To sum up, Śniadecki and Stewart agree that all knowledge originates from the senses, and we resort to philosophical belief when carrying out research, e.g., in astronomy or physics. Still, they disagree about a particular point, *i.e.*, whether Stewart's thought experiment successfully shows that the operations of the mind do not become necessarily cognizant through the knowledge about matter.

Regretfully, Żuraw does not analyse Śniadecki's criticism of Stewart's imagined human being but confines himself to an extensive quote from *Filozofia umysłu ludzkiego*. Therefore, assuming that Śniadecki was a consistent empiricist, we are left with the question of what kind of empiricist Stewart was. In this impasse, it seems that idealist or romantic empiricism is THE term, and research literature does include it. For example, Gavin Budge argues that philosophical idealism grew out of "non-positivist classical empiricism deriving from eighteenth-century thought" and, consequently, cannot be opposed to it<sup>100</sup>. Hence, the critical tradition that "has defined British 'empiricism' in opposition to a philosophical idealism assumed to originate in Germany" needs revision<sup>101</sup>. The mental operations of Stewart's hypothetical human being that could only hear and smell are indeed half empiricist and half idealist. Half empiricist since it has two senses at its disposal. Half idealist since its language is fit for pneumatology but not for the description of matter.

Now, when we have derived all the consequences from Żuraw's argument, it is clear that his line of interpretation clashes with Śniadecki's concept of sound philosophy, as represented by Stewart. Not only does it lead to the overrefined division of the Kantian narrow understanding of empiricism into principled empiricism and idealist empiricism, but it also nearly pushes Stewart to the opposite idealist, *i.e.*, speculative camp.

It brings us to another example from the history of mathematics.

In his essay "Jana Śniadeckiego filozofia matematyki", Zenon Roskal, similarly to Żuraw, takes Śniadecki's confession at face value. However, he limits himself to Śniadecki's philosophy of mathematics as instantiating genetic em-

<sup>100</sup> G. Budge, "Introduction: Empiricism, Romanticism, and the Politics of Common Sense", in G. Budge (ed.), *Romantic Empiricism: Poetics and the Philosophy of Common Sense, 1780-1830*, Bucknell University Press, Lewisburg, Penns. 2007, p. 11.

<sup>101</sup> *Ibid.*

piricism<sup>102</sup>. To flesh this out, mathematical concepts as abstracted from things in the real world exemplify the accommodation of a subject to an object in conformity with the general principles of empiricism. In other words, the mind creates them but not independently from sense data. In that, Śniadecki follows the empiricism of Locke and Hume: at the stage of *tabula rasa*, the human mind does not possess any mathematical beings. The problem with this approach is that it tacitly merges the concept of empiricism as collecting single sense impressions with the much more general conception of ‘genetic empiricism’ that does not do justice to Śniadecki’s understanding of mathematics. I will return to this shortly.

The label ‘empiricism’ also complicates the argument of Bożena Kuśnierz, which is susceptible to many interpretations and, as such, warrants quotation at length:

Jan Śniadecki is regarded as one of the most brilliant, and typical, representatives of the Polish Enlightenment. He was the first to introduce into Polish philosophy issues of modern epistemology, in which we can detect the influence of Hume’s theory of association. Śniadecki, while combating Kant’s philosophy, became aware of the fact that its ‘dogmatic’ character is a response to Hume’s radical empiricism. But Śniadecki for some reason preferred to avoid direct attacks on British philosophers; his criticism was directed mostly against Condillac and the French sensualists and ‘materialists’, even though it should have been directed mainly against Hume. He held that Hume’s ‘error’ had been corrected by the Scottish philosophers of common sense. This error, however, had negative consequences for French materialist philosophy. On the other hand, Kant could only be criticized for accepting as true Hume’s analysis of sensory experience. It is interesting to note that, in his refutation of Kantianism, Śniadecki refers to Hume’s criticism of metaphysics and furthermore argues that Kant was wrong to call Hume a sceptic. According to Śniadecki, Hume only derided metaphysicians who attempted to solve philosophical problems without appeal to experience. Śniadecki even echoed Hume’s words from the first Enquiry (Enquiries, 11) – a rare thing

<sup>102</sup> Z.E. Roskal, “Jana Śniadeckiego filozofia matematyki”, in *Roczniki Filozoficzne/ Annales de Philosophie/ Annals of Philosophy* 42 (1994), 3, pp. 23-34. <http://www.jstor.org/stable/43409629>

Cf. Roman Murawski’s more general classification of Śniadecki as an empiricist: “he was an advocate of Empiricism. He claimed that mathematics was a science about the reality surrounding us, and that the source of this science was experiment”. However, Murawski does not mention Śniadecki’s confession of sins.

R. Murawski, *The Philosophy of Mathematics and Logic in the 1920s and 1930s in Poland*, trans. by M. Kantor, Birkhäuser, Basel 2014, pp. 1-5.

among Polish Enlightenment thinkers – although he did not quote Hume exactly<sup>103</sup>.

Kuśnierz alludes to the big picture (Section 2) by showing Śniadecki as an adherent of sound Lockean philosophy, *i.e.*, as a 'moderate empiricist', who navigates between the French school and the German school. Still, she omits quite a few details, which renders Śniadecki's approach fragmented and incomplete.

First, Śniadecki criticised Locke, Hume, and Stewart directly, so it is unnecessary to search for some hidden reason why he avoided it.

Secondly, Śniadecki did not consider Hume an 'empiricist' and still less a 'radical empiricist'. Accordingly, he could not interpret the dogmatic character of Kantianism as a response to Hume's radical empiricism.

Thirdly, it is not clear what error Hume committed. Probably, it is his radical empiricism that Kuśnierz identifies as an error from Śniadecki's point of view. If so, it was not more urgent to correct it in Condillac than in Hume. The reason is that, according to Śniadecki, only misinterpreted Condillac could pass as a materialist. And one could argue that e.g. Degérando counterbalanced Condillac in his 'philosophie d'expérience'.

Kuśnierz's argument resembles Degérando's line of thought in that the latter, tracing the historical origins of empiricism, classified Hume as a more radical empiricist than Condillac. However, this is not enough to save her from the charge of inconsistency. For, she seems to juggle with the labels attached to Śniadecki and other sources during the twists and turns of their reception. Śniadecki, reduced to a cog in the historiographical machine, should have chosen as the main target of his criticism the icon of British empiricism, *i.e.*, Hume. However, he did not.

Now the question arises whether it is possible to find the same reasons in Hume, for which Śniadecki levelled his criticism against Condillac. To attack this problem, we should bear in mind that, a creative mathematician as he was, Śniadecki gives vent to his irritation since Condillac's substitution damped down the pleasure of mathematical invention, sagacity as Locke calls it in the *Essay*<sup>104</sup>.

*An Enquiry concerning Human Understanding* provides some textual evi-

<sup>103</sup> B. Kuśnierz, "David Hume and Polish Philosophical and Social Thought", in P. Jones (ed.), *The Reception of David Hume in Europe*, Thoemmes Continuum, London 2005, p. 237.

<sup>104</sup> Locke, *Essay*, cit., IV.xvii.11, p. 682: "Till Algebra, that great Instrument and Instance of Humane Sagacity, was discovered, Men, with Amazement, looked on several of the Demonstrations of ancient Mathematicians, and could scarce forbear to think the finding several of those Proofs to be something more than humane."



dence that supports Kuśnierz's interpretation, namely a passage about the limited creativity of the mind, which, widely known as the copy principle, reminds us of dialectic manuals of an Aristotelian bent. It bears mentioning, however, that Śniadecki does not refer to it but, in "O rozumowaniu rachunkowym", plays out Hume against Condillac:

But though our thought seems to possess this unbounded liberty, we shall find, upon a nearer examination, that it is really confined within very narrow limits, and that all this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience<sup>105</sup>.

Paradoxically, while Śniadecki follows in the footsteps of Mendelssohn and rejects uncertainty about the relationship between cause and effect, it is this very uncertainty that qualifies the above claim and makes room for creativity:

But do we pretend to be acquainted with the nature of the human soul and the nature of an idea, or the aptitude of the one to produce the other? This is a real creation; a production of something out of nothing: Which implies a power so great, that it may seem, at first sight, beyond the reach of any being, less than infinite. At least it must be owned, that such a power is not felt, nor known, nor even conceivable by the mind<sup>106</sup>.

Noteworthy, this explains why Kenneth R. Westphal portrays Hume as a philosopher who, at the same time, adheres to the so-called official empiricist approach and comes to grips with its insufficiency. According to Westphal, official empiricism extends to the copy theory of sense impressions and ideas and concept empiricism, the latter being "the thesis that every (legitimate, genuine, significant) concept is either a logical term, a name for a simple perceptual quality, or can be defined solely and exhaustively by combinations of these two kinds of terms"<sup>107</sup>. Nonetheless, neither copy theory nor concept empiricism is up to the mark. The point at issue is how, with general ideas and terms, our imagination and understanding can identify perceptually unspecific classifications<sup>108</sup>.

However, as we have seen, Śniadecki found no tension here. For him, al-

<sup>105</sup> D. Hume, *An Enquiry concerning Human Understanding*, ed. by P.J.R. Millican, Oxford University Press, Oxford 2007, section II.5, p. 13.

<sup>106</sup> Hume, *An Enquiry concerning Human Understanding*, cit., section VII.17, pp. 49-50.

<sup>107</sup> K. Westphal, "Hume, Empiricism and the Generality of Thought", in *Dialogue* 52 (2013), 2, p. 236.

<sup>108</sup> *Ibid.*, p. 260.

gebraic symbols could make such operations perceptually specific again and foster invention. Generally speaking, Śniadecki's concept of invention in mathematics was close to Hume's views, as expressed in *A Treatise of Human Nature*:

Truth is of two kinds, consisting either in the discovery of the proportions of ideas, consider'd as such, or in the conformity of our ideas of objects to their real existence. 'Tis certain, that the former species of truth, is not desir'd merely as truth, and that 'tis not the justness of our conclusions, which alone gives the pleasure. [...] in an arithmetical operation, where both the truth and the assurance are of the same nature, as in the most profound algebraical problem, the pleasure is very inconsiderable, if rather it does not degenerate into pain: Which is an evident proof, that the satisfaction, which we sometimes receive from the discovery of truth, proceeds not from it, merely as such, but only as endow'd with certain qualities.

The first and most considerable circumstance requisite to render truth agreeable, is the genius and capacity, which is employ'd in its invention and discovery<sup>109</sup>.

Of course, this conflicts with Condillac's blasphemy that the leaps of inventory and philosophical genius are mere illusions, and, consequently, we do not need Locke for philosophising:

Elle [la métaphysique des inventeurs] était simple [...] ; et elle ne demandait point d'efforts, parce que la bonne métaphysique n'en demande pas. Elle ne vous apprend que ce que vous faites naturellement, et vous la sauriez mieux que Locke, si vous saviez vous observer<sup>110</sup>.

Among the final lessons to be drawn from this is the inadequacy of both Roskal's and Kuśnierz's approaches to Śniadecki.

Genetic empiricism, as defined by Roskal, covers only the conformity of mathematical concepts to objects in the real world but disregards the other genre of truth mentioned by Hume: the one that requires genius and capacity. This omission is the more striking that Roskal underscores the algebraic character of mathematics in Śniadecki and goes into the characteristics of the symbolic language of algebra. It should also be clear that only grossly misconstrued Hume could be an equally good target for Śniadecki as Condillac.

<sup>109</sup> D. Hume, *A Treatise of Human Nature. A Critical Edition*, vol. 1: *Texts*, ed. by D.F. Norton, M.J. Norton, Clarendon Press, Oxford 2007, 2.3.10, p. 287.

<sup>110</sup> Condillac, *La Langue des calculs*, cit., pp. 211-12.

## 5. Concluding remarks

In concluding, let me briefly return to Śniadecki's concept of mathematics and highlight that he was a critical and institutionally influential Lockean but did not have full command of the master's experimental *cultura animi*.

In *Filozofia umysłu ludzkiego*, Śniadecki opposes attention to distraction and shows the harmful effects of the latter<sup>111</sup>. He calls inattention a mental handicap and finds it curious that Locke hardly mentioned such a crucial intellectual power. Of course, inattention is not a power but rather the defect of one. Therefore, again, Śniadecki betrays his characteristic imprecision. The context, however, makes his thought clear enough. And it is here where a gap in Śniadecki's knowledge of Locke transpires. For, he probably did not read *Of the Conduct of the Understanding* (1706), in particular, the chapter about the wandering of thoughts, where Locke acknowledges the severe impact of this weakness but offers only a general cure: building up the habit of attention:

A proper and effectual remedie for this wandering of thought I would be glad to finde. He that shall propose such an one would doe great service to the studious and contemplative part of man kinde and perhaps help unthinkeing men to become thinkeing<sup>112</sup>.

In this respect, Śniadecki is more precise than Locke by prescribing young minds exercises in Euclidean geometry. Considering his views on the superiority of algebra, it looks like a paradox, at least at first glance. Contrary to Descartes, Śniadecki supposes that ancient geometers did not hide their knowledge of analysis by design but could not express their intuition of algebra by lacking, as already stated, symbolic language<sup>113</sup>. As a result, their proofs placed

<sup>111</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., pp. 280-83.

<sup>112</sup> J. Locke, *Of the Conduct of the Understanding*, ed. by P. Schuurman, PhD thesis, University of Keele, 2000, par. 64, p. 210.

<sup>113</sup> J. Śniadecki, "O Józefie Ludwiku de Lagrange, pierwszym geometrze naszego wieku", in *Pisma filozoficzne*, vol. 1, cit., p. 82: "...ancient geometers did not have algebraic language at their disposal but explained their reasonings through the common one, and, therefore, they did not need to take vanishing quantities into account. For, what algebraic language shows us was naturally beyond the reach of the common language. However, while they avoided expressing this not to obscure their speech, could they not think the same in their proofs as we do?" Descartes, "Secondes Réponses", in *Oeuvres de Descartes*, cit., vol. IX, L. Cerf, Paris 1904, p. 122. Cf. L. Newman, "Descartes on the Method of Analysis", in S. Nadler, T. M. Schmalz, and D. Antoine-Mahut (eds), *The Oxford Handbook of Descartes and Cartesianism*, Oxford University Press, Oxford 2019, pp. 64-88.

a heavy burden upon memory<sup>114</sup>. Nevertheless, what is vice, can transform itself into virtue, in this case, a pedagogical one. Following geometrical drawings engages attention, and thus it strengthens the habit of this power. Consequently, diligent pupils can turn it into a weapon against Kantian hair-splitting (Śniadecki does not mention Kant by name this time) and Condillac's idolatry of sensation, both inflicting attention<sup>115</sup>. Noteworthy, these pedagogical instructions complement Locke's reflections on diagrams as a method of fixing ideas (the *Essay*) and a propaedeutic role of mathematics (*Of the Conduct of the Understanding*)<sup>116</sup>.

To sum up, the differences between Śniadecki and Locke are substantial. For example, Śniadecki did not consider moral philosophy capable of equaling mathematics and attaining the status of demonstrative science as Locke did<sup>117</sup>. Nonetheless, similarly to Locke, he was in line with *cultura animi*, the dynamic "conception that takes the human mind as an object of cure, train-

<sup>114</sup> Śniadecki, "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., p. 132: "For us, all truths become visible in symbolic expression and do not burden memory, while, for ancient geometers, they depended on volatile words and, consequently, required memory and attention. The longer the series of truths memory and attention ran through, the more loaded both were. For ancient geometers, it was necessary to remember all thoughts and concentrate on their usage while expressing them in language. For us, it suffices to understand language, and these thoughts come into sight. The mere resorting to symbolic characters allows one to use and compare concepts without new intellectual effort."

<sup>115</sup> Śniadecki, "Filozofia umysłu ludzkiego", in *Pisma filozoficzne*, vol. 2, cit., p. 282: "The excessive divisions, in particular, of terms and detached thoughts, and, again, the further subdivisions of these divisions exhaust and perplex attention. That is why it is correct to say that overnice order causes disorder and confusion. But on the other hand, the excessive simplification of matter by inventing unity, where there is none, is the second fault that either preys on the strength of attention or makes it crazy by conjectures." Here, Śniadecki resorts to a comparison: "Condillac calls all the powers of the soul sensation because all thoughts and intellectual activities begin from it. It is as if we would like to call all things exposed to the eye the light just because the light stands at the origin of sight."

<sup>116</sup> Locke, *Essay*, cit., IV.iii.19, p. 550: "Diagrams drawn on Paper are Copies of the Ideas in the Mind, and not liable to the Uncertainty that Words carry in their Signification. An Angle, Circle, or Square, drawn in Lines, lies open to the view, and cannot be mistaken: It remains unchangeable, and may at leisure be considered, and examined, and the Demonstration be revised, and all the parts of it may be gone over more than once, without any danger of the least change in the Ideas." Locke, *Of the Conduct of the Understanding*, cit., § 17, p. 164: "...would you have a man reason well you must use him to it betimes exercise his minde in observing the connection of Ideas and following them in train. Noe thing does this better than Mathematicks which therefor I thinke should be taught all those who have the time and oportunity, not soe much to make them mathematicians as to make them reasonable creatures".

<sup>117</sup> Śniadecki, "O rozumowaniu rachunkowym", in *Pisma filozoficzne*, vol. 1, cit., p. 137. Cf. Locke, *Essay*, cit., IV.iii.18, p. 549. Cf. P.R. Anstey, *John Locke and Natural Philosophy*, Oxford University Press, Oxford 2011, p. 125.

ing, and cultivation”<sup>118</sup>. It explains why, for Śniadecki, the inaccessibility of the first causes infused with pessimism squares well with epistemic optimism, e.g., the possibility of extracting the experimental laws of nature and progressing towards a moral or rational society.

Unfortunately for Śniadecki, the civic side of his experimental philosophy has become smothered under the increasingly domineering paradigm of “systematic, timeless, and context-free search for truth”<sup>119</sup>. As Knud Haakonssen rightly observes, the history of philosophy as reduced by Kant to an epistemological clash between rationalism and empiricism was a significant step in this direction<sup>120</sup>. Although Śniadecki ridiculed Kant, a historiographical machine well-oiled by the latter has not spared him. Remarkably, Śniadecki’s colourful language hits the essence of this process in a puckish way. In his manuscript notes, the biting criticism of transcendentalism shares the page with ‘cella kuchenna’ (a kitchen storeroom), *i.e.*, the list of courses, such as French soup and asparagus<sup>121</sup>. Curiously, Śniadecki did compare Kant’s project to cuisine, though to the bad and by no means French. To get rid of empiricism, so he claims, the Königsberg sage peeled reason of all bodily movements and bonds indispensable for society and served us metaphysical cured bacon<sup>122</sup>.

Ironically, as already indicated, Śniadecki’s vivid metaphor also applies to himself as labelled with the etiquette ‘empiricist’ in modern scholarship. The reason is that Śniadecki’s experimental philosophy has become, in a sense, smoked along as the nuances of his approach to Locke, Degérando, or Mendelssohn have been flattening through the change of the philosophical paradigm. However, looking at Śniadecki through his lens, we discover that his thunderous rhetoric with all its contradictions (e.g., Hume being both a sceptic and a non-sceptic) is, at the same time, more complex and consistent than scholars have generally recognised.

<sup>118</sup> S. Corneanu, *Regimens of the Mind: Boyle, Locke, and the Early Modern ‘cultura animi’ Tradition*, University of Chicago Press, Chicago 2011, p. 146.

<sup>119</sup> K. Haakonssen, “The History of Eighteenth-Century Philosophy: History or Philosophy?”, in K. Haakonssen (ed.), in *The Cambridge History of Eighteenth-Century Philosophy*, vol. 1, Cambridge University Press, Cambridge 2011, p. 18.

<sup>120</sup> *Ibid.*, pp. 18-20. Cf. Anstey, “Locke and French Enlightenment Histories of Philosophy”, *cit.*

<sup>121</sup> Śniadecki, *The collection of manuscript lectures...*, 1511/1/26, vol. 4, *cit.*, p. 75.

<sup>122</sup> Śniadecki, “Przydatek do ‘Pisma o filozofii’”, in *Pisma filozoficzne*, vol. 2, *cit.*, pp. 240-41.

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