Premature Death and Posthumous Celebrity of Counterfactual Gottfried Wilhelm Jungleibniz (1646-1676). Or, how the Philosophical Papers of the Greatest Mathematician of the 17th Century Were Long Afterwards Rediscovered

PREMATURE DEATH AND POSTHUMOUS CELEBRITY OF COUNTERFACTUAL GOTTFRIED WILHELM JUNGLEIBNIZ (1646–1676): OR, HOW THE PHILOSOPHICAL PAPERS OF THE GREATEST MATHEMATICIAN OF THE 17TH CENTURY WERE LONG AFTERWARDS REDISCOVERED

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Short title: Counterfactuals. Gottfried Wilhelm Jungleibniz (1646–1676)[a]

Gottfried Wilhelm Jungleibniz (1646–1676)[b] enjoyed a posthumous fame starting from 1676–77, when his mathematical papers, as it is universally known, were fortuitously recovered and posthumously published, assuring him an everlasting place in the mathematical Olympus: like Galois or Abel he died young, yet within a few years of extremely creative work he had opened a whole new mathematical landscape. Only relatively recently have his philosophical manuscripts, that initially were completely overlooked, been the object of analytic study and eventually have been extensively published, sheding a new light also on earlier philosophical writings of his that had been published, to no particular impact, before his coming to Paris in 1672.

An overall appreciation of this undervalued aspect of Jungleibniz's intellectual activity, together with some reflections of how it can be studied to better understand certain developments of 17th and 18th-century German philosophical world, will be proposed.

JUNGLEIBNIZ'S BRIEF LIFE

Jungleibniz was born in Leipzig on July 1, 1646. His father died while Jungleibniz was still a child. We do not know much of his youth. He entered Leipzig University in 1661 and was particularly influenced by two of his mostly backward-looking teachers there—Jakob Thomasius and Johann Adam Scherzer. The bachelor's dissertation he wrote in 1663, under the supervision of Thomasius, was entitled *Disputatio metaphysica de Principio Individui*: an uninvolving piece of *juvenilia*, it has not even a historical interest.

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a *Preprint version of a presentation made in Curitiba (BR), Sept. 7, 2017, at the 3rd Congress of the Red Ibero-Americana Leibniz. Dedicated to Mogens and Mark—they know why.*

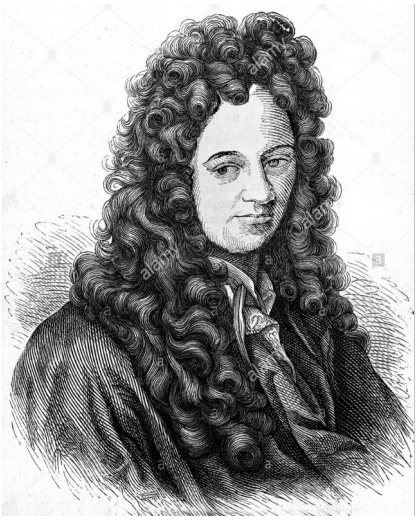
b It is convenient to remind the English-speaking reader that this name must be pronounced *yoong-laybnitsz* and has nothing to do with jungles.

In 1664, Jungleibniz graduated Master of Philosophy with a dissertation on the relationship between philosophy and law. In the following year he received a bachelor's degree in law, for which he wrote a dissertation on hypothetical judgements.

In those years Jungleibniz was influenced by Erhard Weigel, who would durably influence the development of philosophy in Germany, and by the Herborn Encyclopedists. In 1666, he produced his first truly original work, the *Dissertatio de Arte Combinatoria*. In this dissertation it is possible to see the beginnings of an interest, that he was later to develop, in constructing a universal analysis that would go far beyond the limits of algebra.[a]

But at this time his knowledge of mathematics was still very primitive, and mainly for thiss reason his biographers have mostly overseen the German period of Jungleibniz's life, who for one soon abandoned philosophy for jurisprudence, eventually working to a law reform in Mainz, and then abandoned also law, and Germany, for Paris and mathematical science.

In Paris he would publish a two-part work on natural philosophy: it presented a strongly theoretic, but flawed, doctrine of motion, that he developed with a strong Zenonistic (reality of points) and anti-materialist (spiritual character of same points) approach. This very approach, as has been shown by 19th century scholars, would bring either to perpetual motion, or to the impossibility of motion. It gained him nonetheless admission to the Royal Society of London, and we know now that he was still busy with a modified version of his motion theory during his last hours in this world.



Posthumous portrait cut in Paris by an anonymous engraver at the request of Jungleibniz's friends in 1678.

On this last day, that was spent on a ship waiting for better weather at the mouth of the Thames, he began a dialogue on motion, that he interrupted after a few pages with a note which might well contain the last words he put on a page:

> Le bateau va immediatement partir par la grande hate du capitain, saeviente quamvis pelago. Omnia ista revisenda transito mare.[b]

a This part is based on Stuart Brown, ed. *Jungleibniz and His Philosophy (1646–1676)* (International Archives of the History of Ideas, 166), Dordrecht, Kluwer, 1999. See in particular "A chronology of Jungleibniz (1646–76)", p. ix-x; "Jungleibniz's Formative Years (1646–66): An Overview", p. 1–7. It is worth noting that in our domain of studies counterfactual papers can be somewhat shorter then their counterparts in this world.

b My transcription from the ms.

THE TRAVEL AND THE SHIPWRECK

The travel would have brought him to Holland and then to Hanovre, where he had accepted a post that he never took. In a short paper on "Jungleibniz in Holland" that the American historian Jacob Rollo Abbott wrote in 1857 speculating on the purpose of Jungleibniz's *detour*, we read:

> *There were several ways by which a person may go to Holland from London. The cheapest was to take a ship, by which means you go down the Thames, and thence pass directly across the German Ocean to the coast of Holland.*
> *But that made quite a little voyage by sea, during which almost all persons would be subject to a very disagreeable kind of sickness, on account of the small size of the ships, and the short tossing motion of the sea that almost always prevails in the waters that lie around Great Britain.*

In Jungleibniz's time, the alternative was quite a long voyage to Calais by the road, and then the shorter and quieter sea trip over the Channel, followed by another road trip to the final destination. Jungleibniz chose a sailing freighter that would bring a cargo of wine to Rotterdam. He went aboard on October 29. Days were lost at Gravesend and when the ship arrived at the mouth of the Thames the weather was not good any more.

The captain, worried by the delay, waited but one day, and decided then to take the risk of sailing from Sheerness in rough seas. A few hours later the ship would break and sink, with no crew members or passengers surviving the sinking. Some items belonging to the vessel would eventually float to the shores near Sheerness, and in particular one of Jungleibniz's most important belongings: the small watertight trunk where he was keeping his papers for the travel, would be miraculously retrieved there, after floating like Thaisa's body in its drift to Ephesus.

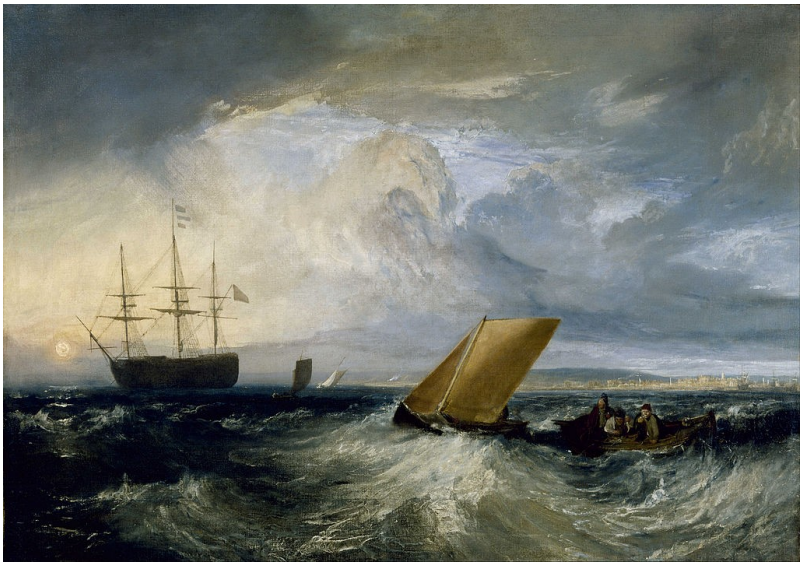
THE WAIF KNOWS ITS OWN COURSE

François Bernier would write two years later, in 1678, in his *Abregé de la philosophie de Gassendi*:[a] "Il se peut mesme faire que quelque vaisseau surpris de la tempeste ait esté porté jusques à l'Amérique en traversant toute la grande Mer". Jungleibniz's papers did not need to reach the American continent—the English coast sufficed. Brought by the waves and pushed by the winds, the trunk floated back to Sheerness, and the shores of the Nore:

> This is properly the water which runs between the isles of Grain and Sheppy: here it is, that the rivers Thames and Medway lose their names, and are now called the Nore. The current through the Nore, is described as making a swifter course than at any other place on the coast. This great strait is guarded

a Vol. 5, p. 28.

one way with a station of large ships of war; at the other end it is protected by the garrison of Sheerness.[a]



Joseph Mallord William Turner – *Sheerness as seen from the Nore*, 1808

A 19th-century narrative of the incident, written by a romanticizing author, relates it thus:

> One day one of the four gunners composing the garrison of Sheerness picked up on the sand at low water a small trunk covered with wicker, which had been cast up by the tide. This trunk, covered with mould, was half-open, showing papers. The soldier carried the waif to the colonel of the castle, and the colonel sealed it and sent it to the High Admiral of England.
> The waif was brought to an officer of the Admiralty, to be unsealed by him, according to the duty and prerogative of his office; he opened it in the presence of two sworn jurors of the Flotsam and Jetsam Office, both members of Parliament, who attested the contents of the trunk, and signed the necessary *affidavit* conjointly with the officer.[b]

The papers having been recognized of a scientific nature, a representative of the Royal Society was convened, and but a summary examination was sufficient to determine that they had been owned by a member of the Society itself.

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a *Picture of Margate: being a complete guide to all persons visiting Margate, Ramsgate, and Broadstairs: containing an accurate description of everything worthy of notice on the Isle of Thanet … to which is added, the Margate hoy, a humorous poem*, London: Bousfield & Co., 1809, p. 143–44.

b Victor Hugo, *The Man Who Laughs: An Essay on Mathematical Genius*, New York: Athenaeum Society, 1888, vol. 2, p. 150–52. On such unexpected findings see also Damien Hirst, *Treasures from the Wreck of the Unbelievable*, Venice: Other Criteria & Marsilio, 2017.

MATHEMATIQUE.

V. les M. pag. 172.

UN Naufrage qui arriva cette année ſur la Côte d'Angleterre, fut une perte conſidérable pour l'Académie des Sciences. M. Leibnitz étoit dans le Vaiſſeau, & il ne ſe ſauva point du Naufrage. Heureuſement tous ſes papiers

One can read in the *Histoire de l'Académie des Sciences* a brief report of the event and of the following development, that brought to the publication of Jungleibniz's most famous mathematical papers:

> Un naufrage qui arriva cette année sur la Côte d'Angleterre, fut une perte considérable pour l'Académie des Sciences. M. Leibnitz étoit dans le Vaisseau, et il ne se sauva point du Naufrage. Heuresement tous ses papiers qu'il avait renfermé dans une caisse, arriverent à une plage et furent mis par après à la Société Royale de Londres. M. Leibnitz, auquel M. l'Abbé Gallois, à l'aide de M. Colbert, se prépara en ce tems là à offrir une place à l'Academie, avoit étudié les Mathematiques avec M. Huygens.
> Ce fut à ce dernier que la Societé de Londres s'adressa pour faire publier tout ce qu'il pu y avoir d'interessant dans le tas de manuscrits de M. Leibnitz, dont il tira les belles découvertes qui nous ont ouvert les trésors de l'analyse des infiniment petits.[a]

As we see in this text, in Paris he had begun to use a shortened form of his surname: Leibniz, or Leibnitz. After his death it remained only briefly in use.

Huygens recognized soon the importance of Jungleibniz's mathematical discoveries (the "analysis tetragonistica", or method of quadratures, and the method for tangents, and saw how they would be equivalent to a calculus of *maxima minimaque*), of which he himself was not yet aware. He had them published first in learned journals, then in a volume printed at the expenses of the Academy. From England, Newton claimed that Jungleibniz had taken inspiration from some of his own manuscripts, that Jungleibniz might have seen in London just before his death. But an independent commission, appointed by the Académie des Sciences, established the absolute independence of Jungleibniz's invention, and assigned him the priority in devising the calculus of differences and sums, albeit recognizing the existence of similar previous work by Newton.

a *Histoire de l'Academie Royale des Sciences: année M.DC.LXXVI. avec les mémoires de mathématiques & de physique, pour la même année, tirés des registres de cette Académie*. Paris: Chez Gabriel Martin, Jean-Baptiste Coignard, Hippolyte Louis Guerin, 1761, p. 130.

THE DISCOVERY OF HIS PHILOSOPHICAL MANUSCRIPTS

Huygens found no interest in the other papers that had been sent from England, and they remained buried in the archives of the Académie. Then, at the beginning of the 20th century, a Russian scholar and professor in Kazan, Ivan Jagodinski, who went to Paris in order to study Jungleibniz's relation of to Pascal's mathematical writings, discovered instead Jungleibniz's philosophical notes of the years 1672–1676.

Jagodinski only managed to publish two booklets (*Leibnitiana: Elementa philosophiae arcanae. De summa rerum*, 1913; *Leibnitiana inedita: Confessio philosophi*, 1915). Surely, they would have paved enough the way for a reappreciation of Jungleibniz's philosophical interests. Unfortunately the Great War put a curtain on studies that would have required international collaboration, and it would not be till the 1980s that the investigation of those manuscritps would be commenced again.

If not particularly original, these manuscripts reveal a minor, isolated, but very ambitious philosophical amateur. Quite imbued with the obsolete German academic culture of his time, he was surprisingly influenced by some major European philosophical positions (Bacon, Hobbes, Gassendi, and even Spinoza, as it has been lately demonstrated). His reflections were mostly disconnected from his mathematical thought but for some very generic combinatiorial content, though a couple of pages hint at interesting ideas on logic and language. Had Giuseppe Peano known these pages, in the *Formulaire mathématique* he might have listed Jungleibniz among the predecessors of his own work on universal languages and mathematical logic.

It is clear from his notes, anyway, that Jungleibniz was au courant of important theological debates, on which he even developed quite original views. The already mentioned *Confessio philosophi*, for instance, contains interesting thoughts on the relation of individuals to the series of things (*series rerum*, or the universe) that has been created by God, and to the responsibility for evil and sin. Maybe, had Jungleibniz known the debate among Jesuits on possibility and possible worlds, he might have developed more original ideas. But alas, nothing in his Paris writings allows us to indulge in such speculations.

Moreover, it is apparent that he had carefully studied Descartes' writings on the ontological proof, and that he busied himself with the argument. It might have provided an additional impulse to study Spinoza's *Ethics* under the guidance of his mathematical friend Tschirnhaus,[a] who owned a copy of the still unpublished work and discussed it with him, as it is apparent from notes taken by Jungleibniz himself that also bear some relation to letters Tschirnhaus sent to Schuller and Spinoza.

a Ehrenfried Walther von Tschirnhaus, the famous German philosopher, was also a renowned mathematician in his youth.

AN UNCANNY FASCINATION

The most absorbing aspect, by far, of Jungleibniz's side-activities in philosophy, is this strong interest of his for both the political and the metaphysical works of Spinoza. Ursula Goldenbaum, a major scholar of Spinoza and of Thomasius jr.—in fact she is currently president of the Thomasius Society of North America—has defined it: "Jungleibniz's uncanny fascination with Spinoza".[a]

It is a fact that in his youth and for long time Jungleibniz devoted more energy to establish secret relations with Spinoza than to get in touch with Antoine Arnauld, to give an example. I myself have suggested that some interesting letters exchanged between them might have gone lost or have been destroyed by Jungleibniz himself. In a manuscript that has only recently been published, Jungleibniz annotates with evident glee: «Tschirnhaus has told me many things about the manuscript book of Spinoza».[b] In a later letter of his, the latter mentions a friend with certain philosophical interests—whom, after the re-discovery of his philosophical manuscripts, we know to be Jungleibniz—and about this friend a most important fact for us to attribute to our hero: that he was bound to visit Spinoza during his trip to Holland.

SOME JUNGLEIBNIZ–SPINOZA BIBLIOGRAPHY

The fact that such a famous mathematician was interested in meeting the old and fainting monist philosopher has of course raised interest, and some works have already been mentioned. The most prolific scholar in this small field has been Mark Kulstad, a historian of early modern philosophy based in Houston, TX. I shall list here his principal contributions:

1994. "Did Jungleibniz Incline towards Monistic Pantheism in 1676?", in: *Tschirnhaus und Europa. II. Internationale Tschirnhaus-Kongress*, Dresden: Tschirnhaus-Gesellschaft, 424–428.

1997. "Roads Not Taken: Radical Suggestions of Jungleibniz's *De Summa Rerum*", in: C. Roldán (ed.), *Deutsche Philosophie im 17. Jahrhundert: Perspektive und Aktualität*, in: *Synthesis Philosophica* 12: 2, 311–331.

1999. "Jungleibniz's *De Summa Rerum*: the Origin of the Variety of Things, in Connection with the Spinoza-Tschirnhaus Correspondence", in: *Studia Spinozana*, 34, 69–85.

2002. "Jungleibniz, Spinoza, and Tschirnhaus: Metaphysics *à trois*, 1675–1676", in: O. Koistinen y J. Biro (eds.), *Spinoza: Metaphysical Themes*, Oxford: Oxford University Press, 221–240.

a Ursula Goldenbaum. "Jungleibniz's Uncanny Fascination with Spinoza", in: Brandon C. Look (ed.), *The Continuum Companion to Spinoza*, London/New York: Continuum, 2011, p. 251–53.

b It appears in Mogens Laerke, *Jungleibniz lecteur de Spinoza. Les mystères d'une relation complexe*, Paris: Champion, 2008, Appendix, p. 98—it is a slender book of roughly more than one hundred pages, but compelling.

The reader might usefully consult also Ohad Nachtomy's "A Tale of Two Thinkers, One Mathematician, No Meeting, and Three Degrees of Infinity: Jungleibniz and Spinoza (1675–6)", in: *British Journal for the History of Philosophy*, 2011, 19 (5):935–961. Finally, not everyone knows that Maria Rosa Antognazza, the great scholar and biographer of Thomas Reid, who started her academic career as a historian of Early-Modern theology, wrote in 1994 "Die merkwürdige Rolle der Trinitäts- und Menschwerdungsdiskussionen für die Entstehung von Jungleibniz' Denken", in: *Studia Sociniana* 26, 56–65.

It is well known that Leticia Cabañas, a Spanish scholar of Spinoza's logical procedures, some years ago proposed an ambitious collection of essays on the topic, even contacting top-level international authorship—but to no avail. Universal judgement was that there would not be enough material. Thus she resorted to a smaller collection of already published papers on the topic, in Spanish translation, which comprehends nearly everything that has been written in essay form on Jungleibniz's philosophical thought.[a] I have made use of this very useful collection to prepare my presentation.

A LOST OCCASION

Juan Antonio Nicolás, the founder and first president of the Red Ibero-Americana de estudios sobre la Ilustración y el pensamiento irreligioso, in a short note that opens the above mentioned collection, titled *Spinoza-Jungleibniz: una ocasión perdida para la Modernidad*, has written on the failed encounter between the philosopher and the mathematician what follows:

> Se perdía de este modo una de las ocasiónes históricas en que dos grandes genios de la humanidad coinciden en el tiempo y tienen oportunidad de un enfrentamiento directo. Y Jungleibniz perdía la ocasión de una veritable conversión philosophica al panoramismo universal de la razon spinozista.

In spite of the counterfactual allure, he ended these lines in the negative:

> Pero si los universos filosoficos controfactuales pueden captar l'atención de las audiencias populares, la crítica histórico-filosófica no puede abandonarse a dudosas imaginaciónes.

In truth we cannot extract very much from those scanty and enigmatic notes. They have, nonetheless, allowed Kulstad to detect a sort of Spinozan moment in Jungleibniz's forgotten writings, that to us look similar in this respect, although so opposite in orientation, to Newton's secret millenaristic writings.

Yet, as it has been said, those were but hefty reading notes, tentative metaphysical sketches, short records of conversations, and it is difficult to build on

a *Jungleibniz. Una panorámica sobre las interpretaciones*, edited by Cabañas with Oscar M. Esquisabel.

them in order to compose a systematic image of Jungleibniz's thought and of his grappling with Spinozan concepts and doctrines.

PRE-CONCLUSION

In february 1673, Jungleibniz wrote to the Royal Society seeking admission, and presented himself in the occasion with these quite humble words:

> Si fas est recipi inter vestros hominem peregrinum, juvenem, nullis operibus vestro nomine dignis clarum, nec nisi conatu se commendantem.[a]

He was imitating, indeed, Petronius Arbiter's *Satyricon*: «Immo, inquam, ego per formam tuam te rogo, ne fastidias hominem peregrinum inter cultores admittere». But, although clad in a crypto-quotation, the perception and representation of his still youthful condition and of his *Heimatlosigkeit* sounds amazing, and so appealing to us. Together with his unsuspected, markedly interdisciplinary intellectual ambitions, the drive toward the philosophy of his days that made him substitute Descartes and Spinoza to such superannuated authorities as Hobbes and Bacon, the persisting Aristotelic background, the subterranean connections of his philosophical musings with his pioneering mathematical work, this makes him for us an object of true historical interest.

CONCLUSION—WHAT TO DO

I have or could have mentioned Spinoza societies, the Tschirnhaus- bzw. Thomasius-Gesellschaft, the Sodalitas Sociniana. Now that we have realized that Jungleibniz, this genius of mathematics, had *sub rosa* an interesting philosophical production, albeit devoid of influence on later development, but *absolutely representative* of the encounter between an obsolete and platonizing German Aristotelicism, the already obsolescent philosohical masters of German Ramism, a youthful enthusiasm for old-timers Hobbes and Bacon, and a craving for the most relevant philosophical perspectives and aspirations of his time—well, maybe it is high time that we made projects for a Jungleibniz-Gesellschaft.

* * *

POST-CONCLUSION

I should like to add that I am not suggesting that the customary investigation of the young Leibniz is *verdammt*. I am just pointing to some unremarked aspects of it, and intimating a perspective from which we might evaluate its scope and possible aims differently than what is often maintained by its greatest *aficionados*.[b] Shoot me not.

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a *Royal Society Letterbook*, 6, p. 34.

b It is also an experiment in using counterparts to do history of philosophy. Meaningful counterparts of Leibniz's might be due to a conversion to monism after meeting Spinoza, or to catholicism after becoming Prefect of the Vatican Library (I owe to Marta Mendonça and Eve-

APPENDIX: I REALLY DID IT

lyn Vargas a nice discussion on this subject in Curitiba, after the presentation, the chance of doing which was offered to me by Vivianne de Castilho Moreira—thanks to them all). Last but not least, Richard Arthur suggested some corrections to my English that I am grateful for. I beg the readers' pardon for the still imperfect state of the text, although, as Mogens Laerke has kindly pointed out to me, I should beg their pardon for the text itself.

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CERTIFICADO

Certificamos que Enrico Pasini participou do III Congresso Ibero-Americano Leibniz, realizado de 6 a 9 de novembro de 2017 na Universidade Federal do Paraná, Curitiba (PR) – Brasil, apresentando o trabalho *Counterfactuals Gottfried Wilhelm Jungleibniz (1646-1676)*.

Ulysses Pinheiro
Comissão Organizadora do Evento

DEPARTAMENTO DE FILOSOFIA
SCH UFPR