Positive and Negative Error. A Debate in the Illuminati Order

Martin Mulsow

Abstract: That error could be of interest to Freemasons and Illuminati as a topic becomes evident when one sees it in the context of concepts such as prejudice, ignorance, and gullibility. The perfection of the human being was understood as the detachment from prejudices – from errors –, as overcoming ignorance and as a fight against gullibility. In 1785 there was a discussion among the Illuminati of Gotha about how one should understand error. Prince August of Saxe-Gotha transfers Voltaire's two types of imagination to two types of errors, using the distinction made by the physicist Charles Du Fay, who distinguished resin electricity (*électricité résineuse*) with its negative charge from glass electricity (*électricité vitreuse*) with its positive charge. So August suggests that there are positive and negative errors: the positive errors are attractive, they attract. In this case the cause of error lies on our side, on the side of the subjects: because of certain defects in the knower, facts are not correctly recognized. The negative errors, on the other hand, repel: there it is due to the nature of the representations of the facts themselves, which have pitfalls or are distorted by hallucinations, that we go wrong.

Keywords: Illuminati order, August von Gotha, German Freemasonry, electricity, imagination

1. Error as a Subject in Freemasonry

The Illuminati were a secret society of the German late Enlightenment, which took up the cause of the improvement of individuals and society.[1] Founded in 1776 by Adam Weishaupt, it was initially called the "League of Perfectibilists" before the name was changed to "Illuminati." For the first few years, the order played only a local role within Bavarian politics with its infiltration tactics, but after 1780 it expanded, mainly through the promotional activities of Freiherr von Knigge, and after 1782, when German Freemasonry was in a crisis, it exploded almost and expanded in a very short time all over Germany with almost 2000 members. All this happened in the greatest possible secrecy, with aliases, secret meetings and undercover information on place and time. In 1784, however, the activities in Bavaria were exposed, the order was banned there, so that its center

[1] On the Illuminati order see Engel 1906; Le Forestier 1914; Van Dülmen 1977; Rachold (ed.) 1984; Agethen 1987; Neugebauer-Wölk; Hammermeyer 2003; Gregory 2009. On the ideal of perfection see Pawlowski 2004.

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now shifted to central Germany, especially to Thuringia, where in Weimar and Gotha Johann Joachim Christoph Bode and Duke Ernst II pulled the strings.[2] However, the crisis widened into a crisis of legitimacy when it became public in 1787 that Adam Weishaupt himself, who had set out with the highest moral ideals, had acted morally reprehensible when he fathered a child with his sister-in-law, then wanted to have it aborted and also use his secret society connections. The order, which had recruited the most promising, cleverest and most socially committed young men everywhere, whether in Heidelberg, Frankfurt, Munich, Vienna, Göttingen or Gotha, then imploded as quickly as it had expanded: by 1788 at the latest, communication with the order was stopped, and the networks that had formed only continued to work for themselves and informally.

In the few years of its heyday, however, the Illuminati order represented, so to speak, a supra-regionally active early form of a progressive party, which went beyond the visible institutions, but used them, for enlightenment, reforms and moral improvement of the people. And it formed an internal public, organized according to local chapters—called Minervalkirchen—in which the members read essays to each other and discussed them at meetings every three or four weeks. These essays were partly suggested by the group leaders, but partly also by the members themselves. Occasionally several members wrote about the same problem, which makes it possible to compare the proposed solutions.

About 150 of these handwritten essays have been preserved for the Illuminati settlements in Gotha, Erfurt, Rudolstadt and Jena in the so called Schwedenkiste (on the Schwedenkiste see Endler 1990.) Together with minutes and letters, they make it possible to reconstruct the exact context of the discussion in a way that is almost impossible to find anywhere else.[3] And one of the subjects discussed was that of error.

That error could be a subject of interest to Masons and Illuminati becomes evident once it is seen in the context of concepts such as prejudice, ignorance and credulity. For the perfection of man was understood as breaking away from prejudices—from errors—as overcoming ignorance and as a fight against gullibility. All these qualities are the negative of epistemic virtues: they are epistemic vices. We shall see that contemporaries themselves, like Gaston Bachelard later, spoke of obstacles to knowledge.

But typical for the Illuminati is not just epistemic virtue education. That would have something purely methodological and pedagogical about it. In clinging to Freemasonry as an invisible elite extension of it, the Illuminati Order also inherited a certain pathos of "Truth" and "Wisdom" (with a capital T and W) not entirely distant from the theological pathos of the One True. But theolo-

[2] On the later phase of the order see Wilson 1991; Schings 1996; Müller-Seidel and Riedel 2002.

[3] Geheimes Staatsarchiv Preußischer Kulturbesitz, Freimaurer, 5.2. G39 Nr. 111ff. I am grateful to the Große National-Mutterloge „Zu den drei Weltkugeln" for their friendly permission to use these documents. For the sake of clarity and simplicity I cite the documents with the abbreviation SK [=Schwedenkiste], the number of the volume and the number of the document (e.g. SK13-034).

gy has its own tradition of addressing errors. Since Lactantius and Augustine, idolatry and heresy have been regarded as "errors," as deviations from the truth of faith. In the 17th century people spoke of "fundamental errors" when they wanted to characterize the basic wrong decisions in intellectual history such as Manichaeism or materialism. Accordingly, some theosophically oriented Freemasons such as the Frenchman Louis Claude de Saint-Martin called their books *Des erreurs et de la verité*—the title of Saint-Martin's work of 1775. There he explains his highly speculative principles and states "that it consequently there can be no true knowledge other than these principles" ([Saint-Martin] 1775. See Schmidt-Biggemann 2004). Everything else is a multitude of opinions and sects, all of which err. The book was also widely discussed in Illuminati circles after the Freemason Matthias Claudius translated it in 1782. Anton Kreill, Illuminati member in Vienna, discussed it extensively in the *Journal für Freymaurer.* Ignaz von Born, the director of the Vienna Minerval Church, sent the review to his friend Karl Leonhard Reinhold, who now lived in Weimar, and Reinhold forwarded it to Bode.[4]

All this happened at the turn of the year 1784/85. One might think that the discussions about error, which began in January 1785 among the Central German Illuminati, were triggered or shaped by this lead. But that is not the case. These Illuminati were anything but theosophical.

2. Prince August's Proposal

On Friday, January 21, 1785 there is a long Minerval Church session in Gotha in the house of the court gardener Wehmeyer on the edge of the Mystery Garden in front of the castle (the minutes of the meeting are in SK15-016.) A total of six lectures are read out, plus a letter, as the neatly written minutes show. The head of the lodge, Castle Captain von Helmolt (code name "Chrysostomos"), first reads a passage on "Prudence" from a Book of Wisdom to the people, then allocates essay topics for future meetings and collects money for charity. The texts, which are read out and discussed, deal with topics as diverse as self-love, friendship, the Bohemian school system and the question of whether there are more bad people than good people. At the end of what must surely be a good three hours, the eleven brothers besides Helmolt are sent home with the motto "Be careful not to complain too much in misfortune." And right in the middle: August von Gotha on "two main classes of errors."

August bore the code name "Walter Fürst" based on the Swiss Confederation legend of freedom. He was the brother of the reigning duke, and while the duke was running his affairs of state, the always ailing August had little choice but to pursue his aesthetic interests. He was an intelligent and educated man, a

[4] Kreill 1784; Reinhold to Bode, without date (about 1784/85), SK06-207: „Ich erinnere mich, daß Sie mir einst erlaubten, Ihnen das Stück des wienerischen Maurerjournals das den Aufsatz über das Buch Des erreurs liefern würde, mitzutheilen. Hier ist es."

friend of Wieland, Herder and Goethe, but extremely reserved, without much self-confidence. "It would be too daring of me, my brothers," August begins in his modest way, "if I wanted to talk about enlightenment at this meeting, since some of you already have dealt with this important subject with much insight and acumen" (SK13-004: Von zwey Classen der Irrthümer). He alluded to Schack Hermann Ewald and Rudolf Zacharias Becker, two of the brightest minds in the Gotha group, who read essays on the subject "What is Enlightenment?" in June and December of the previous year—the same year, in which comments on this topic were also made in the *Berliner Monatsschrift*.[5] August, however, wants to set a new accent: "Allow me to entertain you at present only about the obstacles of the same, namely about the errors, which I would like to make myself more comprehensible for the time being, by dividing them into two main classes." The "for the time being" reflects August's reserved manner, but at least he is attempting a very peculiar and original classification here.

"Methink, my brethren, we should be looking too generally at errors if we ascribed them no source other than ignorance, and the outbursts of a raging imagination, the explanations unsupported by experience or evidence, and at last the credulity so peculiar for an eternal childhood not included in it." Imagination is the key word that really drives August. But how is imagination related to ignorance? There is a theory that did this very powerfully at the beginning of the 18th century; it comes from Fontenelle. August does not name him, but the expression of "eternal childhood" points strongly to him. In *De l'origine des fables*, published in 1724, Fontenelle interpreted myth-making as a compensation for ignorance: "The more ignorant one is and the less experience one has, the more miracles one sees. The first men therefore saw many miracles; and since fathers, of course, tell their children what they saw and did, only miracles occurred in the tales of those times."[6] If mankind does not overcome this, it remains in a kind of eternal childhood.

Error is something specifically earthly, human, according to August:

> Of course we would have to be angels or gods if we were never to run the risk of making mistakes, or in other words if we had such vivid insight into everything that the case of error would become a completely impossible case for us. Then, and only under such a condition, would our fluttering imagination be utterly silenced, all craving for explanation would cease of itself, and credulity would disappear from our moral nature. However, as long as we inhabit our planet, such an ennobling of human powers remains impossible, because from all sides we are confronted with deception of the senses, with secret desires of passionate hearts, with a tendency to slumber in the mind and have to fight a thousand kinds of spiritual enemies in combating which we commonly succumb.

[5] On Ewald and Becker on this topic see Mulsow 2015; on the debate in the Berliner Monatsschrift see the documentation in Hinske 1990.

[6] Fontenelle 1932. On the enlightenment debate on imagination see Dürbeck 1998; Schings 1977.

These are all still quite traditional considerations about the human inclination to explanations in Fontenelle's sense. But now comes August's actual thesis: "Just as electricity is usually divided into a positive and a negative type; so I should be inclined to accept positive and negative errors; which certainly, like them perhaps, finally flowed together into one." That is August's central suggestion. How did he come up with the idea of seeing errors as analogous to electricity? When rubbing a glass tube and a rod made of resin or sealing wax, different electrostatic charges—as we would say today—are created. Charles Du Fay had distinguished resin electricity (*électricité résineuse*) with its negative charge from glass electricity (*électricité vitreuse*) with its positive charge. Let's take a closer look at August's choice of words. The semantics of the "confluence" of the two "kinds" of electricity point to the debates as to whether it is one fluid or two that make up electricity. Men like Jean-Antoine Nollet had advocated the two-fluid theory, but many now accepted the criticisms of it from Benjamin Franklin and William Watson, who argued that there was only one fluid and that what mattered was where that fluid was, whether a body be positively or negatively charged (see Bragatto Boss 2006; Torlais 1954; Cohen 199; on the debate about electricity in Germany, see Hochadel 2003). In Gotha it was quite natural to come up with such analogies, because August's brother, Duke Ernst II, was very interested in physics and promoted natural sciences at court. While classical literature flourished in Weimar, Gotha was the "Weimar of the natural sciences." Ludwig Christian Lichtenberg, the older brother of the physicist Georg Christoph Lichtenberg from Göttingen, worked here. He was an assistant councilor at Gothaer Hof and responsible for the physical cabinet. From 1781 he published the magazine for the latest in physics and natural history, introduced the lightning rod in Gotha and developed an electrifying machine as early as 1773 (see Schmidt-Funke, Berg, and Mulsow 2021) Prince August could talk to him about positive and negative charges and even look over his shoulder during the experiments. It struck him that the distinction between the "effluvium" and the "affluvium" in Nollet, namely the active transition of a positive fluid to another when two bodies touch intimately, and the passive release of the negative fluid of the second body to the first, had a certain similarity to a classification by Voltaire, which also deals with active and passive forces.

August was not a natural scientist, but much more a man of letters, and he loved Voltaire more than anything. It was he who, together with the Gotha publisher Ettinger, organized the first complete edition of Voltaire, which was printed in south-west Germany, in Kehl, but to which the Gotha publisher Ettinger contributed (Gil 2018). In the article "Imagination" of his *Questions sur l'Encyclopédie*, as August later reconstructed his chain of associations, Voltaire

> divides imagination into active and passive [...]. The latter, when touched from without, becomes the source of all superstition, just as the former becomes the muse of poetry, painting, and music, etc. In short, the one adopts everything that has been invented, the other invents it herself, with the knowledge that she is doing it voluntarily. At least that's how, August qualifies, "the memory of this Voltarian treatise still lies in my soul (August to Becker, 19.2.1785, SK14-005).

In fact, Voltaire divides the imagination into two types: "Il y a deux sortes de l'imagination, l'une qui consiste à retenir une simple impression des objets; l'autre qui arrange ces images reçues, et les combine en mille manieres. La premiere a été appellée imagination passive, la seconde active" (Encyclopédie, vol. VIII (1765), 561). In his *Encyclopédie* article, as in his other epistemology, Voltaire oriented himself to Condillac's philosophy, which Condillac took basicly from Locke. With Voltaire the point of the distinction was that the passive imagination is determined solely by the impression of sensory data, while the active imagination combines memory with reflection and accomplishes a feat of combination. Spontaneity and freedom play a role in her, and she combines cognitive and aesthetic qualities (Zwinck 2006, 71ff).

But how did August transfer this Voltairean way of thinking to electricity on the one hand and to the classification of errors on the other? "Some" errors, he says, "would attract us, as it were, so that we would have to err through self-deception and our own fault; the others, on the other hand, push us away from the truth and into darkness through inner defects of knowledge and outer deceptions of the senses" (SK13-004). Positive errors have power of attraction: they attract. The fault lies with them, the cause lies on our side, the side of the subjects: due to certain defects of the recognizer, facts are not recognized correctly. The negative errors, on the other hand, repel: there it is due to the nature of the representations of the facts themselves, which have pitfalls or are distorted by hallucinations, that we go wrong.

August's metaphor is not entirely consistent: on the one hand, he speaks of the subjects being repelled by the truth through errors; the other time about the attraction of subjects to errors. So the parallel is not complete. We will come back to that later. In 1763, Kant demonstrated that one could deal with "positive" and "negative" at all in epistemology, when he introduced "the negative magnitudes into world wisdom" as real repugnance, in which one magnitude is the opposite of the other (Kant 1763). And that one could make the error the object of a quantifying calculation was suggested by Ernst Adolph Westhof in 1772 in an article in the *Hamburger Magazin* on the "rules according to which the importance of an error can be judged:" "The more obvious an error is, the welfare of individual people or entire peoples destroyed, the more it deserves to be feared and loathed" (Westhof 1772, 367). This was a pre-utilitarian calculation, taking into account, so to speak, the common costs of error.

August also relates error and society to one another, but only to the extent that it would be desirable for "a society whose noblest purpose it is to control error and prejudice as much as possible, to make serious business out of it, the border lines to draw between the two classes; which I think I can only see, as if behind a twilight cloud." Of course, the "society" August is talking about here is what Reinhard Koselleck described as the social interior (*gesellschaftlichen Innenraum*) of the 18th century, namely the secret society (Koselleck 1959).

As an example of how his classification works, August uses the fallacy of geocentrism. Assuming the earth to be the center of the world was due to incorrect measurements and calculations (which, by the way, is not necessarily the case)

and has now been overcome. That was just a negative mistake. "But when the fabulous art of the astrologer was joined to false astronomy, did not a new error arose on the wings of a sick imagination? Didn't the weakness of wanting to explain and prophesy the destinies of men and empires take its share? And didn't the foolish astrologer grasp the credulity of the deceived and the self-deceiving deceivers eagerly with both hands?" Here August quite clearly follows Voltaire's concept of an active imagination and therefore determines the situation as a positive error: on the basis of the negative error of astronomy arose the positive error of astrology. While the first, to put it in modern terms, is based solely on cognitive epistemic vices, the second is based on ethically problematic characteristics: desire for explanation, lust for power, deceit—and self-deception. We shall see that Johann Benjamin Koppe elaborates on this point in his contribution.

Can different types of errors build on each other? So is positivity of error a superaddendum, contrary to what the charge opposition in the electrostatic analogy suggests? Geocentrism seems to have been a cardinal example of a basic scientific error in human history (Westhof also invokes it), and Lorraine Daston has shown that such basic errors could inspire a collective sense of shame when looking back from the eighteenth century (Daston 2005, see also Blumenberg 1975). August relates this fundamental error to the nature of astrology.

At the end of his short lecture, the Gotha prince suggests that the characteristics of the positive errors, which he considers far more dangerous, should be worked out more precisely in the circle of the Illuminati: "so that at least the sum of such errors, which are not just based on a lack of human knowledge, does not still grow daily like a water that devastates fields and huts" (SK13-004). That is the practical benefit that is to be striven for here.

3. The Discussion in the Gotha Minervalkirche

It is the advantage of the source situation through the dense documentation of the Schwedenkiste that the internal discussion triggered by August in the Illuminati order can be followed closely. Was the prince able to convince his confreres of his conceptual differentiation? In the debate on January 21, there were doubts as to whether the terms "positive" and "negative" were really appropriate for what August had wanted to say. It was suggested that it would be better to talk about "subjective" and "objective" errors. August reports this in a Quibus Licet (the Reports to the Superiors of the Order), which he wrote four days later, on the 25th (Quibus Licet from August. 25.1.1785. SK 11-005). But there were also more detailed, subsequent reactions.

It seems that the question about the errors was, taking up August's suggestion, also presented to other members of the order for an answer. August writes in the Quibus Licet, modestly as ever: "May I ask that my name be completely ignored if the question is asked?" (Quibus Licet from August. 25.1.1785. SK 11-005). He was simply interested in initiating a debate, similar to what he had done before, not about profiling himself. And Bode or Helmolt, his superiors in the order, implemented the suggestion. In the Schwedenkiste we have two of

the response texts submitted at the time, one by Johann Benjamin Koppe (code name "Acacius") and one by Johann Christian Ernst Haun (code name "Jacob Thomasius"), both members of the Gotha local group, the latter in the January meeting, in which August had presented, also present. A third essay by the archive registrar Johann Carl Hess ("Rapin Thoyras") has not survived (see Session of the Minerval Church Gotha, 22. 9. 1786; SK SK15-152). And even the duke himself, Ernst II, who otherwise did not get involved in what was happening in the lodge, seems to have wrestled a few sentences from himself on the subject. But finally—and above all—there was the direct reaction of Rudolf Zacharias Becker ("Henricus Stephanus") to August's advance.

Most of the contributions are affirmative—which may not only have been due to the stimulating distinction, but also to the authority that a member of the princely family possessed even when he was completely withdrawn in the circle of the Masonic "brothers." Haun, who taught at the Gymnasium in Gotha, reproduced the division into negative and positive and contributed an example of his own, this time from the medical field:

> So it was a negative mistake that the Jews did not know the true cause of the convulsive nervous diseases, and therefore had an incomplete, erroneous notion of them. Subsequently it was reinforced by a doubly positive one, firstly, that to fill the gap caused by the negative they falsely ascribed the origin of the disease to certain invisible malevolent spirits. [And secondly:] Through credulity the positive error spreads to others (SK13-112).

The error is doubly positive, because initially—in Fontenelle's sense—the gap of ignorance is actively overcompensated by superstition, but then the spread from one people—the Jews of the Old Testament—to all others takes place. Here Haun is following a widespread anti-Judaism of the Enlightenment, which in particular separated the morality of the New Testament from the irrationality and the belief in demons of the Old (see Sutcliffe 2005).

Haun uses the old metaphor of the "medicina mentis," which has been popular since the 17th century for connecting logic on the one hand and criticism of prejudice on the other. It would be about "making a sick mind healthy, namely when I am among its curable diseases, such as cheap, gullible, ignorance, too fleeting contemplation and excitement occurring objects, or even carelessness, inertia, excessive sensuality, hasty judgment, stubbornness, pride and lust for genius." Haun thus enriches the list of epistemic vices with a number of additional vices.

Johann Benjamin Koppe, a professor of theology who moved from Göttingen to Gotha and an important eminence in the leadership of the Illuminati order, also takes an affirmative stance on August's proposal, even if he does not explicitly adopt its terminology. He first reformulates the negative error by saying that it is "the result of a natural weakness of the head and a total lack of opportunities and tools for enlightenment" (SK14-012). Children, the common people, but also non-specialists in special regions of knowledge suffer from this ignorance. Koppe sees the positive error—which he does not name as such—in connection with various affects such as sloth, pride and desire.

However, in his assignment to the confreres, August had asked how the characteristics of positive errors should be determined more precisely, i.e. how the relationship between various epistemic vices should be understood. Here Koppe's contribution brings some progress: "General characteristics of these different sources of errors," he says, "may be difficult to state: and it requires an exact knowledge of the erring one himself, in order to be able to determine with him whether from the one or from another source, whether from one source alone or from several combined?" A differential analysis of error thus presupposes an analysis of the erring subject, not just a general enumeration of vices.

> But in general, perhaps this much can be shed light on: in errors about subjects that are very closely connected with our inner and outer happiness, e.g. about religion, about the morality of certain actions to which our temperament drives us; about people who are so close to us that we can expect harm or judgment from them; with these errors, in most cases, it is not actual ignorance that is the cause, but some of the other sources; on the other hand, errors, either about quite abstract matters or about things that lie too far outside our circle to ever touch us, tend to arise more often from actual ignorance (at most from indolence alongside this) than from pride and passion.

In August's terminology, this would mean: negative errors usually occur when it comes to abstract and formal things that have no existential relevance. But whenever one's own happiness comes into play, i.e. the affective and ethical self-reference, then this self-reference creates a source of error of its own kind, so to speak, an affective sphere of love, hate, power and pride that produces positive errors. Koppe does not use the theory of compensation, which allows positive errors to fill the gaps left by negative errors, but rather favors the juxtaposition of epistemic situations remote from affect and close to affect.

The short statement that Duke Ernst makes on his brother's question reads almost like a comment on Koppe and his statements about happiness. Ernst confines himself—in accordance with his position—to an ethical-political perspective: "Most human errors," he says, "may well have arisen from the fact that the middle ends of bliss and tranquility are seen as the end ends of our existence, and over them the whole thing have forgotten what they now serve" (SK13-002 and SK13-003). This is a terminology that was used in Wolffianism, also in cameralistic considerations of the gradation of purposes. Middle ends like prosperity and peace are taken for ends, but for Ernst there are higher and final goals like the enlightenment and perfection of mankind. Gottlieb Hufeland, Illuminati member in Jena, described this as a material principle of morality in his natural law (Hufeland 1790). Ernst's argument is analogous to the classical one about idolatry: there, too, the "primitive" peoples are accused of taking middle causes for final causes and therefore worshiping trees, animals or winds instead of God as the final cause. Ernst, however, sticks to the statement of a mix-up, i.e. a cognitive defect, and does not arrive at a theory of affective subjectivity like Koppe.

4. Becker's Criticism

The various ways in which the question of error is approached sometimes reveals more about the authors than about the problem itself. This was precisely one of Adam Weishaupt's ulterior motives when he made essay question-answering (as "Pensa") a cornerstone in the practices of his order: the texts reveal the character traits of the members and at the same time they help to advance them in their character formation (see Meumann and Simons 2017).

But the Gotha debate on errors would have been stale if it had consisted of nothing more than approving extensions of Prince August's suggestion. After all, we have already seen that August's imagery was quite shaky and vulnerable. It took a bright and independent mind like Becker to turn the wobble into a fall.

Becker, the popular educationalist, philosopher and theologian, editor of the *Deutsche Zeitung* in Gotha, shows in his contribution—which we know from a report by August of February 25—that he understands the electricity analogy that August used very well, yes, that he might have mastered the theory of electricity better than the latter. "The attraction and repulsion in electricity happens from the center," he specifies, "and depends on the nature of the object that is brought into the electrical sphere of action. In the application of this phenomenon to errors, therefore, these take the place of electrical matter, and the mind is the object which is attracted or repelled. The direction which the positive and negative errors give to the mind would therefore have to be exactly the opposite if the comparison were to be correct."[7] Now comes Becker's astute objection: "But it seems as if nothing else could be done about the effect of the error on the mind to think of as a point of direction, except for the imperfection, the lack of development of it; and to this point the mind is driven, according to the treatise, by both types of error, albeit in different ways." Becker takes August's imagery seriously and states that actually both errors are negative in the sense of repulsive. A point of direction is a point of aim and orientation, and that in error is something far removed from spirit and truth. "The division gives therefore," Becker sums up dryly, "considered in this respect, probably not a true species of error."

But he allows his criticism only for the choice of words and metaphors. As far as the matter is concerned, he thinks August's suggestion makes sense if worded differently: "Some errors keep the mind in its imperfect, undeveloped state: but others push it in developing and working on its store of materials, deeper back into the state of obscure and confused concepts." The guiding difference is now undeveloped/developed: the active process of development of the mind can go astray, so that the repulsion in confusion is even stronger than in missteps by pending development. August's example of geocentricity and astrology makes better sense then.

Becker goes even further in order to define the concept of error more precisely.

[7] SK 13-04: August Prinz von Sachsen-Gotha-Altenburg: Auszug eines Schreibens von Heinricus Stephanus [R.Z. Becker] an Walther Fürst [Prinz August von Gotha], Gotha, 25.2.1785. On Becker, see Siegert 1978; Tölle 1994.

> Error is nothing else than incorrect connection of a predicate with a subject. The inaccuracy lies either in not knowing their true relationship, or in ascribing something to them that they do not have. In the first case, the mind will not work on the idea any further: that is, with regard to the idea, it will remain in its imperfection and be kept alive. Otherwise, the more it develops the wrong thought and associates it with others, the deeper it will sink into confusion and darkness through his operation itself, since it gives the subject a wrong predicate.

In this way Becker reformulates what August tried to express through Voltaire's passive and active imagination, in a more basic way, namely through predicate logic. The undeveloped mind with its ignorance only errs insofar as it does not ascribe a specific predicate to a subject (one can ask here, however, whether this really is already an error); the evolved, more complex mind sometimes assigns a wrong predicate to subjects. This is worse than admitting one's ignorance. From this Becker can say: "The first [type of error] arises from the natural and accidental limitation of the limitedness of the mind and its scope: the other from its drive for effectiveness." Unlike Koppe, Becker explains this kind of error not through the clouding of the judgment through affect in self-reference, but through a drive to be effective, through the activity of the mind itself. "The former type is actually just a lack, the absence of truth; this type of error is really existing untruth." And Becker transfers the difference from the individual to the species: "The first is found among rude peoples: the second most frequently among cultivated people."

Becker had been a pedagogue and teacher at the Philanthropin in Dessau. Observing young people in their development, in their urge for self-development, is close to his heart. And he sees that sometimes the wrong paths have been taken. Activity can go wrong. His pedagogical perspective leads him to talk about "procedures" for avoiding both forms of error: "The former would require instruction, the expansion of knowledge, the awakening of the thirst for knowledge: the latter, on the other hand, the healing of curiosity, the correction of insights, the restraint of imagination and government of the mind. In the case of youth, the former is the object of instruction: the latter is the actual education."

The reasoning about mistakes has suddenly mutated from electrical metaphor to a pedagogical lesson. Becker dropped the "positive" and "negative." But he wants to build a bridge for August, showing how—in a modified form—positivity and negativity, together with the analogy to electrostatics, could be maintained. If he had to defend his proposal in a university disputation, he says, he would stick aggressively to his proposed terminology. According to this, August should quietly

> [commit to] the Franklinian theory of electricity. According to this, the negative is as much as—deprivation, lack of natural measure; the positive—overcrowding of electrical matter: almost like the positive and negative magnitudes, or like plus and minus in arithmetic. The former deny the existence of a reality; these establish it. But according to the narrated and admitted characteristics of my two classes of errors [Becker puts himself in August's place] the first gives a real

> minus in the sum of knowledge; that's why I call it negative: the other, where a wrong predicate is assigned to the subject, gives plus, that's why I call it positive. Negative errors are therefore based on ignorance and limitations of the mind and are defects in the system of thought: positive ones are based on incorrect application of the power of thought and are errors in the system of thought.

Becker thus introduces the difference between defect and error, in order to name the deficient, in the other case additive, but incorrect character of "thought systems." "In this sense," concludes Becker, "the expression seems quite appropriate to the matter," and he has another punch line ready: "And if the gentleman opponent doesn't notice that I've turned the tables and now call it negative, what above was positive: so he must admit that he has been overcome. But the faculty will be [issuing] me the master's degree, even if he discovers the fraud; provided I only pay the fees."

The harsh criticism ends on a humorous and forgiving note. While with August and also with Becker, positivity was initially meant as an attraction to an error, and in Becker's dialectical gimmick it has now become negativity and mere deficiency. And August? He acknowledges the criticism: "For my part, I also confess that I have been overcome, and here I publicly express my heartfelt, warmest thanks to our beloved brother for the corrections, which he means with as much frankness as sagacity [and] thorough insight knew how to give wavering concepts" (SK13-064). In the end, August is even happy that his initiative has brought about so much meaningful differentiation in the discussion process.

Was this whole process really typical for the Illuminati? Or could it have taken place in other contexts as well, at a university, at an academy, in an urban environment or in the context of magazines? In a way yes—as the debate in the *Berliner Monatsschrift* on enlightenment shows; So "illuminatic" cannot mean: in any way esoteric and different from public thought. On the other hand, even at universities there were seldom such intense, carefully controlled discussions shaped by personal acquaintance and benevolence as those in Illuminati circles. And hardly ever one that we can understand as precisely as this one. Illuminatism could therefore be defined positively as the creation of protected discussion spaces.

It is a coincidence that the debates took place in the very year when Coulomb's law was formulated, in which the relationships of electrostatics were first formulated. And it is a further coincidence that the long article "Irrtum" in Volume 30 of Krünitz's *Economic Encyclopedia* appeared in the months when people in Gotha were thinking so intensively about errors. The article, which I suspect was written by the aforementioned Ernst Adolph Westhof, who presented his pre-utilitarian theory of error in 1772, gives an amazingly broad panorama, from scientific and legal error to political and theological error.[8] In this he is ahead of the Gotha discussions. But he presents results, not the formation of thoughts like the Gotha papers. If we want to use the analogy of the electric

[8] Westhof 1784. There Westhof's theory is outlined prominently.

again, then Westhof presents a charged medium, but the Gotha papers the intellectual electricity still floating freely in the field.

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