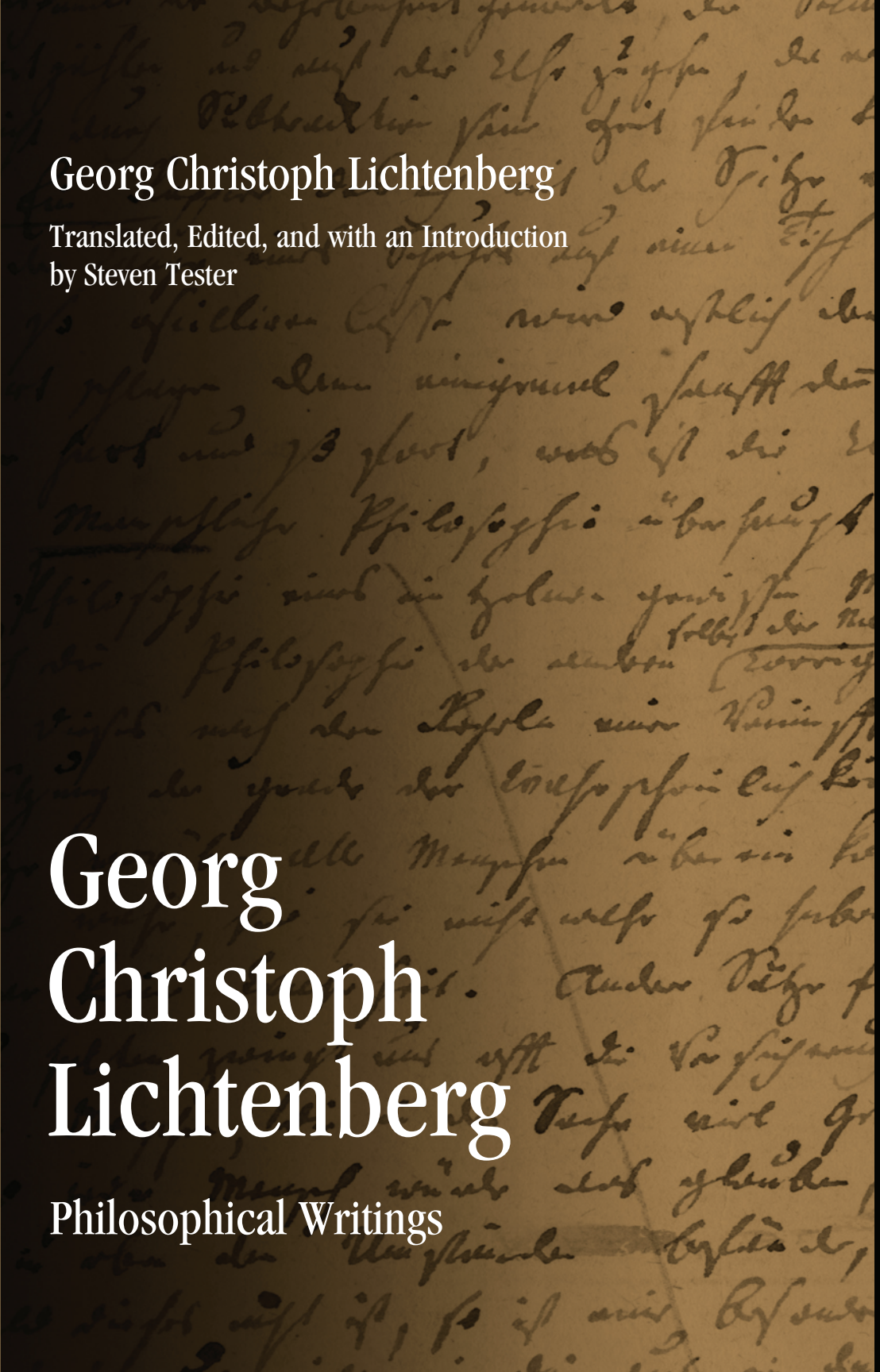

Georg Christoph Lichtenberg

Translated, Edited, and with an Introduction
by Steven Tester

Georg Christoph Lichtenberg

Philosophical Writings

Georg Christoph Lichtenberg

SUNY series in Contemporary Continental Philosophy

Dennis J. Schmidt, editor

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We can use Lichtenberg's writings as the most wonderful divining rod: where he makes a joke, there a problem lies hidden.

—Johann Wolfgang Goethe

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Chronology

1742	Georg Christoph Lichtenberg born July 1 in Ober-Ramstadt to Johann Conrad Lichtenberg and Henriette Katharina (Eckhardt) as the youngest of seventeen children.
1752–61	Attended Därmstadter Pädigogium.
1763	Matriculation at Georg-August University in Göttingen, where he studied mathematics and physics under Abraham Gotthelf Kästner until 1767.
1764	Earliest preserved entries in his Waste Books.
1766	Astronomical work at the Göttingen observatorium under Kästner. Publishes "Attempt at a Natural History of Bad Poets, Particularly the Germans" and "On the Uses Mathematics Can Provide for a *Bel Esprit*."
1767	Finishes studies at Georg-August University.
1768	Begins Waste Book B (1768–1771).
1770	March–May, first trip to England. Appointed professor extraordinarius. Inaugural paper entitled "Examination of Some Methods for Resolving a Certain Difficulty in the Calculation of Probability in Games of Chance," on the Petersburg Problem.
1773	*Timorus*, "Some Experiments with Polyps," "On Comets."
1774–75	Elected to Royal Society of Sciences in Göttingen. Second visit to England. Edits and annotates Tobias Meyer's *Opera Inedita* containing papers on astronomy, color theory, and magnetism.

1776 Begins Waste Book F. "Observationes astronomicae per annum 1772 et 1773 ad situm Hannoverae, Osnabrugi et Stadae determinandum institutae."

1777 Discovers Lichtenberg Figures. Designates electricity with the mathematical symbols + and –. Becomes editor of the *Göttingen Pocket Almanac*.

1778 Begins his renowned lectures on experimental physics at Georg-August University. "On Physiognomy; Against the Physiognomists."

1779 Begins editing *Göttingen Magazine for Science and Literature* with Georg Forster. Continues research on electricity.

1780 Address to Academy of Sciences entitled "Observationes super dubiis quibusdam circa aptitudinem vulgatae mensurae sortis." Publishes "Orbis Pictus" and "A Most Gracious Epistle from the Earth to the Moon."

1781 "On the Pronunciation of the Sheep of Ancient Greece in Comparison with Their Newer Brothers on the Elbe: Or, on Beh Beh and Bäh Bäh."

1782 Elected to Society of Natural Scientists in Halle. "On Attempts Recently Undertaken in France to Cause Hollow Bodies to Rise in the Air," "Miscellaneous Thoughts on Aerostatic Machines." Review of Joseph Priestley's *Experiments and Observations Relating to Various Branches of Natural Philosophy with a Continuation of the Observations on Air* (1781).

1783 Research on aerostatic machines, balloons, and gases. Visit from Goethe. "Fragment on Tails," "A Contribution to Physiognomical Fragments," "Orbis Pictus."

1784 Edits third edition of Johann Christian Polycarp Erxleben's *Foundations of the Natural Sciences*. Three subsequent editions appear in 1787, 1791, and 1794. Most likely begins Waste Book H. "On Hogarth's Engravings."

1787 "Continuation of Observations on the Cosmos," "On Comets."

1791 "Amintor's Morning-Prayer."

1793 Begins Waste Book K (1793–1796). Correspondence with Goethe on the color theory (1792–1796). Elected to Royal Society in London.

1794 Beginning of the appearance of "Commentaries on Hogarth's Engravings." Elected to Royal Academy of Sciences St. Petersburg.

1795 "Geological Fantasies" and "Franklin's Geogony."

1796 Waste Book L (1796–1799). Elected member of the Society of Natural Scientists in Jena. "Does the Moon Rotate on Its Axis?"

1798 Elected to Scientific Society of Holland. "I Wish You Were on the Blocksberg," "A Dream Like Many Dreams."

1799 Lichtenberg dies on February 24 and is buried on February 28.

Note on the Edition, Text, and Translation

The texts that have come to be known as the *Sudelbücher* (Waste Books) consist of fifteen notebooks kept by Lichtenberg from 1765 until his death in 1799. Beginning with A, which consists of five notebooks, each volume was designated by Lichtenberg himself with a letter of the alphabet up to L. Notebooks G and H were lost in the nineteenth century; notebook K was for the most part destroyed; and L is incomplete. The remarks in this State University of New York Press edition were selected from volumes 1 and 2 of the most recent edition of Lichtenberg's works, *Schriften und Briefe,* edited by Wolfgang Promies (München: Carl Hanser Verlag, 1968–), and follow the numbering of the Promies edition. The Albert Leitzmann edition of the Waste Books, *Georg Christoph Lichtenbergs Aphorismen*: *Nach den Handschriften* (Berlin: Behr, 1902–1908) follows a different numbering scheme. Readers who wish to research older secondary sources that follow the numbering of the Leitzmann edition will find the concordance in the Promies edition helpful. Portions of notebooks G, H, and K were reconstructed by Promies from texts published in the first (1800–1806) and second (1844–1853) editions of Lichtenberg's *Vermischte Schriften*. The "Golden Notebook," refers to a notebook designated by Promies as the *Goldpapierheft* (GH) because of its gold-colored binding. Lichtenberg also kept a notebook of excerpts and commentaries on his readings, to which he gave the title Κέρας Ἀμαλθείας, meaning "horn of Amaltheia" or "cornucopia"; this notebook has since been designated by Promies as KA.

In this edition, I have focused on presenting the reader with a selection of Lichtenberg's writings that will expand our understanding of Lichtenberg's philosophical thinking and his relation to the history of philosophy.

Many of Lichtenberg's remarks appear here in English for the first time. In my translations, I have consulted a number of previous translations: R. J. Hollingdale, *The Waste Books* (New York: NYRB Classics, 2000); F. Mautner and H. Hatfield, *The Lichtenberg Reader* (Boston: Beacon, 1959); J. P. Stern, *Lichtenberg: A Doctrine of Scattered Occasions; Reconstructed from his Aphorisms and Reflections* (Bloomington: Indiana University Press, 1959); and Normann Alliston, *The Reflections of Lichtenberg* (Swan Sonnenschein, 1908). At times, we are in agreement regarding the translation of a passage. Each has influenced my translation in its own way, so I am greatly indebted to them. I am also indebted to the Wolfgang Promies edition of Lichtenberg's *Schriften und Briefe* for its extensive notes, which have formed the basis for many of my own critical notes.

Lichtenberg's writings in his notebooks are often not punctuated or poorly punctuated, so in order to facilitate readability I have inserted appropriate punctuation. Where possible, I have retained Lichtenberg's technical vocabulary but have also added or removed minor words and altered syntax for clarification. Where I have not translated Lichtenberg's entire remark, I indicate this with bracketed ellipses [. . .]. As might be expected of texts from the eighteenth century, most of Lichtenberg's gender references are male, and he almost exclusively uses the male pronoun. I have not attempted to alter this. Where the grammar of Lichtenberg's remarks demands it, "*Der Mensch*" (human, human being, person, man) has also been translated as "man," as this would have been the formulation common to Lichtenberg's time and to the English authors he read (for example, Hartley's *Observations on Man* and Pope's *An Essay on Man*). But Lichtenberg's thoughts on language also tell us why such formulations should not be regarded as innocuous. The aim of the translation has been to convey the content of Lichtenberg's thoughts while retaining as much of the form as possible. As Lichtenberg himself observes, however, every commentary and every translation acquires something new, altering the thought even to the point that it is unrecognizable. It is only my hope that such a transformation will be productive.

Introduction

There is perhaps something dubious in suggesting that the thoughts of Georg Christoph Lichtenberg could be organized under the heading of "Philosophical Writings." He was, after all, not a philosopher in the current sense of the term, instead dedicating his life and work to advancing the nascent field of experimental physics, toiling away his days in the laboratory and classroom where he dazzled his students with strange apparatuses, electrical and magnetic phenomena, and the manipulation of various gases. The short remarks contained in his *Sudelbücher* (Waste Books) have traditionally been regarded as satirical and humorous, as have most of his lengthier contributions to eighteenth-century journals. In Germany, where he is well known and widely read, he is largely regarded as a witty observer of humanity, credited with introducing the literary form of the aphorism into German literature, while in the English-speaking world he is known for little more than his commentaries on Hogarth's engravings and his discovery of the electrical phenomenon known as "Lichtenberg figures." Yet many thinkers have appreciated Lichtenberg for the trenchant philosophical thoughts he offers obliquely in his work: Schopenhauer, Nietzsche, Kierkegaard, Freud, Benjamin, Mach, Mauthner, and Wittgenstein, among others, have all engaged with his work to advance their own thinking on topics ranging from self-consciousness and the unconscious to the relationship between philosophical and ordinary language. In this regard, Lichtenberg occupies an important, if largely unacknowledged, role in the history of philosophy, and this role is likely to grow as we understand his writings from a philosophical point of view.

Life

Lichtenberg was born in Ober-Ramstadt, near Darmstadt, Germany, on July 1, 1742, the youngest of seventeen children, most of whom died at a

very young age. A malformation of the spine, the cause of which continues to be a matter of speculation, led to his small stature (about 4 feet 9 inches) and hunched back and was the source of various pains and medical ailments throughout his life, no doubt contributing to his often hypochondriacal disposition. His father was a Protestant clergyman associated with the pietist tradition popular in Germany in the seventeenth and eighteenth centuries. From 1752 to 1761, he attended the Darmstädter Pädagogium under Johann Martin Wenck (1704–1761), after which he received private lessons. In 1762, he was awarded a stipend to pursue his studies at the Georg-August-Universität in Göttingen, where he matriculated in 1763 as a student of mathematics and physics. Founded under the Hanoverian ruler, King George II of England, the university was one of the most modern and liberal in Germany, focusing in large part upon the empirical sciences and Newtonian physics and well connected to English academic life. While a student at the university under the eminent mathematician and natural scientist Abraham Gotthelf Kästner (1719–1800), Lichtenberg befriended Johann Christian Polycarp Erxleben (1744–1777), whose *Anfangsgründe der Naturlehre* (*Foundations of the Natural Sciences*) Lichtenberg would later edit and use as the foundations for his own lectures on physics. Under the direction of Kästner, Lichtenberg conducted astronomical observations at the Göttinger Observatorium from 1766 through 1774, graduating from his university studies in 1767. In 1770, Lichtenberg was appointed professor extraordinarius in Göttingen, where he would for the most part remain throughout his career until his death from pneumonia on February 24, 1799, at the age of fifty-seven.

Perhaps unexpectedly, Lichtenberg's romantic life has been the topic of much interest and speculation in both academic and literary works. The most scandalous of his relationships was with the twelve-year-old flower girl Dorothea Stechard (1765–1782), whom he met in 1777. With the permission of her family, she was employed as Lichtenberg's housekeeper, and although they were never married, she lived with Lichtenberg from 1780 until her death in 1782. Shortly thereafter, in 1783, he employed Margarethe Elisabeth Kellner (1759–1848) as a housekeeper; she was also from a working-class family and at twenty-two years old was much younger than Lichtenberg. This relationship eventually developed into a secret affair that produced three children out of wedlock. In 1789, as Lichtenberg's health deteriorated, they were married to ensure that she would receive his pension after his death, and between 1791 and 1797, they had four more children. She died well into the nineteenth century, some fifty years after Lichtenberg. That Lichtenberg was not readily bound by social conventions,

and indeed often flouted them, is reflected not only in his romantic life but also throughout his writings.

Lichtenberg achieved notoriety during his lifetime primarily through his lectures and his revisions of Johann Christian Polycarp Erxleben's *Anfangsgründe der Naturlehre* (*Foundations of the Natural Sciences*), rather than for his own advancements in the natural sciences. Between 1784 and 1794, Lichtenberg published four editions of this physics compendium, including his own critical comments and revisions, which remained the standard German physics textbook even into the beginning of the nineteenth century. His lectures based on Erxleben's text were supplemented by experiments that brought him renown throughout Europe and were attended by famous scientists and intellectuals, including Alessandro Volta (1745–1827), Johann Wolfgang Goethe (1749–1832), Karl Friedrich Gauss (1777–1855), and Alexander von Humboldt (1769–1859). Election to numerous scientific societies, including the Royal Society of Sciences both in Göttingen and London, the Royal Academy of Sciences of St. Petersburg, and the Scientific Society of Holland, among others, attests to Lichtenberg's prominence in the natural sciences and the great respect accorded him by his contemporaries.

He was renowned not just for his scientific work but also for his literary publications and work as an editor. From 1778 to 1799 he edited the *Göttinger Taschenkalender* (*Göttingen Pocket Almanac*), which published essays on the natural sciences and philosophical and literary observations in the humanist spirit of the Enlightenment. These essays, such as "Von Cometen" ("On Comets") (1787) and "Amintors Morgenandacht" ("Amintor's Morning-Prayer") (1791), and his commentaries on Hogarth's engravings, which appeared between 1794 and 1799, represent an important part of Lichtenberg's literary corpus, supplementing and extending many of the ideas found in his Waste Books. Between 1780 and 1785, Lichtenberg, together with Georg Forster, edited the *Göttingische Magazin der Wissenschaften und Literatur* (*Göttingen Journal of Science and Literature*), which was dedicated to updates and reviews of current scientific research and also contained numerous literary contributions. To today's readers, however, Lichtenberg is best known for his Waste Books.

The Waste Books

In 1764, while still a student in Göttingen, Lichtenberg began the Waste Books for which he was later to become famous. They consist of a series of fifteen notebooks that he kept throughout his life, and in which he notes

his trenchant observations on philosophy, literature, the sciences, and nearly every aspect of private and public life. He called them his "waste books" after the name given to notebooks kept by accountants in England for their rough calculations and lists of transactions, which were later transferred to a journal and finally to a formal ledger (E 46). Many of the observations and remarks in the Waste Books are taken up and reworked in essays published during his lifetime, but most were never developed or elaborated upon. While the remarks contained in the Waste Books have since become known as aphorisms, this designation is not one on which he himself placed any emphasis, and it was only later that these writings became associated with the aphoristic tradition. Indeed, the first edition of Lichtenberg's writings, published by his sons between 1800 and 1806, were entitled *Vermischte Schriften* (*Miscellaneous Writings*), and the writings drawn from his notebooks were organized according to topic and simply called Bemerkungen vermischten Inhalts (Remarks on Various Subjects).

Lichtenberg's writings and his manner of doing philosophy might in many ways be associated with the style and content of the writings of the French enlightenment *philosophes*—Helvétius, Rousseau, Alembert, and Buffon—who appear throughout the Waste Books. These thinkers were observers of humanity and nature and brought their critical insights to bear on a wide range of topics from empirical psychology and the natural sciences to art and politics, and they did so in a variety of forms from letters and autobiographical journals to poetry and public discourse. His writings also share similarities with the fragmentary and speculative writings of German romantics such as Novalis and Schlegel, though his own approach is more empirical than speculative. This is in marked distinction from the systematic tradition associated with mid-eighteenth-century German philosophy, such as that of Christian Wolff, and the subsequent development of the immense and scholarly philosophical systems associated with Kant, Hegel, Fichte, and other idealists. In this tradition, philosophy was often the purview of a small academic group whose discussions seemed to bear only a tangential relationship to the matters of ordinary life.

It is in the former sense that the observations and remarks in the Waste Books might be called philosophical. One finds in them no fully developed doctrine or system, but one does find an acute and consistent thinker who considers philosophical problems, responds to the thoughts of his contemporaries, and develops the implications of their views. He discovered these problems not only in reflection on systematic philosophy but also in the practical aspects of scientific experimentation, in poetry, visual art, and theater, and in the conversations, jokes, and activities of

everyday people, from the grocer to the soldier. Indeed, for Lichtenberg it seems that there is never a time when one is not doing philosophy, since our common language is embedded with philosophical views and commitments with which we always operate in our daily life. It might be fitting to say of Lichtenberg what he said of another, namely, that "he understood philosophy as the everyday man usually does: he reasoned and formed hypotheses in his housekeeping [. . .]" (B 177). To do philosophy means to uncover, become perplexed about, form hypotheses about, and even at times correct the entrenched philosophical commitments evident in our language and practices. This is also accompanied by reflection on the role of emotions in philosophy and on the obscure idea of philosophy itself (D 167). Through such itinerant investigation and reflection, Lichtenberg writes, "we often scare up game that methodical philosophy can make use of in its well-ordered household" (J 1550). The Waste Books can be understood as a journal of such discoveries and a hint at how they might further be developed. Ultimately, however, they should really provide a spark for one's own thinking and investigation: in this sense, they are not meant merely to be read—Lichtenberg himself often inveighs against reading—but to be considered thoughtfully. If there is a single principle guiding his remarks, it is the Enlightenment dictum: *Gnothi Seaton*, "know thyself," where knowing thyself must also mean knowing the world for oneself.

Self-Knowledge

The common wisdom of the rationalism that dominated much of eighteenth-century German philosophy was that the knowledge one could have of oneself was the most secure knowledge possible. The Cartesian idea that I may doubt anything except the fact that I am doubting, and thus that "I think" seemed to many unassailable. Yet Lichtenberg challenges this position throughout the Waste Books. Beginning from the point of view of first-personal conscious experience, Lichtenberg attempts to introspect some self, and finding such an attempt fruitless he famously remarks: "[. . .] We know only the existence of our sensations, representations, and thoughts. *It thinks*, we should say, just as one says, *it lightnings*. To say *cogito* is already too much if we translate it as *I think*. To assume the *I*, to postulate it, is a practical necessity" (K 76).

The self, which is supposed to be nearest to each of us, and which Descartes seemed to have no trouble positing, appears to Lichtenberg to be perhaps the most elusive object of inquiry. It is certainly nothing

that can be encountered in introspection as some substance to which the various modifications of consciousness may be ascribed. Nor, it seems, would Lichtenberg accept that this self is a mere bundle of sensations, as Hume had proposed; it is, after all, unclear what makes the various perceptions encountered part of the same bundle if not the ascription to some self. For Lichtenberg, there is nothing that one could become acquainted with in introspection that could provide any grounds for cogito judgments such as "I think" or that would function as the bearer of self-ascriptions.

Lichtenberg was quite familiar with the solution proposed in the "Transcendental Deduction" of Kant's *Critique of Pure Reason*. Here Kant argues that it is a necessary condition for unified experience that one be able to ascribe one's thoughts and experiences to a single, unified self that would remain numerically identical throughout the modifications of conscious experience. This requirement, that the "I think" be able to accompany all of one's representations, he calls the "transcendental unity of apperception." For Kant, we can know a priori that there is such a unity because experience itself would not be possible without it. In the "Paralogisms of Pure Reason," this claim is also used as the basis of a critique of rationalist psychologists, such as Descartes, who Kant believed had mistaken the necessary unity of apperception for the unity and numerical identity of a simple, immaterial, and immortal soul. Yet it would appear that the Kantian solution of providing a transcendental argument for the necessity of a unified self would be equally as dissatisfying to Lichtenberg as was the initial Cartesian formulation. Beginning from the perspective of first-personal conscious experience as he does, the transcendental self does not seem to be an object of possible experience. Indeed, Kant had conceded as much, suggesting that it is true that the transcendental unity of apperception cannot itself be an object of possible experience but that we are warranted nevertheless in accepting it and in accepting the restricted validity of the cogito judgment.

Lichtenberg proposes that, because we cannot introspect a self, instead of the formulation "I think" we should use the impersonal formulation "it thinks," as we would say "it lightnings" or "it's lightning." As in the phrase "it is raining," "it" is pleonastic; grammatical rules require a noun for the phrase, but it does not refer to an agent. This formulation would capture both the elusiveness of the substantial self in introspection and the elusiveness of the self as the author of one's thoughts, but it may problematically leave Lichtenberg with no way of understanding who the observer of the occurrent thoughts might be. For it does indeed seem that

there is someone or something observing the thoughts. If one were to follow him in this line of thinking, one might end up committed to an ontology that includes no selves and would have difficulty accounting for what, if any, motivational force thoughts may have in the absence of any self to whom they are occurring or to whom they might be ascribed. We find a clue as to how he might develop these issues when he suggests that positing the "I" is a mere practical necessity, perhaps nothing more than a necessary fiction. But he says little about what such necessity consists in. Is it required by the grammar of our language, as Nietzsche later proposed in remarks that are doubtless indebted to Lichtenberg? Is it required in order to makes sense of moral action and responsibility, or in order to make sense of reasoning and commitment? This critique of self-knowledge and the questions it raises run counter to the central role given to the self in other philosophy of the period, especially that of Fichte, who placed the self-positing "I" at the center of his system. It is doubtless the most insistent problem Lichtenberg has imparted to the history of philosophy—and it is one for which he provides no solution.

Self-knowledge seems then to be more of a guiding principle, a *desideratum*, in Lichtenberg's thought than anything admitting of the kind of epistemic certainty accorded it by Descartes or perhaps Kant. Where self-knowledge is not understood as the task of cognizing a self, it is understood as the task of authentic thinking in general. This aspect of self-knowledge involves a thorough investigation of thought and a critique of how we acquire knowledge of ourselves and the world around us. In the spirit of Enlightenment autonomy, he often criticizes our tendency to accept without examination or scrutiny the claims and opinions of others, whether such claims and opinions are derived from books or erudite discourse on matters of science or religion (B 264). Against this—the posturing of intellectuals, the arguments of theologians, and particularly the false emotionality and mannerisms of the *Sturm und Drang* (Storm and Stress) poets, especially those of the *Göttinger Hain*—Lichtenberg entreats us to allow our own reason and thinking to be a guide and to be authentic in our self-expression (A 76). This authentic pursuit of self-knowledge involves not only attentive reflection but also wit and creative thinking and the construction of a coherent narrative regarding who one is and the life one leads. This does not just concern only our waking, rational life but must also include attention to and interpretation of our dreams, of the history of our sleeping life, and the unknown source of our thoughts and motivations (K 86). In this understanding of self-knowledge, he anticipates later philosophical

conceptions found in *Lebensphilosophie*, psychoanalysis, hermeneutics, and existentialism, all of which place a high value on self-discovery.

In what he calls his "doctrine of *Seelenwanderung*," "metempsychosis," or the "transmigration of souls," Lichtenberg also considers whether we can have knowledge of our own existence before birth and what our death might consist in (B 33). In many ways, these reflections can be seen as exploring some of the problems of personal identity involved in his emphasis on first-personal conscious experience (J 511). John Locke (1632–1704), in his *Essay Concerning Human Understanding* (1690), raised similar questions regarding the identity of the self across time, and Lichtenberg was quite familiar with this work and the discussions surrounding personal identity. Locke argues that the identity of a person consists not in the persistence of a body or the persistence of a substantial self that might be encountered in inner sense but in the fact that our various experiences seem to be tied together into a kind of continuity of conscious experience. Often it seems that Lichtenberg might adhere to such a criterion of personal identity, but it is also unclear how he might make sense of such continuity given his notion of impersonal thoughts. For he seems to offer no understanding of what might unite two conscious experiences or how they might be continuous with one another. In other remarks, he considers materialist conceptions of personal identity, in which the identity of a person consists in the identity of a physical body, arguing that identity of a body might be maintained despite a gradual replacement of its parts (A 56).

Given the importance accorded to introspection and the restrictions placed on our knowledge, Lichtenberg is also interested in the problem of other minds and the very existence of other selves.[1] He suggests that the knowledge we seem to have of others is mere projection on our part. Just as in a dream, when we think that someone else is talking to us, we are merely generating this dialogue internally, so too it is possible that what we take to be other people and their opinions could be generated within us (K 85). This tendency to impart minds to others extends also to our relationship with inanimate nature. We find ourselves imbuing nature with a kind of soul, even to the point that we would empathize with a broken clock (K 83). Indeed, this tendency may also explain how we arrive at pronouns regarding "the other" at all. Here the dangers of the pursuit of self-knowledge become evident, for in turning inward in self-observation we may become hypochondriacal, self-obsessed, disconnected, and alienated from the world around us and fail to recognize that we are in many ways dependent upon others and that the pursuit of self-knowledge is an endeavor that may even presuppose the existence of others (B 262).

Mind and Body

Given Lichtenberg's interest in self-knowledge, metempsychosis, and personal identity, it is not surprising that he often reflects on the mysteries of mind-body dualism (J 1306). In the Waste Books, he primarily considers two of the dominant views of the period: psychophysical parallelism and physical influx. Through the legacy of Leibniz and the continuation of Leibnizian philosophy in the work of the preeminent German rationalist Christian Wolff (1679–1754), the thesis of psychophysical parallelism came to dominate much of the discussion of dualism in Germany. According to this thesis, there is no causal physical interaction between mind and body; instead, they mirror one another in a preestablished harmony. Physical influx, on the other hand, held that there was some direct causal link between mental and physical phenomena. Lichtenberg finds ample occasion to parody both views and dualism in general. He suggests for example that the soul must have a very detailed map of the body to which it is purportedly related or that one might create a fairytale to describe their interaction. He also questions how a simple soul could be related to a complex physical body or brain and why only a single soul should be related to a single body (F 349, F 189). He even jokingly imagines a machine that would model the behavior of the competing views—perhaps only then would we have grounds for deciding which is best. Because of such problems with dualism, he also considers various alternatives throughout the Waste Books.

On a trip to England between 1774 and 1775, Lichtenberg became familiar with materialist theories such as those of David Hartley (1705–1757) and the associationist psychologist Joseph Priestley (1733–1804). In his *Observations on Man, His Frame, His Duty, and His Expectations* (1749), Hartley argued that all psychological events, perceptions, sensations, and emotions could be explained by material, physical processes, and Priestley furthered these claims in *Hartley's Theory of the Human Mind, on the Principle of the Association of Ideas* (1775). Inspired by these ideas, Lichtenberg often offers causal explanations of psychological phenomena in terms of how sensations of external objects are transmitted to the retina through nerve fluids in the eye (F 349, F 1084). He also finds inspiration for his own view in the work of the French materialists, Claude Adrien Helvétius (1715–1771), whose *De l'Esprit* (*On Mind*) (1758) argues for a materialist and determinist view of man, and Julien Offray de La Mettrie (1709–1751), whose *L'Homme Machine* (*Machine Man*) (1748) famously rejected Cartesian mind-body dualism. At one point, he predicts that psychology itself will eventually arrive at a subtle materialism, but he also considers some potential

arguments against materialism (F 425). He is also acutely aware of what he calls the "tremendous parallax" between our conception of ourselves in terms of materialism and the conception of ourselves gained through introspection. Beginning from introspection, we cannot seem to get at the physical processes that might underlie our thinking, and beginning from the point of view of a physical world, it seems difficult to account for the variety of our thoughts. Moreover, he finds materialism problematic because it implies that human actions are determined by physical processes and that free will is merely an illusion (J 668, E 30). In the philosophy of Spinoza, Lichtenberg discovers another possible alternative to dualism and often proposes that mind and body may in fact be aspects of a single substance or substrate, whether God or nature.

Lichtenberg also raises the question of the relationship between mind and body in his writings on physiognomy. Eighteenth-century physiognomists claimed that the character or soul of a person was mirrored in their physical features, particularly the face, so that intelligence, for example, could be inferred from features such as the distance between a person's eyes or the shape of her head. Physiognomy was taken very seriously by its scholarly adherents; but it also became a wildly popular theory, and in parlors throughout Germany people traced silhouettes of one another in hopes of discerning the deeper characteristics of their souls. In his essay "Über Physiognomik wider die Physiognomen" ("On Physiognomy, against the Physiognomists") (1777), Lichtenberg attacks this view and its foremost proponent, Johann Kaspar Lavater (1741–1801). And in a later essay, "Fragment von Schwänzen" ("Fragment on Tails") (1783), he lampoons Lavater by analyzing the silhouettes of various animal and wig tails in order to draw ridiculous conclusions about the soul of the individuals. Similar remarks are found throughout the Waste Books. Against the physiognomists, Lichtenberg argues that we may infer things about the character of a person only on the basis of her acquired features. Thus someone who smiles frequently might have wrinkles around the mouth, and someone who furrows her brow might have distinct wrinkles on the forehead. From this it might legitimately be concluded that the former is often happy and the latter often troubled. Contrary to what the physiognomists had claimed, there is, however, no intrinsic or innate relationship between characteristics such as intelligence and physical features. It is clear also that Lichtenberg would have rejected on this basis the burgeoning anthropological studies that sought to infer the mental characteristics of a race from the physical features of its members. Not only did he find physiognomy epistemically

suspect, but he thought it may also lead to a dangerous "physiognomical *auto de fe*," a trial by fire in which people would be judged according to physical features for crimes they have not yet committed (F 521).

What sets Lichtenberg's thinking apart on these issues of mind and body is, however, the way he often entertains various points of view, seeking to understand the origin and implications of the philosophical problems. He diagnoses dualism, for example, as a carryover from our unreflective youth, suggesting that we often employ terms such as *soul*, and perhaps even *matter*, without a clear understanding of their meaning (J 668, E 30). Or he suggests that we employ such terms in philosophical discussions as the algebraist might insert a variable into an equation as a stand-in for some unknown quantity. The unreflective or vague use of these terms often leads us into philosophical discussions without any clear understanding of what these discussions are about. In such situations, Lichtenberg proposes that we attend to our use of such terms, the hidden theoretical commitments embedded in them, and the consequences these hypotheses or "pictures" of the world have for our actions and will have for further investigations (J 568).

Religion and Ethics

Frederick Beiser has argued that with the growing attention to epistemology in the eighteenth century, many philosophers sharpened their critiques of religious doctrine, particularly what were thought to be its epistemically unfounded and rationally dubious elements. These critiques of religion on the basis of reason, however, led still other philosophers to claim that reason itself was inherently skeptical, that it undermined faith and would inevitably led to atheism. With this general wariness about reason itself, many also raised questions regarding its universality and impartiality, two elements that seemed to be foundational for the Kantian philosophy and especially Kantian ethics that dominated much of the discussion of the relationship between rationality and religion in the period.[2] Throughout the Waste Books, Lichtenberg responds to these discussions in his critiques of religion and its institutions, beliefs, and practices; in his reflections on Spinozism and nature; in his remarks on the relationship between reason and emotions; and in his observations on the apparent failure of aspects of Kantian ethics.

Lichtenberg often scathingly attacks religion, Christianity in particular, for its dogmatism, false piety, and adherence to superstitious beliefs (J 733).

The most frequent aim of his attack, however, is not the content of religious belief but the theologians who proffer such beliefs and those who blindly follow them. Theologians cloak their pronouncements in the garb of truth only to manipulate their followers; they tell the story of human nature as one of gradual decline and moral corruption (J 974); and they seek to trick us with incomprehensible and sophistic arguments and dictates into believing we are morally ill, and all the more ill if we do not understand them (K 288). Having expunged all common sense and rationality from the Bible, they promote solemn adherence to ritual and blind acceptance of the doctrines of Christianity. All of this is anathema to the spirit of authentic reflection and critique at the center of much of Lichtenberg's thought. His genealogy of the belief in miracles and other superstitions suggests that they instituted themselves in a time when men were ignorant and incapable of reason. And in a remark that parallels the later thoughts of Friedrich Nietzsche (1844–1900), Lichtenberg suggests that the Christian morality propounded by the theologians may have arisen from a certain weakness and that its dictum of universal tolerance is an unattainable fantasy (G 59). If there is a true Christian religion expressed in the Bible, Lichtenberg writes, it is certainly not that practiced by the Catholics of his time (J 269, GH 33).

As clear as Lichtenberg's feelings about the institutions of religion are, there remains nevertheless an ambivalent attitude toward the idea and existence of God. On the one hand, he radicalizes Kant's demotion of God to an unknowable yet necessary practical requirement in ethics, writing that the statement *God exists* says nothing more than that we feel obliged to do what is right (L 275). As such, God is perhaps merely a useful fiction that in the end will be rejected just as the belief in ghosts has been (D 329). He also attempts to wrest the notion of God from the hands of the theologians, arguing that God himself must also be rational and is best served not by blind subservience but by conducting oneself according to the dictates of reason. Thus there may be reasons for the belief in God, though ultimately these may be rejected. On the other hand, he suggests that our heart may recognize a God, though any understanding of this is beyond the capacity of reason and can only be made comprehensible through revelation. And in this sense Lichtenberg is much closer to those who would defend faith in God against its demotion by reason.

It is also evident in his thoughts on Benedict (Baruch) de Spinoza (1632–1677) that Lichtenberg did not summarily reject the notion of God but accorded an important place to an understanding of ourselves as parts of

a single monistic substance, as aspects of God or nature. "Amintor's Morning-Prayer" is a meditation on this monistic substance thought as nature, and similar reflections on Spinoza's *Ethics* (1677), monism and nature can be found throughout the Waste Books. Yet this flirtation with Spinozism does not fit so comfortably with European monotheism, and it would likely have been considered by many of his contemporaries to be tantamount to a confession of atheism. In 1780, the famous German playwright Gotthold Ephraim Lessing (1729–1781) confided to the philosopher Heinrich Jacobi (1743–1819) that he found Spinozism to be the only true philosophy. Jacobi subsequently argued in his *Über die Lehre des Spinoza in Briefen an den Herrn Moses Mendelssohn* (*Letters on the Teachings of Spinoza*) (1785) that Spinozism was a pantheistic doctrine and thus really no different from atheism. This led to a furious debate known as the *Pantheismusstreit* (Pantheism Controversy) that eventually involved other Enlightenment figures including Moses Mendelssohn (1729–1786). In his *David Hume über den Glauben, oder Idealismus und Realismus* (*David Hume on Belief, or Idealism and Realism*) (1787), Jacobi further argued that Enlightenment rationalism would lead to such atheism and that philosophers should instead return to faith or belief. Though Lichtenberg does not clearly argue for any position on this issue, he was certainly aware of its many implications, and we might understand many of his remarks as his own attempt to work through these debates.

Lichtenberg often discusses other topics that were pervasive in Enlightenment discussions of religion, particularly deism and theodicy. Deists held that reason can show us that the world is created by a supreme being. This supreme being, however, created the world according to a design, much like a clock, set it in motion, and allowed it to operate without intervention. This allows for a materialistic world governed by laws discoverable by reason and is also compatible with Lichtenberg's Spinozistic monism and the determinism of Priestley and Lamettrie (J 280, 282). Theodicy, which attempted to reconcile God with the existence of evil, was also a central concern of the Enlightenment period and one that he often mentions. In his *Essais de Théodicéé sur la bonté de Dieu, la liberté de l'homme et l'origine du mal* (*Theodicy*) (1710), Leibniz coined the term *theodicy*, arguing that the evil in the world was not in conflict with the goodness of God. Lichtenberg often entertains a view that was rejected by Leibniz, namely, that the existence of evil in the world may show that the world was created by an inferior being. He also proposes that Leibniz's defense of Christianity does not show him to be a Christian, and instead

may have been motivated by a less noble aim such as vanity (F 348), an issue that returns in his remarks on the deeper and often unfathomable motivations for moral action.

Regarding ethics, Lichtenberg has little to offer in the way of guiding principles or arguments, suggesting instead a critique of prevailing moral pronouncements and the moral principles that underlie everyday interactions. At one point, he considers four principles of morality proposed by one of his contemporaries—philosophical, religious, human, and political—suggesting that these may all be aspects of a single moral principle, expressed in different ways in order to be made comprehensible to different people. Unfortunately, he does not indicate what this single moral principle might be; but the crucial point made here and elsewhere is that moral principles should be explainable to ordinary people in their own language and that we operate in our everyday lives with such principles (B 195). It is the investigation of these principles and how they underpin ordinary interactions that Lichtenberg is primarily interested in and that perhaps has the most promise in developing a theory of ethics. But because Lichtenberg believes ethics to be so localized, there may be some reluctance on his part to believe that moral principles discovered in one area will or should be universally applicable in others. This kind of relativism stands in stark contrast to Kant's moral philosophy.

In his *Groundwork of the Metaphysics of Morals* (1785), Kant argues, among other things, that one always acts according to a maxim and that such a maxim should be universalizable. This means that in choosing an action we must choose one whose maxim is such that we can will that all people act according to it. Moreover, he argues that the motivation for an action takes precedence over its consequences in evaluating the moral worth of a person, which means that an act done in order to increase one's own pleasure makes one morally less worthy than an act done out of pure duty or obligation. These central tenets of Kant's deontological moral philosophy are often the target of Lichtenberg's critiques, and he also finds similar views at work in Stoic ethics (A 28, KA 166, G 65). He sarcastically suggests that the ability to adopt principles that do not take one's own pleasure into account may simply be the result of old age. The old do not take account of the sensual side of human nature simply because they no longer possess such a sensual side (L 910). He also suggests that in reflecting on Kant's highest moral principle we should also consider that God enticed humans to propagate by making sex pleasurable (J 1071). Indeed, he finds it unlikely that we could ever act solely according to duty without always having our own interest and pleasure in mind; thus, the very notion of acting from

duty alone is incomprehensible and contrary to the empirical evidence and our nature. Perhaps leaning toward a consequentialist ethics, he considers his colleague Feder's suggestion that the only means of evaluating an action is according to its consequences or according to mere authority (E 487). For Lichtenberg, reason and the universalizability of maxims must play a role in deciding upon actions, as Kant had suggested, but reason cannot be the sole guide. Our sensual nature should also be taken into account, just as the consequences of an action must be taken into account (J 710).

Judgment and the External World

Kant's influence on Lichtenberg's thinking is perhaps nowhere more apparent than in his discussions of knowledge of the external world. Lichtenberg was familiar with Kant's precritical work in the sciences long before the publication of the *Critique of Pure Reason* in 1781, but it was in this work that Lichtenberg found a voice expressing many of his own concerns.[3] His understanding of the central issues of Kant's *Critique* is informed by the early reception of the first edition of this work at the university in Göttingen. In a 1782 review of the *Critique* in the *Göttingische Anzeigen von gelehrten Sachen*, Christian Garve (1742–1798) and Georg Friedrich Heinrich Feder (1740–1821), who was a colleague of Lichtenberg, accuse Kant of falling into a kind of idealism similar to that of George Berkeley (1685–1753). As they understood it, Kant was suggesting that objects, qua sensations or appearances, were dependent upon modifications of the self rather than some transcendentally real object. In doing so, Kant had failed to show how one could distinguish between an appearance occasioned entirely subjectively, such as a dream, and one that was occasioned by an external, real object. The result of Kant's position, according to the review, could lead only to skepticism about the existence of external objects. This, however, did not lead Lichtenberg to reject Kant but to offer some novel ways of addressing what he understood to be some of its main concerns.

Given Lichtenberg's background, his inquiries into knowledge of external objects take on a decidedly empiricist slant, which often lead him to conclusions that are idealist in nature. As in his discussions of self-knowledge, he begins his investigations from the first-personal perspective of conscious experience. From this perspective, it seems that one can have knowledge only of one's internal representations, sensations, and emotions and that knowledge of how things stand in the world independent of these

representations is dubious. Whether in fact the causes of these representations can be attributed to objects outside conscious experience, to "things in themselves," seems to be something that cannot be known from our limited perspective. At times, he does, however, suggest that we often do regard some representations as being caused by external objects, though we might not be warranted in doing so, and he wonders, like Kant, whether this has something to do with features of our cognitive apparatus. At other times, he entertains the idea that we observe a kind of regularity in our representations and infer on this basis that they represent states of external objects and have an external cause. Some representations, like fantasies and daydreams, he suggests, seem to be dependent upon us and modifiable according to our will, while others, such as representations of objects behaving according to physical laws, seem not to be.

The objects that seem to be independent of us, or distinct from us, Lichtenberg calls "*praeter nos*" (without us). Other objects seem to be not only independent of us but also spatially distinct from us, and Lichtenberg calls these "*extra nos*" (outside us).[4] In his understanding of spatiality, he is also influenced by Kant. In the "Aesthetics" section of the first Critique, Kant offers an alternative to two views of space that were current at the time: the first view, which was associated with Newton, held that space was an empty container in which objects were located; the second view, associated with Leibniz, held that space consisted in the relations among objects. Against these views, Kant argues that space is a "pure form of intuition." By this he means that space is not something inhering in the objects themselves but something contributed by human cognition. Human minds are so constituted that they experience things spatially, but we are not justified in concluding on this basis that things in themselves are spatial. Lichtenberg follows Kant here in his understanding of the spatial externality of objects, suggesting that we are not warranted in concluding that the spatiality of objects is a property of the objects themselves and not merely due to our forms of cognition. However, while they are in agreement on this point, Lichtenberg does press Kant's thoughts a step further in wondering whether the seeming independence from us of objects *praeter nos* might not also be due to some form of human sensibility, but he is reticent about what might further be involved in such a conception (H 150, J 643, J 1537, K 64).

Unfortunately, Lichtenberg does not offer any reflections on Kant's attempt in the *Prolegomena to Any Future Metaphysics* (1783) to clear up the seeming idealist implications of his view by arguing that we can have

noninferential or direct knowledge of the existence of external objects despite our not having knowledge of how these objects are in themselves. Nor does he consider Kant's attempts in the second edition of the *Critique of Pure Reason*, in the "Refutation of Idealism," to argue that self-knowledge is dependent on knowledge of external objects. Lichtenberg does, however, explore some of these issues further in his reflections on Karl Leonhard Reinhold's (1758–1823) analysis of the representational faculty in his *Elementarphilosophie* (*Elementary Philosophy*), where he discusses the "form" and "matter" of representations, suggesting that the form of a representation may be due to human cognition and the matter due to external causes. Elsewhere, Lichtenberg also describes the appeal idealism has for us at various points in life, suggesting that despite our arguments to the contrary we always remain idealists (H 150). Expanding upon such ideas, he writes that we love only the pleasant sensation produced in us by loved ones but not the loved ones themselves since we can know only our own sensations (H 151). Thus he sees certain strands of idealism as having emotional and ethical consequences. At times he also seems entirely exasperated with the issue. Regarding skepticism, he writes that simply because a skeptic wishes to be refuted does not mean that he deserves to be, for it seems that no arguments could satisfy someone who is inclined to believe an absurdity (E 418). And at one point he even declares the very question about the objective existence of external objects to be irrational or absurd (L 277).

While he finds many of the problems of idealism and skepticism intriguing, he often leans in his thinking toward views advanced by some of the Scottish common sense philosophers. This is not surprising given the influence of these philosophers on the philosophical faculty in Göttingen during his tenure. Two philosophers in this tradition stand out in his writings and offer remedies for philosophical problems that parallel some of his own. James Beattie (1735–1803) became quite popular in England and Germany on the basis of a simplified version of common sense philosophy expounded in *An Essay on the Nature and Immutability of Truth In Opposition to Sophistry and Scepticism* (1770). But the view expounded there owes much to Thomas Reid (1710–1796), whose writings received less attention. Reid argued against the representationalist "theory of ideas" of Locke and Descartes and the skepticism of Hume, in favor of a direct realist account of perception according to which we perceive external objects as they actually are. What is striking in Reid's account and parallels Lichtenberg's own thinking on the matter is the suggestion that the indirect realist view does not attend closely enough to how we express our relationship to the world in our everyday

language. The problem with the indirect realist view is that it posits an intermediary object, a representation, between ourselves and objects. But in doing so it misunderstands completely how we actually relate to the world. When we smell a flower, for example, we do not smell a representation of a flower, for representations have no scent, but we smell the flower directly. This much is clear from our common expressions about these things.[5]

It is a great interpretive difficulty, and perhaps one that cannot be resolved given the itinerant nature of Lichtenberg's writings, whether he thought a materialist account of perception of external objects was in some way reconcilable with some of his idealist tendencies. One might perhaps argue that our perception of external objects can be given a causal explanation, for example by nerve fluids being affected by external objects and these fluids then creating an effect on the retina of the eye (F 349, F 1084). One might then suggest that how something is perceived will depend also on the material constitution of the brain. And one might indeed find evidence for a view that regards perception as incorporated in a system of matter throughout Lichtenberg's thoughts and his discussions of Priestley (F 1130). Yet as tempting as such a solution might be, his pronouncements against our knowledge of the causal features of things in themselves seem to make such an explanation dubious. There are also great difficulties in resolving his seeming empiricism with what are often idealist positions, but these may best be explained by suggesting that empiricism, coupled with a representationalist view of external objects, in fact leads to some of the idealist positions Lichtenberg often espouses.

The concerns with the relationship between objects in the world and our sensations are not unrelated to some of Lichtenberg's ideas about judgment and truth, many of which are novel for eighteenth-century German thought. Many of his observations end up in the idealist predicament that there seems to be no way of explaining how judgments can be objectively valid, that is, how they might correspond to the external world. Kant had resolved this issue of objective validity by suggesting that judgments are true of the world because they are true of our forms of sensibility. Lichtenberg, however, suggests that judgments are true not because they correspond with states of affairs in the world or with our forms of sensibility, but because they cohere with other judgments and meet with the consensus of other rational people.[6] He writes, for example:

> Human philosophy is never other than the philosophy of one particular individual corrected by that of others, even fools, ac-

> cording to the rules of a rational appraisal of degrees of probability. Propositions to which everyone assents are true. If they are not true, then there is no truth. Other propositions we are often compelled to hold true on the assurance of experts, and any man would believe such propositions were he to find himself in the same circumstances. Where this is not the case, we have a particular philosophy and not one established in the council of mankind. Superstition itself is a local philosophy voicing its opinion as well. (A 136)

Judgments are subjected to scrutiny in an intersubjective "council of mankind" where they can be appraised, disputed, and tested for coherence with other judgments. And at times, our judgments must rely on the testimony of others rather than merely on our own estimations of the matter. Thus knowledge is something of a shared burden and is dependent on social interaction and social institutions. Borrowing a thought from his own work on probability in mathematics, he suggests that we eschew the notion of certainty in epistemology and consider judgments in terms of their degree of probability (A 136, H 15). On this view, the coherence of one judgment or belief with others increases the probability of its truth but does not afford anything like certainty. His thoughts here are similar to those of his contemporary Thomas Bayes (1702–1761) and anticipate those of Pierre-Simon Laplace (1749–1827), both of whom have had a great deal of influence upon current discussions of the relationship between probability and knowledge in the sciences.

Natural Science

While most of Lichtenberg's reflections on the natural sciences are to be found in his lectures on physics, his commentaries on Erxleben's *Foundations of the Natural Sciences* and his contributions to scientific journals, the Waste Books are nevertheless a rich source for considerations of the relationship between epistemology and science. His thoughts are found primarily in notes in the Waste Books, which were to form the foundation of a physics compendium he hoped to write on the basis of Kantian philosophy.[7] Two concerns generally dominate his theoretical reflections on the sciences: the first is an empiricist interest in restricting our knowledge claims to observable phenomena; the second is an interest in providing an account of the role

of human cognitive capacities in science. He is also concerned throughout the Waste Books with specific debates in eighteenth-century physics, particularly about atomism and dynamism and the physics of light and color.

Lichtenberg often critiques the scientific theories of many of the rationalist physicists of the period, particularly the Cartesians. While such philosophers proposed mechanistic explanations of physical phenomena, they often did so on the basis of a priori rational or metaphysical analysis. Many of their hypotheses Lichtenberg thought untestable and even absurd. In his writings, he often ridicules ideas like the Cartesian explanations of gravity, which held that objects fall to the earth because they are caught in tiny imperceptible vortices; and he derides other physicists who had helped themselves to various *qualitas occultas* and other theoretical entities to explain physical phenomena. Against these fantastical explanations, he proposes that the natural sciences concern themselves only with observable phenomena or entities reducible to such phenomena.

In keeping with his understanding of the relationship between representations and external objects, Lichtenberg understood physical phenomena as sensations or modifications of the self or consciousness. For this reason, he felt that an inquiry into the self or mind was an important prerequisite for any science. Thus in his compendium notes, he proposes to begin with an analysis of the subject, its capacity for knowledge, the means by which it acquires this knowledge, and the limits of understanding and reason, and only then does he proceed to a discussion of wider problems in physics. He often remarks that given that the kind of knowledge available to the scientist depends on human cognition, the laws of physics might appear different if the human mind were differently constituted (H 176, L 662, L 799, L 852).

In this sense, the empirical observation of nature is always bound up with our cognitive capacities. For Lichtenberg, we discover in nature only what we ourselves put there. Indeed, he goes so far as to say that without the order imposed by us on nature neither coherent experience nor knowledge would be possible (J 392, E 497). Here he follows to some degree Kant's arguments in the *Critique of Pure Reason*. But while Kant argues that the categories organize our experience and thus make objective knowledge of nature possible, Lichtenberg suggests that this ordering capacity extends much further. Nature it seems is thoroughly constructed; we create the laws of physics just as we create biological and social categories in order to simplify and organize empirical phenomena according to some *Vorstellungsart*, or manner of representing (A 192). That we regard some behavior in nature

as necessary is merely the result of our organizing observed phenomena according to rational principles such as necessity. Lichtenberg's thoughts here should, however, be understood as claims not primarily about nature as it is in itself but about how we do and must represent it to ourselves. In keeping with his epistemic modesty about nature, we know it only as we organize it, not as it is in itself.

What distinguishes Lichtenberg's view from that of Kant and many of his contemporaries is that the ordering of nature through our representations is an entirely practical affair. That is to say, he is concerned less with validity than with the effects or consequences of the adaptation of a certain way of representing nature. This thinking informs not only his views about scientific theories and how they explain natural phenomena but also his understanding of the relationship between mathematics and the natural world (G 40). Contrary to Kant, who had argued that mathematics, and geometry in particular, can be true of the world because it is true of our forms of sensibility, he often suggests that it is often nothing more than a useful fiction. But even if such ways of organizing the world turn out to be false, he believes it may nevertheless be useful to believe them (J 1521) because they may open up new avenues of thought and research. His instrumentalism in this regard is clear: hypotheses and "paradigmata," as he often calls them, are merely useful "heuristic pulleys" (K 312).

This instrumentalist view of scientific theories is also revealed in a number of his remarks on some important scientific debates of the period. The first is between impulsionist and attractionist explanations of gravity, and the second is between atomist and dynamist views of nature. Impulsionists, such as Georges-Louis Lesage (1724–1804), explained gravity in terms of straight-line movements that are the result of the impulsions of atomic particles. To explain how bodies move toward one another, Lesage posited *copruscucles gravifiques*, which were imperceptible particles that pushed bodies toward one another through collisions. Attractionists, such as Kant, on the other hand, explained gravity as the result of an imperceptible force that attracted one body to another (L 918). Lichtenberg often found the former view desirable because it provided a mechanistic explanation of nature and accorded with Newton's inverse square law of universal gravitation, whereas the latter posited action at a distance to explain the phenomena but had no explanation of how such action occurred.[8]

The position that scientists took on these matters also dependend on whether they were proponents of an atomistic or a dynamic view of nature. Lesage's explanation of gravity relied on the atomistic view, whereas Kant's

relied on the dynamic view. At points in his lectures on physics and his remarks in the Waste Books, Lichtenberg seems to lean toward the dynamic view of nature, taking up an argument proposed by Kant in his *Metaphysical Foundations of Natural Science* against the atomistic-impulsionist views. On the Kantian view, extended matter is impenetrable not because it has the property of solidity but because the presence of repulsive forces resist compression. On this basis, he concludes that matter is infinitely divisible and thus that there are no simple substances or atoms. Kant then argues that if only repulsive force existed, then matter would be dispersed to infinity. Since matter is not dispersed in this way, he concludes there must be some attractive force that holds matter together. There is thus both an attractive and a repulsive force in nature. Lichtenberg recognizes the advantages afforded by both the atomist and dynamist views, suggesting that they are perhaps reconcilable or that they may in some way depend on one another (L 917, 918). The choice of a theory in such a case should be guided by practical virtues: the ability to predict empirical phenomena with some accuracy, explanatory simplicity, and accordance with our common sense understanding of the world.[9]

There is also some discussion in the Waste Books of the physics of light and various theories of color, including those of Newton and Goethe. Goethe turned to Lichtenberg as an authority on the physics of light and Newtonian optics in the early phase of his own research on color and colored shadows. His letter to Lichtenberg from May 1792 was accompanied by copies of the first two installments of his *Beiträge zur Optik* (*Contributions to Optics*) in hopes that Lichtenberg would be sympathetic to his views and perhaps introduce the theories to a wider audience of natural scientists. Unfortunately, the response to this initial letter is lost, but a letter from October 1793 is preserved and includes a response to Goethe's third installment of the *Beiträge* entitled *Von den farbigen Schatten* (*On Colored Shadows*). A central tenet in Goethe's experiments with light is a rejection of the Newtonian physics of light in favor of qualitative experiments that attempt to capture the wide range of variation in color phenomena depending on surrounding light conditions, mixtures of light, and refraction. It is in short a phenomenology of color rather than a physics of color. It seems from his responses that Lichtenberg did not take Goethe's experiments seriously as a contribution to the physics of light. He did, however, attempt to explain the difference in Goethe's and Newton's views in terms of the relationships among language, judgment, and sensation and their differing uses of the term *white*, topics that emerge throughout his discussions of color and light in the Waste Books.[10]

Language and Thought

Lichtenberg's thoughts on epistemology are inseparable from his interest in language, an interest that he shared with many of his contemporaries. The emergence of the field of anthropology in eighteenth-century Germany was accompanied by a humanist interest in languages and their origins, classical philology, and hermeneutics. In his celebrated translations of Homer, Johann Heinrich Voss (1751–1826) introduced a new pronunciation for the Greek letter η justified on the basis of an analysis of the portrayal of sheep sounds in Greek literary texts. According to Voss, βη was to be pronounced in German as bäh. Regarding these changes, Lichtenberg carried out a satirical critique of Voss in essays such as "To Bäh or Not to Bäh, That Is the Question." Similarly, throughout the Waste Books, Lichtenberg offers pronouncements on debates concerning nomenclature in the sciences, which were sparked by the terminological changes in chemistry introduced by Antoine Laurent de Lavoisier (1743–1794) in his *Méthode de Nomenclature Chimique* (*Methods of Chemical Nomenclature*) (1787) (K 20). Other figures in the period, such as Johann Gottfried von Herder (1744–1803) and Johann Georg Hamann (1730–1788), critiqued many of the dominant philosophical positions of the period on the basis of their understanding of the relationship between human language and the capacity for reason, thought, and expression. It is in the context of such discussions that Lichtenberg develops his thoughts on language.

In his writings on language, Lichtenberg explores a number of views during the course of his career. Early remarks, such as those found in Waste Book A (1765–1770), reveal a deep interest in the Leibnizian idea of a *characteristica universalis* or universal language. As Lichtenberg understood it, the *characteristica* was intended to be a formal language consisting of simple concepts—concepts that admit of no composite definitions—and formal rules for the combination of these concepts. This language was intended for expressing not only logical truths but also objects and their relations in the world. He often finds such a language appealing because it would be able to dispense with the ambiguity of ordinary language in philosophy and the natural sciences (A 3).[11] However, he often critiques formal language as well, suggesting that it would contain notions such as necessity and contradiction that are not found in the empirical world. Indeed, the empirical world seems to be far too complex and rich to be accounted for within the strictures of a formal language, which must express itself in general terms. His concern with this rationalist conception of language also aligns here

with his critique of rationalist metaphysicians, Wolff among them, who he believed had unwarrantedly extended the rules of logic, such as the principle of contradiction, to nature itself.

Lichtenberg also shows interest in the tendency of some thinkers to become captivated by language and to depart from the world of sense in unfounded metaphysical speculation, *Schwärmerei,* or enthusiasm.[12] He often mentions the Christian mystic Jakob Böhme (1575–1624), whose pronouncements and speculations often verge into nonsense. Kant had also criticized a similar tendency in his *Dreams of a Spirit Seer* (1766) regarding the mystical thought of Emanuel Swedenborg (1688–1772). Lichtenberg is not, however, always critical of such fantastical departures but speculates that perhaps such language may be something like the language of "angels," which expresses a philosophy that, even if we were to hear it, we would scarcely be in a position to understand (B 242). And in this regard, he is very near the language of his contemporary Hamann and anticipates in many ways the philosophy of later German thinkers such as Walter Benjamin (1892–1940). This is the language one speaks when one begins to see "all in all," to see the large within the small, and to see the whole (F 48). His fairytale speculations of a world beyond that of human understanding and cognition and his fantasies about imaginary machines and contraptions belong to these reflections on language (J 711), as does his emphasis on the performative dimension of language, the instinctive nature of communication, and elements such as style, tone, and emotion, which seem often to occupy a place more important than that of meaning and reference (A 21, A 22, D 413, J 1005). It is also where philosophy and science fail that he believes such fictions and fantasies may be useful in imparting wisdom (J 713).

It is perhaps in the philosophy of British empiricism, most likely that of Locke, that Lichtenberg finds reflections on language that allow him to move beyond the thinking of Leibniz and the rationalists and that accord with many of his own views on representation. Beginning from the view that our knowledge is limited to the representations and sensations encountered in conscious experience, he is led quite naturally to a representationalist philosophy of language, which takes the meaning of a word or term to be some mental entity or representation. This view is reflected in his observation that many disputes are merely about words, which is to say that the thinkers have the same idea or representation in mind but use different words or concepts to express it. He also draws out a problematic implication of this view when he suggests that there is nothing to prevent

us from associating any idea we wish with any word, and thus that the association of a word with its meaning is entirely arbitrary and subject to change at any moment (E 85). In hearing one another, we always run the risk of reducing the other person's language to our own, of associating their words with our own particular representations. Drawing conclusions from this for hermeneutics, he suggests that understanding another person would require that we sometimes be that person (B 262).

Elsewhere, Lichtenberg suggests that the meaning of a word is not some mental entity but rather consists in its common use (J 417). What this common use is depends upon the historical period, culture, and discourse in which it appears. A consequence of this is that understanding another person involves understanding the specific use their words have in their historical and cultural context (A 9, G 135). Because reasoning and thinking are so closely tied to our use of everyday language, he also observes that we may sometimes be misled by language and as a result often reason incorrectly. This is perhaps evident in the case of "I think" judgments, where grammatical rules require that we posit a bearer of ascriptions, but from this we falsely conclude that the "I" is a substance. Philosophy consists in clarifying or making explicit the commitments involved in the view of the world embodied in our everyday language, its metaphors and common expressions. He writes, for example:

> [. . .] Our false philosophy is embodied in our entire language; we cannot reason, so to speak, without reasoning falsely. We fail to consider that speaking, regardless of what, is philosophy. Anyone who speaks German is a folk philosopher, and our academic philosophy consists in qualifications of this common philosophy. All our philosophy is the correction of linguistic use; that is, the correction of a philosophy, our most common one. But only this common philosophy has the advantage of possessing declinations and conjugations. Thus true philosophy is always taught in the language of false philosophy. [. . .] (H 146)

This suggestion has been deeply influential for later philosophers, particularly Ludwig Wittgenstein (1889–1951), who was an avid reader of Lichtenberg, and anticipates twentieth-century ordinary language philosophy. For Lichtenberg, philosophical language always carries on an unwitting "love affair" with common, everyday language and despite its protestations cannot so easily tear itself away from this relationship. Because of this tight

relationship between philosophy and language, he also accords an important place for creative language, wit, striking metaphors, and poetic language that may open up a new understanding of the world and with it perhaps new philosophical views.

One might suggest that this can be taken as representative of Lichtenberg's style of thinking as a whole. In keeping with Enlightenment ideals, he is always committed to firsthand knowledge, knowledge acquired through observation, but he nevertheless saw an important place for the knowledge that can be gained through communication, dialogue, and consensus. Where he is skeptical, it is often only to prevent the dogmatic acceptance of ideas, which would eventually stultify thinking, investigation, and experimentation. And because thinking and experimentation are often confused and arrested by acceptance of such ideas, Lichtenberg proposes a thoroughgoing critique of the concepts we use in our analyses and the language in which we express these ideas: "The most common ideas and those upon which everyone agrees deserve most often to be investigated [. . .]" (KA 295).

Philosophical Writings Selected from the Waste Books

Notebook A

1765–1770

The great trick of regarding small deviations from the truth as the truth itself—a trick upon which the whole of differential calculus is based—is also the basis of our ingenious thoughts, where the whole thing would often collapse if we were to consider the deviations with philosophical rigor. [1]

It is a question whether in the arts and sciences a *best* is possible beyond which our understanding cannot reach. This point is perhaps infinitely distant, yet with every approximation we have less ahead of us. [2]

To create a *charicteristica universalis*, we must first abstract from the syntax of language; syntax is a certain music we have composed, which in a few cases ("femme sage, sage femme") has its peculiar use. If we are to make progress in our *characteristica*, we first require a language that adheres to concepts, or we must at least seek one for special cases. But since our most important decisions, when we think them without words, are often only points, such a language would be as difficult to formulate as the others that are supposed to be derived from it. [3]

When one believes—as metaphysicians often do—that one understands something one really does not, it could be called *affirmative nescire*.[1] [5]

It is difficult to say how we came to possess our current concepts. No one, or very few of us, would be able to recount when they first heard mention of the name Leibniz. To explain how we first acquired the belief that all men are mortal would be still more difficult; we do not arrive at this idea as quickly as one would believe. If it is this difficult to explain the origin

of phenomena that occur within us, how will we fare in this respect when we wish to establish something about the things outside us? [9]

[. . .] The question is really whether we arrived at geometry through the division of farmland or if we merely applied a previously discovered theory. Such division certainly could not be performed without geometry, and even the most ignorant farmer would discover geometrical propositions when dividing a field into equal parts. Only a people can advance things in this matter without ever arriving at the proposition of the equivalence of Δ Δ. Our gardeners are no geometers, yet only they are adept in resolving many situations. It is indeed a question what in everyday life most cleverly leads men to discover the most important geometrical propositions. To be sure, they do not arrive there by a straight line.[2] [10]

The discovery of the most significant truths depends upon a subtle abstraction, yet our everyday life, with its competencies, habits, and routines, constantly endeavors to make us incapable of this. It is the work of philosophers to unlearn these trivial mindless abilities, which we have acquired through observation since childhood. Thus even as a child, a philosopher should already be educated differently. [11]

When we look at an object, we simultaneously see many others but less distinctly. The question is whether this is habituation or whether it has another cause. If the first is the case, we should be able to become accustomed to seeing things distinctly without directly attending to them. [13]

In some sciences, the endeavor to discover a universal principle may often be just as fruitless as the endeavor of a mineralogist to discover some primary universal element through the compounding of which all minerals arose. Nature creates neither genera nor species, but individua, and in our shortsightedness, we must seek out similarities to be able to retain many things simultaneously. These concepts become more and more inaccurate the broader the categories are which we create. [17]

The greatest things in the world are brought about by others, to which we pay no attention, insignificant causes that we overlook but that eventually accumulate. [19]

In his novel *Émile*, Rousseau rightly calls accent the soul of speech. We often think people stupid, but upon examination we discover it is only

their simple tone or accent that makes them seem this way. Since tone is not conveyed in writing, the reader must be directed to it by being shown more clearly through phrasing where it belongs. This is what distinguishes ordinary speech from a letter and what should distinguish a merely printed speech from one that is actually delivered.[3] [21]

The influence of style upon our attitudes and thoughts, which I have discussed elsewhere, is evident even in Linnaeus, who is usually quite precise; he suggests that stones grow, plants grow and live, and animals grow, live, and sense. The first is false because the growth of a stone bears no resemblance to that of plants and animals. The intensification of expression, which he noticed in the latter series, probably led him to include the former in this classification.[4] [22]

To match versification to the thought is a very difficult art, the neglect of which is responsible for much ridiculous verse. Versification and thought are related to one another as in everyday life *savoir-vivre* is to occupation. [23]

If we wish to create a philosophy of use to us in life or wish to give general principles for a perpetually contented life, we must certainly abstract from what introduces too much diversity in our observations—much as in mechanics we ignore friction or other similar particular properties of bodies, so our calculations are not so cumbersome, or we at least replace them with a single letter. Insignificant mishaps undeniably introduce much uncertainty into our practical principles, so we must dismiss them and attend to overcoming the significant ones. This is undoubtedly the true meaning of certain propositions in the Stoic philosophy.[5] [28]

The superstition of ordinary people originates in their early and all too zealous instruction in religion, where they hear of secrets, miracles, and acts of the devil and believe it probable such things might occur everywhere in anything. If, however, they were first taught about nature, they would more readily regard the supernatural and mysterious aspects of religion with greater awe rather than considering them quite commonplace as they now do—so commonplace, indeed, that they do not think it extraordinary when someone tells them that today six angels crossed the street. Neither are the images in the Bible good for children. [29]

Habit might be called a moral friction: something that does not allow the mind to glide easily over things but joins it to them so it cannot easily free itself. [32]

In the everyday question of how to do something in the *best* possible way, we are seeking a certain *maximum*. [37]

The proof advanced by philosophers that there is a future life, which consists in their saying that were it not the case then God could not reward our final moments, belongs to the proofs by analogy. We reward only after the fact, thus God must also. We do this out of lack of anticipation, but where we are not thus hindered we also reward in advance, as we pay in advance our university tuition. Might God not also have paid in advance? When Plutarch says that the victor is not crowned during the battle but only afterward, he is similarly obscure; it is a mere analogy, a kind of proof that is both false and cruel. [42]

Death is a constant quantity—only pain is variable and may be intensified infinitely. Those who defend torture must admit this, or they torture in vain. In many, pain reaches a maximum and yet is < death. [53]

The argument against the materialists offered in Herr Unzer's journal *Der Arzt*, and that derives from the mutability of our body, truly has some force. Certainly the parts of my body are no longer *me* when I am a few years older, so how could successive souls, so to speak, impart consciousness to one another? One might respond that the transformation is very gradual, just as traditions have been passed on even though every eighty years the earth itself is different. This is how La Mettrie would respond. Another demonstration, esteemed by Herr Fontenelle, that the surprising effect of thought upon the body is inexplicable if thoughts follow mechanical laws is no more formidable. It is true, if I whisper gently in the ear of a man that he will be arrested if he does not immediately abscond, he will bolt and run frantically for miles. Yet we need assess an effect according to the sound the word makes that gives rise to it, just as little as we estimate an attack against the state by the force of an explosion; the thought thus continues to act, perhaps in a manner like a spark to gun powder.[6] [56]

Prejudices are, so to speak, the acquired instincts of human beings: through prejudice we can accomplish many things we would find too difficult to think through to the point of decision. [58]

According to Home, in seeing and hearing we do not sense the immediate contact of bodies outside of us in the same way as with other senses. (If

we had no eyes, perhaps the feeling of sensations would seem as equally to occur within us; it is only because we have eyes that we locate sensations where we see a cause for them *p.m.*)[7] [70]

Whenever we read a good thought, we should see if something similar might be thought and said about another matter, assuming here that it has some affinity with the former. This is a kind of analysis of thought that perhaps some scholars adopt without saying. [76]

Understanding the meaning of a word in our mother tongue often takes us many years. I also have in mind understanding the meaning tone can lend to a word. The meaning of a word is, if I may express myself mathematically, given by a formula in which the tone is the variable and the word is the constant quantity. This opens the possibility of infinitely enriching language without increasing the number of words. I have found that the phrase "It is good" is pronounced in five different ways, each time with another meaning, which is often determined by yet a third variable, namely, the facial expression. [93]

If substances possess properties that allow others to apprehend them, then we can at once be members of different worlds without being conscious of ourselves in more than one of them, for the properties of substances are, in a manner of speaking, permeable. Thus we can die in one world and continue to live in another. [87]

If we could organize our most abstract principles, which our reason apprehends without much previous sensation, in such a way as to facilitate a transition to their application, it would produce a practical metaphysics—only this transition currently eludes our metaphysics. [97]

We ourselves are the measure of the miraculous. Were we to seek a common measure, the miraculous would disappear and all things be reduced to the same size. [110]

Minds or spirits without an external world must be strange indeed; since the ground of every thought lies within it, even the most fantastic combinations of ideas would always be correct. We call people insane when the order of their concepts no longer corresponds to the sequence of events in our orderly world; thus a careful observation of nature, or even mathematics, is

certainly the most effective preventative of insanity; nature is, so to speak, the guide rope by which our thoughts are lead, so they do not stray. [111]

The grocer who weighs something is as much engaged in placing an unknown quantity on one side and a known quantity on the other as the algebraist. [113]

The conflict over *meaning* and *being*, which has done so much harm in religion, might have done more good had it been fought on other fields, for it is a common source of our misfortune that we believe things actually to be what they really only mean. [114]

It is an entirely unavoidable defect of all languages that they express only the *genera* of concepts and seldom can say adequately what they wish to say. For if we compare our words with things, we discover that the latter consist in a wholly different order from the former. The properties we observe in our souls are connected in such a way that it is not easy to delineate a boundary between them, but the words with which we express them are not constituted in this way. Two successive and related properties are expressed with signs that seem to indicate no relationship with one another. We should be able to decline words philosophically and to indicate their relationship through modifications. In the geometrical analysis of a line a, one indefinite section of it is called x; the other section is not called y, as in ordinary life, but $a - x$. This is why mathematical language has such great advantages over ordinary language. [118]

When Plato says passions and natural desires are the wings of the soul, his expression is enlightening; such comparisons illuminate the matter and are, as it were, translations of the difficult concepts of one man into a language understood by all—true definitions. [120]

Undoubtedly creatures might exist whose organs are so sensitive that they are unable to reach through a ray of light, just as we are unable to reach through a stone because our hands would be destroyed. [121]

Perhaps a thought is the cause of all motion in the world, and the philosophers who taught that the world is an animal perhaps arrived at the idea this way; but they may not have expressed themselves as exactly as they perhaps should have. Our entire world is only the effect upon matter of one of God's thoughts. [123]

The world is a body common to all people; changes in it bring about changes in the souls of all people who are facing only a part. [124]

Not to exist means to natural scientists, at least a certain class of them, the same as not to be perceived. [127]

It never occurs to the peasant who believes the moon is no bigger than a plough wheel that at a distance of a few miles an entire church appears no larger than a white speck, while the moon always appears the same size. Since he possesses these ideas separately, what prevents him from connecting them? In his everyday life, he does connect ideas, perhaps in more elaborate ways than these. This reflection should grab the attention of philosophers, for in certain connections of thought they are perhaps still peasants. We think early enough in life, but we do not know that we are thinking any more than we know we are growing or digesting; among ordinary people, few ever realize this. A close observation of things outside us leads quickly back to the point of observation, that is, ourselves; conversely, anyone who once becomes fully aware of himself is readily led to the observation of the world around him. Be attentive, experience nothing in vain, measure and compare—this is the entire law of philosophy. [130]

Whatever one sees, does, or reads, it should always be brought to such a degree of clarity that one can at least answer the most general objections against it and then it can become part of the structure of our science. To this structure nothing disputable should be added. If something generally assumed cannot be united with our system, then perhaps we are still missing foundational ideas, and discovering this is a great achievement. [133]

Human philosophy is never other than the philosophy of one particular individual corrected by that of others, even fools, according to the rules of a rational appraisal of degrees of probability. Propositions to which everyone assents are true. If they are not true, then there is no truth. Other propositions we are often compelled to hold true on the assurance of experts, and any man would believe such propositions were he to find himself in the same circumstances. Where this is not the case, we have a particular philosophy and not one established in the council of mankind. Superstition itself is a local philosophy voicing its opinion as well. [136]

Growing wiser means becoming increasingly acquainted with the errors to which our instrument of feeling and judging may be subject. Today,

cautiousness in judgment is to be recommended to each and every one. If we reap but *one* incontestable truth every ten years from each philosopher, our harvest would be rich enough. [137]

Every mathematical expression is in effect a mirror. [153]

Many relations in nature are neither arithmetical nor geometrical and are thus difficult for us to specify or describe. Perhaps such relations can be reduced to those we have already discovered. [. . .] [156]

The *abacus pythagoricus* is an elegant visual representation of our rational syllogisms. [. . .] As the simplest representation of the comparison of ideas, the imitation of this device would be quite useful in other sciences, if we could represent magnitude here without presupposing extension. [157]

To explain why some people feel an incredible sensation when they see someone chew coal or cut extinguished coal or coarse stone with a sharp knife. [158]

We are accustomed to using the word *times* when speaking of augmentation, for example, five times or one thousand times etc. This has led many people to whom I had explained calculation with fractions to the most marvelous thoughts, as when they believe it impossible that propositions that have been proved by multiplication could possibly be valid for multiplication with fractions. This is an example of the dutiful influence of language upon opinion. [159]

Datur quodammodo generatio linearum univoca et aequivoca.[8] [160]

The microscope magnifies surfaces (lines), leaves angles unaltered, and reduces curves. [187]

Rain, snow, and wind follow one another in such a way that we discern no certain law in their order. But we conceive of laws only in order to simplify our conceptions of things, just as we create races. [192]

Any object can be magnified with a microscope, but an angle cannot. [214]

Our senses relate to the things around us in such a way that by the time something appears to our senses, they have unbeknownst to us already made

their most important contributions. The state of things before their sensible appearance, the Greeks called ἄδης and the other they called φῶς or Ζεὺς whose brother was ἄδης Pluto. [. . .][9] [223]

Κέρας Ἀμαλθείας

1765–1772

The Yameos in the West Indies can count only to three, indicating this number with the lengthy word *Poettarrarorincouroac*. [. . .] They may have a concept of a larger number but lack a term for it; thus they commonly avail themselves of expressions from European languages. [1]

Late one evening, Socrates wanted into his house but was scolded from the window by Xanthippe, who finally dumped the chamber pot on his head. "With such a storm," he remarked, "I knew it would rain." [9]

The Stoics deny degrees of morality; according to them, all crimes are equal when one abstracts from their damage. [166]

Some scholars have understood truly higher or abstract reason is for man an unnatural thing, and erudition, an illness. [195]

Where must I turn my eyes to discover what no man has discovered before? [252]

What would this be had I discovered it myself according to the structure of my own system of thought? [264]

The particular instead of the universal. [. . .] [275]

Make natural observations before subtle ones, and seek always a simple and natural explanation. [276]

Things most often forgotten, places overlooked, and things accepted without question deserve most often to be investigated. [291]

Silence is not silence, and white is not white—we only suppose this. What we do not observe does not exist for us. [293]

Perhaps this arose in me only through constant habituation since childhood. What insights we would have if we could once divest our wealth of truths of things not essentially true but only accrued through frequent repetition. [294]

The most common ideas and those upon which everyone agrees deserve most often to be investigated, but in misgivings about this one should always remember what Franklin says in his *Experiments and Observations on Electricity*: "If we propose our objections modestly we shall tho' mistaken, deserve a censure less severe, than when we are both mistaken and insolent."[10] [295]

Ask yourself whether you can explain the insignificant details; this is the only means to create an accurate system, probe its strengths, and put your readings to use. [296]

A single word might be replaced with six; we express too much with one and the same word. [297]

To investigate what is mutable and what eternal in a matter, and at least to indicate where certainty ceases. [300]

We know for certain how to designate the limits of error, and where doubt remains, precise inaccuracy begins. [305]

Can this be parsed into its constituents? [310]

What would this be for higher or lower beings? [312]

What are its degrees, and how are they determined? [313]

To what end? [314]

Notebook B

1768–1771

Whenever he had to reason, he felt like someone who had always used his right hand but was now forced to do something with his left. [1]

In recalling our past pleasures, we depart from our present physical body, transporting ourselves entirely in abstracto back to a previous time as an Arcadian being without debts, cares, or needy relatives, for we are not able to imagine for ourselves the unified effect of different impressions as easily as we can that of a single one. [33]

We infer, perhaps too quickly, from the intelligent constitution of the instincts of animals, the existence of a *supremely* intelligent being; it need only be more intelligent than we are. [34]

There are very few things we can conceive of through all five senses. [37]

We see absolutely nothing of the soul unless it is manifested in the face. The faces of a large assembly of people might be called a history of the human soul, written in a kind of Chinese ideogram. Just as a magnet arranges iron filings, the soul arranges around itself the features of the face, and differences in the arrangement of these parts indicate differences in that which gave rise to them. The longer one observes faces, the more one will notice in so-called unremarkable faces traits that make them individual. [69]

Of all the animals on earth, the human is closest to the ape. [107]

He was the author of various articles that appeared here and there in journals under the heading *Nonsense*. [108]

The thing of whose eyes and ears we see nothing and of whose nose and head we see very little—in short, our body. [109]

Little two-penny judgments, virtues, truths. [116]

This is as certain as $(a–x) \times (a+x) = a^2 – x^2$. [120]

Logica palaestrica, metaphysica terminologico-visionaria, and citica gladiatorio-offensiva. [147]

Just as there is a post/μετὰ φυσικὰ so too could we devise a προ/antephysica—this would be Geometry.[11] [148]

He understood philosophy as the everyday man usually does: he reasoned and formed hypotheses in his housekeeping—in short, what for the Kästners and Leibnizes is the world was for him the place between Bossiegel and Schmalen's shop.[12] [177]

The notion of a mathematical method is ridiculous; it should be called the "natural" method because this alone is applied in mathematics. It is as if one were to say that in the end the masons of the tower of Babel worked according to pandectic law. [190]

To the wise, nothing is immeasurable and nothing insignificant, especially when he is doing philosophy—assuming he is not hungry or thirsty or has not forgotten his snuff if he uses it. In this case, I believe he could compose an essay on keyholes, which would sound as important as one on *jus naturae* and be equally as enlightening. As only few sages well know, in minor everyday occurrences one can discover a moral principle just as readily as in the major ones. [. . .] [195]

He possessed a great deal of philosophical insight, or common sense that looked like it. [205]

Do not always say that since something is one way it follows that something else will be another. Let your emotions speak as well! Until now reason could not be expressed and long remained silent, but since the storm has calmed, her voice can once again be heard. [211]

He used his little stick to measure all kinds of things, physical as well as moral, and would often say, "I am not *so* concerned with it," indicating on the stick with his thumb nail his degree of concern. [215]

Who is there? Only I. This is already saying too much. [240]

If an angel were to tell us something of his philosophy, I believe many propositions would sound like 2 times 2 equals 13. [242]

Even if suicides could give reasons for their act in their *own* language, it would do no good. Every hearer would only reduce them to his own language and in so doing would not so much weaken them as transform them entirely. To properly understand someone, it would be necessary occasionally to be the person one wishes to understand. Whoever understands what a system of thought is will agree with me. To be frequently alone, to think about oneself, and to create a world of one's own may bring great pleasure, but in doing so, one imperceptibly creates a philosophy according to which suicide is appropriate and permissible. It is a good thing then to anchor oneself to the world by means of a girl or companion so that one does not fall off completely. [262]

In our premature and often all too extensive reading, by which we acquire numerous materials without constructing anything from them and which accustoms our memory to keep house for sensibility and taste, a profound philosophy is often required to restore to our feelings their initial state of innocence: to extricate one's *self* from the detritus of alien ideas, to begin to feel for one*self*, to speak for one*self*, and, I might almost say, to exist for oneself. [264]

The hypotheses of some newcomers do not yet contradict the evidence, but I fear the evidence will soon contradict *them*. [281]

One can really make oneself morally heavy, just as children believe they can make their bodies heavier—one can intentionally suppress a fond desire and do what is right. [282]

It is an open question whether it is more difficult to think or not to think. The human is compelled to think, and we all know how hard it is to suppress such a compulsion. Surely then, the small-minded really do not deserve the contempt with which they are treated in every country these days. [308]

Notebook C

1772–1773

The whole man must move together

Something that covers the distance between two ends of a grain of sand with the speed of lightning or light will appear to us to be at rest. [32]

That we do not investigate *existence* and *meaning* in other matters is a blessing. [34]

We often believe our handwriting differs at different times, yet to another it always appears the same. [48]

It is a prejudice of eighteenth-century Germany that writing is regarded as the measure of merit—a sane and sound philosophy will perhaps gradually dispel this prejudice. [61]

Mr. Westenhof in Osnabrück mentioned that a farmer had once said to him, "I heard that you speak *painfully* well." *Painfully well* is a very common idiom and means something like *very well*. [88]

We could have continued to think and live without ever concerning ourselves with why or how thought occurs; indeed philosophy first investigated things outside of us before finally turning the microscope inward. A curious and observant mind asked, "How does it come about that we think?"—few, indeed not one in a million, even among professors who have explained

psychology, would have posed such a question. And yet how many now ask why objects fall toward the earth? The force that brings this about, and that is as little known to Euler as to Rudolph von Bellinkhaus, is as necessary to our mortal felicity as the one that makes us think is to our eternal felicity. The former has been attributed to spirits, but I know too little of the history of human folly to say whether some ambitious religious patriarch ever counted among the duties of man the propitiation of such spirits, the dereliction of which would result in our weightless bodies being scattered throughout the heavens. Astonishing inferences have been made from the hypothesis that it is a spirit in us that thinks; to this the religious patriarchs have added many other less evident ones with which to support society, just as the other force supports the firmament. That this edifice is too complex to be based on a human design, I would much prefer to believe than that procreation is a human invention. Here we find God. But he who seduced us to procreate by making it the greatest carnal pleasure might also, through an implanted devotion, draw us together into a merely temporary wellbeing; but is this not deception? To us it seems so.[13] [91]

To wish to conclude some things from God's wisdom is not much better than to conclude them from one's own understanding. [103]

It is to be sure no small difficulty to teach philosophy *with a purpose*—the child, the boy, the youth, and the man all have their own. How fortunate it would be if one age worked for the advantage of another and one year for the advantage of the next; if one produced a gear, another springs, and yet another dials, then doubtless a fourth would produce a clock. If every human inhabited his own planet, what would philosophy then be? Just what it is now: the essence of a man's opinions is his philosophy. [. . .] The question: should I philosophize for myself? must, I think, be answered in the same way as the question: should I shave myself? If someone were to ask me this, I would answer: if you can do it properly, it is an excellent thing. I always think that though we try to teach ourselves the latter, we do not make our first attempt on the throat. Act as the wisest before you have acted, and do not begin your philosophical exercises where an error can deliver you into the hands of the executioner. [. . .] [142]

The rules of grammar are merely human dictates, which is why the devil himself speaks poor Latin through the possessed. [. . .] [151]

In grasping their meaning, it was impossible for him not to disturb the words. [158]

A leg of mutton is better than nothing,

Nothing is better than heaven,

Therefore a leg of mutton is better than heaven.

In this syllogism, as in many pseudosyllogisms in which the word *nothing* occurs, the ambiguity of the word is at fault. In the first line the word *nothing* excludes only those things in the world that are worse than a leg of mutton, among which "nothing" is included; in the second line, on the other hand, the word *nothing* excludes everything in the world however small or great it may be, which again includes "nothing." In the first line, *nothing* is a species of the latter from which no conclusion can be drawn regarding the genus. [179]

[. . .] It is well known to any observer of man how difficult it is to explain experiences without the interference of judgment. [192]

Catholics forget that, like history and knowledge in general, the beliefs of man also change. To advance in one and abide in the other is impossible for man. Even truth needs new apparel to appeal to a new age. [223]

Is there then no difference between justice and oppression? [249]

In perceiving something, we cannot withhold our judgment; that we do this also with people is the foundation upon which someone has built physiognomy. [251]

I can *comprehend* it, but I cannot *grasp* it, and vice versa. [277]

What Bacon says of the harmfulness of systems might be said of every word. Often words that express an entire class or all steps on a ladder are used to refer to individuals—here words become indefinite. [278]

Because of the plurality of our senses, we need not be so attentive with individual senses to the many features of an object. It is easier to recognize something by its appearance or smell than its color or structure. [. . .] [290]

According to Buffon, there are perhaps more species of insects that cannot be perceived with the human eye than plants on the entire earth.—But plants that cannot be perceived by the human eye, how many could there be?[14] [292]

The often-repeated observation that each is best pleased by his own might once again be subjected to lively and very philosophical scrutiny. [301]

[. . .] Our earth is indeed the strangest planet for us, just as our soul is the strangest substance, for we alone inhabit the one and are the other. If only for a moment we could be something else. What would become of our understanding if all objects really were what we take them to be? [. . .] [303]

Concerning love, Socrates distinguished between need and passion, between the work of nature and the work of fantasy. He cautioned against the latter, and for the satisfaction of the former he recommended a kind of love in which the soul participated as little as possible. [. . .] [325]

Do you perhaps believe that your convictions owe their strength to arguments? Then you are undoubtedly mistaken, for if it were true everyone who heard them would have to be as convinced as you are. The theologians call Voltaire delusional, and he in turn calls them delusional; but since they cannot prove with certainty that they are more reasonable than he, and since he is more sophisticated and a better philosopher, the advantage is his. One can be deluded in favor of a proposition as well as against it. Reasons are often, and for the most part, only explanations of entitlements, by which we give a coloring of legitimacy and rationality to something we would have done in any case. Nature, it appears, did not wish to make such an important thing as human conviction depend on logical deductions alone, as these may easily deceive. The impulse to act, thank heavens, often takes us by surprise, before we are half finished proving its necessity and utility. [332]

To appreciate which is the most simple of the two, one can understand the meaning of a word in a simple or elaborate way. [348]

Excellence is so difficult to attain in the arts and sciences because it means the attainment of a certain fixed aim. To do something according to some prescribed rule poorly would be equally as difficult—if doing so could still be called doing it poorly. [353]

We cannot say how anything would have turned out but only how we believe it would have turned out. [375]

Notebook D

1773–1775

Since the correctness of our judgments rests not so much on knowledge of the opinions of others as on experience or knowledge of facts, the question is how best to secure a wealth of these facts from which our judgments arise. Is history the means, or does less association with others not already bring us there? [15]

Our dispositions are as diverse as our faces, for who could prove to us that our inner constitutions, especially our brains, do not differ noticeably? How varied also are the events that inform our attitudes and opinions? This is why they are always human. Most people merely adopt the same opinions as others. Germans go unbelievably far in this. In England, nearly everyone has his own opinion, which is not to say that each has a different one. This frees our judgment, whereas studied opinions restrict it. In the new world, one could produce the masks of children from copper molds. We should endeavor to learn facts and not opinions, giving these facts a place in our system of beliefs. We should reason at least once about the most common things and be wary of ever introducing another's *opinion*, at least not *qua talis*, if it is not our own. It is unbelievable the kinds of things people repeat after one another. Even great men, who measure everything according their own scale, in a moment of overconfidence, trade in something they have not themselves weighed. It seems to me that herein lies the difference between good and bad authors: one reasons from facts with his own ingenuity, while the other incapably connects facts with garbled opinions. A good and a bad author are not differentiated according to degree, which is why there are famous yet terrible authors. That history is a great teacher is an adage that will undoubtedly be repeated by many unexamined. We need only look

at how those who have elevated themselves through understanding have acquired their knowledge; they acquire it from things themselves, where things occur, not where they are recounted. History should be written this way, but what historian is capable of this? This befits the great deeds, so they ignite. When history writes that a hero from the Battle of Minden is a great man, it resounds for centuries; without history, the clamor of his fame would be heard as little as the thunder of the artillery. Thus a common man and a great one can write about the same matter, though they do not write the same thing.[15] [19]

That our ancestors accorded so much importance to the judgments of God and valued the miraculous tests of innocence so greatly might be excused because of their simplicity. Their age was cultivated enough not to heed prophecies but not enough to see that their desire that God should allow the innocent to walk over red-hot iron unscorched would be contrary to his wisdom. This was reserved for our age. Today certain philosophers are already beginning to make pretensions of believing it would be contrary to God's wisdom and greatness to concern himself at all with the world. [21]

I knew someone who thought of the days of the week as certain figures; he once even drew Wednesday on the table. [. . .] [24]

A young boy who was still perfectly innocent imagined that in a marriage a man and a woman sit on a seesaw and move as children do: when one goes up, the other goes down. He imagined this though he had never seen a bride and groom on a seesaw. [25]

Once we know our weaknesses, they cease to harm us. [29]

I cannot help wondering why we strive for such painstaking precision in our work and concern ourselves so much with deviations of *more* or *less*. Anyone who repeats us will inevitably deviate by $+x$ or $-x$ from the actual point. Ultimately it makes no difference whether the circle can be squared or not, so what are we chattering about? Perhaps only so the angels do not mock us? [41]

Many things about our bodies would not seem to us so filthy and obscene if we did not have the idea of nobility in our heads. [45]

If I had not written this book, a thousand years from now, between six and seven in the evening, people would in many towns in Germany be talking about quite different things from what they will in fact be talking about. [55]

I too am awakened, friend, and have attained that degree of philosophical sobriety at which the love of truth is my only guide, and with the light granted me meet all I regard as error without exclaiming *I regard that as error* and even less *that is error*. [84]

To undertake a comparison between what we think and what we say. We may say without fear of flogging that half the population would be flogged if they said openly what they think—and yet man is that which thinks, not that which speaks. Two people complementing one another would clash immediately if each knew what the other thought of him. [89]

The thought still has too much play in the expression; I have pointed with the knob of a stick where I should have pointed with the tip of a needle. [96]

How and in what form does this property show itself in similar and related things? [97]

A king decrees that under penalty of death people shall believe a stone to be a diamond. [99]

The inhabitants of Otaheite eat alone and cannot understand how one could eat in company, especially with women. Surprised by this, Banks asked why they eat alone: they do it because it is the right thing to do, but why it is right they would not and could not say.[16] [130]

To think all things to their conclusion so that not the slightest obscurity remains, to discover its deficiencies through experiment, to improve or with this purpose to suggest something more perfect—this is the sole means of endowing ourselves with so-called common sense, which should be the principal aim of our efforts. Without common sense, there can be no true virtue. It alone makes the great author, *scribendi recte sapere est et principium et fons*. We must only have the will, as the maxim of Helvétius says.[17] [133]

What are the thoughts and ideas we have while awake if not dreams? If while awake I think of friends who are dead, the story unfolds without it occurring to me that they are dead—just as in a dream. Or I imagine that I have won a grand lottery, and in that moment I really have won it; the thought that I have not won it, I encounter only subsequently as proof to the contrary. The actual possession of something sometimes gives us no greater pleasure than merely imagining we possess it. Our dreams are made benign if we avoid eating meat in the evening, but what about these other thoughts? [134]

To discover a thought such that anyone, upon hearing it, would laugh themselves to death. [137]

Like a great philosophical chatterer, he is concerned not so much with the truth as with the sound of his prose. [153]

In giving incomprehensible, nonsensical things a reasonable interpretation, one arrives often at excellent thoughts; thus Jacob Böhme's book might be as useful to some as the book of nature.[18] [159]

The infusion of man with life is, so to speak, the push that sets him in motion, and constant friction brings him to rest. Herein originates the inclination toward foolishness. Though thinking is as natural to man as rumination is to oxen, he has now made an occupation of it. Goodness is becoming difficult for man to attain. [160]

Man is perhaps half spirit and half matter, as the polyp is half plant and half animal. The strangest creatures lie always at the boundaries. [161]

A philosopher on the island of Zezu once asked: if a man could transform himself into an ox, would it be considered suicide, and would the ox be culpable? [165]

To the words that are simply tossed about certainly belong butter-bread, philosophy, and mood. [167]

To transform oneself into an ox is not yet suicide. [169]

I no longer consort with others. As a man, I improve my thoughts as best I can, and if they do not take flight, then it is to my detriment. But is it my fault? That is another question. [171]

We mock Jacob Böhme? As if the supernatural things of which he speaks could sound natural. If the inhabitants of Mercury or the Sun recounted to us in German their observations, gathered through the employment of other senses, such a tale would sound no more reasonable. Do we not already have in our own religion one times three equals one? [. . .] Perhaps Jacob Böhme's book, of which an angel would make the same judgment as we, is sometimes nonsense and sometimes even sublime. [. . .] [172]

We judge the mysterious actions of nature from similar actions we already understand. [174]

It seems that attraction in inanimate things is what self-love is in animate things. [178]

Code of Law: regard all things from the best vantage point; determine first the true end, or what is in the general best interest, then the means; consider multiple vantage points. [183]

How far do the consequences extend? [188]

Describe the library of a madhouse, together with the librarian's commentaries on the books, his disjointed speech, and his insightful remarks mingled with nonsense. [189]

God created man in his own image; I dare say this means we created God in the image of man. [201]

When I regard anything first as body then as mind, it produces a tremendous parallax. The former might be called the *somatocentric,* and the latter, the *psychocentric* aspect of a thing. *Sarcocentric*. [202]

Nowadays we already have books about books and descriptions of descriptions. [204]

Is it possible to acquire more distinct knowledge of a certain substance than that acquired by being the substance in question? We know little of our souls, and we are our souls. To whom does it belong then to have more knowledge of our souls than we ourselves have, and why does there remain something there of which we are ignorant? This last fact, it seems to me,

is certain proof that we still serve purposes unknown to us. If the only determination of our being is to be tickled or tormented by our surrounding substances, I cannot understand why we remain unknown to ourselves. [211]

We see with our two eyes only one image as long as the images are at an equal distance and thus also form an image of equal size on the tunica retina. In other cases, however, the image appears doubled: when I hold an object near one eye and regard it with both, when the image does not fall on similar parts of both eyes, or when the image falls upon similarly located parts of the eyes but are not the complimentary points where the image of a single thing is ordinarily formed. This is sufficient proof, it seems to me, that we see two of everything; since, however, we notice no difference between them, because of the similar positions of the images with respect to our symmetrical body, we regard them as being one. The moment one image is slightly enlarged, as when one regards an object with one naked eye and regards the same object through a telescope with the other eye, everything appears doubled. Perhaps our souls are similarly constituted, without our sensations and perceptions appearing manifold. We sense something as a unity or single thing not because we ourselves are a unity but because we regard it in a unified way, in accordance with the attunement of our senses, and thus as a *unity* or *single thing*. I am quite concerned, however, that the idea of the simplicity of our soul is a borrowed concept. We cannot sense for an individuum A, thus multiple substances cannot have a thought in common. The ratio of equivalence (one might say regarding the eye mentioned above) is perhaps in the soul = 0, just as it is in the addition of ratios in arithmetic. [212]

Ubiquity. [236]

One distinguishes equally among all things. [239]

One could create a dietetics for the health of the understanding. [251]

Every person has their own sphere of knowledge in which they can orient themselves better than most of our philosophers can in theirs. Within it, a person notices in a glance what is ridiculous, subtle, stupid, or superfluous. When I understand the purpose of something and have acquired familiarity with the established methods, it should be easy for me to recognize error in

any new method—and how could it be otherwise? If I wished to describe to a kitchen girl a new dish and were to tell her that it is an interesting meal with an exceptional flavor and that some grain should be sprinkled on the edge of the dish, she would certainly mock me. Many authors approach their subject in this way without noticing its absurdity. If we wish to make something comprehensible to other people, we must use examples drawn from their own circle, and from this experience we may also learn what we must do to make a certain science a part our own circle. [252]

Have we not been resurrected once already? Certainly it was from a state in which we knew less of the present than in the present we know of the future. Our former state is related to our present as our present is related to our future. [254]

Brush your teeth and rinse your mouth every morning! This is more easily adhered to when we must swear to it with our fingers on the cross. Our inclination toward the mystical, it is exploited. [258]

Given the correct concept of a thing's perfection, we are certain to act in accordance with the design of nature, whose ultimate purpose is to thrive and flourish. This, I am convinced, is a universal law. [260]

As we begin to consider something, it appears plausible, but upon further consideration, we find it false. The initial impression of a thing on the mind is important indeed. Surveying a thing, our mind sees all aspects obscurely, which is often more advantageous than a distinct view of only one aspect. [273]

In the Bible it is said that God created man in his own image. Philosophers do the opposite—they create God in their own image. [274]

A proposition in geometry is sometimes only another in a different form. [284]

One might call a globe an astronomical computing machine. [288]

The moment I have asserted a proposition: where does one find more examples? [295]

From a single experiment with the reflection of a light beam, the mathematician deduces the whole of catoptrics. [299]

According to Alembert, the most excellent logical systems are of use only to those who can dispense with them. With a telescope the blind see nothing.[19] [300]

I imagine that when we reach the limits of things set for us, or even as we only approach these limits, we gaze into the infinite, just as from the surface of the earth we gaze out into immeasurable space. [312]

Where a body is in motion, there is space and time; the simplest sentient creature in this world would thus be the measure of times and angles. Our hearing, and perhaps also our sight, consists already in the counting of oscillations. [314]

That men act always out of self-interest is useful for the philosopher to know; yet he must not act in accordance with such a principle but conform his actions to the customs of the world. Just as a discerning writer does not depart from the common usage of words, so too should a good citizen not readily deviate from customary actions, though he may have objections to both. So convinced am I that man does everything in accordance with his own self-interest (understanding this word properly), I believe it just as indispensable to sustaining the world as sensibility is to sustaining the body. It is sufficient that our own interests very often cannot be attained without contributing to the joy of a thousand others and that our first cause so wisely knew how to combine the interest of one with the interest of many. [321]

Our world will in time grow so judicious that it will be as ludicrous to believe in God as it now is to believe in ghosts. [329]

We should examine whether it is even possible to do anything without having our own self-interest always in mind. [350]

What is this? I can scarcely distinguish whether it is something or nothing. Such arguments are best avoided. So that you see I mean this earnestly, I want to help you. I want to give your arguments all the force you are incapable of giving them—the force they would have if you were reasonable people—and then I want to step back and blow them down. [353]

Lambert's color pyramid is a sensible image of abstraction; in the end only white remains.[20] [356]

Our best expressions will grow feeble; many words that were once vigorous metaphors are now infirm. When one is stylistically venturesome, defying imitation, this certainly aids the survival of a work so that it cannot so easily grow old. [362]

One can repeat something in a way that it has already been said, remove it from human understanding, or draw it closer. The shallow mind does the first; the enthusiast, the second; and the true philosopher, the third. [364]

There must be someone for whom the orbit of a comet does not seem as long as it does for us. [385]

Religion has brought about much evil, but should it therefore be rejected? If so, the notorious *belli taeterrima causa* must for the same reason be abolished. [405]

The philosopher often defies the great men of this world with a thought; the great man defies them and feels it. [406]

In my opinion, this theory corresponds in psychology to a notable one in physics that explains the northern lights as the phosphorescence of herrings. [411]

I doubt it will ever be possible to prove we are the work of a supreme being and not rather fabricated for its own amusement by a very imperfect one. [412]

The more we learn to discriminate in a language by the use of reason, the more difficult it becomes to speak it. In fluent speech, much is instinctive that cannot be achieved through reason. Certain things, it is said, must be learned in youth, which is true of those who cultivate their reason to the detriment of all other powers. [413]

You must never think: this proposition is too difficult for me; it is only for great scholars; I will concentrate on this other one instead. This is a weakness that will degenerate easily into complete inactivity. You must not think yourself too humble for anything. [434]

To investigate how two things are related and how they behave in the absence or presence of that common property. [446]

If one investigates precisely the *location*, *form,* and *order* of everything around us, one will discover *natural* reasons for their being in *this location*, *this form,* or *this order*. Having verified these laws, whoever has undertaken this investigation will discover through his own understanding simple improvements for these things because he will find that these individual laws are sometimes observed and sometimes disregarded. [447]

Some wish to ridicule art historians, saying they merely write books about trivial little paintings. What, however, are our conversations and compositions, if not descriptions of images on our retinas or false images in our minds? [448]

If only someone like von Störk would stand up from among the philosophers and show the value of bad critics; the truth is more often brought to light by bad critics rather than good or by the oblique endeavors of idiots rather than the focused endeavors of great minds.[21] [449]

Observing most educated people, one finds they do nothing themselves except cut their nails and quills. Their hair is styled by others, their clothes made by others, their dishes prepared by others—all so they can observe the weather in their own heads. [450]

The man was such an intellectual he was of hardly any use in this world. [451]

I know very well the people you mean; they are all mind and theory, all head and not enough hand to sew on a button. [452]

Helvétius' system, according to which all men are born with equal abilities, strikes a blow to physiognomy. Why among similar faces does one so often find similar dispositions? [454]

What science would mediate these two fields? [457]

Rome, London, and Carthage are only durable clouds; all will alter and finally perish. How often we regard as essentially different things that differ only by plus and minus. [461]

We have only one word for color and pigment, which causes a great deal of confusion. This is often true where for many things we have only one word but require more. *Color* is a concept, and *pigment* is a word. A combination of concepts expressed in words can mean something different for different people. We should, therefore, investigate whether more words might not be created, and thus give some motivation to make further distinctions. Here also is the root of disputes about the word *beautiful*. [464]

Aside from the properties he shared with various animals, he also shared some with thermometers, hygrometers, and barometers. [465]

Metaphorical language is a form of natural language that we construct from arbitrary but concrete words. This is why we find it so pleasing. [468]

An animal is perhaps possible that cannot discern its own body, just as our soul cannot clearly conceive of itself though it knows it is there. The materialist finds one reason too weak with which one wishes to prove the existence of the soul, and the idealist finds the other reason too weak. [470]

We have by now in our travel books so many observations of man that we might, by a kind of synthesis, derive from them everything any further books of travel are apt to discover. [479]

Scholars should always gratefully avail themselves of new conjectures about things, provided they are at all reasonable; another mind often needs nothing more to stimulate it to make an important discovery. The prevailing way of explaining a thing no longer has any effect on his brain and is no longer able to set it in motion. [484]

He had constructed for himself a certain system, which thereafter exercised such an influence upon his manner of thinking that onlookers always saw his judgment walking a few steps in front of his perceptions, though he himself believed it followed. [485]

Man has an inclination to promote the happiness of others, independent of his self-interest. This sounds as though a professor of philosophy created man—more charming than true. [493]

If one is to read judiciously, one must keep two aims constantly in mind: first to remember what is said and unite it with one's own system of thought,

and second to appropriate for oneself how others have previously understood the matter. Everyone should thus be warned against reading books by dilettantes, particularly when they have included their own arguments and demonstrations. One can indeed learn from their compilations, but they cannot teach what for the philosopher is equally if not more important, namely, how to bring appropriate form to one's own manner of thinking. [506]

Most of our expressions are metaphorical; they contain the philosophy of our ancestors. [. . .] [515]

Many know things in the way one knows the solution to a riddle after reading it or being told of it. It is an impoverished kind of knowledge and the kind least to be cultivated. One should rather cultivate the kind of knowledge that enables one to discover for oneself, when needed, what others must read or be told in order to know. Many *simplicia*. Here again we arrive at a thought that has been thought before.[22] [536]

To do exactly the opposite of something is also a form of imitation, namely, an imitation of its opposite. [604]

I offer this book to you not as a lorgnette to observe others but as a mirror to observe yourself. [617]

One cannot deny that the word *nonsense*, if spoken with the appropriate nose and voice, concedes little or nothing, even to the words *chaos* and *eternity*. One feels a shock, if my senses do not deceive me, which arises from a *fuga vacui* of human understanding.[23] [636]

Our discoveries might be regarded as things we simply lost or, so to speak, misplaced in the mind. It is possible to find something there only if it was previously lost. [640]

Nobody has bad taste, but many have none at all. Most people have no ideas, says Dr. Price; they speak about things, but they do not think. I have often called this "having an opinion."[24] [645]

Body and soul: a horse harnessed to an ox. [656]

In a quite remarkable passage of Herr Herder's treatise on language, he asks how vision and hearing, color and words, odor and tone are related. Not, he writes, on their own in the objects. But what then are these properties of objects? They are mere sensations in us and as such do not all intertwine. We are a thinking *sensorium commune* but affected from various sides. Herein lies the explanation. We abound in such combinations of diverse sensations, but we do not notice them except in an agitated mood, in illness or fantasy, or in situations where they become exceedingly apparent.[25] [691]

Helvétius' *Discours I.* Judgment is *sensation*. Differences in judgment depend upon passion and ignorance; the side we see, we take to be the only one, or we do not retain in memory those things we must know in order to judge something properly. The misuse of words has led also the greatest men into error. En effet s'il faut tirer tout le parti possible de l'observation, il faut ne marcher qu'avec elle, s'arreter au moment qu'elle nous abondonne et avoir le courage d'ignorer ce qu'on ne peut encore savoir.[26] [705]

Our sensations and perceptions are the sum of many. [. . .] [727]

That the colors of objects often appear so strange in a camera obscura shows how much sensation is intertwined with judgment. If we merely sensed, much that now does not stir us would appear quite intense, and much that appears intense weak. [739]

Regarding the interference of judgment in the estimation of colors, I believe that to a man of keen senses a shadow on the face appears blue or black. Another who judges in advance does not see this and takes the entire face to be flesh colored. It is thus essential to investigate correctly and compare what the senses show and to elucidate correctly and verify the image on the retina before writing books about it. [769]

Notebook E

1775–1776

Something might have been made from his ideas, had an angel arranged them for him. [9]

The path by which one arrives at knowledge of certain things makes a great difference. If one begins in youth with metaphysics and religion, one may easily follow a series of rational syllogisms that lead one to the immortality of the soul. Not every other path will lead here, at least not so easily. Although a definite concept may be given for each individual word, it is nonetheless impossible for us to have in mind all these concepts with equal clarity in a complex deduction. In the application we often combine them in the way easiest and most familiar to us since youth. [30]

Nothing is more difficult in philosophy than to take up an idea from the beginning, and yet in considering it to make use of already acquired knowledge: to think, for example, about the immortality of the soul without already having in mind a certain end or purpose. Often we draw a conclusion from the sixth inference, and then merely add to it the eighth, ninth, tenth, and so forth. Is the reason we find it so difficult to reconcile ourselves as material substances with ourselves as thinking things perhaps not because we ourselves are nothing more than this thinking? The nearer we come to an object in nature, the more incomprehensible it becomes; the grain of sand is certainly not what I take it to be. It is as equally incomprehensible to me how a complex being is capable of thought as how a simple and complex one can be combined. Had we an analysis of such propositions and were able to reduce them to a formula, we would see that both propositions are equivalent and that the enigma had only been deferred but not resolved.

I do not know how far apart in my mind are the two propositions, *two times two is four* and *Henry IV was murdered by Ravaillac*. Nor do I know whether each occupies the whole brain or only a small part and whether in all people the parts are the same. It seems to me probable that each thought sets a certain region of the brain in motion and that this motion is communicated to the rest of the brain, with greater strength in some than in others, or that, not being completely communicated, it carries further in one person than in another. [31]

All languages have the expressions, *I think, I feel, I breathe, I was struck, I compare, I remember the color*, and *I remember the proposition*. That in us which remembers the color and that which remembers the proposition are perhaps as little the same thing as that which is struck or which compares. Everything has its effects on everything else; man feels complete in the whole. And if I remember that $(a+x) \times (a-x)$ is equivalent to $a^2 - x^2$, perhaps my thumb is responsible for some part, however obscure, but perhaps lively enough in some that in touching something they might be reminded of it or might believe, while dreaming or feverish, the proposition to be nothing more than a piece of cloth. It is not as vexing to explain a phenomenon using mechanics and a strong dose of vague concepts as to explain it entirely through mechanics; that is to say, the *docta ignorantia* is less reprehensible than the *indocta*. All motion in the world has its cause in something that is not in motion; why, then, should the universal force not just as well be the cause of my thoughts as it is of fermentation? [32]

We must admit the man is right, but not according to the rules we have by consensus imposed upon ourselves in this world. [33]

In all intelligent people, one finds the inclination to express oneself succinctly, to say expeditiously what needs to be said. Languages thus give no weak indication of the character of a nation. How difficult it is to translate Tacitus into German. The English, at least their talented authors, are already more concise than we are. It is to their great advantage, in this respect, that they possess particular words for a species while we are more oblique, using the genus with a qualification. It could do no harm to count the words in every phrase and endeavor always to express it with the fewest.[27] [39]

Every condition of the soul has its own sign and expression as much as it has an innocence that never becomes *guilt*; you see then how difficult it is to seem original without being so. [40]

Merchants and traders have a waste book (*Sudelbuch*, *Klitterbuch* in German I believe) in which they enter daily everything they purchase and sell, messily, without order. From this, it is transferred to their journal, where everything appears more systematic, and finally to a ledger, in double entry after the Italian manner of bookkeeping, where one settles accounts with each man, once as debtor and then as creditor. This deserves to be imitated by scholars. First it should be entered in a book in which I record everything as I see it or as it is given to me in my thoughts; then it may be entered in another book in which the material is more separated and ordered, and the ledger might then contain, in an ordered expression, the connections and explanations of the material that flow from it. [46]

There is a great difference between *still* believing something and believing it *again*. *Still* believing that the moon influences plants reveals stupidity and superstition, but believing it *again* indicates philosophy and reflection. [52]

If it were true, what in the end would be gained? Nothing but another truth. Is this of such great advantage? We have enough old truths still to digest, and even these we would not be able to endure if we did not sometimes flavor them with lies. [59]

What? One should understand the matter if one wishes to debate it? I say it is essential to a debate that at least one party not understand the issue under discussion and that in so-called current debates, in their most perfect form, neither party understands the issue—indeed, they need not even understand what they themselves are saying. [. . .] [72]

I have no idea what the man means. He has got it into his head that certain words have certain meanings that they must always retain. Is this a royal decree? Who will prevent me from taking here a word and there a meaning and combining them? Obviously this is a lack of contact with the wider world, which is the only world there is. [85]

The unfathomable and fathomable depths of philosophy. He understood the profundity of this science in all its superficiality. [102]

On the advance of the equinox and the dinner hour: the investigation of the latter is as important to the moralist as the investigation of the former is to the astronomer. [117]

Once people have gotten such ideas into their heads, they are not so easily removed. The best thing they can do is take a sound system of logic and go through their entire system of beliefs piece by piece until they have cleaned it up. [. . .] [137]

Stop your chattering. What do you want? If the stars are no longer fixed in their places, how can you continue to say that truth is still truth? [139]

I actually went to England to learn to write German. [144]

If one considers the matter, better yet, even if one merely speaks about it, one must acknowledge it. [145]

One of the most fruitful means of discovery, rivaled not even by the questions *quid*, *quis, ubi*, is when upon hearing something one asks, *is this true*? and searches for reasons for one's answer. The dictum that one should never speak or write before thinking reveals the good will of its author but no genuine reflection; to express myself provincially but forcefully, the good man did not consider that you cannot obey this law without breaking it. Indeed, many would not be able to speak at all; thus I believe exactly the opposite. Many people have said something brilliant out of desperation, having to defend something without previous consideration, and to venture claims is to do philosophy. [. . .] [146]

Truth must overcome a thousand obstacles to safely reach the page and a thousand more to travel back from the page to the mind. Liars are its most feeble enemies. The enthusiastic writer who speaks of everything and views everything as other honest people do who have had one drink too many; the sophisticated, pretentious student of human nature, who sees and intends to see his whole life reflected in every human action like angels in a monad; the worthy, pious man who believes everything out of respect, examines nothing he learned before the age of fifteen, and builds the little that he has examined upon unexamined ground—these are the enemies of truth. [196]

A shot of reason. [202]

If mankind suddenly became virtuous, thousands would starve. [213]

A book is a mirror: if an ape looks into it, an apostle is unlikely to look out. We have no words for speaking about wisdom to idiots. Whoever understands the wise is wise already. [215]

There is no art in saying something briefly when, like Tacitus, one has something to say. When one has nothing to say, however, and yet writes a book and makes truth, with its *ex nihilo nihil fit*, into a liar—that I call an accomplishment.[28] [222]

As I take up my quill, I feel myself so full, so equal to my subject, and see my book so clearly before me *in nuce*, I would almost venture to express it with a single word. [224]

The man who believes a compendium is a book or to record facts is to write history. [232]

That it is true does not matter, as long as the people believe it—that is the devil. [248]

He cannot even distinguish between active and passive reading. [266]

Do not deride our metaphors; after the strong fabric of a language begins to fade, they are the only way to revive it and to lend the whole life and warmth. It is incredible how much our best words have lost: the word *reasonable* has almost entirely lost its impressiveness; we understand its meaning but no longer feel it because so many men have been called reasonable. *Unreasonable* is in its own way more impressive. A reasonable child is a dopey, pious, good for nothing tattler; an unreasonable child is much better. The sound of *Liberty*. [274]

A dangerous consequence of all too profuse reading is that it exhausts the meaning of words, and thoughts are only approximately expressed. The expression fits the thought only loosely. Is this true? [276]

Fools would be better than our finest philosophers because they still believe what they see and sense, while certain English philosophers, turning their backs on nature, believe what they do not sense or perceive. Yet I am far from ridiculing this; I believe denying one's senses is a daring flight of

reason, while speech, suicide, and insanity are merely the hops of a flea. This I call freedom; indeed, such enterprising souls need not return to the barracks of the earth in order to eat and drink; they have deserted the love of God entirely and live like the devil apart. [282]

There are people who believe everything done with a solemn face is reasonable. [286]

Not true—neither tomorrow nor in eternity. [290]

Is that a sin? As little as breaking a window or stealing apples. [297]

His writing astonishes even the minds of angels. [310]

A good expression is as valuable as a good idea because it is nearly impossible to express oneself well without casting a favorable light on what is expressed. [324]

Whether something like this actually occurs in nature, I have no idea, nor does it concern me; that it occurs in books and cannot be refuted or that it can be found in the respected journals is enough. [329]

I was acquainted with a few astronomers in England who altered their findings, and they were right in doing so. Should one not lend nature a hand sometimes? I do not see why not. If in wishing to connect two uncooperative propositions, I push one of them a little, what is wrong with this? People who reason this way have always the truth in view. Is a system of no importance then? The truth is not impoverished when I make of a 3 a 2, but my entire system may collapse. This is why I always enjoy it when I read from our best writers in physics the brave philosophical statement that the experiment they employed for proving some proposition was successful beyond expectation. There is something here that is more easily felt than expressed. I cannot comprehend how people could ridicule this. It brings tears of joy to my eyes. [331]

Once we thoroughly understand nature, even a child will see that an experiment is nothing more than a compliment we pay her. It is merely a ceremony. We know in advance what her answer will be. We ask nature for her consent as great rulers ask their provincial representatives. [332]

I am really not joking, my dear countrymen, when I confess Germans have no *esprit*, for the little bit of atheism found among us cannot be called *esprit*. A French atheist with *esprit* is expected to be converted only when he is severely ill and on his deathbed, while ours are usually converted every time there is a thunderstorm. Nor are the little songs of our youth evidence that our youth possess *esprit*.—True, *esprit* is nonsense, but not all nonsense is *esprit*. [342]

The obscure sense of his own perfectibility makes man think he is still far from his goal, even when he has attained it and reason is not luminous enough for him. What he finds easy, he thinks poorly of, and thus he strains from bad to good and from good to a kind of bad he considers better than good. Good taste is either what agrees with my own or what submits itself to the rule reason. From this we see how appropriate it is to employ reason in seeking the laws of taste. [359]

The egoists and the idealists might be ridiculed in my letters on contemporary literature: the common sense of one steward opposed to the philosophy of the other. [371]

When we see something, we endeavor with words to express without distortion the impression it has made upon us. It is incredible how clever humans are. [384]

"How's it going?" a blind man asked a crippled man. "As you see," replied the crippled man. [385]

Nonsense and confusion should beset whoever says such a thing! [388]

Pity and fear Aristotle considers the purpose of tragedy, not pity and horror. [399]

Φιλοσοφωτερον και σπουδαιωτερον ποιησις ίστοριας ἐστιν.[29] [405]

We should leave the metaphysical musing to those who can do no better. Without departing the parish of Beattie's philosophy, one can say and do much that is good and useful, much more than if one loses oneself in fine subtleties. His philosophy is for the people, the other for professors—the analysis of sensation.[30] [411]

Do not have overly artificial ideas about people, but judge them naturally and hold them neither for too good nor for too evil. [412]

Overly subtle men are rarely great men, and their investigations are often as useless as they are precise. They distance themselves further and further from practical life when they should come closer to it. Just as the dancing or fencing instructor does not begin with the anatomy of the legs and hands, so a sound and useful philosophy can begin much higher than with such subtle musings. The foot must be positioned in this way, or you will fall down; you must believe this, for it would be absurd not to—these are very good foundations. People who wish to go further may do so, but they must not think that they are thereby doing something great, for when they are successful they discover only what the reasonable man has long known. Someone who once again proves Euclid's twelfth axiom deserves at most to be called an ingenious man, but he will make no contribution to the expansion of the limits of science that he could not have made without this discovery. And the skeptic? You will never succeed in refuting the skeptic. For what possible argument could be given to convince someone who would believe absurdities? And indeed does everyone who wishes to be refuted really deserve to be? Even the greatest fighters do not fight everyone who challenges them. These are the reasons Beattie's philosophy deserves respect; it is not an entirely new philosophy, but it begins at a higher level. It is the philosophy not of the professor, but of man. [418]

Our philosophers listen too seldom to the voice of feeling; or rather, they rarely possess sufficient sensitivity, so that to every event in the world they respond by expressing more what they know than what they feel, which is useless. It brings us not one step nearer to true philosophy. Is what a man can know necessarily what he should know? [423]

The enthusiasts whom I have known all had the appalling fault that when the smallest spark fell upon them they burst into flames like long primed fireworks, always in the same pattern and with the same clamor; but in the reasonable man, feeling and sensation are always proportionate to the impression. The foolish man argues coldly from the first impression, while the sensible man occasionally turns around to hear what instinct has to say. [427]

Because we do not read each syllable but entire words, many books could be abridged. Vowels in many words are superfluous: everyone certainly reads prsn as person; evryn crtnly rds as prsn. [434]

Perhaps within our brains there are other instruments that might be called eyes, ears, and so forth. When moved, aether transmits its motion to the nerves of the retina, whereupon it is no longer aether that is moved but nerve fluid. The latter occurs in the world that I am, while the former occurs in a world that I am not. [452]

Dr. Priestley twice expresses himself forcefully regarding Hartley's *Observations on Man*: 1) The preface to the refutation of Reid, "For my own part I can almost say that I think myself more indebted to this one treatise than to all the books I ever read besides, the scriptures excepted." And in the same work, when he speaks of knowledge of oneself: "Something was done in this field of knowledge by Descartes, very much by Mr. Locke, but most of all by Dr. Hartely who has thrown more useful light upon the theory of the mind than Newton did upon the theory of the natural world."[31] [453]

We should follow our feelings and express in words the first impression a thing makes upon us. I say this not because I wish to save the truth in this manner but because it is the unadulterated voice of our experience, the result of our best observations, and because we too easily fall into compulsory chatter if we first reflect. In this respect, I advise one read Beattie's philosophy. [454]

The English are more attentive to sensation than others, which is why they are so inclined to posit novel senses: the sense of truth, of beauty, of morality. [. . .] [456]

A principal rule in philosophy is to create no *deus ex machina*, to assume no sense or instinct where one can still make do with association and mechanism. [460]

People who have read a great deal seldom make great discoveries. I do not say this to excuse laziness, for discovery requires extensive introspection and observation of things. One must see for oneself more than let oneself be told. Association. [467]

My observation that in the position of sand on a charged plate one may discern the forces that acted thereupon might be of use in the explanation of vibrations in Hartley's system of association. What is the form of the earth and its landscape if not a tablet from which one may read all forces that acted thereupon? Herr Lesage's theory that every point might be an

intermediary one is as equally universal in its explanation of movement in the physical world as Hartley's associationism is in its explanation of the actions and emotions of man.[32] [469]

We use the word *soul* as the algebraists might use *x*, *y*, *z* or one might use the word *attraction*; it is perhaps merely a word like *opinion*, *condition*. Newton might have used *x* or * instead of *attraction*. [472]

Just as we express heat, cold, and force with lines, we might also call acts brilliant or dark. It would be absurd to say a grey or sky-blue act. Much might be expressed with visible ideas. [473]

To investigate how, according to Hartley's theory, my strange notion of metempsychosis could originate. [474]

A person's actions and the appearance of his household are commonly an extension of the inner constitution of his brain, just as a magnet imparts form and order to iron fillings. [476]

In Germany sewing needles hear, and in England they see. [477]

I do not use the word *devil*, which occurs frequently in my work, in the sense in which ordinary people would but like recent philosophers, in order to keep peace among all sects. It is comparable to the *x*, *y*, *z* of the algebraists or to an unknown quantity. [485]

In his essay on moral feeling in the *Deutsche Museum*, Herr Feder writes that aside from authority, or the consequences of an action, we have no basis for deciding whether an act is good or not. Approval or disapproval that does not arise from such reasons rests on the association of ideas, *habit*, mere physical inclination or disinclination of temperament, or something else that alone is inadequate to characterize moral good and evil.[33] [487]

If people recounted their dreams honestly, their character might be read more easily from these than from the face. [494]

I have often noticed when people learn to understand a mathematical proposition from a perspective different from that of the usual demonstration,

they often say, "Oh, I see, it has to be that way." This is an indication they have understood it in their own system of thought. [496]

The utility of systems consists not only in allowing us to think about matters in an ordered way in accordance with a particular scheme but also in allowing us to think about the matter at all; the latter utility is incontestably greater than the former. [497]

What I do not like about our definitions of genius is that there is in them nothing of the judgment day, nothing of resounding through eternity, and nothing of the footsteps of the almighty. [505]

It is an admirable observation by Herr Hartley that false judgments are corrected through differences between languages. For we think in words. It deserves to be considered to what extent the acquisition of foreign languages clarifies the concepts in our own language—*an excellent question*.[34] [507]

"The proper method of philosophizing seems to be, to discover and establish the general laws of action affecting the subject under consideration from certain select, well defined and well attested phaenomena and then to explain and predict the other phaenomena by these laws. This is the method of analysis and synthesis recommended by Sir Isaac Newton."—Hartley [508]

What effect must it have upon a people if it learns no foreign languages? Presumably an effect similar to what a complete withdrawal from all society has on an individual. [510]

A on his lips and *not-A* in his heart. [514]

In metaphysical demonstrations of the existence of God, it would perhaps be best to avoid the word *infinite* entirely, or at least not to use it until we are clear about the matter. [518]

Notebook F

1776–1779

In a review, published in the *Göttinger gelehrte Zeitung* (1776), of the recent Priestley edition of Hartley's theory, he is rebuked for having failed in his third essay to distinguish general and abstract ideas from ideas of reflection. Locke claims along with many ancients that not all concepts may be explained on the basis of effects of external objects upon outer sense; that certain representations arise from the soul turning upon itself (reflection) or, as one might now say, from the agitation, not occasioned by an external object, of the innermost organs of our brain; thus for these ideas of reflection, a second source must be posited, namely, *inner sense* or feeling. Among these representations, which may be attributed neither to external objects nor to their impressions upon our outer senses, he rightly counts all of man's concepts of the *soul*, its powers and effects, will, freedom, inclination and disinclination, and so forth. These concepts arising from inner sense are not, however, in Locke identical with universal or general concepts, nor does he claim that all abstract concepts arise only from inner sense.—Finally it concludes: Hartley is always a man deserving of study because in all of his clamoring he has made many new and excellent discoveries that are easily separated from the hypotheses by which he endeavors to support them.[35] [11]

The expression "I will not forget this for all eternity" is false. [15]

When one begins to see all in all, one usually expresses oneself obscurely. One begins to speak with the tongue of angels. [. . .] [48]

In most cases, it is more difficult to make clever people believe you are what you are not than really to become what you wish to appear to be. [51]

The welfare of many nations is decided according to the majority of votes, though everyone admits there are more evil men than good. [52]

We, the tail of the world, have no idea what the head is planning. [54]

Bon sens. *Menschen-Verstand*, common sense is too often regarded as a perfect sense when in fact it is nothing more than an ever vigilant and intuitive knowledge of the truth of useful general propositions. [56]

In the whole of philosophy, there is perhaps nothing more demanding of discernment than to see clearly all difficulties involved with parallels. [68]

[. . .] What does firmness of flesh have to do with firmness of character? [75]

To coordinate again the distinct concepts with clear ones. [77]

They sneezed, hissed, coughed, and made two other kinds of sound for which we have no words in German. [87]

On the use of metaphors: when we employ an old word, it often follows the channel dug in our understanding by the alphabet book; metaphors dig a new one and often break through entirely. [116]

I have remarked already elsewhere that everything in the world loses itself in everything else and everything can be found in everything. I mean, everything we designate with a word existed already before it reached that degree at which we notice it. An example of this is a storm in which all clouds are one and can be differentiated only by degree. [. . .] [147]

A single soul was not enough for his body; he could have given two enough to do. [189]

In those days, they say, even some angels might have become Wolffians. [252]

Perhaps a dog, just before it falls asleep, or a drunken elephant has ideas not unworthy of a master of philosophy. But such ideas are of no use to them and are soon extinguished by their all too sensitive sensual apparatus. [265]

Experience, not reading or hearing, is important. It is not all the same whether an idea enters the soul through the eye or through the ear. [288]

The *principium indiscernibilium* may be expanded: nothing remains the same even for two seconds; everything changes at every moment.[36] [307]

Long before we were able to explain ordinary phenomena in the physical world, we explained them by means of spirits. Now that we better understand their relationship, we explain one phenomenon in terms of another; but two sprits we retain, a God and a soul. The soul is now, as it were, a ghost that haunts the fragile shell of our body. But does this accord even with our limited reason? Must that which in our opinion cannot be caused by things we know be caused by things other than those we know? This is not only a false but a coarse line of reasoning. I am quite convinced we know precisely nothing of that which we comprehend conceptually; and how much more may there not remain that the fibers of our brain cannot represent? It most becomes us to observe modesty and caution in philosophy and especially psychology. What is matter according to the psychologist? Perhaps there is nothing of the sort in nature; he kills matter and afterwards says it is dead. [324]

Leibniz defended the Christian religion, but to conclude straightaway from this that he was a good Christian, as the theologians do, shows very little knowledge of the world. Vanity and the desire to say things better than the professionals are, in the case of such a man as Leibniz, who held firmly to few principles, much more likely motivations for doing such a thing than religion would be. If we search more deeply into our own heart, we will discover how little we can assert of others. I would even dare say that I could demonstrate that often we believe we believe something and yet we do not believe it. Nothing is more unfathomable than the system of motivations behind our actions.[37] [348]

If the soul is simple, why is the constitution of the brain so complex? The body is a machine and thus must be composed of mechanical parts. That the mechanical in us extends quite far is proven by the fact that even the internal parts of the brain are formed with a design about which we probably do not understand even a hundredth part. [349]

The metaphor is far more clever than its author, as are many things. Everything has its depths. Whoever has eyes sees all in everything. [369]

Just as a deaf-mute can learn languages and how to read, so too can we do things whose effects we cannot know and fulfill intentions of which we are ignorant. He is a testament to a sense that he himself does not possess. [373]

The author gives the metaphor its body, but the reader gives it its soul. [. . .] [375]

Nature and lifestyle are more than twofold. [391]

Every moment we do things of which we are unaware, and this ability continues to grow; in the end, man will do everything without knowing it and will literally become a rational *animal*. Reason approaches animality. [424]

Our psychology will eventually settle on a subtle materialism as we learn ever more about one side (matter) and on the other side have reached beyond everything. [425]

Thinking for oneself is often recommended while studying only for the purpose of distinguishing between truth and the errors of others. It is useful, but is that all? Is reading then studying? We could spare ourselves much unnecessary reading. It has been said with great truth that while printing certainly propagated learning, it also reduced its content. Much reading is harmful to thinking. Among all the scholars I have known, the greatest thinkers I have known are those who had read the least. Is enjoyment of the senses nothing at all then? [439]

When we teach men *how* they should think and not always *what* they should think, we avoid much misunderstanding. It is a kind of initiation into the mysteries of mankind. Whoever stumbles upon a peculiar proposition in his own thinking will readily depart with it if it is false. A peculiar proposition taught by a respected man, however, may mislead thousands who do not examine it. One cannot be cautious enough in disclosing one's own opinions in matters of life and felicity and not diligent enough in inculcating understanding and doubt. To this belongs Bolingbroke's statement, "Every man's reason is every man's oracle."[38] [441]

Doubt must be no more than vigilance; otherwise it can become dangerous. [447]

One finds in language traces of all sciences, just as one finds in language much that may be of use to the sciences. [474]

Everything is equal to itself; a part represents the whole. I have at times seen my entire life in an hour. [478]

That what you are searching for is usually in the last pocket you search is a putative empirical proposition, which I believe is assumed true in every land and every family; and yet nobody seriously believes it. [480]

With the simple proverbs of our ancestors, what use to me are the nests of departed truths? [487]

Man becomes sophistical and overly subtle where grounded knowledge is no longer possible; consequently, everyone must become so when it concerns the immortality of the soul and life after death. Here we are all *without* ground. Materialism is the asymptote of psychology. [489]

With our fashionable poets, one readily sees how the word produced the thought; with Milton and Shakespeare, the thought always begets the word. [496]

It is as if our languages have become confused: when we want an idea, they bring us a word; when we call for a word, they give us a dash; and when we expect a dash, there stands an obscenity. [503]

Man has an irresistible instinct to believe he is not seen when he himself sees nothing, like children who shut their eyes in order not to be seen. [512]

If physiognomy becomes what Lavater expects it to become, children will be hanged before they have committed the deeds deserving of the gallows; a new kind of confirmation will thus be performed each year, a physiognomical *auto de fe*. [521]

A clever child raised with a foolish one can itself become foolish. Man is so perfectible and corruptible that he can become a fool through reason. [536]

Representations too are a life and a world. [542]

It is a question whether a man might be raised in such a way that without actually loosing his mind he would combine his concepts so idiosyncratically that he would be of no use in society—an artificial fool. [549]

Not the lies, but the very subtle *false* observations obstruct the illumination of truth. [552]

I have observed quite clearly that I am often of one opinion while lying down and of another while standing, especially when I have eaten little and am weary. [557]

We continue to speak of the soul, just as we continue to say taler long after the minting of talers has ceased. [575]

In past times, when the soul was still immortal. [576]

All impartiality is artificial. Man is always partial and is quite right to be. Even impartiality is partial. He belonged to the party of the impartial. [578]

That will outlive even the German language. [579]

Where the eye sees unclearly [. . .], it is already a kind of death; where there is no clear image, there is no representation or idea. [582]

What we are able to judge with feeling is very little and very simple; all else is prejudice and complaisance. [584]

The opinion of peoples who believed the world to be round, but also believed we move on its concave side like oxen in a furrow, deserves to be noted. [596]

There are enthusiasts and fanatics without ability, and they are really dangerous people. [598]

God must punish, according to Christ's parable, not because of his justness, but because our nature demands it. Enthusiasm is merely a power. [599]

That some, at least me, often dream they are speaking of the dead with the dead one of whom they are speaking might be the result of the similarity

of the hemispheres of our brain, just as we see double when we press on one eye. In dreams we are fools; the scepter is missing. I have often even dreamed of eating cooked human flesh. To understand the nature of the soul from dreams is a matter worthy of the greatest psychologist. [607]

We are all leaves on a tree, and none is similar to another; one is symmetrical, while the other is not, and yet all are equally important to the whole. This allegory might be elaborated. [630]

A defense and forceful discussion of the advantages conferred by our ignorance: I believe a perfect physiognomy will eventually lead where demonstrations by analogy already lead: *all is good*. But human physiognomy will hardly get us there as quickly. To explain the origin of evil in the world, it is useless to gather examples of retribution from here and there; such things cannot be understood from within our horizon—even if we were attentive and more perspicuous, we would still find just as much evidence to the contrary. For the common man who cannot think, it is useful for representing deeper *raisonnement*. I believe, however, that if we had the whole before us, like a pocket watch, such insight would lead us there. *Imperfect* is a word like *sex* or *genus*. Imperfection, like color, is not in the object but in us. I believe where we glimpse perfection in the work of the creator, we are still very far behind. The veil that covers the soul of our neighbors, just as the veil that covers our fate, we must not endeavor to lift—all efforts will be in vain. [637]

We must not believe if we make a few discoveries here and there that things will go on like this forever. An acrobat may leap higher than a plowboy, and one acrobat may leap higher than another, yet the height over which no human can leap is still very low. Just as we find water when we dig in the earth, sooner or later we discover the incomprehensible everywhere. Man may grasp a root fiber of the whole of science, yet he does not know if the root belongs to a moss or a cedar. The astronomer Kindermann believed he had discovered a telescope with which to see around the earth and even had it engraved in copper.[39] [645]

We cannot judge a face in an instant; something must be implied by it. [651]

There is a kind of transcendental ventriloquism by which people can be made to believe that something said on earth comes from heaven. [665]

Even superstition may be of use. We do not readily point an unloaded pistol at another man and pull the trigger, because we believe that even with an unloaded pistol the devil may still play his games. [681]

Just as assimilation evokes syllables and words, the syllables in proper names may add color to the images and traits to the characters in our imagination. It is worth investigating whence the images arise that we form of people whom we have never seen before. The double *e* in the name General Lee contributes more to the image I have of his face than the stories I have heard of his bad deeds.[40] [683]

A philosophical dream book could be written. People have, as usual, made the interpretations of dreams suffer their precocious zeal, which actually should have been turned only against dream books. I know from undeniable experience that dreams lead to self-knowledge. Sensation not interpreted by reason is much stronger. This is demonstrated by the fact that a roaring noise in our ears during sleep is found to be quite faint upon awaking. The power of this separation of faculties in our brains is indicated by the fact that as soon as reason lays down its scepter I recurrently dream of my mother and see her in everything. It is strange also that we sometimes dream of the streets of our home town and see particular houses that strike us, but we quickly come to our senses and discover—whether true or not—that things were only this way in the past. [684]

Our thoughts would follow an entirely different course if things other than reflection were not at work within us. Every man would have a different morality and a different face. Perhaps something may be admitted here of the influence a single word of mine might have on everything that will ever be spoken. [727]

I once again commend dreams. In dreams we live and perceive no less than while awake, and one is just as important as the other. It is among the virtues of man that he dreams *and knows it.* But we have yet scarcely made best use of this. The dream is a life which, combined with our remaining life, constitutes what we call human life. Our dreaming merges gradually into our waking life so that we cannot tell where waking life begins. [743]

It is as easy to dream without sleeping as to sleep without dreaming. [749]

In the matter of seeing without light, it is remarkable that what we see when we close our eyes in the dark may become the beginnings of dreams, but the consequences are much different depending on whether we remain in possession of our waking reason or we sleep. I would like to know if animals are stupider when they dream than when they are awake; if so, animals possess a degree of reason. [752]

We each see not only a different rainbow but also a different object and a different proposition than others do. [760]

I believe it is far better to draw from oneself than from Plato. We can misunderstand Plato, but we are always *near enough* to ourselves to lighten all that is difficult and illuminate all that is obscure. [761]

One can imagine cities one has never seen. [763]

If reason, the daughter of heaven, were allowed to be the judge of beauty, only illness would be ugly. [765]

It is not surprising when one sees that the people who judge the contents of the soul from the face commonly judge the thought from the sound of the prose in which it is shrouded. [773]

There are people who cannot endure the sight of blood, and some who cannot endure the sight of daggers, and others itch when someone mentions lice. [779]

That the earth revolves around the sun and that when I sharpen a quill the point of it flies off into my eye is all one law. [787]

As long as someone looks into eternity and reads from the stars things I do not see, I remain silent; because he would have to believe me if I were to read off my prophecies. It is only when we look into such a world that in a difference of opinion only one can be right or both wrong. We have all taken an oath to the four syllogisms and sworn to the supremacy of logic. [790]

Not only can we make things transcend the material world, but also we can make things in the spiritual world retro-transcend back to the material world. [791]

You cannot even infer from the constitution of one part of the body the constitution of another part, and yet you wish to infer from the body something of the soul. [806]

This incomprehensible being that we are, and that would appear yet more incomprehensible to us if we were to come even nearer to it, we must not expect to find inscribed on the face. [816]

People do not like to take ticket no. 1 in a lottery. "Take it," reason cries loudly. "It can win the twelve thousand talers just as well as any other." "Don't take it for the world," some *je ne sais quoi* whispers. "Such a small number has never been associated with such great winnings"—and no one takes it. [829]

In a machine as complex as this world, it seems to me that in spite of the small contributions we make, we are, as far as the essentials are concerned, always gamblers in a lottery. [846]

Why is there not a single creature that thinks and is as independent from eating and drinking as a stone? Ghosts would be veritable islands. [851]

To think this causes such confusion in my head, almost as though I tried to think that Poland lies to the west of us. [856]

If the notion that the soul creates the body were as true as the popular expression that each of us determines his own fortune, then the former would amount to nothing more in physiognomy than the latter does in soothsaying. Without revelation, we will never know the little God who created this little world. [862]

That men so often make false judgments is certainly not due solely to a lack of insight and ideas but primarily to the fact that they do not put every element of the proposition under the microscope and examine it. [864]

Thousands can see that a proposition is nonsense without possessing the capacity to refute it formally. [868]

Sometimes we make in the morning a statement that remains with us the rest of the day. On February 28, 1778, I said nearly once every quarter of an hour: *Law is a bottomless pit*. [877]

New glimpses through old holes. [879]

The analogy with dice might be of great use: I can predict the roll of a die given the height from which it falls, but I cannot do the opposite. It is a hypothesis. (Explained by other hypotheses.) [888]

Someone who interprets all vague mockeries as references to himself and believes people had him secretly in mind. [913]

We can say a name for the understanding and then merely for the ear: Haller, for example, once as a two-syllable word and then as the name of an important scholar.[41] [915]

What is the good of drawing conclusions from experience? I do not deny they are sometimes correct, but are they not just as often incorrect? Is that not what I intended to say? A game of chance. [947]

Certainly we would and must admit that the ideal of strength and virtue is the highest beauty. Yet it may be in conflict with the satisfaction of sensual desires, which also plays a part. We love ourselves in others, and where we recognize virtue in a face, it pleases us. Is this, however, beauty? People often call what pleases them beautiful, but what pleases them is relative. [948]

The beauty of outer forms in general, says Mendelssohn in his *Main Principles of the Fine Arts*, is only a small part of the purposes of nature, and at times nature must neglect it for more important purposes.[42] [960]

Our sensibility and feeling are certainly not the measure of the beauty of the unfathomable designs of nature. [961]

An ass was obliged to carry an image of Isis, and when the people kneeled to worship the image, he thought they were honoring him. [967]

Not at all is from a human point of view always only *very little*. *Not at all* belongs only to the angels, and *very little* belongs to man. [983]

When we were still a half-year younger, everything was completely different. [997]

The author of the essays, whose name has been omitted by mankind. [1007]

The flash of conviction lit up everywhere. [1008]

The devil could play his game, and the people might believe it if they repeat it often enough. [1012]

Certain audacious people have claimed that just as there are no mice where there is no cat, so no one is possessed where there are no exorcists. [1030]

How perfectible man is and how necessary education can be seen from the fact that he now appropriates in sixty years a culture that the whole race has taken five thousand years to create. A youth of eighteen can contain within himself the wisdom of whole ages. If I learn the proposition, *the force that attracts in polished amber is the same as that which thunders in the clouds*, I have learned something quite quickly, the discovery of which cost mankind several thousand years. [1039]

First there is a time when we believe everything without reasons; then for a short time we believe with discrimination; then we believe nothing at all; and then we believe everything again and indeed give reasons for believing everything. [. . .] [1042]

Once we know that someone is blind, we believe we can recognize this from behind. [1043]

We cannot prove the planets are inhabited by rational creatures, yet I nevertheless believe it. Thus anyone can believe the soul dies with the body, even though he cannot strictly prove it. [1045]

You have discovered these traits together ten times, but have you also counted the cases in which you have not found them together? [1062]

An amusing thought: a scholar weeping because he cannot understand his own writings. [. . .] [1065]

When something bites us in the dark, we can usually locate the spot with the point of a needle. What an exact plan the soul must have of its body. [1084]

I have long known, dear sir, that here and everywhere observations must be our primary concern and that a profound theory always allows enough room for two heads of equal size to distance themselves nearly to the point of being pro and contra. Only I assumed we are consistent, and what you have taken to be mere theory was a probable explanation of my numerous errors. [1088]

We can count seconds and at the same time quite comfortably think of something else. And if we know how to think of the days of the week in images, we can calculate dates a rather long time in advance while we are counting; we can, in a word, count two things at once. [1097]

There are few people who are not obliged to believe many things that upon closer examination they would not understand. They do this simply on the authority of others, or they think they lack the additional knowledge necessary to abolish all doubt. In this regard, it is possible for a proposition, whose truth has not yet been verified, to be universally believed. [1127]

An excellent analogy made by Priestley in *On Matter and Spirit*: "There is no more reason in nature why perception may not belong to a *system of matter*, as such, and not to the *component parts* of it, than that *life* should be the property of an entire animal system and not of the separate parts of it."[43] [1130]

If we followed our imagination without reason in our judgments, then in subtracting one hundred from one thousand there would scarcely be one hundred left over. [1160]

That people who read so astonishingly much are often such bad thinkers may also have its origin in the constitution of our brain. It is certainly not all the same whether I learn a proposition without effort or if I finally arrive at it myself through my own system of thought. In the latter everything has its roots; in the former it is merely superficial. [1171]

That we see ourselves in dreams can be attributed to our having seen ourselves in the mirror without thinking that it is a mirror. Imagination is more active in dreams, and consciousness and thought less so. [1180]

When someone finally sorts out what the condition of our brain is while we are representing or thinking it would be worthwhile to account for the influence languages have upon it. It is undeniable that it cannot be a matter of indifference for a *finite* system of fibers whether a concept, for which there are two signs, occupies two positions or folds in the mind or *one*. Physiognomical dithyrambs. [1183]

Let us take Sir Isaac Newton. All discoveries belong to chance, whether they come at the end or the beginning of the process, for otherwise reasonable people could sit down and make discoveries like they write letters. Wit spots a similarity, and reason tests it and finds it to be true: *that is discovery*. [. . .] [1195]

In philosophy this is often the case: if it is not true of all things, then it is true of none, insofar as something is true only by being the plus or minus of something else. [1201]

You believe I chase after the singular because I do not know the beautiful; no, it is because you do not know the beautiful that I seek the singular. [1211]

One rule in reading is to condense the intention and main thoughts of the author into a few words and in this way to make them one's own. Whoever reads in this way is occupied and gains something. When one reads without comparison with one's own inventory of knowledge or without synthesizing it with one's own system of thought, the mind gains nothing and loses much. [1222]

Regarding dreams, it is strange that one about being instructed is and can be nothing more than the recollection or combination of concepts lying in our head, and yet another person is created in the dream. [1229]

Notebook G

1779–1783

The intellect, not just feeling, seems to be the bond that actually connects us to the world and its purposes. The intellect *first* must apprehend something, and then its conclusions, brought to clarity, may finally be joined with other feelings through association. Drawing conclusions about perfection from beauty is no better than drawing conclusions about the terrified feelings of a dying man from his bodily convulsions and facial contortions. [. . .] [1]

It is almost impossible to carry the torch of truth through a crowd without singeing someone's beard. [13]

What people call a subtle knowledge of human nature is for the most part nothing other than one's own weaknesses reflected back from others. [17]

Whoever knows himself properly can very soon know all other men. It is all reflection. [18]

I said to myself: *I cannot possibly believe that*, and while saying it, I noticed I had already believed it a second time. [21]

Men who know well how to observe themselves, and thus secretly know a great deal, often are pleased to discover a weakness in themselves, where such a discovery would normally disappoint. For many, the professor is much more esteemed than the man. [22]

It is certainly quite true that *most* people who are not capable of love are also worth little in friendship. Still, one often sees the opposite. [23]

It is a fault common to all people of little talent and more erudition than understanding that they discover artificial rather than natural explanations. [24]

The entire skeleton of our manner of thinking and our beliefs is formed from our heroes, and in instances where we have the least experience and deliberation, we simply follow a pattern, which in the end affects our judgments if not also the consequences of our experience. [25]

It has always been true that most men live more according to fashion than reason. [29]

There is a *coup d'oeil* for everything in the world, that is to say, every rational person who hears or sees anything instinctively forms a judgment about it. From the title of a book and how thick it is, for instance, a man infers the worth of its contents. Of course, I am not suggesting that such things influence his actual judgment, but only that with the first glance at anything, he forms a judgment about it, proportionate to the sparse information given, often without explicitly being aware of doing so. And often a subsequent experience overturns the judgment. These are all seeds of science from which Lambert could have cultivated something; yet also here, not every seed produces a tree or a vegetable. But such hints should never be neglected; they are the results of a number of acquired impressions assembled in the most comprehensible manner. [39]

Möser's "the flour is important, not the mill" is excellent; the fruits of philosophy, not the philosophy itself. When we ask what time it is, we do not wish to know about the construction of a pocket watch. The knowledge of means has today become a laudable science; yet nobody uses it for their happiness or that of others. Knowledge of means, without actual application of this knowledge, without indeed the ability or desire to apply it, is what is now commonly called *erudition*.[44] [40]

Since this life is no more than a vanishing point, I cannot understand why the state of eternal glory does not begin immediately. [42]

There is in my opinion a great difference between *teaching reasoning* and *being rational*. There may be people who possess anything but common sense and yet who speculate admirably upon the rules it must observe, just

as a physiologist can have knowledge of the constitution of the body and yet be quite unhealthy. The greatest analysts of the human mind have not always possessed practical reason. I am speaking here not of morals but of logic. [43]

Men have more difficulty believing in miracles than in the tradition of miracles, and some Turks, Jews, and others who would now give their life for their tradition would, at the moment the miracle occurred, have remained sober minded. For at the moment a miracle occurs, it has no importance other than that conferred by its own worth. To give something a physical explanation is not yet impiety, as little as seeing it as a scam is blasphemy. To actually deny a fact is in itself innocent; it becomes dangerous in this world only when it contradicts others who defend its incontestability. Some things, which in themselves are quite insignificant, become significant when esteemed people believe them without really knowing why. Miracles must be seen from a distance to be believed, just as one must see a cloud from a distance if one is to believe it to be a solid body. [45]

I myself believe in the doctrine of Helvétius: "What we will we can do, but we do not will everything that we unemotionally wish we could do." The kind of will Helvétius means here is irresistible passion, which almost never lacks the requisite ability.[45] [53]

What can be the reason for man's terrible aversion to showing himself as he is, whether in his bedroom or in his most private thoughts? In the material world, everything is both what it can be and at the same time very forthright. According to our concepts, things are all that they can possibly be with respect to one another, but man is not. He appears rather *to be that* which he should not be. The art of concealing ourselves, or our aversion to letting ourselves be seen naked, intellectually or morally, is carried astonishingly far. [56]

The heroes of the ancient poets are quite different from those in, for example, Milton. They are brave, clever, and wise but are rarely, according to our morals, amiable or merciful. Milton took his from the Bible. Does our Christian morality perhaps have its origin in a certain weakness, in a Jewish cowardice, while the other is founded on strength? Universal tolerance is perhaps only an agreeable dream and something that will never be attainted. [59]

We often know someone better than we can say, or at least than we do say. Words, intensity of spirit, mood, ease, wit, interest—they all conceal and lead to deception. [61]

I know that look of affected attention; it is the lowest point of distraction. [63]

To make man as religion would have him resembles the undertaking of the Stoics; it is only another degree of the impossible. [65]

Whoever expends just a little effort will soon notice that there is a certain knowledge of human nature, a philosophy or theory of life that without further investigation serves many as a guide to both action and speech. There are even celebrated people who have little more to show. In medium-sized towns, for instance, the professor is invariably considered a pedant; indeed, even university education is associated with rigidity. The nobleman is another familiar character, yet the majority of noblemen are nothing like this. The weak-minded are generally very much at home in this philosophy. Words must occasionally be investigated, for the world can move on while words remain behind. Thus always *things not words*! For even the words *infinite*, *eternal,* and *always* have lost their meaning. [68]

One should not believe that reason could become so morbid that people would compliment one another when entering a funeral coach. [70]

He was astonished that cats have two holes cut in their fur at precisely the spot where their eyes are. [71]

There are many who can believe anything they wish; what fortunate creatures they are! [79]

There are quite a few people who read simply to prevent themselves from thinking. [82]

To err is also *human* insofar as animals rarely or never err, or at least only the cleverest among them do. [85]

Of all things I have written about physiognomy, I wish only that two observations be left to posterity. They are simple thoughts, and no one will

begrudge me them. The first is that I recognized the similarity between physiognomy and prophecy, and the second is that I was convinced that physiognomy would suffocate in its own fat. [95]

Through our excessive reading we learn not only to take things for true that are not, but our proofs also acquire a form that is often demanded not so much by the nature of the case as by our unnoticed adherence to fashion. Using familiar examples, we demonstrate things that we could as convincingly support with examples from our own experience; and we even cite as support sentences that prove nothing and propositions that are mere tautologies. It is quite difficult to regard something in a new way and not mediated by fashion or determined by our accepted paradigm. When we should offer reasons and arguments, we instead offer our reputation; where we should teach, we instead threaten; and where humans would have been sufficient, we enlist gods for support. [110]

Is it not peculiar that a literal translation is almost always a terrible one? And yet anything can be translated well. One sees here what it really means to understand fully a language; it means to understand fully the people who speak it. [135]

The book that most deserves to be banned would be a catalogue of banned books. [150]

Regarding a person who thinks only of the present, we might say *he has not discovered the immortality of the soul.* [153]

The man was working on a system of natural history in which he ordered animals according to the form of their excrement. For this he created three classes: cylindrical, spherical, and cake-like. [161]

Both honest men and rogues simply confuse *mine* and *yours*. The honest man regards the former as though it were the latter, and the rogue does just the opposite. [162]

Many people claim philosophical objectivity about certain things because they understand nothing of them. [165]

Undoubtedly, the strangest thing about this thought is that if he had it a half minute later, he would have had it after his death. [186]

A great way of attaining common sense is to strive constantly for clear concepts—not merely by relying on the definitions of others, but as far as possible by personal inquiry. We should repeatedly scrutinize things with the intention of discovering something others have not yet observed. For every word, we should at least once give ourselves an explanation and never use any word we do not understand. [206]

It is not easy to think too much, but it is easy to read too much. The more things I think about, the more I endeavor to associate them with my experiences and my own system of thought, the stronger I become. With reading it is the contrary; I extend myself without increasing my strength. When I notice in my thinking gaps I cannot fill or difficulties I cannot overcome, I must consult a book and read. Either this is how one becomes useful, or there is no way. [208]

To shake your head while saying *yes* and nod it while saying *no* is difficult, but it acquires a meaning of its own when you can do it. [217]

Most people shut their eyes while they are being shaved. It would be a blessing if we could shut our ears and other senses like we shut our eyes. [221]

That it is so easy to shut our eyes and so difficult to shut our ears, except by covering them with our hands, shows undeniably that heaven was more concerned with the maintenance of our sensible apparatus than with the pleasure of our soul. Our ears are our most alert sentinels in sleep. What a blessing it would be if we could close and open our ears as easily as our eyes! [226]

Whoever does not yet know his science to such a degree that he feels every offense against it like a grammatical error in his mother tongue still has much to learn. [230]

The human tendency to regard little things as significant has produced much that is great. [234]

Notebook H

1784–1788

The noble simplicity in the works of nature has its origin only too often in the noble shortsightedness of the one who observes it. [5]

There is a great difference between believing something and not being able to believe the contrary. I can often believe things without being able to prove them, just as I disbelieve others without being able to disprove them. The position I take is determined not strictly by logic but by the preponderance of evidence. [12]

I suspect it must be the immutability of the laws of nature that creates the majority of deists, especially among men of thought and intellect. The more familiar we become with these laws, the more probable it is that in this world things have never occurred otherwise than they now occur, nor are miracles any more likely now than they ever were. That individuals and even whole generations are deceived, that thousands of interests influence our beliefs, that indeed it might even be a pleasure to believe something we have never investigated—this is no miracle at all; we see it every day. But that the sun should be eclipsed during a full moon or water changed into wine is incomprehensible. [14]

Anyone who reflects on the history of philosophy and natural science will find that the greatest discoveries were made by people who regarded as merely probable what others advanced as certain. They might be described as adherents of the New Academy—a school that maintained a balance between the rigorous certainty of the Stoics and the uncertainty and indifference of the Skeptics. Such a philosophy is all the more to be recommended in that

we accumulate our ideas and opinions at a time when our understanding is at its weakest. This point deserves to be considered with regard to religion. [15]

As nations improve, so do their gods. But since the latter cannot immediately be divested of all the human attributes coarser times have attributed to them, the rational world still regards some of these notions as incomprehensible or interprets them figuratively. [18]

We might simply ask those who dispute Kant's conception of space and time what exactly they mean by true knowledge of objects and whether such knowledge is even possible. All that I perceive is indeed due only to me, and every effect of a thing external to me is indeed the truth; what more as humans do we expect? It is a radical error on the part of those who dispute the Kantian conception that they believe it would be idealism or even a deception perpetrated by the creator of nature if Kant were correct. Since all things in nature stand in relations to one another, what could be more real or true than these relations? When I say that all bodies occupy space, I am saying something quite real because I am speaking about the relation of these bodies to me. But to claim that bodies occupy a space in an objective sense is as nonsensical as attributing a color or even a language to these things.—Even if none of this is illuminating, it at least shows that the endeavors to refute Herr Kant are entirely in vain. [19]

In all sciences, it can be advantageous to posit cases that as far as we know do not occur in nature, just as mathematicians posit alternative laws of gravity. It is always heuristic and may sometimes provoke insights. [20]

If only I could dishabituate myself from everything, so I could see anew, hear anew, and feel anew. *Habit* corrupts our philosophy. [21]

We can do good in as many ways as we can sin, in thought, word, and deed. [22]

The most dangerous untruths are truths slightly distorted. [24]

We must believe that everything has a cause, just as the spider spins its web to catch flies. It does this before it knows flies exist. [25]

There are truths that go about so garishly attired that we should take them for lies, but they are pure truths nonetheless. [27]

An imaginary incapacity can with timid people long play the role of a real one, in works of the mind as much as the body. [33]

Premeditated virtue is not worth much; feeling or habit is the thing. [35]

Every man has his personal superstition that sometimes in jest and sometimes in earnest guides him. I am in a ridiculous way often its plaything, or it mine. Positive religions are a subtle use of this human disposition. All men experience something of this when they do not think clearly. And it is certainly impossible that a deist as perfect as one depicted in our compendia has ever existed. [42]

If only children could be educated so that all things unclear were entirely incomprehensible to them. [50]

It is very good to read once again the books others have read already a hundred times, for though the object remains the same, the subject is different. [54]

Shortsighted and *farsighted* are used incorrectly as metaphors of mental capacity. Here shortsighted means blind; but it is clear that shortsighted people also see things others do not. [59]

Just as there are polysyllabic words that say very little, so too there are monosyllabic words of infinite meaning. [64]

It is a great trick of rhetoric merely to persuade people when one could have convinced them; they often think themselves convinced when merely persuaded. [65]

With prophecies, the interpreter is often a more important man than the prophet. [89]

A great advantage of writing is also that it allows the thoughts and opinions of *one* man to reach posterity undistorted. Tradition acquires something from

every mouth through which it passes and can eventually present a matter in such a way that it becomes unrecognizable. It is always a translation. [130]

Nothing is more agreeable to me than instances where my sympathy or antipathy precedes reason to discover how these are related, in other words, to become aware of what I am in this world and why I am this way.—Our entire philosophy, I believe, consists in becoming distinctly aware of what we already are mechanically. It is strange heaven has granted us so much latitude. Perhaps we fail so often in jest so that it does not occur to us in our free will to fail in earnest. [140]

The mind of man is no less provided for than is the body of an animal; what in the latter is called appetite and instinct is in the former called common sense. Both can suffocate; the only difference being that for an animal the cause must be external, but for man it can also be internal. An animal is for itself always a *subject*, while man is for himself also an *object*. [142]

If the world should endure for an incalculable number of years, the universal religion would be a refined Spinozism. Reason left to itself leads to nothing else, and it is impossible that it should lead to anything else. [143]

Undoubtedly a certain truth, and thus presumably a certain utility, underlies religious hatred. I sincerely wish it could be discovered. Our philosophers talk of religious hatred as something that could be reasoned away, but surely it cannot be. [144]

It is unquestionably one of the most clever achievements of the human mind to have focused the hopes of man upon a point of time about which nothing decisive *for* or *against* can ever be established, at least not with geometrical certainty; this happens despite a *vague* feeling, difficult to analyze, that all too clearly reminds us that all of this is nothing. [145]

I and *myself*. *I* feel *myself*—these are two things. Our false philosophy is embodied in our entire language; we cannot reason, so to speak, without reasoning falsely. We fail to consider that speaking, regardless of what, is philosophy. Anyone who speaks German is a folk philosopher, and our academic philosophy consists in qualifications of this common philosophy. All our philosophy is the correction of linguistic use, that is, the correction of a philosophy, our most common one. But only this common philosophy

has the advantage of possessing declinations and conjugations. Thus true philosophy is always taught in the language of false philosophy. Defining words does not help, for in defining them we do not alter the pronouns and their declinations.[46] [146]

However we imagine representing to ourselves the things outside of us, these representations will and must invariably carry some trace of the subject in them. It seems to me a very unphilosophical idea to regard our soul as merely passive; no, it also contributes something to the objects. Thus there can be no being in the world that recognizes the world as it really is. I would like to call this the affinities of the mental and physical worlds, and I can very well imagine there might be beings for whom the order of the universe would be music to which they dance while heaven plays accompaniment. [147]

The greatest inconsistency human nature has yet made itself liable for is allowing reason to be placed under the yoke of a book. It is difficult to imagine anything more abysmal. This example alone shows what a helpless creature man is *in concreto*, confined to this bipedal container of earth, water, and salt. Were it ever possible for reason to erect a despotic throne, someone who sincerely wished to refute the Copernican system on the authority of a book would have to be hanged. Merely because it is written in a book that it was created by God is no proof that it was. That our reason is from God is certain; one need only take the word *God* as one wishes.—Where reason reigns, it punishes by the natural consequences of a transgression, or with instruction, if instruction may be called punishment. [148]

One cannot consider often enough that *the existence of God*, *the immortality of the soul*, and the like are merely *conceivable* not *cognizable*. They are associations of ideas, a play of thoughts, to which nothing objective need correspond. It was a great error of Wolffian philosophy to extend the principle of contradiction to what is cognizable, for it concerns merely what is conceivable. [149]

If we consider *idealism* in relation to the various stages of life, it commonly follows this course: in our youth, we initially smile at the absurdity of it; soon we find the idea agreeable, clever, and defensible; then we enjoy disputing about it with people who, because of their age or social standing, still find themselves at the first stage. At a mature age, we indeed find it

useful to tease ourselves and others with it, but on the whole we find it hardly worth refuting and contrary to nature. We do not think it worthwhile to consider it any longer, for we believe we have already thought about it often enough. But later, after earnest meditation and more acquaintance with human affairs, it acquires an irresistible power. We need only consider that even granting there are objects outside of us, we can know absolutely nothing of their objective reality. However matters might stand, we are and remain simple idealists; indeed, we cannot do otherwise. For nothing can be given to us except through representations. The belief that these representations and sensations are caused by objects outside of us is just another representation or idea. Idealism is entirely impossible to refute; for even if there were objects outside of us, we would still remain idealists, as we *cannot* possibly know anything about them. Just as we believe that things occur outside of us without any contribution on our part, the representations of these things might also arise within us without any contribution on our part. Indeed, it is without any contribution on our part that we have become what we are. The reason so many people are not conscious of this is that they associate the word *representation* with a very incomplete concept, namely, that of a dream or a fantasy. These are certainly species of representations, but they do not exhaust the genus. It is undoubtedly here that the cause of the misunderstanding lies. We must first agree on what is meant by representation. There are certainly different kinds of representations, but none of them clearly indicates that they originate from *outside of us*. What indeed is *outside*, *external*? What are objects *praeter nos*? What does the preposition *praeter* imply? It is a merely human invention, a name to indicate a difference from other things we *do not* designate as *praeter nos*. They are all sensations. [150]

To say we cognize *external* objects is contradictory; it is impossible for man to go outside of himself. Where we believe we see objects, we see only ourselves. We can actually know nothing of the world except ourselves and the changes that occur within us. Contrary to what we commonly say, we cannot possibly *feel* for others; we feel only for ourselves. The proposition sounds harsh, but it is not when properly understood. It is neither father nor mother, neither wife nor child that we love, but only the pleasant emotions they occasion—something that flatters our pride and self-love. It cannot possibly be otherwise, and anyone who denies this has evidently not understood it. In this matter language should not be philosophical, any more than in regard to the universe it should be Copernican. In nothing, I believe, does man's

superior mind appear so clearly as in the fact that he even knows how to discover the tricks that nature would play on him. One question, however, remains: who is right, the man who believes he is being deceived or the man who believes that he is not? Unquestionably, the man who believes he is not being deceived is right. But neither of them really believes he is being deceived. As soon as I know I am being deceived, it is no longer a deception. Language originated prior to philosophy, and that is what makes philosophy difficult, especially when it is a matter of making it clear to those who do not themselves reflect very much. When philosophy speaks, it is always compelled to express itself in the language of nonphilosophy. [151]

Just as the highest law is the greatest injustice, so too is the greatest injustice often the highest law. [154]

People do not think so differently about the events of life as they speak about them. [158]

Why do animals not squint? This is also a virtue of human nature. [165]

We believe we are free in our actions, just as in a dream we think a place completely familiar that we are doubtless now seeing for the first time. [. . .] [169]

What am I? *What shall I do*? *What may I hope and believe*? All things in philosophy can be reduced to this. If only other things could be made so simple. We should at least see whether everything we intend to consider in a book may not from the beginning be formulated similarly.[47] [172]

[. . .] Philosophers must consider and write about all things, even the most common ones—this more than anything else brings focus to a system. [. . .] [174]

For once to really evaluate the concept of *matter*. We attribute impenetrability and resistance to its inner space but do not consider that all of this can and must be the effect of forces. This leads perfectly to the Kantian conception. The foundations of a natural science could be conceived really well by beginning with consciousness and then showing that everything one thinks and senses is merely consciousness of the modifications of one's self. *Meditandum et tentandum*.[48] [176]

Never regard matter as entirely exhausted; everywhere there is still something. [179]

More and *less* is for true philosophical contemplation nothing. This is what makes explanations of phenomena in nature so difficult; we attribute too much importance to things universal and widespread and are able to concern ourselves too little with things that are *infrequent or rare* yet substantial. [. . .] [182]

It would be very much worthwhile for once *truly* to investigate why we know *nothing* of the origin of motion. A real criterion for this could be to determine where to begin or end. We have not, I think, always attended intensely enough to this peculiar circumstance. There is here a more determinate limit than anywhere else because it seems to be not so much a lack of experience as an *absolute barrier*, or at least a clue as to where such a barrier is to be sought. [183]

When we mistakenly judge an object to be larger than it actually is—as we do with the moon on the horizon, for example—, do the individual parts also appear more *distinct*? Can I recognize a sunspot that I could not have noticed at midday or see in the moon on the horizon things that would have been impossible to distinguish at midday? [198]

[. . .] It is actually evidence for the great limitation of our sensibilities that we do not see the essence of things. We see the color, feel the weight, impenetrability, and density of a magnet; but these properties are *not*—whether taken separately or together—that by virtue of which the magnet attracts iron, for other objects also possesses all of these properties. [201]

Golden Notebook

Winter 1789

What is duration? According to my system? [15]

Where we experience no localized sensation, where we do not actually feel the impression on our sense organs, we cannot reduce anything to our bodies. If we could not shut our eyes, we would not know whether we see with our head or our stomach. [. . .] [16]

If the New Testament accurately contains the precepts of the Christian religion, then the Catholic religion is hardly Christian. Indeed, it is even written there: *drink ye all of it*. The Catholic religion received its present form in times of the grossest ignorance in which minds were fettered, and now man who is once again permitted to exercise reason is supposed to continue to adhere to it. This is impossible, and it can be maintained only by fire and sword. [33]

Form is determination or the manner of thinking something; *matter* is what is given and determinable. [54]

The resolution to make the inner feeling of bliss, however it might arise, everlasting through virtue is a praise of the being in which or through which I exist—be it the god of the Christians or of Spinoza. [58]

It is necessary to agitate all of our knowledge and then let it settle again in order to see how everything is arranged. [. . .] [78]

To discover between things relationships and similarities that no one else sees. In this way, wit can lead to invention. [86]

Notebook J

1789–1793

Writing is an excellent means of awakening the system sleeping within each of us; anyone who has ever written will have discovered that writing always awakens something that, though it lay within us, we did not previously clearly recognize. [19]

The Kantian philosophy may establish whatever kingdom it wishes, but if it does not wish to sink into old, familiar chatter, it must admit that our representations correspond to something in the world. [28]

It is undoubtedly far easier to explain the constitution of the world than that of a plant. [. . .] [34]

[. . .] What is publicly prohibited cannot be secretly condoned, for otherwise what is secret threatens to corrupt everything. It is foolish after all to prohibit a man from making a fist in his pocket. This evidently *touches* on the freedom to speak in public, which cannot be suppressed without spies. [57]

How might an entry on *typos* best be explained in an encyclopedic dictionary using examples and lessons? [71]

One use of dreams may be that they represent impartially our entire being, freed from our often forced and artificial reflections. This thought deserves very much to be taken to heart. [72]

A teacher and a professor cannot educate individuals, only species. This is a thought that deserves very much to be taken to heart and disputed. [73]

I believe that instinct in man can anticipate the conclusions of reason and that some things may thus be revealed by a less educated but more acute sensibility that guarded reason cannot yet follow or attain. A brute passion is produced within us without our being in a position to explain whence it arises. I include here the doctrine of the immortality of the soul. After our life, things will be just as they were before it began; this is an instinctive anticipation of any reasoned conclusion. This cannot yet be proved, but taken together with other conditions such as unconsciousness or stupefaction, it possesses an irresistible force for me and presumably does so for many who do not wish to admit it. Not a single argument has convinced me otherwise. My opinion in this is nature; the other is an *art* whose conclusion everything contradicts as completely and forcefully as anything can be contradicted. [78]

Although it is not *certain*, in the *futuris contingentibus,* it does not bode well. [85]

Do you believe the world has ever been any different than it is now? Do you believe blackthorn bushes have ever borne oranges? No. Very well, do you believe there have ever been men who were sons of God? Yes! Oh thou just God, how low thy gift of reason may sink. What a feeble instrument reason is. [99]

When he attends church and reads his bible, the ordinary man confuses the means with the end—a very common error. [102]

Mathematics has its independence of everything that is not mere quantity solely to thank for the great advances that have been made in it. Everything that is not quantity is thus completely foreign to it. Since, therefore, it is concerned only with this and needs no outside assistance, being nothing other than the development of the laws of the human mind, it is not only the most certain and dependable of human sciences but also certainly the *easiest*. Everything that can serve its enlargement is in man himself. Nature equips every intelligent man with the complete apparatus, which we receive as our endowment. It is thus the easiest of sciences inasmuch as we cannot ever hope to go as far in any other. Whoever can prove the forty-seventh proposition in the first book of Euclid has already made much more progress in the development of these laws of the human mind or of quantity than has ever been made in physics.—But who wishes to establish

here a quantity or scale? It seems then that what is useful lies everywhere quite near. The certainty of human sciences must henceforth be investigated accordingly. [103]

We do much on our deathbed and even in our deathbed that as a reasonable person we would never have done. We take up childhood beliefs again, just as we soil the bed again, and we no longer know what we are losing. [117]

Jacobi on Spinoza's philosophy (Preface, 17). Lessing says: "There is no other philosophy than that of Spinoza. And in the same place: "The consistent determinist is no different than the fatalist" (21). Herr Jacobi's writings on Hume and *Idealism and Realism* lead to the conclusion that *we understand nothing of the being of all beings, and if we wished to investigate it, we would find it impossible given our modes of representation*. Yet both teach that we should *believe* in such an *incomprehensible* being (merely incomprehensible? Belief is something miserable here. What is belief? Obviously, we *must* believe). Regarding the entire spirit of Spinozism, Jacobi believes *a nihilo nihil fit*. (I also do not understand how from the fact that all phenomena have a cause we hope to prove that the whole must have an external cause; it seems we first must prove we can approximate this first cause, as we do in the expression of irrational numbers, but this is impossible to prove).[49] [144]

"Ah!" he exclaimed at his mishap, "if only I had done something delightfully sinful this morning, I would know why I am suffering now!" [150]

When I dispute with someone in a dream, and he refutes and teaches me, it is I who am teaching myself, *that is to say, reflecting*. This reflection is presented in the form of a dialogue. Can we be surprised then if earlier peoples, such as Eve, attributed their own thoughts to the serpent and expressed them with: "The serpent spoke to me. God spoke to me. My spirit spoke to me." Since we do not know exactly *where* we think, we can locate our thoughts wherever we wish. Just as we can speak in such a way that whoever hears us believes it is coming from a third person, so too we can think as though we were being spoken to. Socrates' demon is such a phenomenon. What an incredible amount may we not yet develop from dreams! [171]

The melancholic, poetic, and so forth in love is actually its own form of the contemplation of pleasure; man possesses more than one form of inner feeling. [179]

I read somewhere that Christian morality is everywhere a support and supplement to the law but that the remainder of religion supports superstition. [228]

According to Reinhold, every *representation* must consist of a component that refers to the *object* that is distinct from it. This is what he calls the "matter of representation," and it is that through which what is represented (the object) belongs to the representation. Every representation must also, however, consist of another component that refers to the *subject* (that which represents), which is also distinct from the representation in consciousness. It is by virtue of this component that the representation belongs to the mind; and it can be nothing other than that through which the otherwise mere matter of a representation can become an actual representation. This is the *form of representation*, which the matter can acquire only in the mind and through the representational faculty. As long as it is unclear in what *this form* consists, then that which in the representation belongs to the mind must be attributed to the object, and that which belongs to the object must be attributed to the mind. *The original sin of previous philosophy!*[50] [234]

Current popular philosophy is merely only the flesh of Kantian philosophy. [250]

As with any language, learning to speak the Kantian language becomes more difficult with age, but one can always learn to write it. [251]

Feder's review of Reinhold's theory of the power of cognition can be found in the *Göttingische gelehrte Anzeigen*, no. 14 (1790). [258]

A representation referred to the subject is sensation, to the *immediate* object intuition. [262]

Revelation does not make me understand a thing, but I understand it when it has authority. Yet what authority can force me to believe something that contradicts my reason? The word of God alone. Yet do we possess any word of God that stands outside reason? Certainly not. For it is men who have said the Bible is the word of God, and men can know no word of God other than reason. [269]

It was no friendly act on the part of Herr Kant toward his readers that he wrote his work in such a way that one must study it like a work of nature.

With works of nature, the effort and enthusiasm involved in the investigation are sustained by the conviction that the whole is worth investigating and that if one discovers anything it will be something worthy of the effort. In the works of man, however, this is not to be expected, for the author may have erred, and in the end all will result in a Jacob-Böhmeism. Herr Kant is certainly already due a great deal of credit in this world, but his book concerns a topic that in itself is not the most interesting for the rest of the world; yet one must, through repeated readings, become familiar with concepts such as *representation*. The subjects treated in Herr Kant's book are admittedly quite interesting, but not everyone can immediately recognize that. [270]

Long before the invention of the papacy and purgatory, it was already customary to pray for the dead. I believe that love for my mother even once induced me to pray for her. This is nothing more than the anthropomorphization, the humanization of all that of which we know and can know nothing that we encounter everywhere. [271]

Many, such as the witty, obscurely sense how mechanical man is in his so-called acts of free will but do not make this known. The intuitions of the *genii Socratis et Kepleri aliorumque*, the invocation of muses. With regard to the body, we are obviously slaves. We have doctors for when we are ill and books for when we are thinking. What if the belief we are acting freely consists merely in the feeling that the clock is now working properly?[51] [275]

How did men ever arrive at the concept of *freedom*? It was grand idea. [276]

Our theologians wish with force to make of the Bible a book in which there is no *human* understanding or common sense. [277]

That a false hypothesis is at times to be preferred to the correct one can be seen in the doctrine of the freedom of man. Man is certainly not free, but a quite profound study of philosophy is required not to be misled by this idea. Among a thousand people, none has the time and patience for such study, and among the hundred that do, not one has the mind or spirit for it. Freedom is thus really the most convenient way of thinking about the matter for oneself and, since it has appearance on its side, will always remain the most conventional one. [278]

Before God there are only rules—actually, only one rule and no exceptions. Because we do not know this supreme rule, we create general rules that are not rules at all; indeed, it could be possible that what we call "rules" could for finite beings even still be exceptions. [279]

I believe the Spinozist and the deist differ only in opinion in the way that the Newtonians and Eulerians do with regard to the theory of colors.[52] [280]

Belief in a God is an instinct as natural to man as walking on two legs; in many it is certainly modified and by some even suffocated entirely. Usually it is present, and if our faculty of knowledge, our inner being, is to be well formed, it is indispensable. [281]

Both systems lead a reasonable mind to the same conclusion, so in order to see if Spinozism is correct, one can make use of Deism, just as one often makes a visual judgment to test the most accurate measurements. [282]

Whoever has less than he desires must know he has more than he is worth. [304]

If we really were the free creatures they would have us believe we are, our thoughts would have to extend much further. We should be able to stop thunderstorms with our earnest will; unfortunately, however, our so-called spirit is determined by circumstances, and it cannot extend so far but can merely passively determine physical bodies. [322]

I do not think it entirely impossible that a man might live forever, for continual diminution does not necessarily imply cessation. [341]

[. . .] We must have hypotheses and theories in order to organize our knowledge, otherwise everything remains merely detritus—and we already have a great deal of scholars who produce this. [342]

The world of words. [357]

If dogs, wasps, and hornets possessed human reason, they could perhaps conquer the world. [360]

Non cogitant, ergo non sunt. [379]

An autopsy cannot uncover those faults that end with death. [382]

Hypotheses serve not only to retain a number of facts but also to establish many for the person who produces them. [. . .] [387]

That is the weather side of my moral constitution; I can endure something on that side. [388]

I made a sketch of him, so he will find it easier to recover his body on judgment day. [390]

A long speech may easily be learned by heart and a long poem even more so. How difficult it would be to memorize the same number of words strung together without any meaning or a speech in a foreign language! Sense and understanding are thus an aid to memory. Sense is order, and order is in the end nothing but conformity with our nature. When we speak sensibly, we are only speaking in accordance with our essence and our nature. When we wish to commit anything to memory, we endeavor always to introduce some definite sense or order into it; for example, we use *genera* and *species* in the case of plants and animals, and with other things we show resemblances by introducing rhymes. Our hypotheses belong here as well: they are necessary, for without them we would be unable to remember things. This was said long ago, but it is something we constantly encounter again from all directions. We endeavor to make sense of the physical world in this way. The question is, however, whether everything is legible to us. Certainly through much experiment and reflection we are able to introduce meaning into things that are either for us or altogether meaningless. Thus we see faces or landscapes in the sand, though they certainly are not there. Symmetry is another example, as are silhouettes in inkblots and so forth, and the same may be said of the ascending scale we introduce in the animal kingdom:—all this is *not in the things but in us.* In general, we cannot too frequently reflect that in observing nature, and especially the order found in nature, we are always only observing ourselves. [392]

The attempts of the physicists—that of *Lesage*, for example—to explain gravity, attraction, and affinity mechanically are further examples of what I mention above. Such explanations, however, are always as useful as inventing a machine capable of reproducing such effects. If someone could create a machine that represented the motion of heavenly bodies exactly as in nature,

would it not be of great value even though the universe does not move by gears and mechanisms? A good deal would be discovered through such a machine, which he would not believe he himself had included in designing it. What is mathematics but such a machine?[53] [393]

It is and will always remain a strange expression to say, "The soul is in me; it is in the body," when we should say, "I am this." For we do not say, "The roundness is in the sphere." It is merely similarity that misleads us here. Identity is something objective, but similarity is subjective. [404]

Catachresis. *Vir gregis ipse caper*. The misuse of a word because of lack of a better one; this is why our metaphors are most often catachreses.[54] [410]

The fly that does not want to be swatted is safest when it sits on the fly swatter. [415]

The synonyms of a language betray at least in part the remnants of a nation's knowledge, just as the language of a people contains its common philosophy. The common folk philosophy does not extend very far. When I say that gold is as heavy as cork, I am expressing a great truth that fewer than one out of a hundred people understands, even among educated people. If I say that cork is not as heavy as gold, then I express a truth that is understood by anyone who understands the words; the same is the case when I say that a pound of cork is as heavy as a pound of gold. The latter is also true. Really these things should stand in the opposite order, with the first coming last. Regardless of this, it is surprising that with the words of our common philosophy we can speak about things that go beyond them; that is to say, we speak in analogies. Thus one would have to state the doctrine of universal gravity without making use of concepts outside of those used in the game of the goose. This is how Lesage's theory is in the worst case. [417]

It is after all always a key question in the Kantian philosophy to ask how he arrives at the certainty that some knowledge is *a priori*. Regarding the principle of causality, for example, it is also a matter of experience, as much as there is any such objective dependence. Feder, *Göttingische gelehrte Anzeigen* 1790, no. 144. [429]

An excellent motto: "Opinions are continually varying, where we cannot have mathematical evidence of the nature of things; and they must vary.

Nor is that variation without its use, since it occasions a more thorough discussion, whereby error is often dissipated true knowledge is encreased and its principles become better understood and more firmly established" (Franklin's *Letters on Philosophical Subjects*, Letter 38). [431]

Rousseau says that a child who learns to know only its parents does not even know them—quite nice and true.[55] [433]

A screw without a beginning. [434]

The feeling of truth. [439]

Those who think a great deal for themselves will find much wisdom recorded in language. We probably do not add it all ourselves, but much wisdom does reside there, just as in proverbs. [443]

A slave of belief. [446]

Humanitarianism. If I see someone in the distance secretly squashing something, I must believe it is a flea until I can prove to myself with apodictic certainty it is a louse. [460]

Fontenelle was once asked how it happened that he had so many friends and no enemies: "Par ces deux axioms," he answered, "tout est possible, et tout le monde a raison."[56] [464]

To smell what time it is—a peculiar clock indeed. [468]

Just as the followers of Herr Kant always accuse their opponents of not understanding him, I suspect there are many who believe he is correct simply because they understand him. His way of representing things is novel and differs considerably from the usual, and once we finally gain some insight into it, we are inclined to regard it as true, especially since it has so many zealous adherents. We should always remember, however, that understanding something is no reason for believing that it is true. I believe the satisfaction in having understood an extremely abstract and obscure system leads many to believe that its truth has thereby been demonstrated. [472]

It would be peculiar if the true system of philosophy and the true system of the cosmos both originated in Prussia. Both are useful for predicting a

certain kind of eclipse, but there are certainly fewer epicycles in the Kantian system. [473]

Nothing is more common than for people to consider themselves convinced of the truth of something as soon as they have understood the opinion a great man has held about the matter. These are, however, very different things. It has often happened to me. I believe that many people, once they have labored their way through the difficulties of the Tychonian system and all its epicycles, have thought: "Praise the Lord, I have finally figured it all out."[57] [475]

The complete table of the categories that according to Kant are the pure products of the understanding:

1. Quantity

   Unity, Plurality, Totality

2. Quality

   Reality, Negation, Limitation

3. Relation

   Inherence and Subsistence, Causality and Dependence, Community

4. Modality

   Possibility—Impossibility, Existence—Nonexistence, Necessity—Contingency

Without these laws of thought, everything in us would be particular and disconnected; through them, things are combined and ordered.[58] [481]

He judges in each case according to the particular state of the aggregates of his sensations. [482]

Such people do not really defend Christianity, but they do allow Christianity to defend them. [504]

He learned to play a few pieces on the metaphysic. [507]

Mississippi: a word with eleven letters and yet only four—four s, four i, two p, and an m. [510]

Anyone who plunders the ideas of an ancient writer could defend himself by appealing to metempsychosis and say: "Prove I was not also that writer." [511]

We cannot really know whether we are not at this moment sitting in a madhouse. [520]

Most teachers of faith defend their propositions, not because they are convinced of their truth, but because they once claimed they were true. [521]

Nothing more clearly proves to me how matters stand in the world of learning than the fact that Spinoza was for so long regarded as an evil, disreputable man and his opinions as dangerous; the reputations of so many others have suffered a similar fate. [523]

From the chapter titles of Spinoza's *Ethics*, one can already grasp its main ideas:

1. de Deo
2. de natura & origine mentis
3. de origine et natura affectuum
4. de *Servitute* human seu de affectuum viribus
5. de Potentia intellectus seu de *Libertate* humana. [525]

We say of a certain kind of unintelligent idea that it is a foolish idea; we also say things are foolish. Certainly the first person to use this phrase had something in mind. It may refer to what is *unexpected* or *strange* in a connection of ideas or to the overleaping that one often finds with foolish people. [529]

In the end, everything leads to the question: "does thought originate in feeling or feeling in thought?" As Garve showed very early in his commentary on Ferguson's moral philosophy, this is the ultimate principle of religion,

and the answer to the question, "Is the power of feeling or the power of thought the ultimate reality?" indicates the final limit between theism and atheism.[59] [531]

Flatt, or rather Schwab, believes one must explain the doctrine of the trinity in terms of three-dimensional space.[60] [533]

Someone wishes to look something up in the dictionary and searches for the name of his girlfriend, his enemy, or his idol. It would have to be a chemical dictionary. [. . .] [562]

Our idea of the soul is not unlike the idea of a magnet in the earth. It is merely a picture. To think all things according to such forms is a means of conceptualization innate to man. [568]

In the preface to the second and third editions of Kant's *Critique of Pure Reason* (the third edition is only a reprint of the second), many peculiar things appear that I have often thought but never expressed. We find no cause in things but notice only that which corresponds to something within ourselves. Wherever we look, we see only ourselves. [569]

Vere scire est per causas scire: "to know truly is to know by causes."—Francis Bacon.[61] [573]

Universally valid laws of perfection for works of sentiment and fantasy. [579]

Clocks that strike an hour and repeat. [580]

A creature of a higher kind who makes the entire history of the world repeat itself in the way one makes a watch repeat. [581]

A multicolored confusion. [598]

Epitaph at Arlington, near Paris:

> Here lie
> Two grandmothers with their two granddaughters
> Two husbands with their two wives
> Two fathers with their two daughters

Two mothers with their two sons
Two maidens with their two mothers
Two sisters with their two brothers.
Yet but six corpses all lie buried here,
All born legitimate, from incest clear.

This riddle, which was given to me by someone who himself did not know the solution, I solved in the following way: Two old men, each of whom has a grown son, each of whom has an unmarried daughter, marry two young girls who are sisters. After the weddings, both old men become sick and die before the marriages are consummated. After their deaths, the two young men marry their stepmothers: these last six are those who are buried here. For here two sisters are also lying with their two brothers, because every woman calls her sister's husband her brother. [599]

It is of little consolation that from the lack of correspondence between the inner and the outer man, I mean between the esoteric and the exoteric, one can infer something similar about the works of nature. For how few friends would remain friends if they could see each other's dispositions as a whole? [600]

The most accomplished ape cannot draw a picture of an ape; this too only man can do, but it is also only man who regards this ability as a merit. [613]

I have long thought that philosophy will yet devour itself.—Metaphysics has already partially devoured itself. [620]

In the review of Carl Christian Erhard Schmid's *Essay on Moral Philosophy* (Jena 1790) (*Literatur-Zeitung*, no. 108, 1791), it is well said: Herr Schmid distinguishes first between the *subject* of moral action *as an object of experience* and as a thing in itself (object, πμ), in the usual manner of the critical philosophy. He then shows how one might conceive of a being who could *in itself* freely cause an action, thus entirely *independent* of the influence of any *temporal causal series* (occurring within the form of time, πμ), but at the same, to the extent that it appears active, must in all of its cognizable actions be regarded as necessarily determined. In order to save freedom, he further distinguishes between the *matter* and *form* of moral action; he leaves the matter to the mechanisms of nature and attributes the form to reason, autonomous and independent of morality. The more

soundly this is then considered, the more the reviewer is astonished that a chapter is entitled "Pervasive Necessity." (Herr Schmid discovers necessity quite artificially in that which in itself underlies all sensibility and appearance; otherwise, he believes that anything not necessary is accidental, πμ) To this the reviewer responds: it is precisely the incorrectness of the unqualifiedly expressed proposition, *either necessity or contingency*, that is really decisive in this issue of freedom. This is a quite unique capacity to include the ground for something without being subject to some necessity, which, indeed, is unknowable and incomprehensible but nonetheless completely conceivable. The reviewer then finds no further difficulties in the matter since coming to terms with the following concepts: freedom in the cosmological sense is for him the capacity to contain and make active the complete ground for the reality of new circumstances, without being determinable necessarily either by external forces or by its own constitution. In a being that possesses reason and sensibility, this capacity is *moral freedom*; it is the capacity to contain and make active the complete ground of actions, which are contrary to or in accords with the moral laws of reason, without being determinable necessarily either by the influence of external forces or by its own representations. Such a faculty is as little a faculty of *necessary* as *contingent* actions and yet is a faculty for containing the grounds for an action. That we can conceive of grounds whose effects, according to the relation of the dependence of an effect on its ground, do not stand under the form of necessity can be attributed to the fact that the *pure concept of a ground* extends further than the *concept of a ground* thought *as operative under the form of necessity*; and further, it can be attributed to the fact that this form of necessity regarding effects and causes is applicable only within the sensory world; but the sensory world presents neither things in themselves nor all aspects of the universe. That, however, the form of necessity is subject to this qualification follows from the essence and limitations of the form of inner sense, time, as that which gives the concept of necessity its sense (quite good, πμ).[62] [629]

A character: everyone forms an incorrect idea of him and hates and persecutes him according to this image. [630]

A character: a man who, like me, always speaks for his dog when he is playing with it. This could be applied to children as well; that is true guardianship. [634]

For several days (since April 22, 1791) I have been living according to the hypothesis (for I always live according to some hypothesis) *that drinking with meals is harmful*, and as a result I feel excellent. There is certainly something true in this. For through no change in my lifestyle and no medicine have I ever before experienced such a good effect so quickly and palpably as this. [639]

Only the egoist and the idealist doubt the existence of beings *praeter nos*. That, however, we change *preater* into *extra*, and regard beings *praeter nos* as *extra nos*, think of them as occupying a different space, seems to be a form of sensibility. Could the *praeter me* also not be a form of our sensible faculty? [643]

One of the most excellent observations supporting the Kantian theory of space has for me always been that we must regard physical bodies as infinitely divisible, which contradicts reason; for it is not at all necessary, it is indeed not possible that, for example, inertia and impenetrability should be the effects of a complex body, and yet we always think of these as existing in space. This is a form of sensible intuition. [646]

Practical reason or moral sense: the latter expression will make it more intelligible to many what one means by the former. [656]

It is astonishing how often the word *infinite* is misused: everything is infinitely more beautiful, infinitely better, and so on. There must be something agreeable about the concept, or its misuse could not have become so widespread. What have the ancients to gain from this? [661]

When you are sitting in a shoddy carriage, you really can make such a face that the entire carriage appears outstanding; this is also true of horses. [675]

The things outside of us are nothing other than how they appear to us; this is true, for us at least, since we can observe only relations because the observing substance invariably intervenes. Even God sees in things only himself. [681]

No matter how simple an idea, it will always govern something and abound somewhere. The man in the moon abounds in our calendar illustrations. [682]

In order to find something, many, if not most, people must first know that it is there. [688]

Something could be said about the art of translation, which could be of great use. I mean the art of translating the language and actions of ordinary people into the true language of our life. Ordinary people often express themselves appallingly or humorously about things, but if it were translated into our language, they would appear to speak quite differently. The way we think about the events of life does not differ as widely as does the way we *speak* about them. [692]

In toto aliquid et ex omnibus nihil—that would be the most abstract philosophy.[63] [694]

The picture-book of the world. [702]

We are lost if given *too much* time to think about ourselves, assuming we do not regard ourselves as an object of observation like a prepared specimen but always as the sum of all that we now are. We become aware of so many dismal things that, at the sight of it all, the desire to arrange it or hold it together evaporates. [704]

A system: through the transmigration of souls, every man arrives at the condition that during his life he most envied and desired; thus in the end everything will revolve in a circle, and no class will be entirely empty. [705]

When we shatter the limbs of a murderer on the breaking wheel, it is a question whether we do not fall into the same mistake as a child who strikes a chair after bumping into it. [706]

If only we had the snuff that misses our nose! The same is true of procreation. In any process something is always lost, in the physical as well as the moral. [710]

Perhaps a kind of fairy tale could be written on the basis of Kantian philosophy, with other forms of intuition, and where light becomes music. My God what is this? This is time? Such a thing would certainly be nonsense; we have only parables and satires about the actual world, as in Count Hamilton's fairy tales.[64] [711]

I believe that in comparison with the English, the German suppresses more with reason, which really should never happen. On many occasions, for instance, on which it would never occur to the Englishman to laugh, a German does not laugh because he knows it would be improper. [712]

In preaching useful truths to men, everything is permitted that does not harm or offend anyone, even fairy tales. No one any longer finds it absurd that animals speak in fables, so why should we find it tasteless if it rains pearls? A wise man would *do* more than many a sorcerer in a fairy tale if he could make a fool wise—why should he not *create fictions* for this purpose? [713]

My auction catalogues and translation machine could be used in a fairy tale—also the doubled men, upon whose heads a kind of cuckoo bird sits, who always says what they are thinking while their mouths are speaking, and a megaphone that, even when one whispers, carries one's voice to the one for whom it is intended. [714]

One of my strangest character traits is certainly the peculiar superstition with which I discover in anything an omen and everyday find an oracle in a hundred things. I need not describe it, as I understand myself here all too well. Each movement of an insect is an answer to a question about my fate. Is this not peculiar for a professor of physics? Yet is it not something based in human nature, and only in me has it become monstrous and exaggerated beyond the natural proportion in which it is beneficial? [715]

He was no "slave to his word," as they say; on the contrary, he exercised such despotism over his promises that he could do with them whatever he wished. [719]

Might we not say of philosophy examined microscopically that it is Kantian? First one uses the naked eye, then small telescopes, and then stronger ones; to observe the course of the stars we do not need a Herschel telescope.[65] [724]

We are so constructed that we will very rarely be accurate judges of what is useful to us. It is the case in this life; and who will guarantee it is not also the case in the next life? Whom the Lord loveth, he chastiseth. What if this means: whom the Lord loveth, he destroyeth? [725]

Fairy tale: to represent visually how the soul and body interact with one another; at the least something amusing could be made of this. [727]

There are many forms possible according to which certain masses of ideas and experiences could be ordered and united into an observable whole. The review of Heydenreich's *Ästhetik* in the recent *Bibliothek der schönen Wissenschaften* (43, 2nd part, p. 223) says admirably: "Just as in painting, philosophy cannot represent an object entirely *en face*, and less so can it represent an object or subject matter with all of its traits. Each searches for a certain phrase, a certain profile, and chooses certain traits that fit this. A new theory is often an old object or subject matter depicted from a new side. With this new position or attitude certain aspects must be left out."[66] [732]

One should never look for genuine Christian convictions in a man who makes a show of his piety. [733]

The form of a game of chess and even that of the Talmud and the old scholastic philosophy is good, but the matter is not of much use. One exercises one's faculties, but what one learns in doing so is of no value. [749]

Many people regard as divine that which has no rational sense. The enjoyment in contemplating useless algebraic equations one has contrived oneself belongs in this class. [750]

[. . .] Some people *arrive* at an idea, and others *stumble* upon it; some *fall into* it, while others *fall over* it (we are missing only to *fall apart* from it). We also say, "I have *taken to* an idea," but not, "I have *be*taken myself to an idea." That would be the *via regia*. [756]

The principle of sufficient reason is, as a purely logical principle, a necessary law of thought and to this extent cannot be disputed; but whether it is an objective, real, *metaphysical* principle is another question. [757]

There is only *one* plant and one animal, and these two are one. The animal that lives off plants has its roots in the earth; thus so too does the animal that lives off animals. [758]

Nature has provided animals with sufficient intelligence to take care of their self-preservation. They all know very well how to help themselves when it

comes to this important matter. Vaillant gives very good examples of this in the way that animals behave at the approach of lions. Nature has almost instinctively armed even man against the fear of death with the belief in immortality.[67] [761]

The hermeneutics of hypochondria. [770]

All of our desires are merely a play of the nerves, and this circumfluent medium does not transmit them according to my will. My fear or most sensual desire is not capable of impeding the lightest mist of a thundercloud. It takes the course that it must. Man is integrated with his body but not with this world. [775]

In this world, you can live well from soothsaying but not from truthsaying. [787]

We are a great deal more certain that our will is free than that everything that happens must have a cause. Could we not therefore reverse the argument for once and say that our concepts of cause and effect must be quite incorrect, for if they were correct, our will could not be free? [790]

[. . .] All theory is against the freedom of the will; all experience is for it. [. . .][68] [811]

There could be an ear for which all the people of the world speak only *one* language. [815]

Busts have no hands and therefore cannot steal. [818]

The men who first invented the forgiveness of sins through Latin formulas are guilty of the greatest corruption in the world. [842]

There is something natural in the way we admire great warriors, as there is in our thirst for conquest. The former corresponds to beauty and bodily strength, the latter, to prosperity. It will, thus, never be possible to banish these things from the world with philosophy. [843]

Similar to what Linnaeus did for the animal kingdom, one could also create in the realm of ideas a class called "chaos." To this would belong

not only the great ideas of universal gravity, stardust, and immeasurable spaces powdered with stars, but also the little protazoic ideas that attach themselves to everything with their little tails and often live in the seeds of great ideas, a million of which every man sees passing through his mind if he sits still. [850]

Since a man can go mad, I do not understand why a universal system cannot also. This fits well for Dolomieu's hypothesis.[69] [876]

One of the strangest delusions man would be capable of is to believe he is insane and sitting in a madhouse but actually be acting completely rational. If someone once became convinced of this, I really do not see how one could convince him otherwise. [878]

In addition to time, there is another means of effecting great changes, and that is—*force*. When the one moves too slowly, the other often anticipates it. [880]

Conclusive solution to the riddle in the Taschen-Kalender for 1792.

There are two widows, A and B, each of whom has a grown son, a and b, and each marries the son of the other: namely, A marries b, and B marries a. In the marriage, each produces a daughter, α and β. These are the six people in the grave.

2 grandmothers with their 2 granddaughters
A and B with α and β
2 husbands with their 2 wives
a and b with A and B
2 fathers with their 2 daughters
a and b with α and β
2 mothers with their 2 sons
A and B with a and b
2 maidens with their 2 mothers
α and β with A and B
2 sisters with their 2 brothers
α with her stepbrother a, and β with her stepbrother b.

A justified objection to this solution would be that if A married b, then a would have married his mother's mother in law; but this might be permitted if, for example, the marriages occurred at the same time or if there were no prohibition against such a marriage in England. Incest, however, it is not; and it is only of this that the riddle speaks. (I have also heard this degree is not prohibited.) [884]

The world exists, not so we may know it, but so we may form ourselves in it. This is a Kantian idea. [898]

When one feels sympathy, one does not first ask other people whether one should feel it. [909]

He was no mathematician; for this he possessed too little mind and too little common sense; but he was a great, masterful analytic speaker, which one can be without possessing those qualities. [924]

Since being slapped, when he saw a word beginning with s, such as *superiors,* he always thought it was called a slap. [925]

Xantippe, or better yet Xanthippe, actually means "blond mare." [930]

An ancient Greek epigram:

> Παντα γελως, και παι παντα κονις, και παντα το μηδεν,
> Παντα γαρ εξ ἀλογων ἐστι τα γιγνομενα.
> All things of nothing sprang, from dust or smoke,
> Devoid of reason all things—all a joke.[70] [932]

It is a very good observation by Herr Schmid, in his *Empirische Psychologie*, when he says that God and immortality are so often called upon to provide consolation in ordinary circumstances that, at times when he alone is truly able to offer it, it is no longer efficacious.[71] [934]

The world beyond polished glasses is more important than that beyond the ocean and is surpassed perhaps only by the one beyond the grave. [937]

Since the middle of 1791, something has been stirring in my entire economy of thought, which I cannot yet adequately describe. I wish only to mention

one thing and give it more attention in the future. I mean the extraordinary mistrust, which I am on the verge of committing to writing, of all human knowledge, except mathematics; and the only thing that still ties me to physics is the hope of discovering something beneficial to humanity. We must think of causes and explanations because without such efforts I see no other way to remain active. Someone can of course go on a hunt for weeks without shooting anything, but this much is certain, at home he *certainly* would not have shot anything, since only in the field does he have the possibility, however slim it may be, of shooting something. To be sure, we must engage in something. But is everything what we believe it to be? I constantly ask myself: "What is existence? How do you understand it?" Your belief that things are a certain way is certainly also something, and regarding the rest you know nothing. This was also the time when I began to believe (God forgive me if I am mistaken) that mussels might grow in the mountains. It was not, however, a positive *belief*, but a vague sense of our, or at least my own, inability to penetrate the secrets of nature. [938]

Related in part to the previous thought: The creature we receive most purely from the hands of nature and which at the same time is most near to us is us ourselves—and yet how difficult and complex is everything there! It seems almost that we should act without making ourselves an object of observation. The moment we make ourselves an object of observation, it is nearly a matter of indifference whether we wish to learn the origin of the world from the Hainberg Mountain or the nature of our soul from our accomplishments. [939]

The roof tile may know many things the chimney does not. [941]

Even our frequent errors and misapprehensions have the advantage that they accustom us to believing everything may be different from how we imagine it. This experience too can be generalized, like the search for causes so that in the end we arrive at a philosophy that denies even the necessity of the *principii contradictionis*.[72] [942]

Given our mental faculties, the two concepts of being and *nonbeing* are simply impenetrable. For we do not even really know what being is, and as soon as we venture into definitions, we must admit that something can exist and be nowhere. Kant also says the same thing somewhere. [943]

It is truly astonishing that we have founded our belief in God upon vague ideas of causation; we know and can know nothing of God, for to infer that the world must have a creator is no more than anthropomorphism. [944]

Without wit, man would really be nothing at all, for it is only the discovery of similarities in situations that leads us to scientific knowledge; indeed, it is only through similarities that we are able to arrange and retain. The similarities do not lie in the things; before God, there are no similarities. Certainly, from this follows the conclusion that the more perfect the understanding, the more deficient the wit; or there must be faculties of the soul that, like some scales (again wit), are so calibrated that they can just as equally be used for exact as for rough measurements. [959]

A golden rule: we must judge people, not by their opinions, but by what these opinions make of them. [. . .] [966]

Is a nation entitled to change its political constitution if it wishes to? Regarding this question, a great deal has been said, both good and bad. I believe the best answer is: who will prevent it once it has resolved to do so? It is natural to act according to universal maxims; the effort can turn out wrongly, but at least it has been made. To prevent this, the wisest must have the upper hand; they must also be able to command a group of both wise and unwise men equally, in order always to channel the reason of the better ones and the obedience of the bad ones to the same end. [972]

Theories of the physical world, or earth, begin with a crude clump that always improves, while those of morality begin with a patriarchal perfection that always degrades. I believe that in the latter things have not fared much better than in the former. It is not surprising that a man in a crude state is in many respects better than a refined one; the child is also often better than the adult. [974]

This thought was constantly at work in his conscience like a deathwatch. In the bustle of daily affairs it was imperceptible, but in the silence of the night he listened with his entire soul. [988]

I have examined the register of illnesses and did not find anxieties and melancholy thoughts among them—this is very wrong. [992]

He directed much hypochondriacal attention toward himself. [996]

The tone of the voice often determines the assertion instead of the assertion determining the tone. Even good writers, who are able to speak well, sometimes find they have arrived unexpectedly where they really had not wished to go. [1005]

Aenesidemus, on Reinhold's philosophy, is supposed to be good.[73] [1006]

Things depend so strikingly much on *how* something is said that I believe the most ordinary things can be said in *such* a way that someone else would believe the words had come from the devil. [1011]

Instead of saying the world is reflected in us, we should perhaps say our reason is reflected in the world. It is a consequence of the structure of our intellect that we cannot help but recognize order and judicious direction in the world. But it does not follow that things really are so because we must necessarily think they are so, for we have no conception at all of the true nature of the external world; thus no proof of the existence of God is possible on this basis alone. ("The difficulty of demonstrating the existence of God through nature, in a manner that would allay all reasonable doubt, led him to a profound investigation of our own rational being, and through an auspicious vindication, to discover the hidden reasons that constantly support our belief in a wise creator of this world against all doubts of reason. And behold! He found what he was searching for. He discovered in the necessary and immutable consciousness we have of our own power of reason the grounds for these beliefs, the truth of which we can doubt only if we doubt our own reason, indeed, doubt our own being." This passage is from an essay in the *Schleswig-Braunschweig Journal*, from May 1792, entitled: "Ideas for the Estimation of Judgments regarding the Influence of the Kantian Philosophy on the Religion of Life: An Introduction to Critical Remarks on Reimarus' Natural Religion.")[74] [1021]

In his optics, Priestley makes the excellent observation that the more one *knows* (*scire*. *Vere scire est per causas scire*, says Bacon) about a subject, the more quickly one is able to make an *abstraction* from it. Where, however, there are still only isolated facts, one can merely make an *extraction*.[75] [1023]

Faisceaux de causes, Deluc once said about a ray of light, namely, blended or white light. A bundle of causes. Groups.[76] [1024]

A white foam was discovered at a precipitous height, and it was unanimously agreed that it had originated from a riding horse, and all admired the boldness of the rider. In the end, they discovered that the schoolmaster of the area had passed by there while taking a shortcut and had shaved himself. [1026]

It is bad enough that truth must nowadays reveal itself through fiction, novels, and fables. [1030]

He shoots everything down from the mobile ambush of a kind of floating philosophy. [1036]

It suffices for a man's justification if he has so lived that on account of his virtues he deserves to be forgiven his faults. [1037]

In the May edition of the *Berliner Monatschrift* 1785, there is supposed to be a shrewd argument by Kant that the unlicensed *reproduction* of books is not permissible; I cannot recall having read it.[77] [1038]

People laugh, and rightly so, about a man's attempt to break his horse of the habit of eating. Unfortunately, it died! And on precisely the day on which his hopes were highest for finally teaching it this art. This happens not only to the Swabians, but also to most men in becoming more intelligent. [1043]

Certainly happiness cannot be the first principle of morality, for it shows me only the direction but not the way. Furthermore, happiness must be subordinated to reason, for otherwise, as Pütter once demonstrated quite well in collegio, *perfice te* could lead to the devil.[78] [1053]

Each searches in his private world for the explanation of everything: "in minoribus mundis et non in majore sive communi," as Heraclitus [500 BCE] once said.[79] [1066]

That God, or whatever it is, has lured man to propagate himself by making him enjoy coitus must also be borne in mind when reflecting on Kant's highest principle of morality. [1071]

It could not be avoided; man also had to create a theoretical man. This means he had to arrange this man in the same way that he himself is arranged, but this is perhaps as little the true man as Lesage's theory is the

true theory, even if it can explain everything. Our adherence to the opinions of our teachers and so forth are all practical incitements according to which all things in nature are ordered; for this purpose, we now seek some general principle, which may be entirely incorrect. [1072]

A measure of cares, *mensura curarum*. My face is one. [1079]

Philosophy is now, according to Kantian-Reinholdian *principiis*, the *science of the determinate relation of things independent of experience*. One of the best presentations of Kant's *Critique of Pure Reason* is the first part of the *Contributions to the History of Philosophy* by Georg Gustav Fülleborn.[80] [1081]

No popery! *Kein Pabst*! No matter where, there are popes everywhere. [1086]

In the *Tübinger gelehrte Zeitung* of October 1792, I forget in which piece, someone observes that the dispute about whether the proposition, every triangle of equal sides has equal angles, is analytic or synthetic is merely a dispute about words—this seems to me to be well founded. *Kant* says that from merely the concepts of three, side, and equality, we cannot conclude anything about equal angles; the concept must first be constructed. If the triangle is thought of as constructed, then it is quite certainly merely analytic. If such propositions were *unconstructedly* analytic, then the conclusion about equal angles could be deduced from the concept of equal sides; but such a proposition about equal sides and equal angles occurs only in the case of triangles, and apart from that in no other figure of equal sides.[81] [1091]

The limitations of human nature have hitherto been used for the purpose of showing that it has a beginning, not merely that it is a dependent being, which is conceivable as not having a beginning in time. Now through experience, the cause of this beginning or much more the noncause of it is to be accounted for apodictically. Others accept it as a matter of experience that man, according to his being and condition, is determined by conditioned and thus also dependent beings, which once again presuppose a ground for their being conditioned, and that here our reason cannot give up its search until it has posited an eternal independent being as the first cause of all conditioned things. It is only again with reason that one can deny this is correctly thought. But the important question is: what is thereby achieved for the proof of the *objective* existence of such a being? Our reason arrives

at the idea of such a being, not because otherwise the individual experiences of an external world would be impossible for it, but because without this connection, in which it thinks the whole in accords with its nature, the final *bond* is missing. If this conclusion is to have objective validity, it must be shown that, without the presupposition of such a being, not only would our representations of nature have no bearing, but nature itself and our experience of it would not be possible;—thus we must recognize this being. Now, since we cognize its effects only through appearances, and even the actual grounds of these remain concealed from us, how do we expect to decide how the essence of nature must be grounded?—This all leads to the conclusion that this necessity, which only in speculation leads to the idea of God, is only an inner (*subjective*) one, and thus only of speculative use as the first principle of the unity of our cognition of nature. One must not tire of saying this if one strives for the truth and not merely *persuasion*. It is better that we ourselves dispute such an insecure possession than that in times of need someone else dispossess us of it (not πμ). *Schleswig-Braunschweig Journal*, July 1792, p. 282. G.C.L.[82] [1098]

Burn in the name of the Lord, scald in the name of the Lord, murder and deliver to the devil, all in the name of the Lord. [1099]

On old and new philosophy. Previously there was a science of *supersensible* objects apprehended by reason alone. *Ontology* was a science of the *objective* predicates of real objects derived from reason alone, which sanctioned the entire metaphysical system. Its cardinal principle was the law of contradiction, which however proves nothing but the agreement of an idea with its predicates but not of the idea with the objects. [1130]

We perceive things by means of our senses. But what we perceive are not the things themselves; the eye creates the light, and the ear, the sounds. Outside of us, they are nothing. We lend them this. It is just the same with space and time. Even if we cannot feel the existence of God, we cannot prove it. All of this leads to one thing. But it is not possible to convince oneself of this without profound reflection. I believe that in some years it is as difficult to learn the Kantian philosophy as it is to learn to walk a tightrope. [1168]

On the nature of the empirical and the intelligible. A being other than God could be possible that determines itself without dependence on causality. [1173]

If a war has lasted twenty years, it may well last for a hundred. For war has now become a status. Polemocracy. People who have tasted peace die out. [1181]

Like the Revelations of John, I have taken the explanation of gravity and speculation about the formation of crystals to their final conclusion, and one can believe as much of it as one wishes or can. [1183]

Writers argue against suicide with reasons that are supposed to influence our judgment at the critical moment. But all of this is in vain as long as we have not discovered the reasons for *ourselves*, that is, as long as they are not the fruit, the result, of the whole of our knowledge and our acquired nature. Thus everything calls to us: strive daily after the truth; learn to know the world; devote yourself to acquiring the companionship of honest men; and you will always act in your best interest. And if one day you should find that suicide is in your best interest, that is, if all of your reasons are not sufficient to dissuade you from it, then for you suicide too is—permitted. [1186]

One need not endeavor to understand it, for it is not worth the effort. This is Huygens' estimation of the Cartesian theory of the astronomical telescope.[83] [1191]

To completely prevent an effect from occurring requires a force equal to the cause of that effect, but to give it a new direction often requires only something quite trivial. [1196]

My body is that particular part of the world that my thoughts are able to alter. Even *imaginary* illnesses may become real ones. In the rest of the world, my hypotheses cannot disturb the order of things. [1208]

Is it not peculiar that anyone can be his own physician or lawyer, but as soon as he wishes to be his own priest, he is met with cries and lamentations, and the gods of the earth intervene? What might be the reason the gods of the earth concern themselves so with the eternal welfare of man, while they are so often irresponsibly negligent of his mortal welfare? The answer is not difficult. [1227]

Is the situation so uncommon then in which philosophy forbids one to do philosophy? [1234]

If I wish to make an inference by analogy, I must necessarily assume an order of priority between analogies, for one cannot be just as good as another. What does this order of analogies consist in? [. . .] [1259]

Something completely paradoxical about this that nobody could yet have easily thought. [1261]

To attribute a different name to something, which would have been attributed to it in other regards, and to make inferences from this. [. . .] [1266]

To doubt things that are now believed without any investigation, that is everywhere the essential thing. [1276]

Every particle could be an organic being. Geometry at any rate has nothing to do with the organic; for this, there still is no geometry. At least our current geometry has not yet ventured to expand this far, and if it did it would be unsuccessful. Every particle of matter floats about in the expectation (if I might speak this way) of becoming organic; and if it becomes organic, it is lost to geometrical observation. [1283]

The doctrine of the soul is like that of phlogiston. [1306]

Why do I believe this? Is it actually this way? [1326]

It really deserves sincerely to be investigated, for my own housekeeping, why most discoveries happen by chance. The principle reason is really that people learn to regard things as their teachers and acquaintances do. That is why it would be quite useful for once to give instructions on how one can deviate from the rule according to certain laws. [1329]

Whenever I arrive at a new thought or theory, always to ask: Is this really as new as you believe it to be? This is also in general the best reminder never to be amazed at anything in the world (*nil admirari*). [1341]

Our entire morality and religion belong to the dynamics I spoke of elsewhere. Newton says at the end of his famous *Queastionen* in his *Optics*: the more we learn to know about the order of this world, the more we learn to know God (or whatever it is that each may and finally must call God πμ) and thus the more we learn to do his will just as surely as salt crystallizes. These

things do his will without knowing it. Man does it with the feeling he calls consciousness and moreover with the feeling he could also *not* have carried out this will if he had wished, just as we believe the wind that blows today could also not have blown today. [1350]

Nothing in the world is so difficult as to make the conditions in experiments sufficiently identical. [. . .] [1357]

Our artificial systems in the natural sciences are certainly not the best; we choose them only because we lack a *natural* system. But even someone who believes all artificial systems are false must concede that if ever a natural system arises, it will certainly be thanks to the indefatigable industriousness with which people worked on the artificial ones. This is also quite true of hypotheses, yet people now deny their usefulness. [1360]

To seek to see in everything something no one has yet seen or thought. [1363]

To ask in everything the question: *is this true?* and then to seek reasons for why one believes it is not true. [1389]

The reason I admire Herr Lesage's theory so much is primarily because by supporting itself with analogy and geometry, it tidies things up for us and encompasses the furthest circles of our knowledge—it gathers up all the little particular hypothetical amusements and makes all further dreams useless. If it is a dream, then it is the greatest and most sublime that has ever been dreamed and one with which we can fill the tiny holes in our books that could only be filled by a dream. And if this dream is internally coherent, if it never departs from the rules of correct analogy, then it could be truth itself or at least take its place. He teaches in models as one preaches in analogies. Indeed, the deaf-mute learns to speak with tones that he himself does not *hear*, being led by what he sees to imitate the movement of the speaking muscles. [. . .] [1416]

Regarding the indiscernibles and imponderables in nature, Lucretius is quite fitting: "Corporibus caecis igitur natura gerit res" (*De rerum natura*, 1.328).[84] [1420]

Has anyone ever dreamed of scents for which there was no external cause, I mean, for example, the scent of roses at a time when the scent of rose or

rosewater could not reach the nose? This is certainly the case with music and light as well; only the sensations of pain in dreams commonly have an external cause, but I am uncertain about scents. [1465]

On Lesage. I would very much like to know whether it is better to be stalled with an obscure word or to posit causes using analogies that through their ingenious expression put us finally at ease. Nothing in the world can bring us to a standstill quicker so that we are no longer in the position even to think of a plausible hypothesis, as, for example, occurs with questions about the origin of motion or the origin of things. [1483]

God, this great *qualitas occulta*. [1485]

Man is a masterpiece of creation if for no other reason than that, despite all evidence of determinism, he believes he acts with free will. [1491]

Lesage's Hypothesis: To assume that all of this is *inexplicable* is itself a hypothesis, such as that which the common man holds regarding things that the scholar can explain. To say that it is *uncertain* is also a hypothesis; or it is meaningless, for what in the whole of natural sciences can we be *completely certain* about? [1502]

Hypotheses—conjectures by analogy with what is already agreed upon. [1520]

Someone who accumulates mere observations and experiments seems to me like a person who keeps a register of the pieces that two chess players pick up, put down, and remove. Someone who notices which movements they are making is much more advanced. It would cost him not a little time precisely to account for the laws of movement; indeed, he would expend a great deal of time before deducing the reason why all of the movements are being undertaken and that the purpose of it all was to capture the king. Without hypotheses of this sort, nothing can be ordered. The question as to their usefulness has something absurd about it, for we would like to explain the phenomena in nature, and such a hypothesis is nothing more than a bold explanation that gets a knock on the head as soon as the phenomena contradict it. The question of the usefulness of false hypotheses also answers itself: not everyone is capable of immediately arriving at the best one. Not only are they found in the natural sciences, but Turenne and Friedrich II followed them in their endeavors as much as Newton. L'hombre cannot be

played without hypotheses, and the finest players venture them most often. When the false ones are rebutted, there is always another one that is seldom any worse.[85] [1521]

Movement in nature appears to be not so much purpose as means. Space is the *vehiculum of movement* through which we come to know everything. [1523]

It is strange that only extraordinary people make the discoveries that afterward seem so easy and simple; this presupposes that to perceive the most simple but true conditions of things requires very profound knowledge. [1529]

How do we arrive at the concept *outside us*? Why do we not believe that everything is *within us* and occurs *within us*? How is it that we arrive at the concept of distance at all? This seems quite difficult to resolve. We go as far as to locate that which is in us and occurs within us, namely, the changes of the images on our retina, outside ourselves, and yet when we are pricked or feel a pain in the eye, we immediately locate it in the eye itself. [1532]

A man of spirit must not think of the word *difficulty* as even existing. Away with it! [1534]

In observations, the difficulties are objective and subjective irregularities. We can consider the latter objective and assess accordingly. [1536]

Outside us. It is certainly difficult to say how we arrived at this concept, for we actually merely sense things within us. To sense something outside oneself is a contradiction; we sense things only within ourselves, and what we sense is a mere modification of our self and thus within us. Because these alterations are not dependent upon us, we ascribe them to other things that are outside us and say that there are things we should call "*praeter nos*"; but for *praeter* we substitute the preposition *extra*, which is something entirely different. That we think of these things as being in a space outside us is clearly not a matter of sensation; it seems to be something that is most intimately interwoven with the nature of our sensible faculty of cognition; it is the form in which the representation of something *praeter nos* is given to us. The form of sensibility. [1537]

Could our belief that we act freely, although we are actually machines, not also be a form of our understanding? It is entirely impossible for us to observe the initial act of coming into being; we everywhere observe only what has happened, not how it has happened; when we believe we are now doing something, it has really already been done. [1538]

Although the concept of *antiperistasis* has been banished from physics, it nevertheless still finds a place in ethics. [1541]

In sound, there is nothing that corresponds to black in colors. Deathly silence might be called black. An interval is black. [1543]

In physics, it is just as with the genealogies of the Bible: he was the son; he was the son, and he was the son of Adam, and he was the son of God. [1548]

In the itinerant wanderings and expeditions of the imagination, we often scare up game that methodical philosophy can make use of in its well-ordered household. [1550]

Man is a creature who searches for causes; in a hierarchy of minds, he could be called a "cause-seeker." Other minds perhaps conceive of things according to different relations that to us are incomprehensible. [1551]

A good method of discovery is to imagine certain members of a system removed and then see how the rest would behave: for example, if the world were without iron, where would we be? This is an old example. [1571]

The more experiences and experiments we accumulate in the investigation of nature, the more precarious the theories become. But it is not always good to give them up immediately on this account. For every sound hypothesis was useful for synthesizing and retaining previous phenomena. We should document contradictory experiences separately until enough have accumulated to make erecting a new structure worthwhile. [1602]

Wit is the *finder*, and understanding, the observer. [1620]

To invent an inventor for all things. [1621]

Is this really the only way of explaining this? [1639]

Seeing black is not the same as seeing nothing. Someone who has no eyes does not see everything around himself as black but does not see at all. We do not see black with our ears but do not see at all. Black then is seen or sensed to a certain degree; it is the feeling of tranquility for a sense engaged by light. [1651]

It cannot be proven whether *animals* perceive things in space and time, for regardless of whether they act in accordance with their perceptions, it would all the same appear to us as though they were acting according to space and time. This is also the case with the actions of those born blind. [1664]

To seek everything on a grand scale that we observe on a small scale and vice versa. For example, all that a child says and does the adult certainly also does in other things in which he is and remains a child; for we are after all only children of an advanced age. This lesson is put quite generally, but the man of experience will certainly understand how to give it the sense he knows I intend. We no longer strike the table after bumping into it; but for different yet similar bumps we have created the word *fate*, which we know to curse. [1666]

In a land where snow never falls on the planes, there is a towering, insurmountable, snow-covered peak upon which the inhabitants can gaze. What hypotheses the physicists would not propose to explain this phenomenon: flowers, mold, or foam caused by the flow of the water. Phosphorescence—a fable about the craters on the moon. [1739]

We might explain nature as Minellius did Virgil, but also as Heyne did: with a painstaking view that does not extend beyond grammar, but also with a comprehensive view that encompasses the entire age and human nature. The view of an apothecary.[86] [1758]

For the banishment of empirical comparisons it is admittedly too soon, but we must always create refuges for this purpose. [1760]

Is a complete revolution possible in this? [1773]

These theories are artificial systems that have their value always in absence of a natural one. [1774]

It would have been quite simple for the heavens to grant us a sense that would immediately indicate the distance of objects from us, just as our ear, so to speak, counts the vibrations of strings. Just as light indicates the positions of objects only according to its path, a sense would be quite possible that would indicate distance immediately. The distances of objects are always only inferred. [1782]

What odd chatter there would be in the world if we were to transform the names of things into definitions! [1806]

When I press my hand on my eyes, I see suns, electrical figures, and the most beautiful patterns. When I remove my hand and open my eyes, I see a tree and roof tiles—what is now doing what my hand previously did? [1817]

If we assume that all our representations are a kind of mania, a state of madness, there must then be some being who has this as its purpose. The mad are severed threads who do not follow the spool in the weaving of a tapestry. In them, we find the work of God. They are also considered holy among some peoples. The mad give us a view into the economy of the whole, which we would otherwise not have. They are the compressed eye that produces electrical figures, suns, and patterns. [1818]

The moment we assume a primitive state of the earth, whatever it might be, we assume something *naturally*. To assume something is, however, always a kind of prophecy, like soothsaying, for we can never know what the earth was in the beginning—and what is *in the beginning*? What do these words mean? [1819]

As long as we do not know how animals originate and develop, we also cannot know whether mussels did not originate in the mountains. [1820]

Richter once said to me that physicians should not say: "I cured him," but, "he did not die at my hands." Likewise in physics, one could also say, "I have attributed to it causes whose absurdity in the end no one will be able to demonstrate," instead of saying, "I have *explained* it."[87] [1827]

Of what type is this, or in what does the type to which it belongs consist? [1836]

I also believe that strictly understood there is for humans only a single science, and it is pure mathematics. For this we need nothing more than

our mind, our self; and indeed, we need this self even for our existence. Yet to believe for this reason that mathematics is absolutely necessary for physics is foolish, for where this actually happens, man has already made the best discoveries. It should be brought to a point where it can be left to the mathematician, yet I believe that the first mathematical people saw *more* of the mathematical in things than was really there. This, I think, is also an idea from Kant, but I am not certain. [1841]

We seek everywhere in nature a certain determination, yet all this is nothing more than an ordering of the obscure feeling of *our own* determination. All mathematical laws we discover in nature are, despite their beauty, always suspect to me. They bring me no joy. They are merely for utility. In close proximity, nothing is true. [1843]

Might there not occur in other *bodies* something analogous to fantasy and creativity in our own? How might our brain appear if we could observe the changes brought about in its texture by thoughts? [1854]

In the world and in the realm of truth, we must investigate freely and not concern ourselves with whether a proposition belongs to a family of which some members might be dangerous. The power involved here can be useful elsewhere as well. [1857]

Is this the real cause as we commonly believe, or is there still more to it? [1884]

We cannot too often bear in mind that all application of mathematics to physics is valid always only in the sense in which what is claimed to be true of mathematical objects is also true of physical ones. The ideas of mathematicians, like the law of refraction or the effect of gravity, are pure ideas, which certainly do not occur in nature in the form in which the mathematician represents them. This is how things are. Already with the concept of a body, the mathematician differs from the physicist; how then can he with any right insist upon further agreement? They are all *his* assumptions. [1908]

To no longer use in physics compendia the word *theory* regarding fire, electricity, magnetism, and many others, but instead to use fact and speculation; *manner of representing*. [2021]

Since we have no sensation of magnetic forces, it could also even be the effect of a physical body that is not an object of our senses. [. . .] [2040]

Above all, to expand the frontiers of science; without this, all is for nothing. [2041]

Just once to try on Kantian philosophy with my so-called metempsychosis. [2043]

What have we done?
What are we now doing?
What else should we do? [2076]

Would it not be a good idea at the beginning of our physics books to teach about our senses in general, where we can prepare for expressions such as *latency*. We encounter numerous effects in nature whose causes we cannot sense: the cause of gravity, of magnetic material. Consider how light would appear to us if we had no eyes. [2078]

Do not say hypothesis, and even less theory; say *way of representing*. [2093]

It is common to rebuke the phlogiston theorists because they cannot agree, since one understands this by phlogiston and another that, and thus that they themselves do not understand what they mean. This is even used as an argument against the existence of phlogiston. To my mind, we could reverse the argument and say that it is precisely because there are so many opinions that there must be something else there in addition to fire and air and that it is very probable that some such thing exists. Similar conclusions have been drawn from the common belief in a god or the soul. (Even the fact that people pray to idols proves there is a god.) [2134]

The philosopher cannot proceed cautiously enough in his supposition of matter. What we explain according to matter and even fluids could be nothing more than transcendental affinities. That I see a physical body, and it addresses my substance, and that it does this from a great distance when the sun is over the horizon, is heightened affinity. A ball in the dark still addresses itself to my sensations. For how objects outside me affect my faculty of cognition, I do not know. There are properties of these objects outside of us through which they are able to modify our sensing substance.

That the sensation of this modification is not the thing itself is no doubt very clear. The vibration of the air first becomes a sound where there is an ear. Accordingly, our senses would be nothing more than instruments through which the affinities of physical bodies can become representations in us. [2147]

However we wish to put it, philosophy is always the art of analysis. The peasant uses all the principles and propositions of the most abstract philosophy, only in a way that is enveloped, indirect, compounded, or *latent*, as the physicist or chemist might say; the philosopher gives us pure propositions. [2148]

We see in nature not words but only the initial letters of words, and when we wish to read, we discover that the so-called new words are in turn merely the initial letters of others. [2154]

Notebook K

1793–1796

The greater and more ambitious the plan is into which a revolution fits, the more suffering it inflicts upon those involved, for not everyone is capable of strengthening his patience by appealing to reason, even if he has a clear view of the whole, and this much less so if he is uncertain that he will still be there to enjoy the fruits. But precisely this same shortsightedness, which makes man incapable of surveying the grand plan of providence, prevents even the wisest governments from attaining their great goals by the peaceful roads they so rightly embark upon. Indeed, since it is a natural duty always to choose only what we believe to be right, it is impossible to embark upon a road that will lead to the improvement of the world but will make millions miserable in the present. Man is here to cultivate only the surface of the earth, and nature reserves for herself the cultivation and repair that go deeper beneath the surface. Such cultivation has not been entrusted to man. He cannot cause earthquakes that devastate cities, and if he could, he would surely cause them in the wrong places. I am inclined to believe that the same is true of our—*archies* and our—*cracies*. What the plow and the axe can do is what we can and must do—but not what belongs to the earthquakes, floods, and hurricanes, though this is presumably, even certainly, just as useful and necessary. If ultimately the fortune of our entire species rests on some . . . *cracy*, whose prefix we do not know, and like mathematicians must simply call an *x*-ocracy, who wishes to assign this *x* a value? A friend suggested *Christ*ocracy, and from the depths of my soul I have no objection to this value for *x*, if only we could for once agree on the meaning of the word *Christ* or if we did not willfully misconstrue its clear meaning. I fear, however, that even this understanding could be brought about only through reformatory revolutions or a thirty years' war. [16]

If a higher being were ever to tell us how the world came into existence, I would much like to know whether we would be in a position to understand him. I believe we would not be. Regarding the act of coming into existence, there would hardly be any mention, for this is mere anthropomorphism. It might even be that outside of our minds there is nothing that corresponds to our concept of coming into existence once it is applied, not to relations among things but to things in themselves. [18]

Much is being written nowadays on nomenclature and correct designation, and this is quite right; it must all be considered and the best results obtained. Yet I believe that we expect too much from it and are too anxious to give things names that express their nature. It seems to me that the immeasurable advantage that language brings to thinking consists in the fact that words are signs for things rather than definitions. Indeed, I believe it is precisely in providing definitions that the usefulness of language is in part annulled. To determine what things are is the task of philosophy. A word should be, not a definition, but only a sign for a definition, which itself is always the variable result of the collective effort of researchers; and it will always remain so in countless objects of our thinking that the thinker will become accustomed no longer to regarding the sign as a definition and will in the end unwittingly transfer this lack of meaning even to those signs that are genuine definitions. And I think this too is quite right. For since the signs for concepts cannot be definitions, it is almost better not to allow any of them to be definitions than, on the reputation of a few signs that are genuine definitions, to give false credit to so many others that are not. This would produce a dominance of language over meaning that would rob us of all the advantages provided by the signs. But this need not worry us; left to itself, reason will always take words for what they are.—Such a defining word accomplishes incredibly little. For a word cannot contain everything, and thus I still must get to know the thing itself better separately. The best word is one that everybody understands immediately. We should therefore be careful about discarding words that are universally understood and not toss them aside on the grounds that they might present a false conception of a thing! For, in the first place, it is not true that such a word gives me a false conception since of course I know and take for granted that the word serves merely to identify the thing, and, in the second place, I have no wish to learn the nature or essence of a thing from the word. Who has ever thought of metal calx at the mention of calx? What harm can there be in calling comets comets, that is, long-haired stars, and what use would there be in calling them flaming or steaming stars? (or shooting or falling

stars for that matter). It is seldom that much can be introduced into a name, so that one must in any case know the thing first. *Parabola*, *hyperbola*, *ellipse* are the kinds of names of which chemistry can hardly boast, for they express properties of lines from which all other properties can be derived; but this is certainly to be attributed more to the *pure* nature of the science to which these observations belong than to any particular cleverness on the part of the originators of these names. Yet of what use is this wisdom? We employ them just as we do the names *circle* and *ring* or *conchoid*, which are not definitions at all. This dispute has much in common with the purist endeavors of the language reformers and orthographers. *Too much* is expected of good words and feared from bad ones. It is not only the correctness but also the familiarity of an expression that is important, and the value of a word to a certain extent consists in the proportion in which correctness and familiarity are combined whenever it is used. To establish rules for the creation of words is certainly always a good idea, for a time might come when they are needed. It really is best to give things Greek names. If all of the names in chemistry were Hebrew or Arabic, such as *alkali* etc., then the less one understood of the names, the better one would fare.[88] [19]

Nomenclature. Here too a limited monarchy is preferable to an aristocracy. If we wish to grant validity only to rationally selected expressions, we will have an aristocracy, and then the question will be: which are the most rational, and who is to decide this? Indeed, many expressions might be selected that are all equally good and equally rational. Here too I consider a carved monarch the best monarch, for carved saints accomplish more than living ones. In the reformation of accepted words, vanity always plays a greater role than utility, for usually the new words become useful only when we understand them and take them for granted as we did the old ones, that is, when we no longer think of *the nature of the things* they designate but only of the things themselves. Hypotheses are expert opinions; nomenclatures are mandates. [20]

Nomenclature. I always think it best not to reform at all. It arouses animosity, envy, and disdain, and *too much* is written about names that is really of no value. The senseless disappears of its own accord, and that which nature rejects does not grow again. [21]

Previously my head (my brain) recorded everything I heard and saw; now it no longer records things in this way and instead leaves it to *me*. Who is this *I*? Am I and the writer not the same? [38]

In his *Letters on Different Subjects in Natural Philosophy* (Vol. 2, Pg. 228), Euler says there would still be thunder and lightning even if there were nobody present for the lightning to strike. It is an entirely common expression, but I must admit that it has never been easy for me completely to grasp it. It always seems to me that the concept *being* is something borrowed from our thinking and that if there were no longer any perceiving and thinking beings, there would also no longer *be* anything. As simple as this might sound and as ridiculed as I might be if I expressed it publicly, I consider *the ability to speculate about such things* to be one of the greatest virtues, indeed one of the most unique abilities of the human mind. This is related again to my idea of metempsychosis. I think, actually, I sense very much in this that I am not in a position to express, for it is not something *common for humans*, and thus our language is not made for it. God grant that it does not one day drive me mad. I realize this much: if I wished to write about it, the world would consider me a fool, and thus I remain silent. It is as difficult to communicate this as it would be to play the spots on my table on a violin.[89] [45]

Nothing pains me more in all that I do and do not do as much as the fact that I must see the world as the ordinary man does even though as a scientist I know he sees it falsely. [46]

Where foresight was of no use, I possessed it, but where it could have been of use I was foolish: *when the time comes I will know what to do*, I thought, and did nothing. This is a disposition far more common than we think. [47]

Even if my philosophy is not sufficient to discover anything new, it nevertheless possesses courage enough to regard as questionable what has long been believed true. [49]

Oh! Those were the good days when I still believed everything I heard. [50]

I cannot rid myself of the idea that I *died* before I was born and that through death I will return again to that previous state. It is in many respects fortunate that this idea cannot clearly be comprehended. Even if it were possible for man to speculate about this riddle of nature, it would be very much against his interest to be able to prove it. To die and become animate again with the memory of one's previous existence, we call being

unconscious; to wake again with different organs that require development, we call being born. [54]

It is quite amazing the varied levels of instruction afforded us by our faculties, from the most indistinct presentiments to the clear insights of the understanding. It is a favorite endeavor of mine to analyze them. Nearly every contemplation is preceded by a certain decisive feeling, which in a felicitously constituted mind seldom deceives, and is subsequently merely ratified by the understanding. Perhaps animals are led only through such intuitions. [63]

Perhaps we can imagine the matter this way: we possess a capacity for receiving impressions, which is sensibility. Through this we become conscious of the modifications that occur within us; the cause of these modifications we call objects. Yet we ourselves are not only these objects. We sense modifications and impressions within us the ground for which we seek also within us because we are conscious of the fact that they are dependent upon us or are within us. In this way, we are conscious of the state of our soul at every moment. This capacity is *inner sense*. When I say something occurs *within me*, I am experiencing it with inner sense. There is a feeling of attention, spontaneity. Here we ourselves are object and observer, object and subject.

And yet there are also impressions regarding which we sense in an overwhelmingly convincing way that we are merely a receptive subject but are nothing less than an object. Perhaps it would be enough to say here that such objects are *praeter nos*, something distinct from us—this, we should think, is the only thing we are capable of sensing. But that this *praeter nos* is transformed into an *extra nos*, which we do and must then associate with distance from us in space, seems to be a necessary requirement of our nature. Since this representation carries with it necessity, it cannot come from experience, for no empirical proposition implies necessity. Indeed, we must even think of space as infinite. How could we experience such a thing? It is impossible. Thus I believe that if any proposition is independent of all experience, it is the proposition regarding the extension of bodies.

Here then arises another question, and I cannot say if it has yet been answered: if bodies are granted objective reality, and properties are attributed to them, then given a countless number of cases, one would be possible in which the object has those properties that we, according to our nature, must attribute to it. This is so not because it has these properties, but

because given the countless possible forms of intuition also this agreement would be possible. This would also be a *harmonia praestabilita*. Yet here it is also a question whether it is permissible to ask if an object can be that which it appears to be for another. This entire question is once again anthropomorphism. For how beings that sense and think can be affected by objects outside of them is something we do not and cannot know. Given this state of things, the smartest thing we can do is to remain with ourselves in order to observe our modifications and not at all to concern ourselves with the nature of things in themselves.

Just as it is with space for so-called external objects, so it is with time for the objects of inner sense. We view modifications in ourselves under the form of duration, succession, simultaneity etc.[90] [64]

What makes the study of a profound philosophy so difficult is that in everyday life we regard a host of things as being so natural and simple that we believe it would not be possible for them to be any different, yet we have to recognize that we must first accept that these supposed trivial things are of great importance in order then to explain what is pronounced *difficult* about them. When I say: *this stone is hard*—thus first associate the concept *stone*, to which many things can be attributed, with this *individuo*, then speak of its hardness, and then go on to unite this being hard with the stone—this is such a miracle of an operation that it is a question whether so much has been exerted on the production of entire books. "But are these not subtleties? Does one need to know this?"—Regarding the first question: they are not subtleties, for it is precisely in these simple cases that we must get to know the operations of the understanding. If we wish to do this first with complex things, then all of our effort will be in vain. To find these simple things difficult reveals no marginal progress in philosophy.—Regarding the second question, however, I reply: *No*! You do not need to know it, but neither do you need to be a philosopher. [65]

Very few people indeed have ever really contemplated the meaning of *nonexistence*. The nonexistence following death, I imagine as the state in which I was before being born. It is not really apathy, for that may still be felt; it is, rather, nothing at all. When I arrive at this state,—though the words *I* and *state* are no longer appropriate here—, it is, I believe, something that is wholly a counterbalance to eternal life. Regarding sentient beings, *nonexistence* is not opposed to *existence* but to *supreme bliss*. I believe one

would be equally well off whatever state one is in. But because we do not comprehend the whole, it is our duty to act according to reason, to live and to *wait*. [66]

What is really singular seldom remains unexplained for long. What is inexplicable is usually no longer really singular and perhaps never has been. [67]

The understanding grasps theory quite well; *judicium* decides its application. Very many people are lacking in the latter quality, and frequently the greatest scholars and theorists lack it most of all. [68]

Already many years ago, I thought our world might be the work of some inferior being, and I still cannot rid myself of this idea. It is foolish to think that a world with no sickness, no pain, and no death is impossible. Indeed, we imagine heaven in this way. To talk of a time of probation, of gradual perfection, is to think of God in human terms and is mere chatter. Why should there not be a gradation of beings up to God, and our world—I mean our solar system and the entire star cluster ending with the Milky Way—be the work of one who did not properly understand things, an experiment? The nebulae observed by Herschel are perhaps nothing more than admitted specimens or works in progress. When I witness war, hunger, poverty, and pestilence, I find it impossible to believe this is all the work of a supremely wise being. Or perhaps some matter independent of this being was created, and some degree of limitation was introduced so that this world became only relatively the best one, as indeed has often been taught. [69]

If we regard nature as a teacher and poor mortals as her pupils, we are inclined to make room for an altogether extraordinary idea about the human race. We are sitting all together in a class and possess all of the principles necessary for understanding what is said, yet we pay more attention to the chatter of other pupils than to the teacher's lessons. And indeed when someone next to us does take notes, we *cheat* from him, stealing some remark that he himself perhaps indistinctly heard and supplementing it with our own orthographic and intellectual errors. [70]

Every degree of knowledge has a number of viable propositions in regard to which we do not notice that they levitate without further support on

mere conjecture beyond what is comprehensible. We possess them without knowing whence the certainty comes with which we trust them. The philosopher has them no less than the man who believes that water flows always downhill because it would be impossible for it to flow uphill. [71]

With the prerogatives of *beauty* and those of *happiness*, the matter is quite different. To enjoy the advantages of beauty in this world, *other* people must believe that we are beautiful; yet in the case of happiness, this is not necessary, for it is perfectly sufficient that *we ourselves* believe it. [72]

One of the greatest supports for Kantian philosophy is the *certain truth* of the observation that indeed we ourselves are as much something as the objects outside of us. Thus whenever anything affects us, the effect depends not only on the thing producing the effect but also on that upon which the effect is produced. As in collisions, both bodies are at once active and passive, for it is impossible for one thing to be acted upon by another without the overall effect appearing compound. I should think then that in this sense a pure *tabula rasa* is impossible, for in every action or effect the agent is modified and what it loses the other gains and *vice versa*. [74]

We become conscious of certain representations that are not dependent upon us; others, at least we believe, are dependent upon us; where is the boundary? We know only the existence of our sensations, representations, and thoughts. *It thinks*, we should say, just as one says, *it lightnings*. To say *cogito* is already too much if we translate it as *I think*. To assume the *I*, to postulate it, is a practical necessity.[91] [76]

What does it mean *to think in the spirit of Kant*? I believe it means to discover what relationships obtain between our being, whatever it might be, and those things we say are *outside us*; that is to say, to determine the relationship of the subjective to the objective. This has certainly always been the goal of all thorough natural scientists; the question is whether they have undertaken it in so truly a philosophical way as Herr Kant. One has taken things to be objective that indeed are and must be subjective. [77]

I find that theorizing is excusable, for it is an impulse of the soul that can be useful to us as soon as we have accumulated sufficient experience. Thus all our current follies of theorizing could be impulses that will find their application only in the future. [78]

Man is to be found in reason, God in the passions. I believe Pope has already said something similar.[92] [79]

Is it not strange that belief can become stronger than reason? And is it not the question which of them has more right to direct our actions since both direct them with equal strength when they begin to govern? [80]

It is impossible to see how far anthropomorphism may not extend, taking the word in its widest sense. People revenge themselves on the dead; bones are exhumed and dishonored; we empathize with inanimate things—indeed, someone once mourned for a clock when it stopped because of the cold. This transference of our own feelings and perceptions to others prevails everywhere in such a variety of forms that it is not always easy to identify. Perhaps all pronouns regarding *the other* have such an origin. [83]

What might be the reason for the singular phenomenon, which I have so often noticed, of speaking to someone in a dream about a third party and then upon awakening discovering that the supposed third party is the very person with whom we were speaking? Is it perhaps a mere form given by awaking, or what might be the reason? [84]

Since in dreams we so often take our own objections for those of another, as for example when we dispute with someone, it surprises me that the same does not occur more often when we are awake. The state of being awake seems primarily to consist in our making a sharp and conventional distinction between what is in us and outside us. [85]

Why can we not wean ourselves from sleep? Considering the most important functions of life proceed without interruption and the organs through which this occurs, like the heart, bowels, and lymphatic system never rest or sleep, it would seem that sleep is not at all necessary. Those organs then of which the soul has most need for its functioning are interrupted in their activity. I would much like to know whether sleep has ever been considered in this regard. Why do we sleep? Sleep seems to me to be more a relaxation of the organs of thought than anything else. If a person were not to exhaust himself physically in the least but to do his business according to his utmost comfort, he would in the end still become sleepy. This at least is a manifest indication that while we are awake more is expended than earned, and as experience teaches us, this deficiency cannot be compensated for while

awake. What does this mean? What is man while he sleeps? He is a mere plant; thus man must for a time becomes a plant so that for a few hours during the day he may represent the masterpiece of creation. Has anyone yet considered sleep as a state connecting us with plants? History contains only accounts of waking people; but should we regard those of the sleeping less important? True, man does little in that state, but it is precisely here that the waking psychologist has the most to do.

At their extremities the nerves become pointed and constitute what we call "organs of sense." The extremities are directed outward and receive impressions of the outside world. These presumably are at work without our knowledge and are continually awake. If we consider man from the extremities of the nerve fibers to his interior, there is a stratum constantly at work; and presumably while occupied with the transmission of impressions to the soul, this stratum cannot at the same time be occupied in maintaining itself and replacing what has been expended. Thus these parts are left to rest during the time of restoration. We appear to feel only while functioning, not while we are accumulating the means to do so. What we sense in this case is perhaps only the sensation of well-being; it does not become an idea but is the mere feeling of strength or even comfort.

Our entire history is merely the history of the waking life of man; nobody has yet considered the history of his sleeping life. Our organs of thought appear to be fatigued most easily; they are the most acute nerve extremities. Thus during healthy sleep we do not think at all. To recapitulate: in the most sensitive nerve extremities, exertion and restoration appear to counteract one another; when the nerves are being restored, there is an absence of sensation. Those parts located nearer the interior are merely for sustenance, not for transmission and reaction. In this way, the necessity of sleep might be demonstrated a priori. Sensitive parts that must be restored by coarser ones are unable to fulfill their duties while they are undergoing this repair. [86]

The sure conviction that we could if we wanted to is the reason some good minds are idle—and this is not without its reasons. [87]

We cannot show with more certainty that a particular character is a person's true one than by showing that the opposite would make everyone laugh. [89]

Even the uncertainty in which we find ourselves about certain objects is sometimes useful. Through this, hope acquires great latitude, and we always hold for true what is most appropriate to our situation. [94]

I am convinced there are spectacles for the powers of the mind just as there are for the eyes. [. . .] [96]

It is certainly better not to have studied a subject at all than to have studied it superficially. For when healthy common sense makes a judgment about something it does not go so far astray as a little erudition does. [98]

I am utterly convinced man possesses all knowledge necessary to make him happy. Yet it also seems to me probable that human happiness as such contributes little to the well-being of the whole. What man contributes to the whole is hardly subject to his will or choice. What of it does he comprehend? When he is of use in the exercise of his will, even this will is mechanical, and we are merely disputing about words. Whoever contributes through his will to the benefit of the whole must comprehend the whole. But man cannot do this; thus, with respect to the whole, it is not a matter of freedom. Absolute freedom is here a contradiction. If he has achieved freedom within a certain horizon, it is also merely mechanical and is like the freedom of a man who turns the treadwheel of a crane. I believe when man binds himself to the great chain of things he is not free; he does not even know that he is contributing. [99]

[. . .] If God proclaimed the secrets of men, the world could not endure. It would be as if you could see other people's thoughts. [. . .] [100]

To make a vow is a greater sin than to break one. [105]

It is a danger to the perfection of our spirit to receive acclaim for deeds that did not demand the entirety of our powers. Thereafter one usually comes to a standstill. Rochefoucauld thus believes no man has ever yet done all of which he was capable; I believe this is true for most. Every human soul has its portion of indolence, which disposes it most often to do what is easiest for it.[93] [111]

Do people blush with shame in the dark? That people become pale with fright in the dark, I believe, but not that they blush with shame. For they become pale on their own account, but they blush on account of themselves as well as others.—The question whether women blush in the dark is a very difficult one, at least one that cannot be answered with the lights on. [115]

I do not believe that so-called truly pious people are good because they are pious but pious because they are good. There are certain characters for whom it is natural to reconcile themselves with the circumstances of domestic and civil life and to make the best of things of which they partly see the use and partly recognize the impossibility of improving. Thus to ascribe this to religion may well be a fallacia causae.[94] [117]

He was one of those who wants to do everything better than one requires. This is a loathsome quality in a servant. [120]

The rabble can never, or only seldom, be persuaded. Through the cunning guidance of their superstitions, they can, however, still be led to do good deeds. We scare children, whom we cannot persuade, with the figure of a black man or a chimneysweep. Saint Januarius of Naples is nothing more than this. Here again is the series whose polar members seem no longer to belong together.[95] [121]

If you really want to see what man is capable of if he so desires, you need only think of those people who have escaped or tried to escape from prison. They accomplished as much with a single nail as they could have with a battering ram. [124]

First we must believe, and then we believe. [136]

To establish liberty and equality as many people now think of them would mean to declare an eleventh commandment through which the other ten would be abolished. [153]

There is, I believe, no question that despite all inequality of rank all men can be equally happy; we need only seek to make everyone as happy as possible. [160]

As long as our memory lasts, a multitude of individuals work together united as one: the twenty year old, the thirty year old, and so on. But as soon as it fails, we come to stand more and more alone, and the whole generation of I's withdraws and sneers at the feeble old man. [. . .] [162]

What I dislike about the method of treating history is that intention is seen in every action, and every event is attributed to some intention. This is truly

quite wrong. The greatest events occur without any intention; chance makes good of mistakes and expands the most cleverly planned undertaking. The greatest events in the world are not produced; they happen. [170]

In this world, one can hardly find a stranger ware than books: they are printed by people who do not understand them; sold by people who do not understand them; bound, reviewed, and read by people who do not understand them; and now they are even written by people who do not understand them. [172]

Would it not be much better for the human race if we no longer had any history at all, or at least no political history? Men would act more in accord with the powers they possess on each occasion; but now, for every man who is improved by an example, a thousand are made worse.—All this for the *proprium locum*.[96] [176]

Of all the chapters that the pleasant chatterer Montaigne left to us, I enjoyed the one about death, notwithstanding all of the excellent thoughts contained therein, the least of all. It is the nineteenth chapter of the first book. One can see through it all that the brave philosopher feared death; and with the violent anxiety with which he shifts his thoughts, even turning them to plays on words, he makes a quite bad example. Whoever really does not fear death would unlikely know how to speak against it with as many little reasons for consolation as Montaigne presents here.[97] [179]

It must be a quite excruciatingly miserable translation that could ruin a good book for a man of intelligence who reads it as a whole without lingering over each and every expression or sentence. A book that does not possess such a quality, which even the worst translator can scarcely ruin for a man of intelligence, is certainly not written for posterity. [189]

It was once fashionable, and perhaps still is, to add to the title of a novel the words *a true story*. This is an innocent deception; that, however, the words *a novel* are omitted from some recent history books is not so innocent. [195]

Comparison of a preacher and a locksmith: The one says: "You should not want to steal"; and the other says: "You should not be able to steal." [219]

To doubt something, all that is required is very often merely to fail to understand it. Certain men have been all too ready to reverse this proposition, claiming that we fail to understand their propositions if we doubt them. [238]

The Socratic method sharpened—I mean torture. [242]

To think and reflect anxiously about what we might have done is the worst thing we can do. [253]

What is said of the benefits and harms of the Enlightenment can certainly be well represented in a fable of fire. It is the soul of inorganic nature; its use in moderation makes life enjoyable for us, and it warms our winters and illuminates our nights. But this must be done with candles and torches—to illuminate the streets with burning houses is a quite wicked form of illumination. Children must also not be allowed to play with it. [257]

The content, the specific weight of a man's intelligence and talents, is his absolute value multiplied by the mean probability of his lifespan, that is, by his distance from the usual end of progress.—This is entirely comprehensible, for me at least. [271]

Since the discovery of writing, requests have lost much of their force while commands have become more forceful. This is ill balanced. Written requests are more easily rejected and written commands more easily given than verbal ones. Both require a heart that is often absent when the mouth must speak. [275]

It is so very modern to place a funeral urn on top of a grave while the body rots in a box below. And this funeral urn is again a mere symbol of a funeral urn; it is merely the tombstone of a funeral urn. [276]

I read Heydenreich's *Letters on Atheism*, and I must confess that contrary to his intention the letters of the atheist seem to be much more convincing than those of the believers. I am not entirely unfamiliar with the exertion of my reason, nor do I lack good will, yet I am unable to be convinced completely by some of the believer's assertions. Too much reliance is placed on the dissemination of moral consciousness, and I would almost like to say that behind this proposition lies the intention to make us believe we

are morally ill if we do not understand the assertions. If the inventors of these well-meaning propositions possessed a recognized infallibility, we could accustom ourselves to regarding their propositions as true, and for their part they could proclaim: "Thy faith hath made thee whole."—But what use to mankind is such a proof of the existence of God and immortality, which hardly one in a thousand is capable of understanding or actually feeling. If belief in God and immortality is really to have any use in a world such as this one, it must become more accessible, or it is as good as none at all.[98] [288]

We should not lie down to sleep without being able to say we have learned something that day. By this I do not mean for example a word we did not previously know; this is nothing. But if anyone wishes to do this, I have nothing against it, even if it need be just before extinguishing the light. No, what I understand by learning is the expansion of the limits of our scientific or otherwise useful knowledge, the rectification of an error in which we have long found ourselves, certainty in some things about which we have long been uncertain, a clear conception of what was unclear to us, knowledge of truths with broad consequences, and so on. What makes this endeavor useful is that we cannot quickly dispense with the matter before blowing out the light, but our activities throughout the entire day must be directed toward it. Even the will is important in such resolutions; I mean by this the constant endeavor to satisfy the requirement. [297]

Regarding things of a large scale, ask always: "What is this on a small scale?" And with the small: "What is this on a large scale? How does this appear on a large or small scale?"—It is also good to make something as general as possible and explore from top to bottom the entire series of which it is a member. All things belong to such a series whose polar members no longer appear to belong together. [301]

Doubt all things at least once, even the proposition that two times two equals four. [303]

In our investigation of nature, we have fallen into such a deep rut that we always follow others. We must find our way out. [306]

How many ideas float about dispersed in my mind of which many pairs, if they were ever to meet, could produce the greatest discoveries. But they lie

as far apart as the sulfur of Goslar from the saltpeter of the East Indies and the charcoal piles of the Eichsfeld, which when combined would produce gunpowder. How long must the ingredients of gunpowder have existed before gunpowder! There is no natural aqua regia. If in our reflections we surrender ourselves to the natural combinations of the forms of our understanding and reason, our concepts often adhere so tightly to others that they cannot combine with those to which they really belong. If only there were something here like a solution in chemistry where the individual parts float about lightly suspended and thus can follow any current. But because this is not possible, we must deliberately bring things together. We must experiment with ideas. [. . .] [308]

I believe that among all our heuristic pulleys none is more effective than what I have called "paradigmata." [. . .] [312]

By means of a paradigma chosen from physics, I believe one could have discovered Kantian philosophy. [313]

This rule of thumb for inventing by means of paradigmata is obviously of no help to fools, for they are incapable of inventing precisely because they are fools. Yet even clever minds must be prodded to see something new; indeed, it is almost only by such means that new things can be discovered by new paths. If, as Kästner speculates, Newton discovered the law of gravity through his theory of light, then it was a paradigma. With regard to this expedient, we cannot too often remember that the clever mind still retains its natural freedom and thus that the use of such expedients does not obstruct other paths. [314]

When something new is discovered, to investigate whether it is a link in a hidden chain of an entire family of truths. [. . .] [315]

Whether impenetrability belongs to the universal properties of a physical body, I do not dare decide. We infer it from experience, which can never be universal. We also have experiences from which we could conclude the opposite, as in the effects of light or magnetic material, for example. Here we avail ourselves of pores, but these again are posited because we take matter to be impenetrable. [321]

If only for once we actually really knew what *dissolution* is. I think *dissolution* is a word like *attraction* that denotes a phenomenon whose mechanical cause

we do not know. It appears to be a penetration of matters. (Kant, if I am not mistaken, expressed such an idea). It seems at least that dissolution is not the final degree of division.[99] [325]

Everything in this world is composite; we need now only investigate how properly to divide it and to make one matter appear primary among others. This alone is the advantage of making *latent* things *sensible*. [327]

In such a complex dispute as that regarding the theory of light, where Newton and Euler stand at the head of the parties, the question can no longer simply be: what is the truth of the matter? We should ask instead: which explanation is the most simple? Through the simple we gain access to the truth. [361]

Colored shadows certainly deserve the utmost attention of our natural scientists. Most think too carelessly about it. People believe the matter has already been completely explained, but I am inclined to believe that it has not yet been completely explained; indeed, it could be that the present state of optics and our entire knowledge of light are not adequate for explaining such shadows; consequently, an exhaustive examination of this difficult problem would be a true gain. An important text here is a small French work whose author identifies himself only as H. F. T. and whom Herr Gehler mentions in his dictionary article on *shadows*. He has nearly the same idea as Herr Goethe.

I have always believed that much of what is needed to solve the problem of colored shadows lies in a more precise investigation of what it is we call "white." A white body, we say, is one that reflects all colors. This definition not only tacitly presupposes that all colors must be present in order to be reflected wherever we see something white but also that these colors must be present in the proper ratio of both quantity and quality. But where in the world can we expect to find this? Perhaps only in the purest sunlight on the highest point of the earth's surface. What then may be concluded from this? Even in sunlight we never see a white body and even less so in shadows or under a cloudy sky. Yet even though we can observe no pure white, we still know very well what we mean by "white." For we always correct our sensations through conclusions. So early do we learn to do this and it becomes such second nature to us that finally we believe we sense something that we really only conclude. With clothing, it is the person who wears it and the kind of folds it is arranged in and so on that makes me think of it always as white, even on a cloudy day or at

dawn or dusk, though it certainly is not. It is merely concluded, just as with other colors.[100] [366]

Does the phenomenon of blue and yellow shadows not perhaps have something to do with the nature of taste in Galvanic experiments with the tongue? We first taste the one when the other is present. I believe this remark deserves some attention.[101] [373]

Notebook L

1796–1799

Often the great men are reproached for not having done as much good as they could have done. They could reply: "Think of all the evil we could have done but did *not* do." [9]

Is it not peculiar that when for example one reads Sömmerring's admirable writings on the organ of the soul, it appears no more familiar to one than an essay on the purpose of the rings of Saturn would; and yet the soul is, if one may still speak here of a location, that which lies *nearest* to us. Yet this proximity is of no help, for the thing we *can* approach is not the thing we *wish* to approach. While watching the sun set, if I take a step toward it, I become closer to it, however little this might be. Things are much different with the soul. Indeed, it might be possible that by becoming too close, as with a microscope, one further distances *oneself* from the thing one approaches. I see, for example, in the distance a strange mass, and approaching it I discover that it is a castle, and approaching it further I discover a window, and so on. This would be sufficient. If I were unfamiliar with the purpose of the whole, and I investigated it further, I would end up in an analysis of the stones, which would only lead me further astray.[102] [10]

Neither to deny nor to believe. [18]

To do or think something in this which nobody in the world has yet done or thought. [20]

"How is it going?" a blind man asked a crippled man. "As you see," was the answer. [29]

Marriage. Regarding the family register, one should not forget that it only provides certainty when it is organized according to *women*. Everybody knows who his mother is, but nobody knows with such reliability who his father is. [30]

Whether the moon is populated is something the astronomer knows with about as much reliability as he knows who his father was, but not with the reliability with which he knows who his mother was. [31]

Pure philosophy unwittingly still continues and cannot help continuing its love affair with *impure* philosophy. And so it will continue until the end of time. [35]

A philosophy concerned with parsing separates inertia from resistance in a physical body, just as anthropology separates merely animalistic man from rational man, but they both *actually* only exist unified. [59]

Just because sermons are preached in churches does not mean they do not need lightning conductors. [67]

From the differences in standards of measurement something might be concluded about transcendental understanding. We all measure, but our *feet* and *miles* are different. Nothing hinders us here. Why not in opinions and religion as well? Why do we not also easily reduce these foreign thoughts to our own? The answer to this question is certainly not very difficult. [71]

This is surely one of the most peculiar constructions of which the human language is capable: if *one* had not been born, *one* would be free from all suffering. [85]

Müller tells this story in his first remarks on the Copernican revolution: "Someone was asked to give a definition of God: God, he said, is a sphere whose center is everywhere and whose surface is nowhere."[103] [95]

If years were seconds, as of today I would have lived exactly one minute. [. . .] [105]

One of the most peculiar uses man has made of reason is perhaps to think it a masterpiece never to use it, and thus having been born with wings, to

cut them off and descend from the nearest church spire.—The defense of the monastic life is usually founded on an entirely erroneous concept of virtue. Better: these people have about the same concept of virtue as those who wish to call madhouses "academies of science" have of science. [. . .] [114]

A rather audacious philosopher, Hamlet, Prince of Denmark, I think, said that there are many things in heaven and on earth that are not mentioned in our compendia. If the simple fellow, who as is well known was not quite in his right mind, was mocking our physics compendia, we might confidently reply to him: very well, but then there are also many things in our compendia that can be found neither in heaven nor on earth. [155]

To send the sense of a letter along with the next mail [. . .] [158]

A question almost as captivating as whether twins can be step siblings. [183]

A few days ago, I read again that a priest in Liége, if I am not mistaken, who died at the age of 125, was asked by the bishop what he had done to become so old. "I have," he said, "refrained from wine, women, and wrath." The important question here, I believe, is: did the man grow so old because he abstained from such poisons or because he possessed a temperament that made it possible for him to abstain from such poisons? I think it impossible not to concede the latter. That someone may shorten his life with such poisons, indeed, by a great deal, is no proof that his life would be extended by abstaining from them. Whoever possesses no such temperament would certainly *not* extend his life by abstaining from the opposite sex. It is just the same with the expression that true Christians are always honest people. There were honest people long before there were Christians, and there are, thank God, still honest people where there are no Christians. Indeed, it might even be possible that people are good Christians because true Christianity compels what they would have been without it. Socrates would certainly have been an excellent Christian. [194]

We now possess four principles of morality:

1. *a philosophical one*: do good for its own sake, out of respect for the law;
2. *a religious one*: do good because it is God's will, out of love for God;

3. *a human one*: do good because it promotes your happiness, out of self-love;
4. *a political one*: do good because it promotes the welfare of society of which you are a part, out of love of society with regard to yourself. (All of this is from *Reichs-Anzeiger*, no. 133, 1797)

But is this not the same principle regarded from different sides? A similar expression can represent things better for a certain class of people. I do not see why we should not make the same things comprehensible to certain classes of people by presenting them using a different image, provided that with increasing knowledge we find a better one or one that is commensurate with his progress. I can even conceive of a case in which the human mind still finds itself tranquil and can see with tranquility that everything is *nothing*, provided he has reached this knowledge through the stages of the most strenuous exertion. Weak-minded men, not adapted to reflection, who anticipated such knowledge on the basis of faith and belief, would be lost; and this causes much mischief in the world.[104] [195]

What would science be like if humans first learned to see at the age of fifteen and learned to hear at the age of twenty and thereafter learned to speak? [. . .] [198]

What do the English understand by *truism*? In Latin it would be called "*verismus*." [204]

It is possible that some aspects of Kantian philosophy may never *completely* be understood by anyone and that each will believe the other understands it better than he, and will thus be satisfied with a vague insight into it, or even sometimes believe that it is his own incapacity which prevents him from seeing it as clearly as others do. [225]

If I were to publish my questions on physics, they would have to be dedicated only to the young, active physicists, Gren, Herr von Humboldt, Hildebrandt, Scherer, and others.[105] [233]

He did not *want* to mislead, but he *did* mislead. It is very sad that the endeavor of man to diminish evil only increases it. It seems we usually have more knowledge of the force than of the matter to which it is applied. [236]

If this is philosophy, it is at any rate a philosophy that is not quite in its right mind. [239]

Everything that we as men *must* regard as real is for men actually real. For as soon as it is no longer permitted to conclude something about reality on the basis of this natural compulsion, any firm principle becomes inconceivable. One thing would be as uncertain as another. Those who find the proof of the existence of a supreme being from nature (the cosmological proof) compelling should accept it; and those who are convinced by the theoretical or moral proof should accept it. Even those who have pondered over new proofs have perhaps been induced to do so by a compulsion they themselves could not quite explain. Instead of giving us their new proofs, they should have explained the motives that compelled them to search for these proofs, provided it was not merely fear of consistories or governments. [253]

"Alas, what would *we* do," said the girl, "if our dear God did not exist?" [254]

Kant says somewhere: "Reason is more polemical than dogmatic."[106] [270]

On October 22, 1797, Herr Thibaut, a man of admirable intelligence, told me that certain concepts of ordinary arithmetic gave him more difficulty than many concepts of higher calculus, which are usually considered difficult.[107] [272]

The study of the ancients is now beginning to be revived once again. People believe they will find salvation there and reinstate the spirit of observation and the true language of nature. There are a few whom this may help, yet in this there is doubtless much fashion and very little of the actual truth or that which accords with human nature and reason. In chivalry, there is much that is associated with human nature, but the actual practice was mere fashion, *esprit du corps*; yet while people were in the middle of it, they thought it *all* necessary. It is just the same with the Christian religion. It is such a warring and quarrelling and scrambling for the veneration of God that at certain times people must almost have believed they existed solely to pray and venerate God. I am convinced that most of this is a mere *outgrowth*. In the end, there is no other way to venerate God than to fulfill one's obligations and to conduct oneself according to the laws given by reason. *There is a God* can to my mind mean nothing other than that with all of my freedom of will I feel obliged to do *right*. What use do we

have for God beyond this? This is what God is. If we were to develop this further, I suspect we would arrive at Herr Kant's principle. A god who would objectively intervene when I do wrong does not exist; a judge who upholds the law or we ourselves must do this. Thus I believe there are really no mockers of religion, though there certainly are mockers of theology.— These are outgrowths that are no doubt of various kinds, and among them are very pleasing ones that through superstition and prejudgment wholly possess the appearance and gravity of truth. This must be developed further. In general, our heart recognizes God; but to make this comprehensible to reason is indeed difficult, if not impossible. [275]

It is a question whether reason alone, without the heart, would ever have thought of God. After the heart (fear) had recognized him, reason sought him as well, just as Bürger sought ghosts.[108] [276]

I now really do believe that the question whether objects outside of us posses objective reality makes no rational sense. We are *compelled* by our nature to say of certain objects of our sensation that they are located outside of us; we cannot do otherwise. See what *Kant* says about the matter. The question is almost as ridiculous as asking whether the color blue really is *blue*. It is impossible for us to transcend the question. Regarding these things that I say are outside me, because I must regard them as such, whatever properties this being-outside-of-me might have, we cannot make any judgments. On this, read the *Theatetus*.[109] [277]

I was once reading from an English book and shortly thereafter from a French one on a similar topic. The first was a paper by Deluc on hygrometry, and the other was Leroy's paper on the evaporation of water in air in the French *Memoires* from 1751. After some time, I noticed quite distinctly that I had been completely unaware of the change of language while reading. I seemed to have been reading it all in English or French. I am convinced that if during this time of undivided attention to the matter I had found it necessary to consult a German book, I would not have noticed the transition here either. For as far as mere comprehension is concerned, especially regarding this subject, the languages are all equally familiar to me. One may say this much of oneself without fear of being reproached for boasting as there are certainly countless others in Germany who are in the same situation. But why do I mention this here? To ask: is it good

and advantageous for our minds to become accustomed to this? I find it impossible to believe that it is. I am not referring here to the loss of time involved, though it is obviously great, but I believe that it also is harmful in a psychological respect to have so many signs in our heads for the same thing. It would be far better if a new sign denoted a new quality instead of an old one. In the transition from the English work to the French work, I had to consult an entirely different index, and yet I never noticed it. I would like to read an examination of this. On ancient languages! And Chinese as well!![110] [278]

The word *incomparable* shows what can become of words in the world. [288]

Kant's early, not yet collected works also contain a description of the earthquake in Lisbon and measurements of its magnitude.[111] [292]

Are we too not a cosmic system, and one that we know better, or at least should know better, than we do the heavens? [305]

The wiser we become, the more we see in the works of nature. Why then should there not be a great deal more in certain thoughts than we sometimes notice? They are also products of human nature. Every thought is in itself something, the false as well as the true. The false are simply the weeds we cannot use in our household. [. . .] [309]

What makes true friendship and even more the joyous bond of marriage so delightful is the expansion of one's *I* over an area that could not be created in a single person through any art in the world. Two souls that are united are never so completely united that there does not remain for both a fortunate difference that makes *communication* so enjoyable. Someone who complains to himself of his own suffering does so in vain, but when he complains to his wife, it is to a self who can provide aid and does so already in its sympathy. And whoever enjoys hearing his merits praised finds an audience in her to whom he can praise himself without appearing ridiculous. [310]

Does the soul not find itself in a peculiar situation when it reads an investigation of itself, thus when it searches in books for what it itself might be? It is rather like a dog that has had a bone tied to its tail, said G. C. L., truly but somewhat ignobly. [311]

A punch in the stomach robs the mind itself not the stomach of consciousness. Generally much is often said about the head and the heart and too little about the stomach, probably because it is located in the *souterrain*; but the ancients understood it better. Persius famously awarded the stomach a master of arts, and since then it may indeed have learned more.[112] [315]

When he philosophizes, he usually casts a pleasant moonlight over the objects, which is pleasing overall but does not show clearly one single object. [320]

It is quite certain that we can make judgments about a matter correctly and wisely, yet as soon as we are required to give our reasons, we are able to give only such reasons as any novice in the art of fencing can refute. The wisest and best men often know as little how to do this as they know the muscles with which they grasp or play the piano. This is quite true and deserves to be considered further. [328]

Actual aristocracy cannot be abolished by any law; it can only be decreed how and with whom it is to be shared. [334]

Something excellent could certainly be written about superstition, namely, in its defense, to show that all men are superstitious. [. . .] [356]

This is one of those so-called flighty sayings that instead of flying about has soared beyond the clouds. So it goes with flying things. We should know or learn how to tether them. [400]

What most clearly characterizes true freedom and its true use is its abuse. [402]

He reasoned me right out of my reason. [404]

Motto: to desire to discover the truth is laudable, even if we go astray along the way. [421]

To choose *one times one* as a patron saint. [427]

Where everybody wants to come as early as possible, it necessarily follows that by far the greater number come too late. [432]

This means thinking where there are no longer any thoughts: like the boy who set up bowling pins at twilight, and when someone who had bowled and missed jokingly asked how many he had struck, the boy naively answered: "You bowled where there were no pins." [444]

When one is refuted in such a way I really do not know what one can still do with honor, except smash the opponent's window. [. . .] [446]

We speak often of enlightenment and desire more light. But, my God, what good is all of this light when people either have no eyes or deliberately shut those they have? [472]

A theory of the folds in a pillow. [476]

When we are young, we hardly know we are alive. We acquire the feeling of health only through illness. It is when we jump, or because of the impact when we fall, that we become aware of the earth's attraction. When old age sets in, the state of illness becomes a kind of health, and we no longer notice we are ill. If memories of the past did not remain, we would not notice the change. Thus I believe that it is only in our eyes that animals grow old. A squirrel that on its dying day leads the life of an oyster is no more unhappy than the oyster. Man, however, who lives in three places—in the past, the present, and the future—can be unhappy if any one of these is a failure. Religion has even added a fourth—eternity. [483]

If necessity is the mother of industriousness or of invention, it remains a question who is the father or the grandmother or the mother of necessity. [500]

If *necessity* is the mother of invention, then the war that caused the necessity is doubtless the grandfather of invention. A proof using adages could be called "*presque geometrique*." [524]

The reduction of one's needs is indeed something that should be inculcated in youth. "The fewer needs one has, the happier one is" is an old but often unrecognized truth. [529]

It has long been observed that when the spirit rises, it lets the body fall to its knees. [. . .] [536]

The word *delivery* is ambiguous; it could also refer to death. [543]

Habit is in many matters an evil thing. It makes us take injustice for justice and error for truth. [572]

There are people who have so little courage to assert anything that they do not trust themselves to say that a cold wind is blowing, no matter how much they may feel it, before they have heard other people say it. [582]

The least credit one can give Kant is that he has become the *Basedow* of philosophy.[113] [584]

Someone who writes, instead of philosoph or philosopher, philofficer or even philos-officer. [586]

The human spirit becomes more uniform the more it rises above the body. But the nearer it comes again to it, the more frequent are the deviances, just as I said regarding the planets. [618]

[. . .] The question is always whether in the end the spirit of contradiction is not on the whole more useful than unity and agreement. [622]

If they were to stand still, we would regard even shooting stars as stars. [643]

Kant differentiates himself from other philosophers in turning his primary attention to the *instrument*; he investigates its quality and primarily its limits, how far it extends, and whether it is suited to accounting for the things of which one wishes to provide an account; that is, he is investigating the nature of our faculty of cognition.—What right do we have to suppose that our sensations are anything more than our sensations? What is reality for us (perhaps to us)? What is existence? May we use "faculty of cognition"? [662]

A comparison between very heterogeneous things. [665]

With most people, disbelief in one thing is founded on blind belief in another. [674]

In England a man was charged with *bigamy*, and his lawyer got him off by proving his client had three wives. [681]

Applying Kantian philosophy in a practical treatise without using Kant's expressions would certainly secure acclaim for his philosophy. [689]

Is it not peculiar that men are so glad to *fight* for religion and so reluctant to *live* according to its precepts? [705]

What Kant really says is that we assume things in themselves lie behind all phenomena, but we cannot know whether reality can be attributed to this assumption, whether it in fact corresponds to what is assumed. [740]

Could it not also be the case, as G. C. L. has remarked, that like colors, tones, and scents, *extension* exists as a result of our sense organs? [. . .] [793]

To distinguish more sharply between inner and outer sense freely and without fear of man. [796]

The image of the child who strikes the table after bumping into it is here the most correct one; it precedes rationality, and that is what we wish to know. Someone who has had a cataract operation sees all bodies as if they were lying on his eye; this is correct. Sensation lies in the eye, and its distance from his own *I*, which is already again a composite of feeling and inference, has been learned through feeling—in fact, it is astonishing that there are so few *material* idealists in this world and so many *formal* idealists. [798]

Beginning: Because our mind, under which I understand the entire sum of our capacities, without seeing a difference between body and soul (our faculty of cognition), is actually the instrument upon whose knowledge everything that we will here be examining depends, it can thus do no harm to say a few words about this instrument. The astronomer describes his instruments. Here man with his capacities is the instrument, which is something that is not described in standard physics. We assume the apparatus is already familiar.—But the opinions here differ; that is to say, there are many constitutions or capacities, and it is disputable, or actually debatable, which is the best. There are various opinions about the constitution of the instrument. Now a short presentation of man according to his capacities. Internal and external objects. [799]

There is no bridge that leads beyond our thoughts to the objects. Very true, and well expressed (not πμ).[114] [805]

If we could learn to invent according to certain rules such as the so-called *loci topoi* for example, or if reason could set itself in motion, it would be like discovering how to enlarge animals or cultivate oak trees from brush. There is an element of chance, it seems, in all discoveries, even those we seem to arrive at through effort. Putting things already discovered into the best order, even the great leaps of discovery seem just as little the work of our free will as is the beating of our heart.—This seems to me just as when the improvements we confer on states through discursive reason are merely slight modifications; we can create new species but cannot create genera, for chance must do that. Experiments must therefore be undertaken in natural philosophy, and in great affairs we must wait for the proper time. I understand myself. What I have said elsewhere belongs here: we should not say *I think* but *it thinks*, just as one says *it lightnings*.[115] [806]

With just the same degree of certainty with which we are convinced that something occurs *within us*, we are also convinced that something occurs *outside us*. We understand the words *inside* and *outside* very well. There can be no one in this world and unlikely one born who would not sense this *difference*; and for philosophy that is sufficient. It should not go beyond this; to do so would be wasted effort and lost time. For whatever the things might be, it is agreed that we can know absolutely nothing of them except what lies in our representations. In this regard, which I believe is correct, the question as to whether the things really are outside of us and really are as we see them is utterly without sense. Is it not peculiar that man absolutely demands to have things twice when once would have been sufficient and necessarily must be sufficient since there exists no bridge from our representations to their causes? We cannot think of anything as existing without a cause, but where then lies this necessity? The answer again is *within us*, inasmuch as it is completely impossible for us to go outside of ourselves. It really matters little to me if one wishes to call this idealism. Nothing depends on the name. At least it is an idealism that through idealism recognizes that there exist things outside of it and that everything has its cause; what more do we want? There is no other reality for men, at least not for the philosophical. In ordinary life, we are rightly satisfied with a lower station. But I believe with complete conviction: either we must completely abstain from philosophizing about these matters or philosophize *thus*. In the light of this conception, it is easy to see how right Herr Kant is to regard space and time as mere forms of intuition. Nothing else is possible. [811]

How many cases are possible here? *How* can the word be understood? In how many senses? [829]

Question: what is light and what is ponderous? Answer: to pose such questions is a *light* matter, to answer them, ponderous. [833]

Is it not curious that geometry begins with a particular case, with the position of lines on a *plane*? This might be the easiest way to proceed, but whether it is scientific is another question. Really, the possibility of a plane must be proven. I only fear that if one takes the philosophy of mathematics too far and takes it too far away from common sense, it will lose on the whole. [834]

We see everything on a plane, projected on a piece of glass; the image itself upon which our representations depend is depicted on a sphere, the posterior wall of the eye. [835]

In the book *Theaetetus*, there is supposed to be something said regarding the bridge about which I often speak and about which I continue to think, namely, the bridge from our representations to things in themselves. [836]

Question: how is *whispering* differentiated from speaking? [. . .] [844]

Reflect on the actual limits of physics, and read Schelling's *Ideas for a Philosophy of Nature*.[116] [850]

Guide for a coherent presentation of commonly used propositions of physics as preparation for a future science of nature. This could be the title of a physics compendium. Certainly everything would need to be explained well in the preface. The way people attempt to move away so much from ordinary human understanding, which is something quite respectable, truly does not appeal to me despite how commendable such an endeavor might in some respects be. *Common* sense is in my opinion a very respectable rung on the ladder of our knowledge and really of the power of our mind in general so that it might very well be regarded as a point from which all reckoning begins. It is not the zero point of the scale that is under discussion but *what* starting point I must assume in 1799 in order to secure the greatest possible benefit. If I do not proceed according to this standard, but choose

a different starting point, then perhaps I will convince one speculative mind and in contrast lose one hundred who in the nineteenth century may have contributed to drawing many back to this point. Or similarly considered: the starting point of our natural philosophy is like that of a thermometer, etc.

I am not disinclined to believe that in the future a mischievous skepticism will succeed in spreading itself among the mathematical sciences. Indeed, to tell the truth, I no longer have any doubts about this. And why should I doubt it given that we must necessarily find everywhere limits to our knowledge and consequently uncertainty as soon as we begin to explain how something is possible and why it is possible? And if we do not wish to begin from a certain *universally acknowledged* point on a scale, then we should begin from a merely acknowledged one. Euclid begins with common sense in his axioms. That between two points only *one* straight line is possible is a postulate impossible to prove, though indeed it may be otherwise given another form of representation. For are not all arcs whose radii = ∞; ∞^2; ∞^3 straight lines that intersect the same point? Thus there are countless straight lines possible between two points. Or if infinitesimal calculus does not belong with Euclid's *Elements*, then woe is us if we do not say: "*Here is where we wish to begin our calculations*."—I believe it is enough to make do with uncertainty on *one* side of the beginning of abscissae without concerning ourselves too early with the difficulties of the other side. Let some study our soul and some, the physical world and thus in the end come together. The starting point of the calculations of common sense is certainly no fixed point, but a mean can be established that may be regarded *without detriment* as the starting point and really has always been regarded as such. It is in fact sad that we call men profound thinkers who lead our knowledge back to this limit and then wish to bring things that lie at different endpoints of what is comprehensible back to a single incomprehensible thing. [852]

There is a great difference between decisively establishing a hypothesis and adding up all possible kinds of explanations. For as long as I am removed from the truth and assume certain propositions that are not yet exhaustive, then many solutions are possible; and precisely this possibility is a direct demonstration that we are still removed from the *truth*. As long as we have not attained it, we must count everything. There is a kind of indeterminacy in the task. [. . .] [861]

It is always peculiar that we so often speak of our persistence after death and so little about our existence *before* birth. I should think given our uncertain

circumstances with respect to the future, about which everything assures us, that it would be much more natural to concern ourselves with this. What the surface of the earth once was can still reasonably be imagined. What will become of it, we do not know. One need not object that we know our soul, our *I*, much better than the earth (This is, however, an important question). Granted this, however, it is evident that in conclusions about what we will become, we consider too little what we were before birth. A fearless consideration of this time would certainly be influential and would reveal much more about our condition after death than all of our current sophistic chatter. We should not say after death but before and after life.—It will likely make no difference.—More should be said about this later—the lamp before it was lit and after it was extinguished. [865]

I do not believe that any great *discovery* has ever been made in the natural sciences through calculation. Nor is this its object. But as soon as chance or practical insight has discovered something, mathematics provides the best conditions for it; given the matter is a certain way as a whole, mathematics demonstrates what the most appropriate form and disposition would be.—Nothing more. [866]

I do not understand at all how this so-called *being outside of us* is supposed to make the matter more comprehensible; for if it does make things more comprehensible, then it is again only the *representation* of *being outside of us*, which inevitably accompanies the representation, that makes it comprehensible. It is necessary to *express* ourselves this way, but it is not thereby decided on which side the necessity lies. The necessity could lie in us just as well as *outside us*, which already seems to beg the question. [867]

Is reason or perhaps the understanding really in a better position when it arrives at final causes than when it arrives at a dictate of the heart? For it remains a great question which of the two most firmly connects us with our surrounding world, the heart or reason. [878]

To invent new errors. [886]

Man has today so far surpassed himself that he even has a science in which all new inventions are inventions of new errors, and all new discoveries are discoveries of old errors. [887]

That Lesage postulates a primus motor and matter, concepts that according to *Kant* already contain that which they are supposed to explain, is certainly a deficiency of the system. [893]

It is incontestably an error on the part of the atomists that they *postulate* matter but do not consider that to postulate it as having the capacity for impact, force, and movement means postulating nearly *everything*. For how an atom of a particular form arises is not a hair more comprehensible to me than how the sun came into existence. It is unfortunate that the best minds so enjoy venturing into the groundless and enjoy hearing the crowds wonder at their boldness, and would rather be called daredevils than quiet cultivators of a ground whose firmness the entire world recognizes. [894]

Dr. Hutton makes a very nice observation in his article *Attraction*: If in physics we did not wish to admit effects whose causes are not objects of our senses, a large gap would arise. If, however, we do wish to concern ourselves with the explanation of causes that are not objects of our senses, we run the danger of erecting castles in the air. We can perhaps stop at the effect and think about the causes in any way we wish. Newton vacillated on the cause of gravity: in the *Optics*, he sometimes inclines toward an immaterial cause and sometimes toward a material one.[117] [. . .] [896]

If we consider impartially what astronomy incontestably teaches us, namely, that matter attracts over distances, then we cannot understand why this attraction cannot be called a fundamental force of matter, just as impenetrability is. In the former, parts of matter approach each other, and in the latter, this approach is limited. Why can impenetrability not also be explained according to impact? The circularity becomes evident here because without impenetrability, no mechanical impact is possible. We are compelled here to posit a fundamental force. The question now is whether the equally as universal phenomenon that parts of matter cannot separate themselves from one another, I mean attractive force, is not also a fundamental force. I do not see what could justifiably be argued against this. That the attractive force of matter extends over an immense distance into the infinite is no less incomprehensible to me than this repulsive force. Regarding the one, I cannot say where it begins, and regarding the other, where it ends; but it must begin somewhere, otherwise no physical body could arise. We see again on both sides the infinite, and I believe we should congratulate ourselves when in such metaphysical reflections we find ourselves at this limit. Even

in mathematics the advancements were tremendous after it began to proceed from this point. This point must be arrived at, and it was fortunate for the sciences that this great wellspring was discovered before it had completely justified itself before the court of reason for this audacious endeavor. The justification cannot in the end fail since the success itself was greater and more beneficial than all expectations.—People believed they could manage by saying that matter fills space through mere existence. Fundamentally, nothing, however, is said with this, and it is probably a little *trick* that the imagination of these philosophers has played. For the question is precisely: what does it mean to *exist*? And how must a thing express its relation to me and my faculty of cognition such that I can say it exists? [897]

Men have written much about the essence of matter; I only wish that matter would for once begin to write about the human mind. It would show that thus far we have not understood one another very well. [908]

Might not much of what Herr *Kant* teaches, especially with regard to the moral law, be a consequence of old age, where passion and appetite have lost their force and reason alone remains?—If human beings died at say the age of forty still in possession of their full virility, what consequences would this have for the world? The calm wisdom of old age produces many curious things. Will there ever be a state where everyone is slaughtered at forty-five? [910]

It seems to me that everything in nature is produced by proportions in the causes and not by essential differences. This again is an application of my idea that everything is in everything. All men are the same in their constitution, only proportions make the difference; and only the different proportions make the honest man and the rogue. [916]

It is a powerful objection against the atomistic system that it first posits things, which cannot be posited without assuming forces, and then posits forces to explain the rest. It is just as impossible to deduce impenetrability and inertia from the concept of mere existence as it is to deduce attractive force, acidity, or redness. This notwithstanding, the doctrine of atomism has its advantages: 1. It adheres more closely to the customary concepts, and this also must be respected; 2. It is useful for mathematics because it simplifies the application of mathematics to nature. This system will always remain an invaluable picture; indeed, the recourse to this metaphysics is not

thereby inhibited. Thus perhaps the two systems should not so much be opposed to one another as their dependence upon one another should be shown. It should be noted that they would soon understand one another if they explained themselves clearly (to be taken *cum grano salis*). [917]

It would be worthwhile for once to compare the systems of Kant and Lesage, the attractionist and the impulsionist. There is so much in each that corresponds to the other that it would be worthwhile to compare them. Attractive force—impact; initial forces, initial bodies. [918]

Attraction and *repulsion*—we speak of them as of *different* things, and indeed this is demanded by linguistic usage, and our entire communication in the literature depends on it. But by ascribing to bodies a force of attraction and denying them a force of repulsion, we are dealing with a *one-sidedness* that reason cannot endorse. We live to be sure in the *region* of attraction, in a place where it prevails; our bodies can exist only on the basis of it; we are fixed in it, as are our plants and our sun; but without being Jacob Böhme, I can conceive of a being existing in the region of repulsion that would fill all the heavens. [919]

We can enlarge a milletseed immensely, but we cannot make a second of time into a minute or a quarter-hour. How amazing it would be if we could! If only we tried more to *shrink* time, we should say, instead of *shorten* it. [925]

Is it really so evident that our reason can have absolutely no knowledge of the supersensible? Might man not be capable of weaving his ideas of God just as *purposefully* as the spider weaves its web to catch flies? Or in other words: might there not exist beings who would admire us for our ideas of God and immortality just as we admire the spider and the silkworm? [952]

Is our concept of God indeed anything more than personified inconceivability? [953]

Herr Schubert in his *Astronomy* (I own a copy myself) has the quite nice idea that it has not yet been established whether Ptolemy really wished to deliver a system. It may merely be a construction for solving the problem of the location of a planet. *NB*. In this work there is also a similar account of how Copernicus arrived at the true conception of the universe.[118] [963]

Regarding what was said previously about the Ptolemaic system: *constructions* are of great use in our hypotheses. If we are to present the fundamental propositions of physics as purely as the geometrician presents his, we must also be able to make constructions, at least in the way Ptolemy did. And here the question is: which hypothesis allows the best construction? We can thus *never* go too deep. In my opinion Herr Kant tried to accomplish this. [967]

I believe that man is ultimately so free a being that his right *to be* what he believes himself to be cannot be contested. [972]

Fichte and Niethammer's *Philosophical Journal*, 1798, issues 1 through 4 has appeared and is banned with a fifty-Reichstaler fine. I must read it because the second volume contains a transcendental speculation on the theory of fire by *Sauer*.[119] [973]

Our best minds are now sitting down to account for the teachings of *Aristotle*, and the dispute between mind and mind is now a pathetic squabble between philosophy and grammar. What is the point? We truly do a disservice to human nature when we believe that in order to *have* an opinion we must know what opinion another *had*. Granted, they may have some use as a resource. Why do people no longer study physics and mathematics and seek Aristotle first in themselves? We would be much more advanced if instead of accounting for what the ancients, who had much fewer resources, *taught*, we rather sought to account for what they *should* have taught. There are, above all in Germany, plenty of men (they are not great illuminators but sometimes carry a great light) who trade in the ideas of others and who find it a great merit to have discovered that a tenet thought new is already old. *Tant mieux*. That makes it all the more true. Yet such comments are also not made, *quod probe notandum*, to belittle the truth, but are done with the laudable intention to harm and belittle *living* men. [974]

If we compare the older writings of our theologians with the newer ones, we must truly be astonished. The ideas of *immediate* revelation, atonement, and so on are really now being presented by them in the way that people who were considered free spirits, derided, and ridiculed previously did. This is easy to understand. People think it beneath their dignity to concede and would thus rather *persecute* because they have the power to. Now we have arrived at where those previous free spirits were. Thus we ought never criticize the audacious deeds of this voluntary regiment. It could happen

that the main army finds it necessary to use them. This is happening now. What can we conclude from this for the future? Presumably that in the end we *must* arrive at a religion of reason. In the end, everything comes down to this *must*; and this is also the boundary of God. It is only a pity that even *there* dissent occurs.—Why do we not see the parts of doctrines of belief, which history offers us, as parts of a series, whose subsequent parts we must be able to show? It is obvious that from what is given we can here also draw further conclusions; but we do not dare because our current political constitutions are for our reason precisely something like what sensibility is for reason. The state is our expanded body; the spirit of man has more than one body with whose nonspirituality it must struggle: our own flesh and blood, wife and child, professions, the city, and our studies, the constitution of the state, and so on. Yet in the end, there are always the dictates of reason (for professors the faculty also belongs here). This can be extended to all bodies. [975]

If one brought together three highly virtuous men—A, B, C—of whom one was a Protestant, another a Catholic, and the other a Fichtean, and examined them closely, one would find that each has nearly the same belief in God, but none entirely has the belief to which he would confess if he had to confess in words. For it is a great advantage of human nature that the most virtuous men can rarely truly say why they are virtuous, and when they believe they preach their beliefs, they actually do not preach them. [980]

To wish to reduce everything in man to simple principles means in the end, it seems, to presuppose that such a principium *must* exist, and how can this be proved? [981]

Herr Fichte seems to forget that there are people for whom it is impossible to see in the distance without glasses, who cannot hear without an ear trumpet, and who cannot walk without crutches. He should now teach the people to eat raw meat because the animals in the field have no kitchen.[120] [982]

Notes

Introduction

1. In his essay "Lichtenberg and Kant on the Subject of Thinking," Guenter Zoeller discusses Lichtenberg's "egoism" and the problem of other minds. Zoeller argues that Lichtenberg does not deny the existence of other minds but only that we can know them as they are "in themselves." See Guenter Zoeller, "Lichtenberg and Kant on the Subject of Thinking," in *Journal-of-the-History-of-Philosophy* 30, no. 3, pp 417–42.

2. For deeper discussion of the eighteenth-century discourse on religion and reason in Germany, see Frederick C. Beiser, *The Fate of Reason: German Philosophy from Kant to Fichte* (Cambridge: Harvard University Press, 1987).

3. Kant and Lichtenberg also carried on a correspondence, which was initiated by Kant in a letter that has been lost; Lichtenberg's response from October 30, 1791, has, however, been preserved. In the correspondence they did not engage in any extended philosophical discussion but did exchange publications. See Immanuel Kant, *Kants Gesammelte Schriften*, ed. German Academy of Sciences (Berlin: De Gruyter), vol. 11, pp. 413f.; vol. 12, p. 244–45. See also Georg Christoph Lichtenberg, *Briefwechsel*. ed. Ulrich Joost and Albrecht Schöne (München: Beck, 1992).

4. Kant also points to such a distinction in the fourth Paralogism of the *Critique of Pure Reason* at A 373 where he discusses the expression "outside us." See Immanuel Kant, *Critique of Pure Reason*, ed. Paul Guyer and Allen Wood (Cambridge: Cambridge University Press, 1998). In "Lichtenberg and Kant on the Subject of Thinking," Guenter Zoeller offers a detailed analysis of Lichtenberg's notion of *praeter nos* and *extra nos*, situating them in a discussion of Lichtenberg's epistemological idealism and his "it thinks" remark.

5. On the place of Scottish common sense philosophy in Germany during the eighteenth century, see Manfred Keuhn's excellent study, *Scottish Common Sense in Germany, 1768–1800: A Contribution to the History of Critical Philosophy* (Kingston and Montreal: McGill-Queen's University Press, 1987). This work also includes an extensive discussion of common sense philosophy in Göttingen and its influence upon Lichtenberg.

6. Smail Rapic's *Erkenntnis und Sprachgebrauch: Lichtenberg und der englsiche Empirismus* (Göttingen: Wallstein, 1999) contains a detailed discussion of verificationism and the coherence theory of truth in Lichtenberg's thought.

7. See the discussion of Lichtenberg's "Zur Matrie sowohl als der Form meines Compendii gehörige Bemerckungen" ("Notes on the Matter and Form of My Compendium"), in Horst Zehe, "Über die eigentlichen Grenzen der Physik nachzudenken," in *Lichtenberg-Jahrbuch*, 1992, pp. 99–109. On Lichtenberg, and Kant's *Metaphysical Foundations of Natural Science*, see Horst Zehe, "Georg Christoph Lichtenberg und die *Metaphysischen Anfangsgründe der Naturwissenschaft*," in *Photorin*. ed. Wolfgang Promies, vol. 10, (1986).

8. See Horst Zehe, ed. Georg Christoph Lichtenberg, "Ist es ein Traum, so ist es der größte und erhabenste der je ist geträumt worden . . . : Aufzeichnungen über die Theorie der Schwere von George-Louis Le Sage" (Göttingen: Vandenhoeck & Ruprecht, 2003).

9. See the discussion of dynamics in Kant's *Metaphysical Foundations of Natural Science*, ed. and trans. Michael Friedman (Cambridge: Cambridge University Press, 2004). Also see the discussion of mechanics in G. C. Lichtenberg, *Physik-Vorlesung. Nach J. chr. P. Erxlebens Anfangsgründe der Naturlehre Aus den Erinnerungen von Gottlieb Gamauf* (Wien und Triest, 1808). Lichtenberg discusses Kant on atomism and dynamism and attraction and repulsion in the *Goettingische Anzeige von gelehrten Sachen*, August 4, 1798.

10. Lichtenberg's response to Goethe from October 7, 1793, can be found in Georg Christoph Lichtenberg, *Briefwechsel*, vol. 4, ed. Ulrich Joost and Albrecht Schöne (München: Beck, 1992); see letter 2303. On the state of the discussion of colored shadows at the time of these letters, see Johann Samuel Traugott Gehler, *Physikalisches Wörterbuch*, vol. 3 (Leipzig, 1798), and Friedrich Albrecht Carl Gren, *Grudriß der Naturlehre* (Halle, 1797).

11. Heinz Gockel's *Individualisiertes Sprechen* (Berlin: Walter de Gruyter, 1973) contains a more detailed discussion of Lichtenberg's epistemology and his thoughts on the *charcteristica universalis*.

12. On the notion of *Schwärmerei* in Kant's thinking, see Peter Fenves, "A Note on the Translation of Kant," in *Raising the Tone of Philosophy: Late Essays by Immanuel Kant, Transformative Critique by Jacques Derrida*, ed. Peter Fenves (Baltimore: Johns Hopkins University Press, 1993), pp. x–xii.

Text

1. *Affirmative nescire* means "positive not-knowing."

2. Δ Δ: According to Wolfgang Promies, Lichtenberg is likely speaking here of Christian Wolff's propositions regarding the equivalence of triangles. See

Lichtenberg, *Schriften und Briefe*, ed. Wolfgang Promies (München: Carl Hanser Verlag, 1968–); notes to the Waste Books are found in volume 3.

3. Jean-Jacques Rousseau (1712–1778) was an Enlightenment philosopher. See *Émile, ou De l'éducation* (*Émile, or On Education*) (1762): "Accent is the soul of a language; it gives feeling and truth to it."

4. Carl Linnaeus (1707–1778) was a Swedish botanist and zoologist who developed the system of binomial nomenclature in taxonomy.

5. The Stoic school of ancient Greece, associated with Zeno, held that morality should be founded on universal laws of reason and not guided by individual passions and circumstances.

6. Johann August Unzer (1727–1799) published the weekly journal *Der Arzt* (*The Physician)*. Lichtenberg is referring to issue 148, pp. 565–67. Julien Offray de la Mettrie (1709–1751) was an early French materialist and author of *L'homme machine* (*Machine Man*) (1748). Bernard le Bovyer de Fontanelle (1657–1757).

7. Henry Lord Kames Home (1696–1782) was a Scottish philosopher and author of *Elements of Criticism* (1762–1765). According to Franz H. Mautner, *p.m.* (or πμ) is an abbreviation of the Latin *pellucidus mons*, meaning luminous mountain in English or "Licht" and "Berg" in German, and refers to Lichtenberg. See Franz Mautner, *Lichtenberg: Geschichte seines Geistes* (Berlin: de Gruyter, 1968).

8. Translation: "There is in a manner of speaking an unequivocal and an equivocal generation of lines." *Generatio aequivoca* refers to the generation of a living thing from nonliving matter and was a matter of great research and dispute in the seventeenth and eighteenth centuries.

9. In ancient Greek ἄδης is translated as "abyss," "hell," φῶς as "light." See *Hamburgisches Magazin* (Vol. 10, 1752). Here Kästner observes: "But people say of a thing that it originates, becomes, begins, when it previously has not appeared to their senses and now becomes sensible. The first state is called ἄδης (abyss, hell one might call it), and the other is called Φάος or φῶς, light, also Ζεὺς, Jupiter, whose brother Ἅδης, or Pluto, was the king of the under world."

10. See Benjamin Franklin (1706–1790), American scientist and statesman, *Experiments and Observations on Electricity* (1751). As a physicist and researcher of electricity, Lichtenberg was very familiar with Franklin's work in the sciences and particularly interested in his discussions of polarity and electrical charge. Following Franklin, Lichtenberg introduced the designations + and – for electrical polarity. On the history of electricity, see John L. Heilbron. *Electricity in the Seventeenth and Eighteenth Centuries: A Study of Early Modern Physics* (Berkeley: University of California Press, 1979).

11. μετὰ φυσικὰ translates as "metaphysica."

12. Abraham Gotthelf Kästner (1719–1800) was the mathematician and scientist under whom Lichtenberg studied in Göttingen.

13. Leonhard Euler (1707–1783) was a Swiss mathematician. Rudolph von Bellinkhaus (1645–1723) was a poet whose work Lichtenberg discovered while in Osnabrück.

14. Georges-Louis Leclerc, Comte de Buffon (1707–1788), French mathematician and natural scientist, was known for his contributions to probability theory (Buffon's needle) and his immense encyclopedic study, *Histoire naturelle, générale et particulière* (*Natural History, General and Particular*) (1749–1788).

15. The Battle of Minden occurred on August 1, 1759, during the Seven Years' War.

16. Sir Joseph Banks (1744–1820), English naturalist and botanist, accompanied Captain James Cook (1728–1779) on his first voyage (1768–1771), which included an exploration of Tahiti (Otaheite) in 1769. The account of the voyage was published in 1773 in London by John Hawkesworth (1715–1773) on the basis of the journals of Cook and Banks as *An account of the voyages undertaken by the order of his present majesty, for making discoveries in the Southern Hemisphere* [. . .], *drawn form the journals which were kept by the several commanders and from the papers of Joseph Banks esq*., volumes 2 and 3.

17. Claude Adrien Helvétius (1715–1771) was a French philosopher known for his materialist and sensualist views. See *De l'homme, de ses facultés intellectuelles et de son education* (*Treatise on Man, His Intellectual Faculties, and His Education*) (1772). The Latin quotation means "knowledge is the foundation and source of good writing" and is originally from Horace, *Ars Poetica*.

18. Jacob Böhme (1575–1624) was a German mystical philosopher and theosopher known for his obscure and speculative writings, which often present a pantheistic and dialectical view of nature. Lichtenberg is likely referring here and in D 172 to Böhme's first book *Aurora* (1634), which had a great influence on German romantics, such as Novalis (1772–1801), and idealists, including Hegel (1770–1831).

19. Jean-Baptiste le Rond d'Alembert (1717–1783) was a French mathematician and physicist. Lichtenberg is here referring to d'Alembert's "Discours" in the *Encylopédie* (1751–1780).

20. This reference is to Johann Heinrich Lambert (1728–1777). Lichtenberg is referring to the color system developed by Lambert in 1772. See J. H. Lambert, *Beschreibung einer mit dem Calaunischen Wachse ausgemalten Farbenpyramide* (*Description of a Color Pyramid Painted with Calau's Wax*) (1772).

21. Anton Freiherr von Störck (1731–1803) was a Viennese doctor who conducted research on toxic plants, which when used in moderation had medicinal properties.

22. In early pharmaceutical compendia, *simplicia* refers to the basic medicinal elements, herbs, minerals, and so on from which more complicated medicines (*composita*), salves, elixirs, and other things could be produced.

23. *Fuga vacui*, or more commonly, *horror vacui* is the fear or abhorrence of a vacuum.

24. Dr. Richard Price (1723–1791) was a theologian and politically engaged author with whom Lichtenberg was acquainted from his trips to England.

25. Johann Gottfried Herder (1744–1803) was a German philosopher, author, and critic. Lichtenberg is referring to the first part of *Abhandlung über den Ursprung der Sprache* (*Treatise on the Origin of Language*) (1772).

26. "Indeed (let me be allowed this reflection) if we are to avail ourselves as much as possible from observation, we must walk only by its side, stop at the very instant when it leaves us, and nobly dare to be ignorant of what is not yet to be known." See Helvétius, *De L'esprit, Or Essays on the Mind and Its Several Faculties* (Albion Press, 1810), p. 28.

27. Tacitus (AD 56–AD 117) was a Roman senator and historian, author of the *Annals* and *Histories*, which present a history of the Roman Empire; he is known for his dense and unembellished prose.

28. *Ex nihilo nihil fit* means nothing comes from nothing.

29. The Greek quotation means, "Poetry is finer and more philosophical than history" and is from the ninth chapter of Aristotle's *Poetics*. The rest of the sentence reads, "for poetry expresses the universal and history only the particular."

30. James Beattie (1735–1803) was a Scottish philosopher known for his simplified version of common sense philosophy expounded in *An Essay on the Nature and Immutability of Truth in Opposition to Sophistry and Skepticism* (1770).

31. The reference is to Joseph Priestley (1733–1804). David Hartley (1705–1757) was a philosopher and founder of associationist psychology. Thomas Reid (1710–1796) was a Scottish common sense philosopher known for his direct realist views and critique of "the theory of ideas" advanced by Locke and Descartes. Lichtenberg is referring to Priestley's *An Examination of Dr. Reid's "Inquiry into the Human Mind on the Principles of Common Sense,"* Dr. Beattie's "Essay on the Nature and Immutability of Truth," and Dr. Oswald's "'Appeal to Common Sense in Behalf of Religion" (1774).

32. Georges-Louis Lesage (1724–1804) was a Swiss physicist and mathematician who explained gravitation mechanically by positing imperceptible corpuscles that drove bodies together through impact. In *Observations on Man, His Frame, His Duty, and His Expectations* (1749), Hartley argued that ideas and associations in the mind were traces left when vibrations of matter caused the brain to vibrate.

33. This refers to Georg Friedrich Heinrich Feder's (1740–1821) essay on moral feeling in the journal *Deutsche Museum* from 1776.

34. For E 507 and E 508, see David Hartley, *Observations on Man, His Frame, His Duty, and His Expectations,* 2 vols. (Bath and London: Samuel Richardson, 1749). E 507 refers to Hartley's observation: "Diversity of languages does also both help the invention, and correct false judgments. For we think in words." See proposition 73.

35. See Christoph Meiner's (1747–1810) review in *Göttinger gelehrte Zeitung* 1776 and *Hartley's Theory of the Human Mind, on the Principle of the Association of Ideas*, Joseph Priestley, ed. (1775).

36. *Principium indiscernibilium* is Leibniz's principle of the identity of indiscernibles. This principle and a related one, the indiscernibility of identity, taken together hold that two objects, x and y, are identical if and only if any property possessed by x is also possessed by y and vice versa. Gottfried Wilhelm Leibniz (1646–1716) held various versions of this view; see for example the *Discourse on Metaphysics*. Lichtenberg is here suggesting that according to this principle no object could be identical across time.

37. See Leibniz's *Essais de Théodicée* (*Theodicy*) (1710).

38. St. John, Henry, Viscount Bolingbroke (1678–1751) was an English statesman. The quotation is from *A Letter on the True Use of Retirement and Study* (1736).

39. Eberhard Christian Kindermann was an amateur astronomer, theologian, and author of the early science fiction work *Die geschwinde Reise auf dem Luftschiff nach der obern Welt* (*The Speedy Journey of the Airship to the Upper World*) (1744).

40. Henry Lee (1756–1818), known as "Light-Horse-Harry," was a cavalier officer during the American Revolution.

41. Albrecht von Haller (1708–1777) was a Swiss physician, botanist, poet, and professor of anatomy in Göttingen.

42. Moses Mendelssohn (1729–1786) was a German-Jewish philosopher and scholar and a founder of the Haskalah, the Jewish Enlightenment movement of the eighteenth century.

43. See Joseph Preistley, *Disquistions Relating to Matter and Spirit* (1777).

44. Lichtenberg is referring to "Ueber der verfeinerten Begriffe," in "Westphälische Beyträge zum Nutzen and Vergnügen" 44, November 1, 1777; Möser here discusses problems of communication among specialists and nonspecialists in a subject. See Wolfgang Promies' commentary in volume 3 of Lichtenberg, *Schriften und Briefe* (München: Carl Hanser Verlag, 1968–).

45. See Helvétius, *Treatise on Man, His Intellectual Faculties and His Education* (1772).

46. The German here is "*Ich* und *mich*. *Ich* fühle *mich*."

47. This is a reference to Kant's statement: "All interest of my reason (the speculative as well as the practical) is united in the following three questions: What can I know? What ought I to do? What may I hope?" in the *Critique of Pure Reason* (B 832–833). See Immanuel Kant, *Critique of Pure Reason*, ed. Paul Guyer and Allen Wood (Cambridge: Cambridge University Press, 1998).

48. *Meditandum et tentandum*, "one must meditate and try." Lichtenberg is referring to Kant's *Metaphysical Foundations of Natural Science*. See Immanuel Kant, *Metaphysical Foundations of Natural Science*, ed. and trans. Michael Friedman (Cambridge: Cambridge University Press, 2004).

49. See Friedrich Heinrich Jacobi (1743–1819), *Über die Lehre des Spinoza, in Briefen and den Herrn Moses Mendelssohn* (*Letters on the Teachings of Spinoza*) (1789), and *David Hume über den Glauben oder Idealismus und Realismus. Ein Gespräch*

(*David Hume on Belief, or Idealism and Realism*) (1787). Gotthold Ephraim Lessing (1729–1781) is a German playwright and aesthetic theorist. See the discussion of the pantheism controversy in the introduction to this volume.

50. See Karl Leonhard Reinhold's (1758–1823) analysis of the representational faculty in his *Elementarphilosophie* (*Elementary Philosophy*) (1790). Reinhold attempted to place the principles of Kant's critical philosophy on an unshakable foundation with his "Principle of Consciousness."

51. *Genii Socratis et Kepleri aliorumque* means "the genius of a Socrates, Kepler, and others."

52. The difference alluded to here is between a corpuscular theory of light, advocated by Newton, and a wave theory, advocated by Euler. On the former view, light is made of discrete particles that can be reflected, and color is due to these particles being reflected to various degrees. On the latter view, light was propagated through a medium, aether, and color due to varying degrees of vibration of the medium. See Erxleben's *Foundations of Natural Sciences*. For a discussion of Newton's theory of light, see Alan E. Shapiro, "Newton's Optics and Atomism," in *The Cambridge Companion to Newton*, ed. I. Bernard Cohen and George Edwin Smith (Cambridge: Cambridge University Press, 2002).

53. Georges-Louis Lesage (1724–1804) was a Swiss physicist and mathematician who explained gravitation mechanically by positing imperceptible corpuscles that drove bodies together through impact.

54. *Vir gregis ipse caper* [*deerraverat*] is from Virgil's *Eclogues* 7.7: "Daphnis, it chanced had made his seat beneath a whispering ilex, while Corydon and Thyrsis had driven their flocks together—Thyrsis his sheep, Corydon his goats swollen with milk—both in the bloom of life, Arcadians both, ready in a singing match to start, ready to make reply. To this place, while I sheltered my tender myrtles from the frost, *my he-goat, the lord of the flock himself, had strayed*." Translation is from Virgil, *Eclogues*, *Georgics*, *Aeneid*, trans. H. R. Fairclough (Cambridge, MA: Harvard University Press, 1916).

55. See Rousseau's *Émile, or On Education* (1762).

56. Bernard Le Bovier, sieur de Fontenelle (1657–1757), was a French author and scientist. The quotation means, "By the two axioms: everything is possible and everyone is right."

57. Tycho Brahe (1546–1601) was a Danish astronomer.

58. See Kant's *Critique of Pure Reason* (A 80/B 106).

59. The reference is to Christian Garve's 1772 German translation of the Scottish philosopher Adam Ferguson's (1723–1816) *Institutes of Moral Philosophy* (1769) (*Grundsätze der Moralphilosophie*).

60. Johann Friedrich von Flatt (1759–1821). Lichtenberg is referring to Johann Christoph Schwab's (1743–1821) essay "Neues Gleichniss von der Dreieinigkeit" in the *Berlinischen Montatsschrift* 16.

61. See Bacon's *Novum Organum* (*New Organon*) (1620).

62. Carl Christian Erhard Schmid (1761–1812) was a doctor, philosopher, and adherent of Kant's philosophy. The review, whose author is not known, of Schmid's *Versuch einer Moralphilosophie* (*Essay on Moral Philosophy*) appeared in the *Allgemeine Literaturzeitung*, no. 108 on April 8, 1791.

63. *In toto aliquid et ex omnibus nihil* means "In the whole something; from all nothing."

64. Antoine Comte d'Hamilton (Count Anthony Hamilton) (1646–1720) was an English author exiled to France, known for his parodic fairytales, such as *Les Quatre Facardins* (*The Four Facardins*) (1730).

65. Friedrich Wilhelm Herschel (1738–1822) was a Hanoverian astronomer who discovered the planet Uranus and created a forty-foot reflecting telescope in Slough, England, in 1785. During Lichtenberg's time, it was the largest telescope in the world.

66. Karl Heinrich Heydenreich (1764–1801) was a professor of philosophy in Leipzig (1789–1798) who wrote *System der Aesthetik* (*System of Aesthetics*) (1790).

67. François le Vaillant (1753–1824) was a French explorer and naturalist who detailed his travels to southern Africa in journals.

68. This statement is attributed to Samuel Johnson (1709–1784) in James Boswell's (1740–1795) *The Life of Samuel Johnson* (1787).

69. Déodat-Guy-Silvain-Tancrède Gratet de Dolomieu (1750–1801), a French geologist and mineralogist, described the dolomite mineral in 1791.

70. Lichtenberg provides the English translation of this epigram, which is attributed to the Greek poet Glycon. An identical translation appears in *The Gentleman's Magazine* 70, part 2 (1791), 1118, and is likely the source of Lichtenberg's translation.

71. Carl Christian Erhard Schmid (1761–1812) was a physician and philosopher whose *Empirische Psychologie* (*Empirical Psychology*) was published in Jena in 1791; see p. 84.

72. The Latin means "principle of contradiction."

73. Lichtenberg is referring to Gottlob Ernst Schulze's (1761–1833) *Aenesidemus oder über die Fundamente der von Reinhold gelieferten Elementarphilosophie nebst einer Verteidigung des Skeptizismus gegen die Anmassungen der Vernunftkritik* (*Aenesidemus*) (1792), which contains a critique of the philosophies of Reinhold and Kant.

74. Hermann Samuel Reimarus (1694–1768) was a philosopher known for deism. The titles of the journal and article in German are *Schleswig-Braunschwigischen Journal* (May 1792) and "Ideen zur Bestimmung des Urteils über den Einfluß der Kantischen Philosophie auf die Religion des Lebens. Eine Einleitung zu prüfenden Bemerkungen über Reimarus natürliche Religion."

75. Lichtenberg is referring to Joseph Priestley's studies in optics published in *History and Present State of Discoveries Relating to Vision, Light, and Colors* (1772).

76. Jean André Deluc (1727–1817) was a Swiss-British geologist and meteorologist. See Deluc's *Lettres physiques et morales sur l'histoire de la terre et de l'Homme*

(*Letters, Physical and Moral, on the History of the Earth and of Man*) (1779), letter 142. Lichtenberg is also referring to Hartley's notion of "clusters of ideas" in *Observations on Man* (1749).

77. Lichtenberg is referring to Kant's essay "Von der Unrechtmäßigkeit des Büchernachdruks" ("Of the Injustice of Counterfeiting Books") (1785).

78. This ethical principle is attributed to the German philosopher Alexander Gottlieb Baumgarten (1714–1762): *Perfice te ut finem, perfice te ut medium* ("Perfect yourself as an ends, perfect yourself as a means"). Kant discusses this principle in section 4 of the *Metaphysik der Sitten* (*Metaphysics of Morals*) (1797) regarding the duties owed by persons to themselves. The translation is from Immanuel Kant, *The Metaphysics of Morals*, ed. Mary Gregor (Cambridge: Cambridge University Press, 1996).

79. The complete quotation is, "Men sought truth in their own little worlds, and not in the great and common world" and is also quoted by Francis Bacon in book 1, chapter 5 of his *Advancement of Learning* (1605).

80. Georg Gustav Fülleborn's (1769–1803) *Beyträge zur Geschichte der Philosophie* (*Contributions to the History of Philosophy*) (1791) includes a comparison between Kant's *Critique of Pure Reason* and Reinhold's theory of the faculty of representation.

81. Lichtenberg is referring here to an anonymous review of Johann August Eberhard's (1739–1809) *Philosopisches Magazin* in the *Tübinger gelehrte Zeitung* (October, 1792). Eberhard and Kant engaged in a dispute regarding analytic and synthetic judgments; see Henry E. Allison, *The Kant-Eberhard Controversy* (Baltimore: Johns Hopkins University Press, 1973).

82. Lichtenberg is discussing an anonymous essay entitled "Bemerkungen über Reimarus Wahrheiten der natürlichen Religion, nach dem Gründsätzen der kritischen Philosophie" ("Remarks on Reimarus' Truths of Natural Religion according to the Principles of the Critical Philosophy") from the *Schleswigschen, ehemals Braunschweigischen Journal*, July 1792, pp. 257–94.

83. Christiaan Huygens (1629–1695) was a Dutch scientist and mathematician, who made contributions to the wave theory of light. René Descartes (1596–1650) was a French mathematician and philosopher.

84. Lucretius (99–55 BCE), *On the Nature of Things*: *Corporibus caecis igitur natura gerit res*: "Thus nature ever by unseen bodies works." See Lucretius, *De Rerum Natura*, trans. William Ellery Leonard (New York: Dutton, 1916).

85. Henri de La Tour d'Auvergne, vicomte de Turenne (1611–1675) was a French military leader during the reign of Louis XIV. Frederick II (Frederick the Great) (1712–1786) was a king of Prussia (1740–1786). L'hombre is a three- to four-person card game popular in the seventeenth and eighteenth centuries.

86. Joannes Minellius (1625–1683) wrote detailed commentaries on antique works; Lichtenberg mentions here Minellius' *Vergilius: Opera omnia cum annotationibus Ioanni Min-Ellii* (1694). Christian Gottlob Heyne (1729–1812) produced a well-known four-volume edition of Virgil's works entitled *P. Virgilii Maronis opera varietate lectionis at perpetua adnotatione illustrata* (1767–1775).

87. Georg Gottlob Richter (1694–1773), German physician and professor of medicine in Göttingen.

88. "Who has ever thought of metal calx at the mention of calx?" The German here is "Wer hat beim Metall-Kalch je an Kalch gedacht?" Lichtenberg is here considering whether one might think that a similarity in words suggests a similarity in the substances. According to phlogiston theory, metals were believed to be composed of calx and phlogiston. When metals were burned, calx remained as a powdery residue. Since the calx weighed less than the metal, it was thought that phlogiston had been released during combustion. It was also thought that metals could be formed by the addition of phlogiston to calx. This was done by heating calx with a phlogiston-rich substance such as charcoal. Antoine Lavoisier (1743–1794) disproved this view through a series of experiments involving phosphorus and other substances. When phosphorus was burned, the resulting powder weighed more than the phosphorus, which ran contrary to the results expected on the phlogiston theory. Lavoisier proposed that when substances combust, they combine with oxygen from the air. On the history of phlogiston, see James Bryan Conant, ed., *The Overthrow of Phlogiston Theory: The Chemical Revolution of 1775–1789* (Cambridge: Harvard University Press, 1950).

89. Lichtenberg is referring to Euler's letters to Princess Sophie Friederike Charlotte, *Lettres à une princesse d'Allemagne sur quelques sujets de physique et de philosophie* (1768) (*Letters to a German Princess on Different Subjects in Physics and Philosophy*).

90. *Harmonia praestabilita* refers to Leibniz's doctrine of preestablished harmony.

91. There is some dispute regarding how the second part of the first sentence of this remark should be translated. In German, the remark reads: "Wir werden uns gewisser Vorstellungen bewußt, die nicht von uns abhängen; andere glauben wir wenigstens hingen von uns ab; wo ist die Grenze? Wir kennen nur allein die Existenz unserer Empfindungen, Vorstellungen und Gedanken. Es denkt, sollte man sagen, so wie man sagt: es blitzt. Zu sagen cogito, is schon zu viel, so bald man es durch Ich denke übersetzt. Das Ich anzunehmen, zu postulieren, ist praktisches Bedürfnis" (K 76).

In my translation, I understand the second part of the first sentence to be "others [representations], at least we believe, are dependent upon us." In his excellent paper on Lichtenberg, Guenter Zoeller has translated the second part of the sentence as "others believe that we are at least dependent upon ourselves." Zoeller argues that the subjunctive "hingen" indicates a dependent clause following "glauben" and thus favors his translation. This, however, is not decisive since one might understand the second part of the sentence to be "Wir glauben wenigstens [dass] andere hingen von uns ab" ("We believe at least [that] others are dependent upon us"), which also respects the subjunctive "hingen." The subjunctive does not indicate decisively one way or another which pronoun occupies the subject position. My

own translation does, however, accord better with what Lichtenberg says elsewhere in the Waste Books regarding the dependence and independence of representations; see J 1537. For a translation that is in agreement with my own regarding the first sentence, see Ernst Mach, *The Analysis of Sensations and the Relation of the Physical to the Psychical*, trans. C. M Williams (Chicago: Open Court, 1914), p. 28–29. Also see Guenter Zoeller, "Lichtenberg and Kant on the Subject of Thinking," in *Journal-of-the-History-of-Philosophy* 30, no. 3 (1992), pp. 418. "It lightnings" is a translation of the German "es blitzt." It makes use of the acceptable though uncommon intransitive verb "to lightning" and is to be understood along the lines of "lightning occurs" or "lightning is occurring." As in the phrase "it rains" or "it is raining," "it" is a pleonastic or impersonal pronoun. In such a case, grammatical rules require a noun, but this noun is impersonal and does not refer to any agent. For a similar reflection see L 806.

92. Alexander Pope (1688–1744) was an English poet and translator. See *An Essay on Man* (1734), epistle 2.

93. François de La Rochefoucauld (1613–1680) was a French moralist known for his short aphoristic reflections.

94. *Fallacia causae* is a "logical fallacy." Lichtenberg may be referring here in part to the dilemma in Plato's *Euthyphro*: "Is the pious being loved by the gods because it is pious, or is it pious because it is being loved by the gods?" See Plato, *The Trial and Death of Socrates*, trans. G. M. A. Grube (Indianapolis: Hackett, 2000), 10a.

95. Saint Januarius of Naples was a Catholic martyr. His dried blood, kept in a vial in Naples, is said to liquefy each year on the feasts of St. Januarius. Lichtenberg is talking about an old German children's game called "Wer fürchtet sich vorm schwarzen Mann?" (Who is afraid of the black man?), which can be understood as referring to a man with dark skin, a shadowy figure, a chimneysweep, or a man who wears black clothing.

96. *Proprium locum* means "pride of place."

97. Lichtenberg is referring to the French philosopher Michel de Montaigne's (1533–1592) essay "Que philosopher, c'est apprendre à mourir" ("That to Study Philosophy is to Learn to Die") in his *Essais* (1580–1588).

98. Karl Heinrich Heydenreich (1764–1801) was a German philosopher and poet, author of *Briefe über den Atheismus* (1796).

99. Kant discusses attractive and repulsive forces in his *Metaphysical Foundations of Natural Science*.

100. J. F. T. is Jean Henri Hassenfratz (1755–1827), French mineralogist and physicist. Lichtenberg is here discussing Goethe's "Von den farbigen Schatten" ("On Colored Shadows"), which Goethe had sent Lichtenberg on August 11, 1793. Lichtenberg and Goethe carried on a correspondence regarding Goethe's theory of colors between 1792 and 1796. See Georg Christoph Lichtenberg. *Briefwechsel*, vol.

4, ed. Ulrich Joost and Albrecht Schöne (Munich: Beck, 1992). J. S. T. Gehler (1751–1795) was the editor of a multivolume encyclopedia of physics entitled *Physicalische Wörterbuch* (*Dictionary of Physics*) (1787–1795).

101. This reference is to experiments performed by the Italian physician and physicist Luigi Galvani (1737–1798).

102. Samuel Thomas Sömmerring (1755–1830), *Über das Organ der Seele. Nebst einem Schreiben von Immanuel Kant* (*On the Organ of the Soul*) (1796).

103. Nicolaus Mulerius (1564–1630) was editor of *Copernici astronomia instaurata cum notis* (1617), an annotated edition of Copernicus' *De revolutionibus orbium coelestium* (*On the Revolutions of the Heavenly Spheres*) (1543).

104. Lichtenberg quotes these principles from the essay "Über Principien der Moral" ("On Moral Principles"), which appeared in the *Allgemeine Reichsanzeiger* on June 13, 1797.

105. This reference is to Friedrich Albert Carl Gren (1760–1798), Alexander von Humboldt (1769–1859), Georg Friedrich Hildebrandt (1764–1816), and Alexander Nicolaus Scherer (1771–1824).

106. See Kant's discussion of the dogmatic and polemical uses of reason in the first chapter of "The Transcendental Doctrine of Method" in the *Critique of Pure Reason* (A 708/ B 736–A769/B797).

107. Bernhard Friedrich Thibaut (1775–1832) was a mathematician in Göttingen.

108. Gottfried August Bürger (1747–1794), philosopher, poet and friend of Lichtenberg in Göttingen, was known for his edition of the adventures of *Baron von Münchhausen* (1786). Lichtenberg attended Bürger's course on Kant entitled Some Main Features of Kant's Philosophy from the *Critique of Pure Reason* during the Winter semester 1777/78 in Göttingen. On Bürger's belief in ghosts, see Erich Ebstein, "Literaturhistorische Miszellen. I. Der Philosoph Feder über G.A. Bürger," in *Zeitschrift für Bücherfreunde* 5, 1914, p. 517.

109. On Kant, see Lichtenberg's remark L 740. *Theatetus* refers here to Dietrich Tiedemann's (1748–1803) book *Theätet oder über das menschliche Wissen, ein Beitrag zur Vernunft-Kritik* (*Theatetus, or on Human Knowledge: A Contribution to the Critique of Reason*) (1794), in which Tiedemann argues that, contrary to the view espoused in Kantian idealism, there is a bridge from our perceptions and representations to objects.

110. Deluc's "A Second Paper on Hygrometry" appeared in *Philosophical Transactions* in 1791. Charles Le Roy (1729–1779) was a French physician; see his "Mémoire sur l'élévation et la suspension de l'eau dans l'air, et sur la rosée," in the *Histoire de l'Académie Royale des Sciences. Année 1751*, pp. 481–518.

111. See Kant's "Geschichte und Naturbeschreibung der merckwürdigsten Vorfälle des Erdbebens, welches an dem Ende des 1755. Jahres einen großen Theil der Erde srschüttert hat" ("History and Natural Description of the Earthquake of 1755") (1756).

112. Aulus Persius Flaccus (AD 34–AD62) was a Stoic poet and satirist; see *The Satires*, prologue, line 10.

113. Johann Bernhard Basedow (1723–1790) was a German philosopher, theologian, and educational reformer.

114. Lichtenberg is referring to Dietrich Tiedemann's (1748–1803) book *Theätet* (1794).

115. *Loci topoi* refers to Aristotle's *topoi* or *loci communes*, which are general forms used for the discovery and construction of arguments; see Aristotle's *Topics* and *Rhetoric*. On Lichtenberg's statement "it thinks," also see remark K 76 and note 91 in the present volume.

116. Friedrich Wilhelm Joseph von Schelling (1775–1854) was a German idealist philosopher. See *Ideen zu einer Philosophie der Natur* (*Ideas for a Philosophy of Nature*) (1797 and 1803).

117. Charles Hutton (1737–1823) was an English mathematician. The article on attraction appears in Hutton's *A Mathematical and Philosophical Dictionary* (1795).

118. This reference is to Friedrich Theodor Schubert (1758–1825) and his *Theoretische Astronomie* (*Theoretical Astronomy*) (1798).

119. The essay referred to is Sauer's "Transcendentale Ansicht der Theorie des Feuers" ("Transcendental View of the Theory of Fire"). Johann Gottlieb Fichte (1762–1814) was a professor of philosophy in Jena, and Friedrich Immanuel Niethammer (1766–1848) was a *privatdozent* in Jena. Fichte published an essay in the *Philosophical Journal* in 1798 entitled "On the Basis of Our Belief in a Divine Governance of the World," which provoked the so-called atheism controversy in which he was accused of atheism and was called on to resign his post in Jena. This issue of the journal was banned, and Fichte was forced to leave his professorship in 1799. For a discussion of the atheism controversy, see Daniel Breazeale and Tom Rockmore, eds., *New Essays on Fichte's Later Jena Wissenschaftslehre* (Evanston: Northwestern University Press, 2002).

120. The reference is to Johann Gottlieb Fichte (1762–1814). See Lichtenberg's letter to Ludwig Christian Lichtenberg from February 18, 1799, in which he criticizes Fichte in Georg Christoph Lichtenberg, *Briefwechsel*, vol. 4, 1793–1799, ed. Ulrich Joost and Albrecht Schöne (München: Beck, 1992).

Further Reading

There has been little treatment of Lichtenberg's thought within the context of philosophy in the English-speaking world. The most important of these, and that from which much of the discussion of Lichtenberg's thoughts on idealism in this introduction is drawn, is Guenter Zoeller's essay "Lichtenberg and Kant on the Subject of Thinking," in *Journal-of-the-History-of-Philosophy* 30, no. 3 (1992), pp. 417–42. Another superb discussion of Lichtenberg's cogito remark can be found in Alfred Nordmann's *Wittgenstein's Tractatus: An Introduction* (New York: Cambridge University Press, 2005); J. P Stern's *Lichtenberg: A Doctrine of Scattered Occasions; Reconstructed from His Aphorisms and Reflections* (Bloomington: Indiana University Press, 1959) contains a broad treatment of many of Lichtenberg's philosophical thoughts, and Hermann J. Cloereen's "Philosophy as Linguistic Analysis: G. Chr. Lichtenberg (1742–1799)," in *Language and Thought: German Approaches to Analytic Philosophy in the Eighteenth and Nineteenth Centuries* (New York: de Gruyter, 1988) discusses Lichtenberg's relationship to the emergence of analytic philosophy.

Other less historical but nevertheless interesting discussions of self-consciousness and personal identity with respect to Lichtenberg can be found in Tyler Burge's essay, "Reason and the First Person," in *Knowing Our Own Minds*, ed. C. Wright, B. Smith, and C. Macdonald (Oxford: Oxford University Press, 2000); Quassim Cassam's *Self and World* (Oxford: Oxford University Press, 1997); Derek Parfit's *Reasons and Persons* (Oxford: Oxford University Press, 1986); and Bernard Williams' *Descartes: The Project of Pure Enquiry* (New York: Routledge, 1978/2005).

A great deal of scholarship on Lichtenberg has been produced in German. Texts on his relationship to Kant include Josef Dostal-Winkler, *Lichtenberg und Kant. Problemgeschichtliche Studie* (München-Leipzig, 1924); Ralf Kauther, "Lichtenberg und Kant," in *Lichtenberg-Jahrbuch*,

ed. Wolfgang Promies and Ulrich Joost (Saarbrücken: SDV, 1992); Arno Neumann, "Lichtenberg als Philosoph und seine Beziehung zu Kant," in *Kantstudien* 4, 1900 (reprint 1958), pp. 68ff.; and Eva Schapira, *Lichtenberg als Philosoph* (Dissertation, Berlin 1911). On mind and body in Lichtenberg, see Friederike Kleisner, *Körper und Seele bei Georg Christoph Lichtenberg* (Würzburg: Königshausen & Neumann, 1998).

Other works on Lichtenberg that concentrate on his thoughts on language and that have been indispensable for this introduction are Heinz Gockel's important book *Individualisiertes Sprechen: Lichtenbergs Bemerkungen in Zusammenhang von Erkenntnistheorie und Sprachkritik* (Berlin: Walter de Gruyter, 1973); Smail Rapic, *Erkenntnis und Sprachgebrauch: Lichtenberg und der Englische Empirismus* (Göttingen: Wallstein, 1999); Johannes Roggenhofer, *Zum Sprachdenken Georg Christoph Lichtenbergs* (Tübingen: Max Niemeyer, 1992); Rudolf Jung, *Studien zur Sprachauffassung Georg Christoph Lichtenbergs. Eine Interpretation der sprachphilosophischen Aphorismen* (Frankfurt a.M. 1967); and Georg Hendrik v. Wright, "Georg Christoph Lichtenberg als Philosoph," in *Theoria* 8, 1942, pp. 43ff.

For a critical edition of Lichtenberg's lectures on the sciences and his revisions of Erxleben's *Anfangsgründe der Naturlehre*, see Georg Christoph Lichtenberg, *Gesammelte Schriften*. *Vorlesungen zur Naturlehre* ed. Horst Zehe, Albert Krayer, and Wiard Hinrichs (Göttingen: Wallstein, 2007). Lichtenberg's work in the sciences is discussed in Horst Zehe, "Georg Christoph Lichtenberg und die *Metaphysischen Anfangsgründe der Naturwissenschaft*," in *Photorin* 10 (1986). Also see Albrecht Schöne, *Aufklärung aus dem Geist der Experimentalphysik. Lichtenbergsche Kunjuktive* (Munich: Beck, 1982).

Biographical and more general treatments of Lichtenberg's work include Carl Niekerk, *Zwischen Naturgeschichte und Anthropologie. Lichtenberg im Kontext der Spätaufklärung* (Tübingen: Niemeyer, 2005); Rainer Baasner, *Georg Christoph Lichtenberg* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1992); an influential study by Paul Requadt, *Lichtenberg. Zum Problem der deutschen Aphoristik* (Hameln: Franz Seifert, 1948); Wilhelm Grenzmann, *Georg Christoph Lichtenberg* (Salzburg-Leipzig: Pustet, 1939); and Franz Mautner's comprehensive biography, *Lichtenberg. Geschichte seines Geistes* (Berlin: de Gruyter, 1968).

Index*

*In the Wolfgang Promies edition of Lichtenberg's *Schriften und Briefe*, references to the Waste Books are arranged according to notebook number and entry number (e.g. K 76). The index of the present edition has been similarly arranged. Other references in the index are to the page number of the introduction or introductory material (e.g. xi, 6) or to the page number and endnote number (e.g. 192n91).

PHILOSOPHY

Georg Christoph Lichtenberg
Philosophical Writings

Translated, Edited, and with an Introduction by Steven Tester

Admired by philosophers such as Schopenhauer, Nietzsche, Kierkegaard, Freud, Benjamin, and Wittgenstein, Georg Christoph Lichtenberg (1742–1799) is known to the English-speaking world mostly as a satirist. An eminent experimental physicist and mathematician, Lichtenberg was knowledgeable about the philosophical views of his time, and interested in uncovering the philosophical commitments that underlie our common beliefs. In his notebooks (which he called his Waste Books) he often reflects on, challenges, and critiques these philosophical commitments and the dominant views of the Enlightenment, German idealism, and British empiricism. This scholarly collection of Lichtenberg's philosophical aphorisms contains hundreds of trenchant observations drawn from these notebooks, many of which have been translated into English here for the first time. It also includes a historical and philosophical introduction to his writings, situating him in the history of philosophy and ideas, and is supplemented with a chronology, suggestions for further reading, and extensive introductory and textual notes explaining his references.

"This is a great project by an extremely knowledgeable translator. Tester does a fine job making the case for Lichtenberg and explaining his thinking."
— Carl Niekerk, University of Illinois at Urbana-Champaign

STEVEN TESTER is a joint PhD candidate in philosophy at Humboldt University in Berlin and in German at Northwestern University.

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