

5 / *Money of the Mind*

DIALECTIC AND MONETARY FORM IN KANT AND HEGEL

ACCORDING TO Plato and Hegel, dialectic comprises two related ways of thinking, the *division* of a whole into parts and the *generation* of a whole from partial hypotheses. These dialectical methods are exemplified and informed by monetary representation and exchange. Plato, for example, argues that most men unwittingly divide up the conceptual and political world in which they live by a kind of division that is formally identical with money changing. His dialogues show how the dialectical relationships of the whole Idea (the One) to its special parts (the many) differ from the relationships of a coin of large denomination to the coins of smaller denomination into which it may be changed. They show how monetary differs from dialectical differentiation.¹ Plato stresses that ignoring or relying uncritically on deceptive interconnections between economic and linguistic categories (rather than taking them into account) renders the intellectual disease of which they are symptomatic more difficult to diagnose and more politically dangerous. In the thought of such modern philosophers as Arthur Schopenhauer² and Immanuel Kant³ there is still some un-

1. On the relationship between division (*diairēsis*) and money changing in the Platonic dialogues (in which both the intellectual process and the financial one are signified by *kermatidzein*), see Jakob Klein, *A Commentary on Plato's Meno* (Chapel Hill, N.C., 1965), p. 81. Cf. Seth Benardete, "Eidos and Diairesis in Plato's *Statesman*," *Philologus* 108 (1963): 212.

2. "Every *general* truth is related to special ones as gold to silver in so far as we can convert it into a considerable number of special truths that follow from it, just as gold coin can be turned into small change" (Arthur Schopenhauer, "On Logic and Dialectic," in *Parega and Paralipomena: Short Philosophical Essays*, trans. E. F. J. Payne [Oxford, 1974], 2:21).

3. Immanuel Kant sometimes considers even the idea of virtue, which Socrates in the *Meno* seems to conflate with the One, in terms of money changing. "All human

questioned dependence on formal relationships between division and money changing.

Plato argues that dialectical generation, or the production of the whole from partial hypotheses, may be connected with monetary processes in the same way as dialectical division. Socrates, for example, is said to deposit in his interlocutors partial falsehoods or likenesses of the whole Idea that the god has deposited with him. These seminal parts are homogeneous with the Idea in the same way that monetary interest is homogeneous with its principal or that a child is homogeneous with its progenitor.⁴ Socrates' maieutic art ensures that from these likenesses are generated, by a series of intellectual births and rebirths from the minds of his interlocutors, intellectual offspring ever more like the Idea. (In the same way the hypotheses figured on the divided line approach the Idea ever more closely.) Thus Socrates husbands the Idea as if he were a midwife, and he draws intellectual hypotheses out of and to the Idea as if he were a banker drawing out compound interest from a financial deposit or hypothec.⁵

Greek dialecticians thus articulate the relationship of genres with species in terms of monetary differentiation and elucidate intellectual hypothesizing in terms of monetary hypothecation. That articulation, as we shall see in this chapter, involves tropologies of division and hypothesizing that are similar to (and which perhaps influenced) the tropologies of adequation (*adequatio*) and sublation (*Aufhebung*) proposed by Kant and Hegel. In Hegelian dialectic, for example, differentiation (division) and hypothesizing similarly involve the generative potential of parts (hypotheses and antitheses) and the absolute whole. They involve the mutual cancellation of two partial *Hypotheses* in polar opposition to each other, and their incorporation and transcen-

virtue in exchange is fractional currency," says Kant. "He is a child who takes it for genuine gold [*ächttes Gold*].—But it is better to have fractional currency [*Scheidemünze*] than to have no medium in circulation: fractional currency can be changed for cash money [*baares Geld*], albeit with considerable loss" (*Immanuel Kant's Anleitung zur Menschen- und Weltkenntnis, nach dessen Vorlesungen im Winterhalbjahre 1790–91*, in *Immanuel Kants Menschenkunde*, ed. Fr. Ch. Starke [Hildesheim, 1976], p. 82).

4. For Plato's analogy from intellectual offspring both to animal offspring (*tokos*) and to monetary interest (*tokos*), see Plato, *Republic* 507, 509, 534.

5. In English, as in Greek, *hypothec* (from *hupothēkē*, literally "deposit") and philosophical *hypothesis* (from *hupothēsis*) are cognate. On Socrates' divided line, see Marc Shell, *The Economy of Literature* (Baltimore, 1978), pp. 39–45.

dence by a third. This transcendence, Hegel implies, is the sublative cashing in (*Aufhebung*) of an already canceled or annulled financial bond, or exhausted *Hypothek*.⁶ The moderns—Kant and Hegel—shift dialectic, as we shall see, away from the Platonic division of the Ideal One towards the cancellation (*Aufhebung*) of things to zero. The modern movements from division to sublation and from One to none, however, do not eradicate the “economics” in dialectic. The modern concept of sublation, indeed, seems to express the historical fact of the internalization of economic form in philosophy.

Suppression and Adequation in Kant

In *An Attempt to Introduce the Concept of Negative Quantities into Mundane Wisdom* (1763), Kant discovers suppression (*Aufhebung*) to zero in Newtonian physics and in credit economics.⁷ Kant considers two kinds of opposition. Logical opposition is contradiction, affirming and denying something about a single subject. (Such affirmation and denial, as Kant says, are of no consequence: *nihil negativum repraesentabile*.) Real opposition, on the other hand, arises when two predicates of a single subject are opposed, but without logical contradiction. Real opposition occurs, for example, when a single body is pulled in different directions by two forces so that one force tends to suppress (*aufheben*) the other.⁸ One direction in which the body is pulled may be called “negative” and the other “positive,” but these words are meaningful only when the directions are taken in relation to each other.⁹

6. In German philosophy the association of *Hypothek* with *Hypothesis* is suggested by the discussions of both words in Johann Georg Walch, *Philosophisches Lexicon*, 4th ed. (Leipzig, 1775; rpr. Hildesheim, 1968).

7. Kant, *Versuch, den Begriff der negativen Grössen in die Weltweisheit einzuführen*, in *Werke in zehn Bänden*, ed. Wilhelm Weischedel (Darmstadt, 1968), 2:775–819. Unless otherwise noted, references to Kant’s *Werke* are to this edition. The relation between this *Versuch* and other works of Kant is a theme of Susan Meld Shell, *The Rights of Reason: A Study of Kant’s Philosophy and Politics* (Toronto, 1980); and Hans Saner, *Kant’s Political Thought: Its Origins and Development*, trans. E. B. Ashton (Chicago, 1973).

8. “In its mathematical sense, [*Aufhebung*] is used of magnitudes which reduce each other to zero [or which] mutually annul or suppress each other, and therefore become indifferent to their equation (W. T. Harris, “Note,” in *Hegel: Selections*, ed. J. Loewenberg [New York, 1929; rpr. 1957], p. 102).

9. Some thinkers on the left ignore the significance of the distinctions that Kant makes between logical and real opposition. Lucio Colletti (“Marxism and the Dialectic

The principal example of nonphysical suppression that informs Kant's concept of negativity is mutual suppression by credit and debt. (The example is not surprising; the opposition of positivity to negativity was first "discovered" by Brahmagupta when he studied the unique interaction of credit and debt in the monetary economy of India in the seventh century A.D.)¹⁰ Throughout *The Concept of Negative Quantities*, Kant refers to "negative" debt and "positive" credit as real opposites. In this way he allies *Aufhebung* with a zero sum:

A person who owes a debt to another person of 100 florins must find this sum. But suppose that the same person is owed 100 florins by another. The latter is then held as reimbursing the former. The two debts united form a ground [*Grund*] of zero. There is no money to give and no money to receive.¹¹

In economics, as in physics, the zero is supposed to be a relative nothing, the final result of *Aufhebung*. In Kant's thinking, an *Aufhebung* is the cancellation to zero, or stasis, of a debt (*Aktivschuld*) by a credit (*Passivschuld*) when both *Schulden* are "predicates belonging to a single subject and are quantitatively equal to each other." The *Grund* is zero.

Kant seems to generalize this notion of reciprocal exchange infinitely.¹² In *The Concept of Negative Quantities*, he applies the notion of mathematical negativity and reciprocity to psychology, to the estimation of the total values of pleasure and displeasure, to crime and pun-

tic," *New Left Review*, no. 93 [September-October 1975], pp. 3-30) suggests that this distinction is necessary to understanding "the relationship between Marxism and science." The distinction also pertains to the historical development of dialectic from Plato to Marx and to thinking about the relationship between money and commodity, as well as about the oppositions between and contradictions within social classes.

10. H. G. Zeuthen (*Geschichte der Mathematik im Alterum und Mittelalter* [Copenhagen, 1896], esp. p. 280) argues that the Indians invented negative numbers by observing an economy of debts and credits. Cf. J. Ruska ("Zur ältesten arabischen Algebra und Rechenkunst," *Sitzungsberichte der Heidelberger Akademie der Wissenschaften Philosophisch-historische Klasse* [1917], 2 Abhandlungen, esp. pp. 35, 49, 60-61, 104, 109-10, 113-14) on Indian sources of Greek "algebra"; and Morris Kline (*Mathematical Thought from Ancient to Modern Times* [New York, 1972], p. 185), who notes that the "first known use [of negative numbers] is by Brahmagupta about [the year] 628."

11. Kant, *Versuch*, in *Werke*, 2:784; cf. 2:785-89.

12. On a similar generalization of the concept of reciprocal exchange, see Gregory Vlastos, "Equality and Justice in Early Greek Cosmologies," *Classical Philology* 42 (July 1947): 173-74.

ishment, and so on. For Kant, the sum total of such opposites is or should be zero. The concept of zero and of negativity is thus crucial to Kant's studies of morality and human intentions. Numerical mathematization informs the Categorical Imperative of his later works on morality. And in *Perpetual Peace* (1795) the notion that different forces cancel each other informs a modern political theory of the balance of powers in which, as in Adam Smith's economics, a cunning historical ruse is seen to balance out and perfect the separate tendencies of individuals, larger groups, or nations. The end of this historical balance is a mutual cancellation, which becomes a dynamic equilibrium that is supposed to move history forward.¹³ The theory of negative quantities, which began by associating equation with mutual suppression, ends with a metaphysical and political justification of the liberal free-market system.

Plato tried to show how opposites, such as pleasure and pain, participate in each other as species of one genus or as parts of a single unity. Kant, however, tries to show that such opposites mutually suppress each other to zero. The Being of unity in Plato, then, is replaced by the *Grund* of a relative zero in Kant.

This replacement, which relies on a theory of equilibrium or equation, affects the Kantian theory of truth. The Platonic conception of truth is connected with the one way to One (*alētheia*). The Kantian conception of truth, however, is connected with the double way of equation towards zero. In the *Critique of Pure Reason* (1781, second edition 1787), for example, Kant adopts the Thomist definition of truth as the equation or adequation of *intellectus* and *res*.¹⁴ He assumes as granted "the nominal definition of truth, that it is the agreement [*Übereinstimmung*] of knowledge with its object."¹⁵ Thus he associates

13. Kant, *Zum ewigen Frieden*, in *Werke*, 9:191–251. The transformation of "mutual cancellation" into "dynamic equilibrium" is already treated in Kant's cosmological *Allgemeine Naturgeschichte und Theorie des Himmels* (1755), in *Werke*, 1:219–400.

14. For Plato, see the ironic Socrates' etymological explanation of truth (*alētheia*) as "the wandering way of the god" (*theia alē*) (*Cratylus* 421b). For Thomas Aquinas, see his *Quaestiones disputatae de veritate*, question 1, art. 1. Aquinas borrows the phrase *adequatio res et intellectus* from Isaac Israeli (ca. 855–955).

15. Kant, *Kritik der reinen Vernunft*, A 58 = B 82; translated as *Immanuel Kant's Critique of Pure Reason*, trans. Norman Kemp Smith (London, 1933), p. 97. (For references to the *Kritik*, numbers preceded by A refer to pages of the first edition [Riga, 1781] and numbers preceded by B refer to pages of the second edition [Riga, 1787].) The "object" in question is the object of knowledge, not the thing-in-itself.

logical truth with an adequation implying the existence of two things that are (in some essential way) adequate or equal to each other. As a matter of course, an equal subtracted, or lifted up (*aufgehobene*), from an equal leaves zero.¹⁶ The tropic movement towards zero is essential to the concept of truth as adequation.

Kant argues that the general logic of truth can be either analytic or dialectic. Analytic logic is a negative touchstone that touches properly only the form of truth or that tests only whether our knowledge contradicts itself. General logic, however, has “no touchstone for the discovery of such error as concerns . . . the content.” Kant criticizes the “dialecticians” who believe that general logic can be treated as “an *organon* for the actual production of at least the semblance of objective assertions.” He argues that “dialectic” is a logic of illusion, and that “dialecticians” do not understand that “logic teaches us nothing whatever regarding the content of knowledge, but lays down only the formal conditions of agreement with the understanding,” and that “since these conditions can tell us nothing at all as to the objects concerned, any attempt to use this knowledge as an instrument [*Werkzeug*] or organon which professes to extend and enlarge our knowledge can end in nothing but mere talk. . . .” Kant thus argues that the formal laws of logic cannot provide such adequation; knowledge is nothing more than the combinatory activity of the understanding.¹⁷ In Kant, then, the *Grund* of a relative zero becomes, like Being itself, a kind of unknowable source.

Plato argued that the universe is subject to government by number, and he recognized a general similarity between number (*numerus*) and coined money (*nummus*): the theory of number and the theory of coined money concern both symbols (numbers as numerals [*Zahlen*] and the inscriptions in ingots) and things (numbers as groups of things [*Anzahlen*] and the ingots themselves), which the symbols represent as, or homogenize into, one genus. Kant distinguishes his from the

16. The connection between “equation” and *Aufhebung* is commonplace in German mathematical discourse. Thus Andreas Reyher, in a widely used textbook (*Arithmetica oder Rechen-Büchlein* [Gotha, 1653; 4th ed., 1657], p. 72) writes: “Wie die grosse gebrochene Zahlen in Kleinere *gleichgeltende* zu reduciren, *auffzuheben* oder zu bringen.”

17. Kant, *Kritik*, A 60–61 = B 85–86; trans. Smith, pp. 98–99. I do not consider, for the time being, transcendental logic.

Platonic position by an elaborate disengagement of the intellectual *Zahl* from the *Anzahl* of things.¹⁸

The Kantian concept of truth, however, is relative to another numerical concept, the zero obtained from discourse about economics and physics. In *The Concept of Negative Quantities*, Kant argued that the *Grund* of being is associated with an equation that is the mutual cancellation (*Aufhebung*) to zero of opposite and real (i.e., not logically contradictory) objective forces, such as physical attraction and repulsion or monetary debt and credit. In *The Critique of Pure Reason*, he argues similarly that truth is associated with the adequation of *intellectus* and *res*, and refers the relationship or affinity of subject with object to a transcendental *Grund*.¹⁹ (Note, however, that credit and debt, of which he wrote in *The Concept of Negative Quantities*, are homogeneous, and that the knower and the known, of which he writes in the *Critique of Pure Reason*, are heterogeneous.) In his theory of truth, then, Kant both uses *Aufhebung* (as adequation) and decries dialectic (which would confirm the truth of objective assertions). That *Aufhebung* is crucial both to the zero in the adequation of analytic logic (which is confined to mere forms) and to the zero in real equation (which may consider quantities and forces of objects) suggests, however, an unavoidable problem in the Kantian critique of dialectic. As it happens, the Kantian relationship between *Aufhebung* and truth is one of the problems with which the dialectician Hegel takes issue.

Against Formalism

Hegel criticizes the infinite generalizations of wayward Kantian systems of reciprocities like those of Friedrich Wilhelm Joseph von Schelling and Johann Gottlieb Fichte. In *The Phenomenology of Mind* (1807), for example, Hegel attacks the formalism of Schelling: "The predicate may be subjectivity or objectivity, or again magnetism, electricity, and so on, contraction or expansion. . . . With a circle of

18. On "the calculating character of modern times" and the Kantian conception "of the world as a huge arithmetical problem," see Georg Simmel, *The Philosophy of Money*, trans. T. Bottomore and D. Frisby (London, 1978), esp. pp. 443-46. On the relationships between *numerus* and *nummus*, and the Greek root *nem-*, see Chapter 6, note 28.

19. Kant, *Kritik*, A 57-64 = B 82-88; trans. Smith, pp. 97-101.

reciprocities of this sort it is impossible to make out the real fact in question."²⁰ According to Hegel, Kant's formalism of real opposites degenerates with Schelling into a schematizing system of pseudoclassification or pseudodifferentiation like the system of labeled boxes in a merchant-grocer's stall. Schelling employs mathematical relations, such as " $0 = 1 + 1 - 1 + 1 - 1 \dots$," to define his notion of differentiation and cancellation (*Aufhebung*).²¹ Hegel, in his *History of Philosophy*, claims that for Schelling all difference is only quantitative, as is money in its role as measure, and he makes his famous assertion that philosophical "difference must really be understood as qualitative."²² Similarly, in *Faith and Knowledge* (1802), Hegel attacks the formalism of deduction in Fichte as "nothing but a transformation of signs, of the *minus* sign into *plus* sign." He mocks Fichte's formalism, as presented in his *Vocation of Man* (1800), by an ironic observation that "an empty money-bag is a bag with respect to which money is already posited, to be sure, though with the *minus* sign; money can immediately be deduced from it because, as lacking, money is immediately posited."²³ Hegel thus accuses post-Kantian formalists of a tendency to differentiate among the things of the world as though thinking were merely double-entry bookkeeping.

This accusation informs Hegel's discussion of "the opposition of

20. Hegel, *Phänomenologie des Geistes*, in *Werke*, 20 vols. (Frankfurt, 1970), 3:48–49. Unless otherwise noted, references to Hegel are to this edition. Translations of the *Phänomenologie* are from the translation by J. B. Baillie (*The Phenomenology of Mind* [New York, 1967], here p. 108). I have also consulted the translation of the Preface by Walter Kaufmann (*Hegel: Texts and Commentary* [New York, 1965]).

21. Joseph L. Esposito (*Schelling's Idealism and Philosophy of Nature* [Lewisburg, Pa., 1977], esp. pp. 178–85) suggests that Hegel misunderstands Schelling and is confused about the relationship between quantity and quality. Esposito notes that "Schelling's Absolute first *appears* as simple (absolute) indifference, as [Lorenz] Oken . . . had interpreted it, and progressively moves toward greater differentiation. . . . However, this differentiation is not, in fact, conceived as *real*. . . . To explain this Schelling would use the . . . mathematical relation [$0 = 1 + 1 - 1 + 1 - 1$]. Hegel prefers to characterize this motion of cancellation [*Aufhebung*] as 'the life of the Concept,' but for Schelling this metaphor and all those involving 'movement' [which] Hegel uses [are] deceptive" (p. 180; cf. F. W. J. von Schelling, *Sämmtliche Werke*, 14 vols., ed. K. F. A. Schelling [Stuttgart, 1856–61], 2:41).

22. Hegel, *Vorlesungen über die Geschichte der Philosophie*, in *Werke*, 20:440–54; translated as *Lectures on the History of Philosophy*, trans. E. S. Haldane and F. H. Simson (London, 1896), 3:512–45.

23. Hegel, *Glauben und Wissen*, in *Gesammelte Werke*, ed. Hartmut Buchner and Otto Pögeler (Hamburg, 1968), 4:391–92; translated as *Faith and Knowledge*, trans. W. Cerf and H. S. Harris (Albany, N.Y., 1977), p. 159.

Being and Nothing" in his *Logic* (1812–16). Here Hegel offers a critique of the Newtonian physics that (as he argues) Kant incorporated wholesale into his philosophy, and he makes a related attack on Kant's ontology and theory of the creditability of Being, or on Kant's attempt to demonstrate the impossibility of the Cartesian and Leibnizian proofs of the existence of God.²⁴ In the *Critique of Pure Reason*, Kant compared the actual and potential worths of certain moneys (*Taler*), and pretended that Descartes had argued that because we have the idea of God He must exist in the same way that if we have the idea of money it can be spent. Kant wrote that "the attempt to establish the existence of a supreme being by means of the famous ontological argument of Descartes is merely so much labor and effort lost; we can no more extend [*reicher werden*] our stock of [theoretical] insight by mere ideas [*Ideen*], than a merchant can better his position by adding a few noughts [*Nullen*] to his cash account."²⁵ Hegel criticizes Kant's supposed demonstration of the impossibility of the ontological argument by ridiculing his identification of "ideas to be extended" with "noughts to be cashed in." Hegel, for whom the possibility of ontology is crucial, argues that "what above all has made successful the Kantian critique of the ontological proof of the existence of God is without doubt the example which Kant added to make it more striking." He argues at length that a coin is different from God; in terms of the attachment of predicates to subjects, they operate differently.²⁶

Sublation and the Modus Tollens

Hegel's position against formalism accounts for his redefinition of *Aufhebung*. In Hegel *Aufhebung* is not "suppression," as it is in the

24. Hegel, *Wissenschaft der Logik*, in *Werke*, 5:88–92; translated as *Science of Logic*, trans. W. H. Johnston and L. G. Struthers (London, 1929), 1:98–102. Cf. Hegel, *Jenenser Logik, Metaphysik und Naturphilosophie aus dem Manuskripte*, ed. G. Lasson (Leipzig, 1923); and *Enzyklopädie der philosophischen Wissenschaften im Grundrisse, Erster Teil: Die Wissenschaft der Logik*, in *Werke*, 8:135–37.

25. Kant, *Kritik*, A 630 = B 658; trans. Smith, p. 507. Compare Kant's quite different *Der einzig mögliche Beweisgrund zu einer Demonstration des Daseins Gottes* (1763), in which he relies on the theory of *Aufhebung* presented in his essay on the concept of negative quantities (1763). Kant writes: "Das Dasein ist gar kein Prädikat, und die Aufhebung des Daseins keine Verneinung eines Prädikats, wodurch etwas in einem Dinge sollte aufgehoben werden" (in *Werke*, 2:642).

26. Hegel, *Enzyklopädie*, in *Werke*, 8:135. See the ironic remark, in Hegel's 1831 revision of the *Wissenschaft der Logik* (originally published 1812), "that man should

Kantian definition, but rather “sublation.” In the *Logic*²⁷ Hegel defines his new meaning for *Aufhebung* with a reference to the Ciceronian pun, “Tollendum esse Octavium,” which may be translated as “Octavian is to be raised/rased.” (*Sublation*, the term I use to translate Hegel’s *Aufhebung*, is derived from the Latin verb *tollo, tollere, sustuli, sublatus*.) In the Latin pun *tollere* has two of the three meanings of *Aufhebung* in Hegelian dialectic. It means “keeping or preserving” and “making to cease or to finish,” but it does not mean “qualitatively transcending,” the third movement of *Aufhebung*, which Hegel usually has in mind.²⁸

In his reworking of *Aufhebung* Hegel criticizes Kant’s dismissal of arguing by the *modus tollens* and Kant’s consequent limitation of the boundaries of human knowledge. Kant, in his discussions of contradiction in the *Critique of Pure Reason* and in his *Logic* (1800), defined the *modus tollens*, which he associates with *Aufhebung*, as one mode of reasoning which “proceeds from consequences to their grounds.” For Kant, the *modus tollens*, or apagogic mode, is “the mode of conclusion according to which the consequence can only be a negative and indirectly sufficient criterion of the truth of cognition.” (Compare “If A then B; not-B, therefore not-A” with “If A then B; B, therefore A.”) If we allow this definition to stand unqualified (as Hegel does not), then it is common sense to distrust the *modus tollens* because, as Kant notes, it is “only negative.”²⁹

raise himself to this abstract generality in his mind, so that in fact it becomes a matter of indifference to him whether the hundred dollars . . . are or are not” (*Wissenschaft der Logik* [*Werke*, 5:91]; trans. Johnston and Struthers, 1:101). Hegel does not consider in what sense moneys, such as *Taler*, may differ in respect to “predication,” not only from God but also from other things. In his discussion of this section of Hegel’s *Logic*, Charles Taylor (*Hegel* [Cambridge, 1975], pp. 246–52) misconstrues Hegel’s understanding of quantity by misinterpreting his “100 *Taler* [units of money]” as “100 units [of anything].”

27. Hegel, *Logik*, in *Werke*, 5:114; trans. Johnston and Struthers, 1:119–20.

28. In a letter to Cicero, D. Brutus writes that “Labeo Segulius . . . told me . . . that Caesar [i.e., Octavian] himself had made no complaint at all about you, except as to the remark which he said you had made ‘that the young man should be praised, honoured and immortalized [tolendum]’” (in Cicero, *Letters to his Friends*, trans. W. Glynn Williams, 3 vols. [Cambridge, Mass., 1929], vol. 2, p. 479, 11. 20). From Velleius Paterculus (Oxford Classical Text, ed. R. Ellis [Oxford, 1898], 2. 62) it would seem that *tollendum* was to have a double meaning like the one that Hegel ascribes to it, but D. R. Shackleton (*Cicero: Epistulae ad Familiares* [Cambridge, 1977], 2:541) suggests that such a meaning would have been “forced.” Cf. *Suetonius*, trans. J. C. Rolfe, 2 vols. (Cambridge, Mass., 1913), 1:137.

29. Kant, *Kritik*, A 790–91 = B 818–19; trans. Smith, pp. 625–26. And Kant,

For Kant the *modus tollens* is “permissible only in rhetoric and in those sciences in which it is impossible mistakenly to substitute what is subjective in our representations for what is objective, that is, for the knowledge of that which is in the object.” Nevertheless Kant does allow one use of hypotheses “in the domain of pure reason.” One may use hypotheses, he says, “for the purpose of defending a right, not in order to establish it.” In this case,

we must always look for the opposing party [which we may attack by using hypotheses] in ourselves. For speculative reason in its transcendental employment is *in itself* dialectical; the objections which we have to fear lie in ourselves. We must seek them out, just as we do in the case of claims that, while old, have never become superannuated, in order that by annulling [*Vernichtung*] them we may ground [*grunden*] a permanent peace [*ewigen Frieden*].³⁰

Only in argument where the opposing party is “ourselves” does Kant hold that dialectical hypotheses are tolerable to pure reason.

Hegel seeks to extend the territory within which to allow annulment by the *modus tollens* and by dialectic. He does so by reinstating and adopting Thomas Aquinas’ conception of the *modus tollens*, or *sublatio*, as mediation between opposites.³¹ Hegel introduces a new *modus*

Logik, in *Kants gesammelte Schriften*, ed. Königliche Preussische Akademie der Wissenschaften (Berlin, 1923), 9:1–150, esp. sec. 7; translated as *Logic*, trans. Robert Hartman and Wolfgang Schwartz (Indianapolis, 1974), pp. 57–58. On the *modus tollens*, cf. note 57.

30. Kant, *Kritik*, A 777 = B 805; trans. Smith, pp. 617–18. Kant’s attitude to the *modus tollens* may be compared with his Newtonian suspicion of hypotheses: “Everything . . . which bears any manner of resemblance to an hypothesis is to be treated as contraband [*verbotne Ware*]; it is not to be put up for sale even at the lowest price, but forthwith confiscated immediately upon detection” (Kant, *Kritik*, A xv; trans. Smith, p. 11). According to Aristotle, there are other proofs by refutation of hypotheses (*anairoumenon hypothēsēsin*) (Aristotle, *Eudaimonean Ethics* 1222b; cf. *Sophistical Refutations* 177a).

31. In his consideration of whether evil destroys good entirely, Thomas Aquinas writes that “the good which is directly opposite to an evil is wholly made away with [*tollitur*], as we have said, but other goods are not wholly made away with [*tollentur*]” (*Summa Theologiae*, 1a. 48. 4). Related examples of the way the Hegelian concept of *Aufhebung* militates against that of Kant include his discussion of giving and receiving hypotheses or deposits (*Phänomenologie*, in *Werke*, 3:316–23; trans. Baillie, pp. 446–53) and his refutation of the Kantian reciprocity theory of crime and punishment: “The annulment [*Aufhebung*] of the crime is retribution [*Wiedervergeltung*] in so far as (a) retribution in conception is an ‘injury of the injury,’ and (b) since as existent a crime is something determinate in its scope both qualitatively and quantitatively, its negation as existent is similarly determinate. This identity rests on the concept, but is

tollens (the dialectical *Aufhebung*), which becomes his principal mode of argument.

Checkers and Checks

Sublation in Hegelian dialectic comprises both the cancellation or equation of opposing forces to a relative zero, as it does in Kant, and the transcendence of opposites, as it does in J. C. Friedrich von Schiller.³² The presentation of Hegel's theory, moreover, associates logical procedures, such as cancellation and transcendence, with uniquely monetary ones. If Hegel conceives of money as a purely quantitative measure (as opposed to, say, a commodity with value in its own right), then the association of logic with money may be symptomatic of, and may even inform, problems in his notion of *Aufhebung*. Thus locating "the logical place of money"³³ in Hegelian dialectic helps to situate the "quality" of Hegelian *Aufhebung*.

In this section I shall consider three traditions on which Hegel draws, traditions in which *Aufhebung* is associated with counting, exchange, and interest.

1. In its initial stages Hegel's intellectual method is similar to the arithmetic one of contemporary German accountants. In German states in the eighteenth century, most merchants did their accounts by manipulating tallies or checkers on a board. (In Hegel's time the English chancellor of the exchequer still used this method; compare fig-

not an equality between the specific characteristics of the crime and that of its negation; on the contrary, the two injuries are equal only in respect of their implicit character, i. e., in respect of their 'value'" (*Philosophie des Rechts*, in *Werke*, 7:192; translated as *The Philosophy of Right*, trans. T. M. Knox [Oxford, 1952], p. 71).

32. J. C. Friedrich von Schiller (*Über die ästhetische Erziehung des Menschen in einer Reihe von Briefen* [Letters on the Aesthetic Education of Man], letter no. 18, in *Sämtliche Werke* [Munich, 1962], 5:625) writes that "beauty unites [the] two opposed states and thus sublimates [*aufhebt*] the opposition. But because both states remain eternally opposed to each other, they cannot be united in any other way than by being sublimated." See also Schiller's use of *Aufhebung* in letter no. 20, where he observes that "the scales balance when they are empty; but they also balance when they contain weights" (Schiller, *Sämtliche Werke*, 5:633).

33. Cf. Bruno Liebrucks, "Über den logischen Ort des Geldes," *Kantstudien* 61 (1970): 159–89; and Alfred Sohn-Rethel, *Warenform und Denkform* (Frankfurt, 1971).

ures 40, 41, and 42.) In reckoning, “the tallies or counters used for working out problems on a board were ‘picked up [*aufgehobene*]’ when dealt with; thus if one was picked up from either side, the result that remained was unaffected.”³⁴ The money token, or checker, was canceled without changing the total. The cancellation of the opposing part became a partial means towards indicating the one whole.

The historical transition from reckoning with this checkerboard to figuring with Arabic numerals, algorithm, and the sign for nought (the cipher “o”) was a significant turning point in Western thought.³⁵ (See figure 43.) The new “algebra” of double-entry bookkeeping had been “discovered” by ninth-century Arabs who needed an efficient method to calculate inheritance shares. Their discovery influenced analysis of simple and dialectical opposition. Al-Khowārazmi’s *Concise Calculation of Restoration and Confrontation* was, “in effect, a new way of solving equations, first by ‘restoring’ normalcy to an equation by bringing its negative terms up to a positive value through addition, a process which was repeated on the other side of the equation; and second by ‘confronting’ similar and congruent terms on either side of the equation and eliminating them.”³⁶ This way of using equation and adequation to zero especially intrigued thinkers who lived during the transition from the old system of accounting to the new one. Among these thinkers were Shakespeare, who lived during a period of rapid economic and financial development in Elizabethan England,³⁷ and Kant

34. See Johann Eisenhut, *Ein künstlich Rechenbüch auff Ziffern, Linien und Wäl-schen Practica* (Augsburg, 1538), G 2b. On the synonymy of *Aufhebung* with *elevatio* in the discourse of German accountants, see Karl Menninger, *Kulturgeschichte der Zahlen* (Königsplatz, 1934), p. 265. According to Felix Müller (“Zur Terminologie der ältesten mathematischen Schriften in deutscher Sprache,” *Abhandlungen zur Geschichte der mathematischen Wissenschaften* 9 [1899]: 319), the meaning of *aufheben* in mathematical discourse derives from its significance in the commercial discourse of accounting with reckoning pennies.

35. For an early comparison of calculation by checkerboard (abacus) and by algorithm, see Gregor Reisch, *Margarita Philosophica* (Freiburg, 1503). Reisch includes a vignette depicting the opposition between the old and new arithmetic (figure 43).

36. Muhammad al-Khowārazmi, *The Concise Calculation of Restoration and Confrontation*, composed in Baghdad ca. A.D. 825; the quotation is from F. E. Peters, *Allah’s Commonwealth: A History of Islam in the Near East 600–1100 A.D.* (New York, 1973), pp. 334–35. For the connection with inheritance, see *The Algebra of Mohammed ben Musa*, ed. and trans. F. Rosen (London, 1831), esp. p. 2; and S. Gandz, “The Algebra of Inheritance,” *Osiris* 5 (1938): 319–91.

37. On the significance of the old and new arithmetic in Shakespeare’s plays, see Henry W. Farnam, *Shakespeare’s Economics* (New Haven, Conn., 1931), esp. pp. 108–14.

and Hegel, who lived in economically and financially backward, although philosophically advanced, states.

2. Discussion about the relationship between economic theory and philosophy in Hegel's time was largely centered on the issues of changing money and redeeming monetary notes. Kant, in "What is Money?" (1797), discusses money as an intellectual concept or rational form.³⁸ Fichte, in his "Theory of the Right of Exchange" (1800), presents an argument by which the withdrawal of money from a bank account and the drawing of conclusions from logical forms may be allied. "The form," writes Fichte, is the draft [*Trasse*]."³⁹ The works of economic theory that Fichte adapts to idealist philosophy—Carl Grattenhauer's *Procuration in Exchange* (1800), for example, and Gottlieb Hufeland's *Protestation in Exchange* (1799)—were themselves adapted to economic theory from works of idealist thinkers such as the Schlegel brothers and other "idealist transcendentalists."⁴⁰

In *The Difference Between Fichte's and Schelling's System of Philosophy* (1801), Hegel criticizes Fichte's theory of exchange by zeroing in on his apparently innocent proposal that checks be cashable by the bearer only upon the bearer's signing his name and presenting a pass-book or identity card.⁴¹ (Fichte believed that such signing would avoid counterfeiting.) Hegel harshly criticizes the "closed" medieval money system that Fichte proposes.⁴² Hegel rarely treats problems of reforming the monetary system⁴³ or of defining the "aura" of monetary tokens

38. Kant, "Was ist Geld?" in *Die Metaphysik der Sitten*, in *Werke*, 7:400–404; translated as *Kant's Philosophy of Law*, trans. W. Hastie (Edinburgh, 1887), pp. 125–29.

39. Fichte, "Theorie des WechselRechts" in *Gesamtausgabe*, ed. Reinhard Lauth and Hans Gliwitzky (Stuttgart, 1979), 2. 5. 211. On the specifically German *Trasse*, or "bill of exchange" (cf. Italian *tratta*), see Alfred Schirmer, *Wörterbuch der deutschen Kaufmannssprache* (Strasbourg, 1911), p. 193.

40. Carl Grattenhauer, *Ueber die Wechselprocura* (Berlin, 1800), pp. 12 and 16; cf. Gottlieb Hufeland, *Primae lineae doctrinae de protestione cambiali* (Jena, 1799).

41. Hegel, *Differenz des Fichte'schen und Schelling'schen Systems der Philosophie*, in *Werke*, 2:84–86; translated as *Differenz (The Difference Between Fichte's and Schelling's System of Philosophy)*, trans. W. Cerf and H. S. Harris (Albany, N.Y., 1977), pp. 146–47). Hegel here refers to Fichte's *Grundlage des Naturrechts nach Principien der Wissenschaftslehre* (1797); in *Sämmtliche Werke*, ed. I. H. Fichte, 8 vols. (Berlin, 1845–46), 3:292.

42. See Fichte's *Der geschlossene Handelsstaat* [The Closed Commercial State] (1800), in *Sämmtliche Werke*, 3:387–513.

43. There are some exceptions. See, for example, Hegel, *Über die englische Re-*

in a particular culture;⁴⁴ even more infrequently does he make such treatments an occasion for defining the logical place of money per se; yet, in his critique of Fichte, he emphasizes the connection between the logical problem that in Fichte's system of philosophy "the intellect is bound to fall into the making of endless determinations" and the economic dilemma that "in Fichte's state [with its complex series of state-issued passbooks] every citizen will keep at least half a dozen people busy with supervision, accounts, etc., each of these supervisors will keep another half dozen busy, and so on, ad infinitum, [with the result that] the simplest transaction will cause an infinite number of transactions."⁴⁵

Hegel would transform the "financial" procedure of Fichte's formalist logic into a unique and powerful process of philosophic cancellation and redemption. In eighteenth-century commercial discourse and practice, a canceled (*aufgehobene*) bond or note still had positive value as a receipt or discharge from debt. (Henry C. Brokmeyer uses *cancel* in both financial and logical senses to translate *aufheben* in his translations of Hegel's works on logic.)⁴⁶ In Hegelian dialectic the nought of cancellation (*Aufhebung*) is, like this bond, both null and positive. (Although *Aufhebung* can denote "cashing in a bond," it can also denote "preservation" and hence "not cashing it in." Thus the inscription in the bottom border of the emergency money depicted in figure 44 cleverly opposes *Aufhebung* as "preservation of the banknote" to *Einlösung* as "cashing it in": "Heb' mich gut auf und lös' mich niemals ein!") In Hegel the nought that is the bond is neither simple negativity,

formbill (1831), in *Werke*, 11:84–87. Karl Rosencranz (*Georg Wilhelm Friedrich Hegels Leben* [Berlin, 1844; rpr. Darmstadt, 1971], p. 61) notes that Hegel did a study of the finances of Berne during the 1790s. See what is probably Hegel's first publication, his anonymously published German translation of J. J. Cart's *Lettres confidentielles* (*Vertrauliche Briefe über das Vormalige staatsrechtliche Verhältnis des Wadtlandes [Pays de Vaud] zur Stadt Bern* [Frankfurt, 1798]). Hegel's introduction to this translation is included in *Dokumente zu Hegels Entwicklung*, ed. J. Hoffmeister (Stuttgart, 1936; rpr. Stuttgart, 1974), pp. 247–57.

44. On coinage in Rome, however, see Hegel, *Vorlesungen über die Philosophie der Religion*, in *Werke*, 17:169–70; and Hegel, *Aphorismen aus Hegels Wastebook* (1803–6), in *Werke*, 2:544.

45. Hegel, *Differenz*, in *Werke*, 2:84–86; trans. Cerf and Harris, *Differenz*, pp. 146 and 148.

46. I thank the Missouri Historical Society for making the still unpublished manuscript of Brokmeyer (1828–1906) available to me.

as in Kant, nor apparently simple unity, as in Plato; rather the bond ought to be cashed in, with interest, by the appropriate teller. This "tally-man" is the dialectician.⁴⁷

3. That the cashiered bond to be cashed in (*aufgehobene*) is interest bearing brings us to another traditional association of *Aufhebung* with money, its connection with the institution of monetary interest. The use of *Aufhebung* to mean "to collect interest of the monetary kind" is as old as the fourteenth century.⁴⁸ This is one of its principal meanings in the works of Martin Luther.⁴⁹ In such writers as Schiller, Goethe, and Hegel, the collection of monetary interest is extended conceptually to include "interest of the spiritual or intellectual kind."⁵⁰

In Hegelian, as in Platonic, dialectic, economic hypothecation informs intellectual hypothesizing: a monetary hypothec (or principal) from which interest is drawn is like a philosophical hypothesis from which a deduction is drawn, and just as mature bonds are homogeneous with the sums of their principals and interests, so dialectical syn-

47. For the role of the tally (*Tale*) in Fichte's understanding of absolute knowledge, see Fichte, *Darstellung der Wissenschaftslehre (Aus dem Jahre 1801)* (in *Sämtliche Werke*, 2: 17–18): "Beyond all knowing, according to our present representation, freedom and being come together and permeate one another, and only this intimate permeation and identification of the two into a new being brings about knowing—now truly in the form of knowing—as an absolute *Tale*."

48. For example: "Die vff gehabene czinse" (*Meissner Urkunde von 1398*) in Lorenz Diefenbach and Ernst Wülcker, *Hoch- und nieder-deutsches Wörterbuch der mittleren und neueren Zeit* (Basel, 1885), p. 103. Cf. the English *raise*, which can mean "to collect (rents or other charges)" (*Oxford English Dictionary*, s.v. "Raise," v., 25).

49. For *Aufhebung* in Martin Luther as "the collection of interest and of fees for indulgences," see the German writings of Luther in the Jena edition, pt. 1 (Jena, 1564), 195^a, 298^b, and pt. 2 (Jena, 1563), 263^b. See too Luther's use of "gleich aufheben mit einem" to mean "beide theile fahren lassen, auf eine linie zu stehn kommen" (Luther, pt. 5 [Jena, 1575], 340^a; discussed by Jacob and Wilhelm Grimm, *Deutsches Wörterbuch* [Leipzig, 1854–1960], s.v. "Aufheben," 10) and his use of *aufheben* to mean "aufheben und behalten" ("to pick up and to lay aside for future use"). Keith Spalding (*Dictionary of German Figurative Usage* [Oxford, 1952–], s.v. "Aufhebung") discusses Luther, pt. 1, 40^a, together with Luther's translations of Matt. 14:20, Matt. 16:9, Mark 6:43, and Luke 9:17.

50. For Schiller, see his letter to Goethe (August 17, 1797): "Mit meinem Protégé . . . habe ich freilich wenig Ehre aufgehoben" (*Schillers Werke*, Nationalausgabe, ed. L. Blumenthal and B. v. Weise [Weimar, 1977], 29:117–18). For the argument that *Aufhebung* in Schiller's letter is to be connected with collecting interest or rent, see *Trübners Deutsches Wörterbuch* (Berlin, 1939–57), s.v. "Aufhebung." Compare Goethe's use of *einwechseln* in Johann Peter Eckermann, *Gespräche mit Goethe* [Conversations with Goethe], ed. E. Beutler (Zurich, 1948), pt. 2: December 6, 1829.

