
Myths of Labor

Elements of an Economical Zoology

Iris Därmann

LABOR IS AT THE SAME TIME punishment and a curse. In his *Theogony* and in *Works and Days* Hesiod describes the revocation of the peaceful table fellowship which at one time connected gods, men, and animals with one another. Zeus commissions Prometheus with the first slaughtering and distribution of a bull and leaves it up to him to select those portions which are intended henceforth for the gods and those which are intended for human beings. In a battle of poisoned gifts and gifts in return which pass back and forth between Zeus and Prometheus, the story finally culminates in that misfortune with which Zeus had wished to burden human beings from the very first: with Pandora, that »beautiful evil« which divides the at one time undivided human race into men and women. Pandora forms the diametrically opposed counterpart to the Promethean deception: clad in a white robe, she shimmers just as seductively as that layer of fat with which Prometheus had concealed the inedible beef bones meant for the gods. In her essence she corresponds in turn to that repulsive stomach with which he had hidden the pieces of meat intended for human beings from the view of Zeus. The female sex is for men what the drone is for bees. She is the ever-hungry stomach which incessantly devours other people's labor (that of men), the grain harvested by them.¹ In return she of course offers them sexual pleasure and in marriage relationships legitimate offspring.² While the Hesiodian myth dramatizes the aspect of labor as punishment imposed on the male sex mainly because of its limitlessness, the Old Testament expulsion from the Garden of Eden particularly underlines the drudgery associated with the physical labor of men in the fields. Admittedly, the Old Testament myth already provides for human beings tilling the soil in paradise.³ Nonetheless, the curse placed on farmland and the hard field labor imposed on men represents genuine punishment for the knowledge-seeking violation of the

¹ Cf. Hesiod: *Works and Days*, translated by Hugh G. Evelyn-White, London 1914, pp. 53–105; Hesiod: *Theogony*, translated by Hugh G. Evelyn-White, London 1914, pp. 570–614.

² I follow here the corresponding interpretation by Jean-Pierre Vernant: *Le mythe prométhéen chez Hésiode*, in: Jean-Pierre Vernant: *Mythe et société en Grèce ancienne*, Paris 1987, pp. 177–194: 180 and 182 sq.

³ Cf. Genesis 2.15.

divine ban by man's female companion, who henceforth is compelled to beget children in toil and pain. In both myths labor has the character of a punishment. Given this exaggerated aspect of labor as a burden and suffering—»In the sweat of your brow you will eat your food«—the notion of labor put forward by Genesis indeed appears to be closer to that of Virgil than to that of Hesiod. In the *Georgics* Jupiter brings to an end the Golden Age and all-plentiful nature by compelling men to labor through scarcity and suffering.⁴

The economic treatises of antiquity and of the modern age are undoubtedly under the spell of these two mythical scenes and the divine power to curse and judge. How do the theoretical economic writings of antiquity—and in particular Aristotle's *Politics* and *Ethics*—regulate female *pleonexia* on the one hand and the unbounded hard labor imposed on men on the other? In turn, how do the economic treatises of the modern age—and in this case especially the relevant labor economics essays of John Locke—deal with female hubris on the one hand and the nature of labor as suffering and a burden on the other? As a part of this, what role is played by distinguishing between and distributing free and unfree, productive and reproductive labor and, not least of all, the economic marginalization inherent in reproductive labor? And finally: how in this context do the king bee, the working bee, and the drone manifest themselves as figures of an economic-mythical zoology whose emblematic effectiveness extends as far as Mandeville's *Fable of the Bees*?

1. Apiology in antiquity

Once upon a time the goddess Ceres ordered her favorite animals, the bees, to instruct Heros in the art of beekeeping. In antiquity beekeeping had spread since the 8th century and formed an important branch of agriculture. Legal provisions laying down the distances between beehives in order to avoid neighborhood disputes among beekeepers bear witness to this. Thus, Solonian legislation provides for a distance of at least 300 feet.⁵ In the *Nomoi* Plato even proposes the death penalty for the unlawful appropriation of a neighboring beehive through shaking.⁶ From the perspective of beekeepers and authors in antiquity, both the king bee and the bees observe clearly defined tasks in the system of the beehive as it is based on a division of labor: it is the duty of the king bee, which is itself inactive, to

⁴ Cf. Virgil: *Georgics*, translated by C. Day Lewis, Oxford 1983, Book 1, p. 140 sqq.

⁵ Cf. P. Martell: Die Biene im Altertum, in: *Entomologischer Anzeiger* 9 (1929), pp. 414–419: 414 and 418.

⁶ Cf. Plato: *The Laws*, translated by Thomas L Pangle, Chicago/London 1980, pp. 843d and 933d.

maintain the regulation, assignment, and monitoring of the labor of honey collecting, which rests on all the bees. A good amount of uncertainty still appears to exist concerning the actual role of the drones. For Aristotle, the authority for all classical agrarian writers on issues of beekeeping, the drones, because of their parasitic way of life, represent the lowest order of bees: »Some people maintain that the drones build cells but produce no honey. They mostly remain in the beehive and only leave it in order to stagger around. Then they return and eat from the reserves of the worker bees.«⁷ Like Hesiod, Aristotle also emblemizes the virtue of hard labor and the vice of laziness by using the two animal figures of the »bee« and the »drone.«⁸ For Plato, the sex of the unstinging and stinging drones, which turn up in the *Politeia* as beggars, gluttons, rogues, and idlers, represent within the confines of the oligarchic soul and form of government bad, wasteful appetites.⁹

Indeed, Hesiod already proves himself to be an adviser on issues of proper housekeeping and the labor economy. Marriage with a previously unwed woman offers the opportunity of constraining her insatiable hunger by molding her into that type of being which she ought to be.¹⁰ Then the particular profit of industrious labor in the fields can be gained in the form of an increase in domestic wealth.¹¹ The tirelessness of labor in the fields, which is moderated through the application of field animals, plowing tools, and other people's labor, assumes, from the perspective of wealth accumulation, a direction which makes it independent of the boundless hunger of women and the sexual desires aroused by them. The increase in property stems from a new stimulus, which entails a displacement of the mythical scene: labor and property can be spurred on by the »struggle« or competition between the poor and the rich.¹²

Aristotle's domestic doctrine submits to the authority of Hesiod when it seizes on the latter's advice to marry a virgin »in order to teach her proper behavior,«

⁷ Aristotle: *Historia Animalium*, translated by D'Arcy Wentworth Thompson, Oxford 1910, Book IX, p. 40 624a; see also R. Billiard: *Die Biene und die Bienenzucht im Altertum*, translated by Rektor Breiden, Leipzig 1904, pp. 43–44.

⁸ Aristotle: *Historia Animalium* (as note 7), Book V, p. 22 553b.

⁹ Cf. Plato: *The Republic*, translated by I.A. Richards, New York 2009, pp. 552c–556a, 559c–e.

¹⁰ Cf. Hesiod: *Works and Days* (as note 1), pp. 695–700.

¹¹ Cf. *Ibid.*, pp. 295–320. On the aspect of the multiplication of possessions and wealth in Hesiod see Peter Spahn: *Die Anfänge der antiken Ökonomik*, in: *Chiron* 14 (1984), pp. 301–323. See also Renate Zoepf: *Einleitung*, in: *Aristoteles: Werke in deutscher Übersetzung: Oikonomika. Schriften zu Hauswesen und Finanzwesen*, vol. X, part 2, translated by Renate Zoepf, Berlin 2006, p. 70 sqq.

¹² Hesiod: *Works and Days* (as note 1), pp. 20–23.

that is, the moderation of her own lust.¹³ In issues of the proper composition of the household, Hesiod is also decisive for Aristotle: »first of all the house, the wife, and the plough animal, since the bull fulfills the role of slave among the poor.«¹⁴ Not, however, in relation to the doctrine of labor and the accumulation of wealth. The Aristotelian *chrematistike*, which draws a rigid distinction between needs-based barter and profit-based bartering, obeys the *mesotes* doctrine of the *Nicomachean Ethics* and the *Eudemian Ethics*, for which too much as well as too little both represent *kakia* (wickedness): leading an ethical life under the aegis of *eudaimonia* requires the ability to distinguish between the good and the bad, and this means in each case finding the good, the proper mean, and avoiding the bad—excessiveness as well as meagerness. This applies not only to the issue of courage, that is, finding a virtuous position between cowardice and recklessness, or that of generosity, which has to be situated between miserliness and wastefulness. It also applies to desire, which as *pleonexia*, as wanting more, as greed and arrogance,¹⁵ always comes into play when what is involved is hunger, love, honor, and money,¹⁶ that is, over-determined objects, the longing for which finds no end even in satisfaction.

Exchange based on the reproductive order of the household is thus that which from the oiconomic point of view finds the proper mean and balance: »Exchange is possible in every case, building on the natural fact that human beings in one instance have too much of the necessary goods and in another instance too little.«¹⁷ Natural exchange thus makes it possible to exchange those surpluses which have been gained and which might spoil for those goods of which there is from time to time a scarcity. In this way exchange is of value in satisfying natural wants.¹⁸ From the moment on, however, when money comes into play, when professional commerce becomes only interested in profit¹⁹ and when money is increased through moneylending and the business of interest rates, the natural order is damaged. The bone of contention for Aristotle is the ethically dubious limitlessness with which money arises from money,²⁰ which has, like the »commercial way of life itself [...]

¹³ Aristotle: *Oikonomika* (as note 11), vol. I, pp. 1343a 18–21, 1344a 17 and Renate Zoepffel p. 329; Hesiod: *Works and Days* (as note 1), pp. 695–704.

¹⁴ Hesiod: *Works and Days* (as note 1), pp. 404–405; Aristotle: *Politics*, translated by Carnes Lord, Chicago 2013, vol I, p. 1252b 11 sqq.

¹⁵ Aristotle: *Eudemian Ethics*, translated by Anthony Kenny, Oxford 2011, p. 1129 b 32.

¹⁶ Aristotle: *Nicomachean Ethics*, translated by Robert C. Bartlett and Susan D. Collins, Chicago/London 2011, II 5 1106a 13–II 9 1109 b 27.

¹⁷ Aristotle: *Politics* (as note 14), pp. 1257 a 6–18.

¹⁸ *Ibid.*, pp. 1257 a 28–30.

¹⁹ *Ibid.*, pp. 1257b 2–5.

²⁰ *Ibid.*, pp. 1258 a 37–1258 b 8. Money is contrary to nature, it exists and is valid »solely through the *nomos*, solely through law,« see Edgar Salin: *Politische Ökonomie. Geschichte der wirtschaftspolitischen Ideen von Platon bis zur Gegenwart*, Tübingen 1967, p. 8. For

something violent about it.« It makes, after all, that which should only be a means into an exclusive goal.²¹

From the perspective of the Aristotelian work *Generation of Animals*, the self-generation and self-accumulation of money²² nonetheless represents the symmetrical counterpart to the extraordinary ability of king bees to fertilize themselves and reproduce and at the same time to give life to the family of worker bees, which in turn ought to produce the for their part infertile species of the drones. Without a doubt the self-fertilization and self-reproduction of the king bees is an affront to the reproductive order of nature, a state of affairs which Aristotle nonetheless attempts to resolve by singling out the bee as a »divine creature.« In the case of such »noble beings,« it sometimes happens that »nature seems to deviate from its own laws.«²³ The divinity of bees is otherwise in keeping with their gold-colored product. Honey,²⁴ a product located at the periphery of human cooking, forms the basis of nectar, the drink of the gods, which is said to taste nine times as sweet as honey itself. In the mythology of Apollo, bees are in turn the »birds of the muses,« while the priestess of the Delphic oracle is popularly known as the »Delphic bee.«²⁵ In addition, bees, when they hang like grapes on houses and temples, act as omens in private and public life, omens which are often validated by big events.²⁶

Aristotle of course reincorporates the perverse generative relationship between the king bee and worker bees into the natural order of things when he emphasizes: »It is entirely natural that bees obey their kings, since they owe their very existence to them, for without this subjection the circumstances which make up the supremacy of the kings would be baseless; it is also obvious that bees happily suffer the idleness of their kings because they are the parents.«²⁷ The king bees represent a form of idleness that is diametrically opposed to the laziness of the

the ancient Greek word »nomisma« (money) see the etymology in the Nicomachean Ethics (as note 16), p. 1133a.

²¹ Ibid., pp. 1096 a 6–8, Gigon.

²² I have drawn on Joseph Vogl for the insight into the reproductive dimension of the Aristotelian *chrematike*. Cf. Joseph Vogl: *Das Gespenst des Kapitals*, Berlin 2010, p. 122.

²³ Aristotle: *Generation of Animals*, translated by A. I. Peck, London MCMXLIII, Book 10, p. 60 sqq.; Cf. R. Billiard: *Die Biene und die Bienenzucht im Altertum* (as note 5), p. 34 and p. 43.

²⁴ Cf. On this cf. Claude Lévi-Strauss: *Mythologiques. Du Miel aux Cendres*, Paris 1966, pp. 11–12.

²⁵ P. Martell: *Die Biene im Altertum* (as note 5), p. 417. See also the zoological emblematics of the Platonic theory of poetry in the dialogue *Ion*, translated by H.N. Fowler, Harvard 1925, p. 543a.

²⁶ Cf. Pliny the Elder: *The Natural History*, translated by Henry T Riley, London 1855, Book 11: *Insects*, Chapter 18.

²⁷ Aristotle: *Generation of Animals* (as note 23), p. 60b; R. Billiard: *Die Biene und die Bienenzucht im Altertum* (as note 7), p. 43.

drones. They can count on the natural recognition of the worker bees, since the latter without their progenitor kings would never even exist. In Aristotelian *oikonomia* the master and the slave stand in an analogous asymmetrical relationship of being to one another. As a »living tool« the slave cannot exist without despotic orders and accomplish the physical labor appropriate to him, labor which serves the very existence of the master.²⁸ As an »animated piece of property« the slave in turn belongs to the ownership domain of the *oikodespot*. This proprietary legal determination is further strengthened by Aristotle in that he establishes a parallel between the asymmetrical relationship between slave and master and the relationship of a part to the whole. In the same way that a part belongs to the whole, the slave also belongs to his master, without the latter in turn belonging to the slave.²⁹ At the same time, Aristotle goes so far as to call the slave »a designated part of his master, namely an animated and autonomous body part.«³⁰ In addition, he equates the relationship between the two to that of the despotic regime which the soul exercises over the body and which is just as useful to the latter as it is natural.³¹

It is true. Aristotle scarcely ever spoke about labor and he certainly never made the distinction between productive and reproductive labor. For him all labor is instead physical and reproductive in nature. Escape from the mythical curse of labor occurs through a targeted shifting of labor on to slaves and domestic animals: »The services that one derives from both of them differ little: both of them, slaves and domestic animals, help us to fulfill our bodily needs.«³² To this shifting corresponds a strict division of labor into the contemptible reproductive labor of slaves on the one hand and the political practice of free men on the other, which in turn corresponds to the industriousness of bees and the idleness of the bee king as the administrator of the labor of others, an aristocratic form of idleness that has found its ugly mirror image in the laziness of the female drone.

2. The sweat beads of others or the rehabilitation of the parasitic drone

For Roman agrarian writers, too, such as Varro or Columella, who were considered Rome's most accomplished beekeepers, beekeeping represented an important part of the agricultural activity of distinguished large landowners. They remain faithful to the mythical stigmatization of the drone when they call the latter

²⁸ Aristotle: *Politics* (as note 14), p. 1253 b 42 sqq.

²⁹ *Ibid.*, pp. 1253 b 27–254 a 26.

³⁰ *Ibid.*, p. 1255 b 15 sq.

³¹ *Ibid.*, p. 1254 b 10.

³² *Ibid.*, pp. 1254 b 36 sqq.

»furies,« »thieves,« or as Virgil does, »lazy cattle,« which expel the hardworking worker bees from the »honey cribs.«³³ In the *Natural History of Bees*, the drone, which Pliny calls the »most incomplete bee« and a »slave,« is allocated only a marginal position: »Occasionally larger bees which expel the others occur at the edges of the honeycombs. These are called *oestrus* (drones).«³⁴ A special form of economic marginality is attributed to drones in John Locke's labor policy educational program for abolishing the poor. Locke was well versed in Greek and Roman agrarian writers and elevates them to paradigms in his recommendations for a gentleman's education. Both social classes, the begging poor and the idle aristocrats, are from an economic point of view marginal and must be compelled to engage in labor or meaningful activity under the aegis of manufacturing or »manual art«; the poor with the help of »houses of correction« as well as fines and corporal punishment, the nobility through ascetic education and a craft occupation. In order to increase the productivity of the English nation, the »begging drones, who live unnecessarily upon other people's labor,«³⁵ must be transformed into worker bees and the idle country gentlemen into gardeners and bookkeepers.

In the history of the reception of economics John Locke is considered to be the founder of the idea that work, the value-adding labor of one's own body and one's own hands, creates the right of ownership to its product. The doctrine of labor value and ownership which John Locke developed in his work *Two Treatises of Government*, written between 1679 and 1683 and published anonymously, still can only be adequately situated historically when connected with three kinds of programmatic interventions and economic interests of Locke: first of all, this doctrine stands in relation to the debate on »the employment of the poor« which had kept the English parliament on tenterhooks »in the 17th century in a long series of state papers and Acts of Parliament.«³⁶ As late as 1662 Charles II had enacted *The Poor Relief Act*.³⁷ At the behest of the king, Locke as a member of the Board of Trade

³³ Vergil: *Georgics* (as note 4), vol. 4, p. 166.

³⁴ Plinius: *The Natural History* (as note 26), Book 11: Insects, Chap. 11.

³⁵ John Locke: A Report of the Board of Trade to the Lords Justices, Respecting the Relief and Employment of the Poor; Drawn up in the Year 1697, in: *Society for the Promotion of Industry, Lindsey: An Account of the Origin, Proceedings, and Intentions of the Society for the Promotion of Industry, in the Southern District of the Parts of Lindsey, in the County of Lincoln*, printed by R. Sheardon, 3d. edition, Louth 1789, pp. 99–126: 104 and 103.

³⁶ E. J. Hundert: *The Making of Homo Faber: John Locke between Ideology and History*, in: *Journal of the History of Ideas* 33 (1972), pp. 3–22: 3. This and other key bibliographical indications are taken from the illuminating study by Jörg Thomas Peters: *Der Arbeitsbegriff bei John Locke. Im Anhang: Lockes Plan zur Bekämpfung der Arbeitslosigkeit von 1697*, Münster 1997, p. 149.

³⁷ This was the first law that required of every poor person a »Settlement Certificate,« which

founded by him in 1696 had intervened in the debate with a catalogue of measures for fighting unemployment among the poor and for its removal from English streets and had published his proposals in 1697 under the title *Respecting the Relief and Unemployment of the Poor*. Second, the Lockean theory of labor value corresponds to his work *Some Thoughts Concerning Education*, in which he sought to impress on the minds of the members of the land-owning gentry by means of suitable educational and training measures that they could acquire political importance vis-à-vis the idle higher nobility only by attaining an economic leadership position, which would in turn promote the welfare of the English nation. Finally, the doctrine of natural law set forth in *The Second Treatise of Government* constitutes the legal-philosophical foundation of legitimation for the agrarian-economic colonization of the North American »waste land« as well as for the transatlantic slave trade. At least in passing the well-known fact should be brought to mind that Locke succeeded through share purchases in the Royal African Company (RAC)³⁸ and Bahama Adventures, founded in 1672, in gaining significant profits from the transatlantic slave trade.³⁹ Locke was also secretary of the United Farmers of Carolina.⁴⁰ In the decree written by him of the Fundamental Constitutions of Carolina it is stated that every free man »shall have absolute power and authority over his Negro slaves.«⁴¹ This corresponds in turn to the Instructions of Governor Francis Nicholson of Virginia⁴² which Locke helped to draft in 1698. These viewed every Negro slave as legally enslaved who had been captured in a »just war« and thus forfeited his life through an act worthy of the death penalty.⁴³

everyone had to carry as soon as he or she left their place of residence. It guaranteed that the municipality responsible for the person had to assume the costs of transporting the person back home, in case he or she was in need of poor relief.

³⁸ This firm was, incidentally, a successor of the first stock company in the world, the *Company of Adventures of London* (1660).

³⁹ A list of Locke's investments is found in Maurice William Cranston: John Locke. A Biography, London/New York/Toronto 1957, p. 115. According to it, in 1674 Locke purchased shares in the Royal African Company for the value of 400 pounds and in 1675 further shares valued at 200 pounds.

⁴⁰ Peter Laslett: John Locke, the Great Recoinage, and the Origins of the Board of Trade: 1695-1698, in: John W. Yolton (ed.): John Locke: Problems and Perspectives, Cambridge 1969, pp. 137-164; p. 143; Walter Euchner: Einleitung des Herausgebers, in: John Locke: Zwei Abhandlungen über die Regierung, translated by Hans Jörn Hoffmann, edited and introduced by Walter Euchner, Frankfurt am Main 1977, pp. 9-59: 19.

⁴¹ Sir Leslie Stephen: History of English Thought in the Eighteenth Century (1876), Vol. 2, London 1902, p. 139.

⁴² Peter Laslett: John Locke, the Great Recoinage, and the Origins of the Board of Trade: 1695-1698 (as note 40), p. 162 sqq.

⁴³ James Tyrell: Patriarcha non Monarcha (Anon., Appendix B, no. 84.), London 1681, p. 62. On the theoretical ambiguity of Locke's attitude to slavery see Raymond Polin: La

This classical practice of the law of war perfectly reflects that punishment which Locke provided for in the *Second Treatise* with respect to criminals who violate the law of nature; that is, for criminals who, incited by vain ambition and criminal greed (*amor sceleratus habendi*),⁴⁴ have through their acts travestied themselves in the shape of predators, lions, and wolves; who can, however, escape their deserved execution through the act of grace consisting of justified enslavement.⁴⁵

The mythical theory scene of the »Golden Age« conceived by John Locke in the *Second Treatise*, on the one hand, and the state of nature corrupted by the introduction of money, on the other, represent an attempt to do »justice« from the perspective of natural law to the expulsion from paradise, the curse of field labor, the imposition of the hard labor of atonement and punishment as well as the colonial expansion into North America. Thus it is stated there on the one hand: »In the beginning all the world was America,«⁴⁶ while on the other Locke stresses that God, after he gave the World in common to all Mankind, commanded Man also to labor.⁴⁷ It is above all »the Industrious and Rational« to whom God has turned over the world for their usufruct, those, in other words, who understand how to cultivate the initially common fallow land by growing »sugar and tobacco,« »barley and wheat.«⁴⁸ Thus to them falls the law of nature vouchsafed by God which consists in acquiring more than »the Fancy or Covetousness,«⁴⁹ more than the Indians, say,⁵⁰ who in the woods only pursue hunting, who can lay no claim to ownership of the woods and the land because they do no labor. »Virginia's colonists would not deprive the Indians of their cornfields,« declared William Strachey, one of the early chroniclers of the English colonization of North America, »but only break up new growndes that lay vacant.«⁵¹ John Locke questions the very existence of Indian agriculture and horticulture, even though the most influential contemporary source, the *America* series published since 1590 by the publisher Theodor

Politique Morale de John Locke, Paris 1960, pp. 277–281, and the helpful hints provided by Peter Laslett, which I follow here, in: John Locke: Two Treatises of Government. A Critical Edition with an Introduction and Apparatus Criticus by Peter Laslett, Cambridge 1960, Second Treatise, p. 43 sq.

⁴⁴ Ovid: *Metamorphoses*, translated by Brookes More, London 1922, p. 131.

⁴⁵ John Locke: *Two Treatises of Government* (as note 43), paragraph 16, p. 296 sq.

⁴⁶ *Ibid.*, p. 319 and p. 357 sq. Carl Schmitt already drew attention to this formulation in Carl Schmitt: *Der Nomos der Erde im Völkerrecht des Jus Publicum Europaeum*, Berlin 1997, p. 66.

⁴⁷ John Locke: *Second Treatise* (as note 43), paragraph 32, p. 308 sq.

⁴⁸ *Ibid.*, paragraph 34 and 40, p. 309 and p. 314.

⁴⁹ *Ibid.*, paragraph 34, p. 309.

⁵⁰ *Ibid.*, paragraph 30, p. 307 sq.

⁵¹ Virginia DeJohn Anderson: *Creatures of Empire. How Domestic Animals transformed Early America*, Oxford 2004, p. 80.

de Bry and the relevant volumes on Virginia, which were demonstrably present in Locke's library,⁵² proved quite the opposite in words and pictures.⁵³

Locke's theory of labor places itself entirely at the service of an unequal distribution of the original common property of the earth, and this also means the unequal distribution of property on North American soil.⁵⁴ As »the Workmanship of one Omnipotent, and infinitely wise Maker,« man is at one and the same time the property of God and the absolute owner of his own self,⁵⁵ equipped with the duty to preserve himself and the rest of creation. Locke appropriates the Stoic-Ciceronian *oikeiosis* doctrine, the notion of self-preservation and self-appropriation of one's own person as well as the related *oikeiosis* of natural objects through work:⁵⁶ »Of the things, then, that are essential to the sustenance of human life, some are inanimate (gold and silver, for example, the fruits of the earth, and so forth), and some are animate and have their own peculiar instincts and appetites. Of these again some are rational, others irrational. Horses, oxen, and the other cattle, [bees] whose labour contributes more or less to the service and subsistence of man, are not endowed with reason. [...] And so those benefits that human life derives from inanimate objects and from the employment and use of animals are ascribed to the industrial arts,« namely the industriousness of the »human hand,« according to Cicero in *De officiis*.⁵⁷ Let us note in passing that the bee serves only

⁵² Locke's library included the works on the Americas by Theodor de Bry (cf. John Harrison and Peter Laslett: *The Library of John Locke*, London 1965, p. 96), as Francesca Falk points out when she emphasizes that Locke had deliberately not taken account of it, in order to legitimize the colonization of the supposed »waste land.« See Francesca Falk: »Thomas Hobbes' horror vacui und John Lockes leeres Land,« in: *Historische Anthropologie. Tierische (Ge)Fährten* 19/2 (2011), pp. 292–310: 302.

⁵³ Cf. De Bry: *Amerika oder die Neue Welt. Erster Teil*, edited by Friedemann Berger, Leipzig/Weimar 1977, plate 20; *The New World. The First Pictures of America*, edited by Stefan Lorant, New York 1964, plate 20, p. 265.

⁵⁴ »Labor is the Father and Active Principle of Wealth, as Lands are the Mother,« as Sir William Petty, whom Locke knew during his studies, had previously stated. On the acquaintance between Locke and Petty during their time as students see Reinhard Brandt: *Zu Lockes Lehre vom Privateigentum*, in: *Kant-Studien* 63 (1972), pp. 426–435: 432.

⁵⁵ »Every Man has a *Property* in his own *Person*.« John Locke: *Second Treatise* (as note 43), p. 290 and p. 305.

⁵⁶ On the Stoic *oikeiosis* doctrine see Max Pohlenz: *Grundfragen der stoischen Philosophie*, Göttingen 1940, p. 12.

⁵⁷ M. Tullius Cicero: *De Officiis*. With An English Translation, translated by Walter Miller, Cambridge, MA 1913, pp. 11–17; on the relevance of the Stoic *oikeiosis* doctrine for Locke's theory of personal identity in the chapter »Of Identity and Diversity« of the second edition of the *Essay concerning human understanding*, and on the labor theory of value in the *Second Treatise*, see Reinhard Brandt: *Zu Lockes Lehre vom Privateigentum* (as note 54), p. 430; in regard to the corresponding significance of Cicero see Jörg Thomas Peters: *Der Arbeitsbegriff bei John Locke* (as note 36), pp. 37–63: 166 sqq.

as an emblem of industriousness in Cicero. Its product is, on the contrary, an object of appropriation through the working hand of the beekeeper.

A person's labor, that is, »the *Labor* of his Body, and the *Work* of his Hands,«⁵⁸ is for Locke the addition and blending of a personal »something« with »Nature, the common Mother of all.«⁵⁹ The product which arises in this way lawfully belongs to that person who preserves himself through physical labor, namely without the approval of the other co-owners of the earth. With this law of ownership based on work, Locke rejects the dominum theory *sensu* Grotius and Pufendorf, that is, the legal foundation of ownership through contractual agreement. Ownership is for Locke a one-sided, quasi magical act of personifying an object rather than a reciprocal legal relationship between individuals. A certain appeal would lie in associating the divested »something« appended to the natural object with the beads of sweat which are supposed to rise on the face of the male sex as an agonizing sign of the forced labor imposed by God: »In the sweat of your brow you will eat your food.«⁶⁰ As Aristotle and Cicero already did, Locke also avoids the effort of physical labor by passing it on both from a work-theoretical standpoint and *in praxi* to servants, day laborers, slaves, and labor animals, that is, by drawing a distinction between the sweat-inducing labor of dependents and the capital-accumulating activity of despotic managers.⁶¹ The land-owning gentleman appropriates the labor of others: first, the physical labor of slaves, second the labor of servants who »for a certain period of time sell [their] services« against a wage, for a wage which in the »Golden Age« of Virgilian provenance first consists of payment in kind and subsequently, following the invention of value-representing signs, of money:⁶² »money is a barren thing, and produces nothing, but by compact transfers that profit, that was the reward of one man's labor, into another man's pocket.«⁶³ The

⁵⁸ John Locke: Second Treatise (as note 43), paragraph 27, p. 305 sq.

⁵⁹ Ibid., paragraph 27–28, p. 306. »[H]e hath mixed his *Labour* with, and joyned to it something of his own, and thereby makes it his *Property*.«

⁶⁰ Genesis 3:19. Reinhard Brandt correctly notes that »this interpretation [...] would not correspond to Locke's original ideas.« Reinhard Brandt: Zu Lockes Lehre vom Privateigentum (as note 54), p. 433.

⁶¹ John Locke: Second Treatise (as note 43), paragraph 28, p. 306 sq. The authority and possessions of the *Pater familias* extends over and includes, incidentally, women and children, as well as servants and slaves. Cf. paragraph 85 and 86, p. 251 sq.; C. B. Macpherson: The Political Theory of Possessive Individualism. Hobbes to Locke, Oxford 1962, p. 215 sq.

⁶² John Locke: Second Treatise (as note 43), paragraph 46, p. 317 sq.

⁶³ John Locke: Some Considerations Concerning Raising the Value of Money and Some Consequences of the Lowering of Interest and Raising the Value of Money, in: The Works of John Locke. A New Edition, Corrected in Ten Volumes, Vol. V, London 1823, pp. 1–116: p. 36. See the quote in Reinhard Brandt: Zu Lockes Lehre vom Privateigentum (as note 54), p. 434.

power to act and the emotional power inherent in money annuls those two limits to appropriation which Locke had initially seen as necessary with a view to preserving divine creation and had based on the neediness of others, on the one hand, and on the corruptive effect of goods,⁶⁴ on the other. With the introduction of money, however, the accumulation of wealth and the unequal distribution of common resources become unlimited. Money makes possible not only the exchange of perishable goods for non-perishable ones but also and precisely the disproportional appropriation of the labor of others and the enlargement of one's own land ownership through conscientious management. In marked contrast to the Aristotelian doctrine of labor, however, this occurs in a legitimate manner—legitimate in terms of natural law—since the cultivation of the »waste land«⁶⁵ through pasturage, tillage, and planting miraculously promises to promote the welfare also of the dispossessed.⁶⁶ Mother Nature and the earth provided only the per se worthless raw materials. Only physical labor, »the Plough-man's Pains, the Reaper's and Thresher's Toil and the Bakers sweat«⁶⁷ give the natural raw materials and not least of all the fallow land their real, almost one hundred percent value,⁶⁸ which thanks to money can now be enumerated, sold, bought, accumulated, and reinvested and finally contributes to the circumstance that the English day laborer lives in greater prosperity than an Indian chief. It is the reference and value system of labor (of the fallow land cultivated through labor) which Locke puts forward against Aristotle and the limitless self-generation of money. In this system some are destined to take on the divine curse of labor while others are destined to appropriate the labor of the former, to transform the surpluses produced into money and to reinvest the accumulated capital to the benefit of all.⁶⁹ As a result, however, it is precisely the investors who obey the divine directive to preserve themselves and the rest of humanity.

⁶⁴ John Locke: Second Treatise (as note 43), paragraph 31, p. 308.

⁶⁵ Judy Whitehead notes that the term »waste land« appears 14 times alone in this chapter: »Locke here is following existing legal usages of wasteland in the sense of land being left unused, a category introduced into English common law in the 13th century to curb the rights of tenants to do anything they pleased with rented land, and to disallow them from leaving it idle.« Judy Whitehead: John Locke and the Governance of India's Landscape. The Category of Wasteland in Colonial Revenue and Forest Legislation, in: Economic & Political Weekly December 11 (2010), Vol. XIV., No 50, pp. 83–93: 85.

⁶⁶ See in particular the precise reading and accurate interpretation by C. B. Macpherson: The Political Theory of Possessive Individualism (as note 60), p. 203 sqq.

⁶⁷ John Locke: Second Treatise (as note 43), paragraphs 42 and 43.

⁶⁸ Ibid., paragraph 40.

⁶⁹ Jörg Thomas Peters: Der Arbeitsbegriff bei John Locke (as note 36), p. 179; cf. Eduard Fechtner: John Lockes *Gedanken über Erziehung* (1883), Schutterwald/Baden 1999, p. 25.

Practice should come from this theory of labor. Consequently, the educational theory developed by Locke both for the laboring class and for the land-owning gentry fulfills this labor economic program and especially the attempt to do away with the two economically marginal ways of life, that is, on the one hand the drone-like laziness of the begging poor and, on the other, the idle wastefulness of the English aristocracy.

Proceeding from the well-known thesis that every human being from birth is an unwritten sheet of paper (*tabula rasa*) or an untouched bee wax tablet,⁷⁰ Locke sees everything having to do with a gentleman's education as dependent on the proper »habitus,« which should not make an impression with the whip but rather through friendly sternness.⁷¹ As far as corporal discipline is concerned, it is advisable to introduce pupils to the ascetic lifestyle in order to prevent them from becoming accustomed to a life »in plenty and ease.«⁷² The toughening of the body⁷³ finds its counterpart in the mind: here the »rules and restrictions of reason« and »the true principles of virtue and industry« should be the focus. To the impracticality of scholastic education Locke opposes the acquisition of decent handwriting, commercial bookkeeping, and accounting (casting account)⁷⁴ together with industrial training.⁷⁵ Of the traditional teaching subjects Locke finds solely Latin to be dignified enough for a gentleman in that it enables him to read the classics and not least of all the Roman agrarian writers. They allow the future »man of business«⁷⁶ to find paradigms for a life befitting one's social status under the aegis of an aristocratic agriculture and the »manual arts.« Locke is aware of the scandal that for the 17th century resides in connecting a gentleman's education expressly with training in a trade and the crafts.⁷⁷ It is the privilege of the nobleman to lead an idle life and to regard physical labor, the church service of the lower classes, with contempt. Therefore he also wants to have nothing to do with the imposition of »hard and painful labor.«⁷⁸ Instead, the noble handicrafts are meant to allow recuperation from one-sided mental and mathematical activity. At the same time they are a useful diversion which should take the place of morally corrupting drinking,

⁷⁰ John Locke: *Some Thoughts Concerning Education*. The Clarendon Edition of the Works of John Locke, edited and with introduction, notes and critical apparatus by John W. Yolton and Jean P. Yolton, Oxford 1989, paragraph 1 and paragraph 176.

⁷¹ *Ibid.*, paragraphs 1, 130.

⁷² *Ibid.*, paragraphs 66, 21, 5, 7, 15.

⁷³ *Ibid.*, paragraphs 147, 148, 167.

⁷⁴ *Ibid.*, paragraph 210.

⁷⁵ *Ibid.*, paragraphs 164, 208.

⁷⁶ *Ibid.*, paragraph 94.

⁷⁷ *Ibid.*, paragraphs 201, 208.

⁷⁸ *Ibid.*, paragraph 206.

dice throwing and card playing⁷⁹ and prepare the future gentleman for his role as an efficient administrator. Just as for Cato, Cyrus, or Xenophon,⁸⁰ for the English gentleman too agriculture, fruit-growing, and horticulture, as well as the grafting and breeding of plants and animals, is particularly expedient.⁸¹ Just as the gentleman should not remain idle if he is to serve as a model for the failed higher nobility and to increase the welfare of the country as a whole, his spouse should also not be corrupted by unproductive idleness. In his work *Oikonomikos*, written around 360 B.C., Xenophon has already said what needed to be said about the education of wives by their husbands. He equips her, after all, in a paradigm which can be seen as a response to Hesiod's misogyny—encompassed in the image of the drone—with the crown of the queen bee that is capable of »controlling her stomach,« in short, is capable of *sophrosyne*.⁸² As a result she is not only called upon to manage the household and to administer the labor of the (enslaved) bees, she also knows how to preserve and use the surpluses that have been acquired.⁸³ The director of the household in Locke's sense is the beekeeper, owner, administrator, and accounts officer of the house and the estates, in England as well as in the colonies.

⁷⁹ Ibid., paragraph 208.

⁸⁰ Ibid., paragraph 205.

⁸¹ Ibid., paragraphs 204, 205, 206, 209.

⁸² On the female virtue of *Sophrosyne* in antiquity see Hans-Ulrich Wiemer: Die gute Ehefrau im Wandel der Zeiten: von Xenophon zu Plutarch, in: *Hermes* 133/4 (2005), pp. 424–446, and therein his reference to Helen F. North: The Mare, the Vixen, and the Bee. *Sophrosyne* as the Virtue of Women in Antiquity, in: *Illinois Classical Studies* II (1977), pp. 35–88: 46. According to North, Xenophon was the first to link *Sophrosyne* with *oikonomia* and to allot it as a virtue to women and men equally. On the division of labor in the orally administered home of Xenophon see Sabine Föllinger: Frau und Techne: Xenophons Modell einer geschlechtsspezifischen Arbeitsteilung, in: Barbara Feichtinger and Georg Wöhrle (eds.): *Gender Studies in den Altertumswissenschaften. Möglichkeiten und Grenzen*, Trier 2002, pp. 63–49.

⁸³ Xenophon was the first to transform the bee king, in antiquity regarded as male, into a bee queen, who »stays in the hive, [...] and does not suffer the bees to be idle; but those whose duty it is to work outside she sends forth to their work; and whatever each of them brings in, she knows and receives it, and keeps it till it is wanted. And when the time is come to use it, she portions out the just share to each.« The bee queen thus embodies the virtues of the good wife. The animal figure of the stealing drone also appears in the *Oikonomikos*: »What if weeds are springing up, choking the corn and robbing it of its food, much as useless drones rob bees of the food they have laid in store by their industry?« The weeds must be cut, of course, just as the drones must be removed from the hive.« Xenophon: *Economics*, translated by O. J. Todd, Cambridge, MA 1923, 7.33 and 7.14. As Peter Spahn indicates, one should recall that the »word *oikonomikos* (and its equivalent *oikouros*) [...] in the literature of the 5th and 6th centuries still consistently referred to female persons and only with authors of the 4th century did it overwhelmingly denote the male head of the household.« Peter Spahn: *Sophistik und Ökonomie*, in: Karen Piepenbrink (ed.): *Philosophie und Lebenswelt in der Antike*, Darmstadt 2003, pp. 35–57: 51.

In his *Report of the Board of Trade*, Locke devotes himself to the other marginal—in the productive sense—class, the poor: towards the end of the 16th century not only bad harvests and famines and the enormous increase in the population and in grain prices contributed to forcing millions of people into poverty. The increasing importance of wool production for the English economy also resulted in the enclosure of areas of arable land and of common land in order to provide pasture for sheep, thus making wandering beggars out of the population and commoners which until that time had lived from agriculture. With the exception of the Netherlands, England had the highest rate of working animals per inhabitant and acre in Europe. According to estimates, there were 4.5 million cattle, 12 million sheep, and 2 million pigs in England and Wales in 1696, compared with a population of 5.3 million people. For the English population of the 17th century the keeping of livestock was thus an »unavoidable part of their world«: »The beasts seemed to have been around forever.«⁸⁴ Meanwhile in John Locke's *Report of the Board of Trade* there is no mention whatsoever of »enclosure,« the enclosure of land and woodland areas previously held in common. Instead, Locke makes the »loosening of discipline and the corruption of morals« responsible for the constantly increasing »swarms of beggars,« who because of their laziness, poverty, and vileness represented a »disgrace to Christianity.«⁸⁵ In view of God's command to eat your food in the sweat of your brow, these »begging drones who live unnecessarily from the labor of others«⁸⁶ had forfeited any right to eat.⁸⁷ Since public assistance only intensifies the laziness of the poor, the central question for Locke remains how the hundreds of thousands of poor people might be compelled to work and be put to work by the wool industry and how England could thus be made a million pounds richer in the space of eight years.⁸⁸ Locke finds the answer in the establishment, first, of »houses of correction« and, second, in that of »Working Schools.«⁸⁹ Thus, those

⁸⁴ Virginia DeJohn Anderson: *Creatures of Empire* (as note 51), p. 84.

⁸⁵ John Locke: *A Report of the Board of Trade to the Lords Justices, Respecting the Relief and Employment of the Poor* (as note 35), pp. 99–126: 111.

⁸⁶ *Ibid.*, p. 103 and p. 104.

⁸⁷ »I think, everyone, according to what way providence has placed him in, is bound to labor for the public good, as far as he is able, or he has no right to eat.« Letter from John Locke to Molyneux of 19 January 1694, in: *The Correspondence of John Locke*, 8 Volumes, Vol. 4, edited by E.S. de Beer, Oxford 1979, (Letters No 124–1701), Letter No. 1693, p. 786. Quoted according to Jörg Thomas Peters: *Der Arbeitsbegriff bei John Locke* (as note 36), p. 222.

⁸⁸ John Locke: *A Report of the Board of Trade to the Lords Justices, Respecting the Relief and Employment of the Poor* (as note 35), p. 102 and p. 110 sq.

⁸⁹ As M.G. Mason explains, by the middle of the 17th century the Elizabethan laws on the poor had proven themselves completely inappropriate for dealing with the issue of the poor. The solution of the poor issue and laws regarding them were the responsibility of

»able-handed« men between the ages of 14 and 50 who have been seized without permits for begging outside their county are to be brought to the nearest seaport and on to the first available ship of His Majesty in order to carry out very heavy labor there for three years and, should they flee, be punished as deserters. All begging men who are crippled and over the age of 50 are to carry out hard labor for three years in a house of correction, while those who forge their permits are to lose both ears as punishment⁹⁰ and, in the case of a repeat offence, to be deported as hard criminals to one of the English colonies. Those who still persist in maintaining that they can find no work or who refuse any labor that is offered to them are to be made through corporal punishment to labor for a lesser wage or be compelled to work in a house of correction. Nor are begging women and children over the age of three who are capable of earning their own livelihood to be spared such measures.⁹¹ The whip and forced labor are for Locke the tried and tested means of honoring the principle of forced labor imposed by God. As far as the future of labor and that of the poor and disadvantaged children of England in particular is concerned, Locke recommends the establishment of »Working Schools« in which poor children can be trained until the age of 14 in »spinning or knitting or in another branch of wool manufacture« as well as being compelled to attend Sunday church. In Locke's view, through the sale of the goods which are thereby manufactured each school should be able to finance itself and thus no longer be a burden to the community.⁹²

In this way child labor can be made productive, the gestures and body techniques of »able hands« be made efficient, and begging drones be transformed into hardworking bees.

John Locke makes no distinction between productive and reproductive labor. In contrast to Aristotle, all labor is instead for him value adding and productive as long as it can be appropriated or purchased through force only, made into capital and reinvested for the purpose of accumulating wealth. Both of them are, to be sure, united by their interest in seeing that labor be made to mean above all having people labor in order to provide political beings as well as land-owning gentlemen

the Board of Trade founded in May 1696, whose corresponding department was headed by Locke as Commissioner; he apparently approached his work with uncommon earnestness. On this see M. G. Mason: John Locke's Proposals on Work-house Schools, in: John Locke. Critical Assessments, Volume II, edited by Richard Ashcraft, London/New York 1991, pp. 269–280: 269.

⁹⁰ John Locke: A Report of the Board of Trade to the Lords Justices, Respecting the Relief and Employment of the Poor (as note 35), p. 106.

⁹¹ Ibid., p. 113.

⁹² Up to now they had to provide between 50 to 60 pounds for each poor child till he or she reached the age of 14. See John Locke: A Report of the Board of Trade to the Lords Justices, Respecting the Relief and Employment of the Poor (as note 35), p. 114.

with the opportunity to engage in political practice or bookkeeping. Adam Smith formulated it as follows: »Ownership is the command over labor,« or, to put it more effectively and in the words of Marx: »Ownership means being in command of [the unpaid] labor of others.«⁹³

The worker bee and the drone are elevated to new heights in the foundation myth of the modern age's economic zoology, Bernhard de Mandeville's *Fable of the Bees*. Mandeville was well acquainted with the labor and ownership theory of the *Second Treatise*. What Locke's »hiding hand«⁹⁴ still attempted to conceal with the mythical theory scene of the »Golden Age,« Mandeville brought into the full light of day in his *Fable of the Bees*: the »necessity« of exploiting the masses of poor people by a small number of non-working rich people who indulge in the »noble sin« of luxury and an appetite for consumption, in short, an excessive egoism.⁹⁵ This rehabilitation of the parasitic drone in the role of the rich glutton takes place for the benefit of all, especially the poor:⁹⁶ Adam Smith, as is well known, made, guided by the »hidden hand,«⁹⁷ theoretical capital out of the discovery of Locke

⁹³ Karl Marx: Kapital, in: MEW, Vol. 23, p. 556; Grundrisse, p. 148; Karl Marx and Friedrich Engels: Deutsche Ideologie, in: MEW, Vol. 3, p. 32.

⁹⁴ Here, however, employed in a completely different sense than meant by Albert O. Hirschman: Development Projects Observed, Washington 1967.

⁹⁵ That »private vices, by the dexterous management of skillful politician, can be turned into public benefits« is the best known maxim from this book, which at the same time makes clear that Mandeville did not abandon society and economy to the free play of forces, but rather put these forces under the control of skilled management and political authority. Bernhard Mandeville: Die Bienenfabel, mit einer Einleitung von Walter Euchner, 2nd edition, Frankfurt am Main 1980, p. 48.

⁹⁶ »Thus Vice nursed Ingenuity, / Which join'd with Time, and Industry / Had carry'd Life's Conveniences, / It's real Pleasures, Comforts, Ease, / To such a Height, the very Poor / Lived better than the Rich before«; Bernhard Mandeville: The Grumbling Hive: or, Knaves Turned Honest, in: The Fable of the Bees, edited by Irwin Primer, New York 1962, Lines 197–202.

⁹⁷ Scholars of culture history and media studies, as well as philosophers, have devoted much attention in recent years to Adam Smith's metaphor of the »invisible hand,« which he used in three passages: in his *History of Anatomy* (1750/posthumously published 1795), in *The Theory of Moral Sentiments* (1759), and in *The Wealth of Nations* (1776). For the theoretical origins of this metaphor see Giorgio Agamben: Herrschaft und Herrlichkeit. Zur theologischen Genealogie von Ökonomie und Regierung, translated by Andreas Hiepko, Berlin 2010, p. 338 sqq. Emma Rothschild has emphasized the Anglo-Scottish literature that Smith was familiar with, not least Macbeth, »who asks the night, with thy bloody and invisible hand, to cover up the crimes he is about to commit, (Macbeth, Act III, Scene ii).« A further »invisible hand,« which Smith would have known, is found in Ovid's *Metamorphoses*, »in which the hero, stabbing his tormentor in the back, twisted and plied his invisible hand, inflicting wound within wound.« See Emma Rothschild: Adam Smith and the Invisible Hand, in: The American Economic Review 82/2 (1994), pp. 319–322: 319 sqq. Cf. Stefan Andriopoulos: The Invisible Hand: Supernatural Agency

and Mandeville that ruthless self-interest promotes the welfare of all,⁹⁸ and in so doing distinguished for the first time from a systematic point of view between productive and reproductive labor. Assuming that the cultural contempt for reproductive work is an old European phenomenon which responds to the mythical notion of forced labor, its economic marginalization only begins with early industrialization. Adam Smith made himself into one of its most important advocates when he emphasized that »lower forms of labor and services at the moment of their execution already come to naught and rarely leave behind a trace or value.«⁹⁹ With the myth of the service economy proclaimed by Jean Fourastié and declared to be the »great hope« of the 20th century, whereby with the decline of the industrial age the »Golden Age« of »tertiary civilization« would be introduced,¹⁰⁰ reproductive labor and services at least emerge from their economic shadow existence and in the 1960s—because of a lack of industrial work—become for the first time part of the calculation of the gross national product.¹⁰¹

in *Political Economy and the Gothic Novel*, in: *ELH* 66 (1999), pp. 739–758; see also the illuminating study by Harun Maye: *Die unsichtbare Hand – zur Geschichte einer populären Metapher*, in: Hannelore Bublit, Irina Kaldrack, Theo Röhle, and Hartmut Winkler (eds.): *Unsichtbare Hände. Automatismen in Medien-, Technik- und Diskursgeschichte*, Paderborn 2011, pp. 21–40.

⁹⁸ The recent stellar career of the term »self-interest« follows the knowledgeable study by Thomas Rommel: *Das Selbstinteresse von Mandeville bis Smith. Ökonomisches Denken in ausgewählten Schriften des 18. Jahrhunderts*, Heidelberg 2006.

⁹⁹ Adam Smith: *An Inquiry into the Nature and Causes of the Wealth of Nations*, London 1776, II: 3.1.

¹⁰⁰ Jean Fourastié: *Le grand espoir du XXe siècle. Progrès Technique – Progrès Économique – Progrès Social*, Paris 1954, p. 275 sqq.

¹⁰¹ On the history of the gross national product, which first began in the second half of the 20th century with Colin Clark's macroeconomic world atlas, see Colin Clark: *The Conditions of Economic Progress*, London 1940, p. 54; also see Daniel Speich Chassé: *Statistische Größen. Zum Zahlenraum der Makroökonomie*, in: Anna Echthölter and Iris Därmann (eds.): *Konfigurationen. Gebrauchsweisen des Raums*, Berlin 2013, pp. 31–44.