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A genealogy of the incentive

By Guus Dix

Max Planck Institute for the Study of Societies,
dix@mpifg.de

The 'incentive' has become a key notion in current intellectual and political attempts to understand human action and act upon it. Managers, management consultants, politicians and bureaucrats frequently use 'incentives' in their accounts of the current and expected behavior of individual and institutional actors. More than a cognitive device, employees and organizations in the public and private sectors are also governed with the help of incentives – from monetary ones that are linked to performance to informational ones that are related to naming and shaming and voting with one's feet. Incentives should thus equally be understood as 'an instrument in the hands of powerful experts useful for managing and directing people's behavior to achieve certain social purposes' (Grant 2002: 130; Dix 2014b). I draw upon Michel Foucault's normative and theoretical perspectives on power/knowledge in the human sciences to challenge the current self-evidence of the incentive as explanatory term and technique of governing individuals and institutions. More in particular, I trace the emergence and subsequent development of incentivization as a new modality of power in an overarching genealogy of the incentive. That history of 20th century attempts to steer people's behavior in new directions takes me from American engineers turned industrial consultants via interwar management scientists to the mechanisms designed by postwar economists of information and incentives.

Foucault's normative stance can be derived from his use of the term 'genealogy' as interchangeable with what he called 'the history of the present' (1995: 31). Although he analyzed a variety of practices as diverse as ancient sexual chastity and eighteenth-century factory rules, the purpose was always to understand something disconcerting in contemporary societies. So even if Foucault sought to uncover the 'complex causal antecedents of a socio-intellectual reality', he did so only in 'an effort to question the necessity of dominant categories and procedures' (Gutting 1994: 12). Foucault's genealogical accounts of the recurrent shifts of purpose and the contingent combination of heterogeneous elements that pass as present-day necessities thereby act on an impulse to transgress what now goes without saying (Goldstein 1994: 14). For what remains of the moral and historical 'necessity' of the categories with which we understand ourselves and the techniques developed to change our behavior if they are the product of historical contingencies and struggles for power?

Theoretically, Foucault genealogical works are concerned with the multifaceted relationships between power and knowledge (Foucault 1980). Sometimes, power is a brute and physical phenomenon, but more often, it is cloaked in discourses that try to rationalize its exercise and legitimize its existence. At the end of the 1970s, Foucault (2008, 2009) began to systematically investigate the history of the 'governmentalities' that provided such rationality and legitimacy. Drawing on his older political and epistemological themes, he focused on two interrelated aspects in succeeding rationalizations of government that were provided by historians, economists, theologians and philosophers from the Middle Ages to the twentieth century. First, he shifted his earlier focus on the formation of the human subject as an object of knowledge towards the constitution of objects and objectives of political action by different groups of (scientific) experts (Foucault 1972: 40–49; Dix 2014a). Second, he extended his analysis of discipline as a technology of power towards a broader set of techniques with which the behavior of individuals and groups could be steered in a different direction (Foucault 1995).

In this article, I will present three successive rationalizations of (industrial) government in which 20th century experts in the social and behavioral sciences demarcated the 'incentivizable subject' as an object of knowledge and designed 'techniques of incentivization' with which that subject could be governed. From the end of the 19th century onward, members of the American Society of Mechanical Engineers presented themselves as the first professional authority in matters of incentives. Second, management scientists with a background in the sociology, psychology and anthropology of work challenged that authority and added new characteristics to the worker that could be targeted with a new set of instruments. Third, mathematical economists appropriated the incentive as a key notion of their own in the 1970s and broadened the need for incentives to all situations where principals faced well-informed and self-interested agents. In the final section I

will outline how to proceed from a genealogy of the incentive to the cognitive and technical manageability of the future in particular instances of incentivization.

Engineering incentives

American mechanical engineers held a unique position in the late nineteenth century industrial landscape because they worked closely with the workers and foremen and, at the same time, had access to the higher echelons of management (Layton 1971; Nelson 1995). In 1886, Henry Towne called upon his fellow engineers to partly shift their attention from engineering problems to managerial ones. For the vast majority of the engineers that engaged in the ensuing debate, the management of workers became synonymous with the introduction of a variant of piece wages. This is where the characteristics of the worker came in. In his own proposal for profit-sharing, Towne urged managers to calculate the exact contribution of the factor 'labor' in the profits of the firm so the workers could be rewarded for their economic use of material and for their efficiency. His method of 'gain-sharing' could work because the worker was conceived of as a self-controlled individual who collaborated with colleagues and was able to postpone monetary satisfaction until the yearly bonus envelopes were distributed (Towne 1889). Frederick Halsey was not convinced. He thought workers were more short-sighted – i.e. only interested in immediate rewards – and inclined to slack off upon seeing the laziness of coworkers. Gain-sharing's reliance on collaborative effort and a long-term gaze should thus be countered by the individualization of incentives. Halsey's (1891) own 'premium plan' combined a fixed daily wage with a flexible premium rate received for reducing the time spent on performing a particular task.

A similar pessimism with regard the workers can be found in Frederick Taylor's infamous system of scientific management. In this system, the worker was viewed as a person who was not prone to work hard – soldiering was an engrained habit (Taylor 1998). Managers should therefore not rely upon the initiative of the workers but teach them how to do the job properly with the help of instruction cards and seek their adherence by way of an experimentally determined piece rate that differentiated between the accomplishment of the task and the failure to do so (Taylor 1895). Henry Gantt – one of Taylor's pupils and close collaborators – subsequently designed a system of organizational charts that visualized the productivity of workers and foremen. Supervisors would capture the performance of individual employees on a daily basis by drawing shorter and longer lines on so-called 'Man Record Charts' to determine and legitimate the distribution of bonuses. At the same time, however, these lines made it possible to ascribe other features to the workers than that of their relative ability to produce. Especially with regard to the class of 'short-line workers', underperformance was accompanied by personality traits that were equally relevant for managing the shop floor. These workers felt inferior, were keen to distract others and were often found among those who started arguments in their departments (Gantt 1919; Clark 1942).

Although there were slight differences between their respective points of view, the nineteenth-century engineers delimited the incentivizable subject as a materialistic creature that was supposed to respond to monetary incentives in a mechanistic way. The materialism and mechanistic responsiveness of the industrial workers was closely related to the techniques of managers and foremen to govern them. The executive should first install an invariable wage incentive scheme that offered a monetary reward to workers who exerted themselves and increased their output. Second, the lower management representatives – superintendents and foremen – should assist the worker in attaining goals and achieving the material rewards he or she desired. Instruction cards and performance charts could be used to explain what needed to be done and the most efficient way to do it.

Adjustment as incentive

With the charting of human performance, the engineers reached the limit of their ability to delimit the incentivizable subject. Because the length of the line was the only access to the characteristics of the workers, a more fine-grained and 'deeper' understanding of their behavior and motivation became possible only after the emergence of other expert communities. From the 1920s onward, the authority of the engineers was challenged by social and behavioral scientists from a variety of disciplines. British and American economists criticized their one-sided focus on the material motives of workers (Commons 1921; Mitchell 1924; Pigou 1921). That criticism was not lost on a group of management scientists who, in the 1930s, moved industrial research in a new direction. With backgrounds in psychology, sociology and anthropology, these management scientists at the Harvard Business School construed a different account of employee behavior and developed a set of alternative techniques to manage the worker (Gillespie 1993; O' Conner 1999). First, the behavior of the worker

was now explained by deeper instincts and inclinations that were largely beyond the worker's control. Internal tensions would build up when outside circumstances prevented individuals from following their inclinations. The worker, who had no outlet for his or her frustrations, would suppress them until some trivial event on the shop floor triggered an excessive response (Mayo 1946). Second, the shop floor came to be considered a culture in its own right. The industrial anthropologist studied verbal communications, physical interactions, bonds of friendship and lingering antagonisms as if he were studying a foreign tribe. On the one hand, the working group was now viewed as something more than a set of individuals; it was a unity with a distinct set of norms and a set of strategies for maintaining those norms. On the other hand, the ethnographic researchers noted that the working group was far from homogeneous. There were different social positions in the group, and it was made up of different kinds of workers (Dickson 1935; Roethlisberger/Dickson 1934). Third, the workers were now considered to be communicative beings who were eager to have discussions with their superiors rather than merely receiving orders from them (Hall/Locke 1938).

At the end of the 1930s, the incentivizable subject was no longer a materialistic being that responded mechanically to monetary rewards. Instead, it had become a figure of considerable complexity that was either well-adjusted and productive or maladjusted and prone to cause problems within the organization. The worker was now endowed with an inner equilibrium, which could be disturbed by harsh treatment from the supervisory staff; however, it could also be strengthened by opportunities to relieve stress. Moreover, the worker was part of a group and acted according to relatively fixed patterns of behavior. The robustness of social interactions fostered a stable balance in the organization that could, however, be disturbed by sweeping organizational changes and disruptive elements within the group itself. Finally, the worker felt more in line with organizational purposes when its views were taken seriously by management and would become frustrated when instructions were badly communicated.

With the replacement of lack of will or effort for maladjustment as the key governmental problem, those who faced this novel incentivizable subject could no longer rely on their earlier wage incentive schemes (Rose 1999). The manager or foreman now had to be attentive to the mental and social processes on the work floor and also had to engage in friendly conversations with the workers. Thus, the proposal for a new class of personnel counselors, ones who would speak with workers in an open yet authoritative way, set an example for the new role of the governor. The personnel counselor was the most approachable management representative; he or she could offer guidance and simultaneously gather vital information about conditions and moods on the shop floor. The open conversation was thus a way for management to get to know the workers, while at the same time making them feel at ease. With counseling techniques such as these one could address the various forms of friction that disrupted the atmosphere at work and foster the adjustment between internal life and external industrial conditions that was considered to be the major incentive for people to apply themselves.

Incentives and information

It took until the 1970s before a third and final governmentality centered on incentives came into being. This time, mathematically trained economists broadened an older theoretical debate on socialism versus capitalism as rival economic systems, to include a number of problems that were faced by all who governed. In their models, these economists gradually forged a link between information and incentives in formal models of central economic planning. In doing so, they abstracted from management as being a concrete problematic of manager-meets-reluctant-worker-or-foreman and excluded the substantial conception of motivation from the economic debate about allocation of resources in situations of information asymmetry.

The roots of the economics of incentives go back to a controversy over socialism and capitalism as distinct allocation mechanisms in the 1920s and 1930s (Lavoie 1985; Mirowski 2002). In the so-called *socialist calculation debate*, economists discussed the possibilities and limits of central planning in a society where information on supply and demand was dispersed over the entire economy (Cottrell/Cockshott 1993; Hayek 1975; Mises 1951). Although the participating economists disagreed about many issues, they shared an economic view – as opposed to a technical or engineering view – on matters of allocation and efficiency. The consensus about motivation as an issue that belonged to psychology – not to economics – enabled them to side-step the discussion of their fellow interwar economists about the characteristics of the worker. Moreover, they agreed that information was the most important issue to address because socialist economic planning required centralized knowledge of all relevant economic parameters that would otherwise be used by consumers

and producers in a more decentralized manner. The second step towards a more abstract approach was taken in postwar *mechanism design theory* (Lee 2006). In this specific branch of economics – an offspring of the earlier debate about central planning – the design of mechanisms for the allocation of resources in different mathematically defined economic environments was put center stage. By formalizing the interaction between a central coordinator on the one hand and consumers and producers on the other hand, mechanism design theorists could model the optimal allocation of resources in a rigorous mathematical way (Hurwicz 1972, 1973). The introduction of *'incentive compatibility'* marked the third and final step in the establishment of a new problematic of government. As mechanism design theorists realized that people were not necessarily angels – truthful and concerned about others individuals – they could equally deceive the planner if that served their own interest (Hurwicz 1987). Any mechanism with which one could truly overcome the information asymmetry between coordinator and participants should fit in with the latter's self-interested strategies. That is, all viable economic mechanisms had to be compatible with the – totally unspecified – incentives of the individuals in order to ensure that they opted for truthfulness. Game theory subsequently offered mechanism design theorists the opportunity to characterize the self-interested individual in a mathematical way. In game theoretic terms, the individual was a strategic agent who optimized his own gains by constantly changing his tactics based on the strategies of other agents (Hammond 1979; Laffont/Maskin 1983).

The end result of this process was the statement of a formal but relatively stable governmental problem and its solution: the relationship between a central coordinator and a set of participants was permeated by asymmetrically dispersed information that could only be overcome with the help of incentive schemes. In the economic theory of principal and agent this information-incentive nexus was subsequently plugged into a variety of concrete situations (Ledyard 1987; Stiglitz 1987; Laffont/Martimort 2002). The central planner became the neutral 'principal' as someone who can only achieve his or her goals if a set of agents – formerly known as socialist producers and consumers – either honestly provides the necessary information or adequately performs certain actions. According to economists, the world is inhabited by principals and agents; thereby, the idea took hold that incentivization was not a local matter – as the engineers still thought – but that it could be located in a wide range of relationships between governors and governed, in both the public and the private sectors.

For all its mathematical sophistication – or precisely because of it – mechanism design theory had a very narrow conception of the incentivizable subject in comparison with the elaborate conception of the interwar management scientists. And that proved to be its main strength. The more abstract delimitation of the incentivizable subject as a self-interested and strategic agent made it possible to think of the problem of government in a far broader sense than engineers and the social and behavioral scientists had done before. The incentivizable subject was no longer the circumscribed figure of the materialist worker or the maladjusted industrial employee, but now appeared anytime information asymmetry could be said to occur. In this rationalization of government, the self-interested agent thus became the adversary of all governors – ministries, managers, corporate shareholders, socialist central planners, insurance firms, electorates and municipalities – who lacked direct access to the characteristics, the effort or the performance of the individuals and institutions they tried to influence. The fact that the incentivizable subject was no longer found in a particular location, such as the industrial shop floor, called for a new awareness from public- and private-sector principals. A rational governor should keep watch for possible instances of information asymmetry that could be exploited by self-interested agents. When such situations were found, a rational governor should design procedures that revealed the knowledge agents try to hide. In other words, the informational or behavioral strategies of agents should be addressed with targeted incentive schemes. When the scheme was adequate, the goals of the agents can be made compatible with those of the principal.

The incentive as future-oriented cognitive and technical device

Each rationalization of government was a combination of elements that were contingent on certain presuppositions about human action, on the orientation to particular academic and nonacademic networks and their prevalent debates, and on the prevalent research methods, the conceptions of proof and the dominant interpretations of the research results. Moreover, there was little necessity in the succession from one rationalization to the next: past achievements and earlier techniques were not disproven or disputed. Rather, they were neglected or simply excluded from the debate. Contingency permeated the genealogy of

the governmentalities that were centered on incentives and it is hard to describe this history as an increased understanding of incentives through the slow accumulation of results or an elimination of theories that had proved to be erroneous.

The objective of a genealogical inquiry is to transgress that which now goes without saying. Understanding the historical contingency that permeated the nineteenth- and twentieth-century views on and uses of incentives as twin elements in a more or less comprehensive program for wielding power over people is one way of doing so as it unsettles the taken-for-grantedness in our current thoughts about and uses of incentives. However, the problematization of something that is presently not perceived as problematic might be a necessary but certainly not a sufficient step to address present day instances of incentivization.

The first move in that direction is to see that, despite the many contingent historical shifts, the *incentive* also became a novel and quite coherent device that contrasts sharply with *discipline* as a rival modality of power. If we zoom out of the particular origins of new ways to wield power and its erratic course of development, we see how 'the multiplicity of often minor processes' in the end 'converge and gradually produce the blueprint of a general method' (Foucault 1995: 138). As a general method, contrary to discipline, the incentive does not target and transform the inner characteristics of individuals but surrounds them with desirable courses of action; it does not restrict movements and correct deviations from the norm but seduces the individual by addressing the willingness to act in accordance with the objectives of those who govern. With its aim to surround and seduce – not discipline and punish – incentivization comes close to Foucault's depiction of neoliberalism as an 'environmental technology' that addresses the relationship between the individual and the field of possibilities for action open to it (Foucault 2008: 259).

Second, these concrete instances of incentivization as a method of wielding power should be studied in light of the broader narratives about the future that structure of the forthcoming and disclose certain behavioral possibilities while limiting others. On the one hand, such *fictional expectations* (Beckert 2013a, 2013b) are bound up with the cognitive manageability of the future in the sense that individuals try to come to grips with the present state of the world and the one that might emerge from it. On the other hand, they are intimately related to the technical manageability of the future in the sense a wide variety of instruments has been designed to drive off uncertainty and work towards a different world. The current importance of incentives fits in with this double status as a cognitive tool used to turn an open and uncertain future into something that is more or less stable and predictable as well as a technical tool to alter the future courses of action of individuals and institutions.

The importance of the incentive as a cognitive tool did not come out of thin air; it is part of an overarching economization of the social that is critically informed by the theories and models of economic experts. Over the past four decades, the incentive became a key term to make sense of individual and organizational behavior in the public and private sectors and to anticipate behavioral responses to institutional change. Economic science was a vital resource for such anticipations as the incentive had become a widely used yet ill-defined concept to explain why humans act as they do and what to expect from them. One of the pioneers of the economics of incentives holds that 'incentives are the essence of economics' (Lazear 1987: 744). The presupposition that 'people respond to incentives' or that 'people usually respond to incentives, exploiting opportunities to make themselves better off' subsequently became one of the core principles of microeconomics (Mankiw 2014: 7-9; Krugman/Wells 2012: 9). Some economists even recast the complete subject matter of economics in terms of incentives:

Today, for many economists, economics is to a large extent a matter of incentives: incentives to work hard, to produce quality products, to study, to invest, to save, etc. How to design institutions that provide good incentives for economic agents has become a central question of economics. (Laffont/Martimort 2002: 1)

The economics of incentives has provided these scientists with a 'flexible framework for modeling innumerable variations in institutional arrangements, and comparing their potential for inducing desirable behavior' (Gailmard 2014: 90). Next to its flexibility, the framework has also permitted economists 'to generate rather precise expectations about the effects of different institutional arrangements' because these arrangements 'have systematic and predictable consequences' (Strom 2000: 275). What goes for the core principles of economic science goes for its burgeoning popularizations. In *The armchair economist* we find that 'most of economics can be summarized in four words: "People respond to incentives". The rest is commentary' (Landsburg 1995: 3). Whereas the idea that 'people respond

to incentives' unites the heterogeneous collection of everyday and not-so-everyday situations in the bestselling *Freakonomics and Superfreakonomics* (Levitt/Dubner 2010: xii).

Starting out from the academic arena, the economic approach to incentives was taken up by a wider audience. Management consultants now explain and justify the positive role of private equity in a wider narrative about incentives. When investment funds buy a large part of the shares of a major firm, they allegedly exert leverage and give managers a much-needed incentive to realign their interest with those of the shareholders (Engelen et al. 2011: 74-75). In light of the recent financial crisis, attempts to get rid of the 'perverse incentives' in finance led to a method of remuneration where part of the bonus earned is not immediately paid out but kept on an account to replace the short-term focus with a concern for the longer run. Consultants from the Hay Group (2009) warn advocates of such 'bonus banking' that they should keep one cardinal rule of reward in mind: 'the more remote the payment becomes, the weaker the incentive'. In the public sector, economic experts argued for fundamental reform as the public sector was being out of touch with the 'market-driven incentives' of private businesses and lacking the 'clear incentives to satisfy their customers' (Crouch 2011: 76 and 78).

With such great expectations about people's responsiveness to incentives, the question of foreseeing the reaction of actors to institutional change could become a core concern of economists and those more directly concerned with public and private sector reform. As these examples show, the articulation of present and future states of affairs in terms of incentives is more than a cognitive matter; it already points in the direction of certain types of political or managerial interventions. The incentive should hence be understood as a technique to manage the future. After the decline of ideas of countercyclical intervention, and societal steering more broadly defined, incentivization became a guiding principle of individualized, market-informed forms of social control (Streeck 2015: 76). It is a key ingredient of neoliberalism as a policy discourse and practice. This is evident, for instance, in the 'pervasive neoliberal insistence on "incentives" in fiscal and welfare policies to kick-start economic growth' via 'higher pay and lower taxes at the top, along with cuts in wages and benefits at the bottom of the income ladder' (Streeck 2014: 67). The past three decades also saw the entrance of incentives in particular areas of the public sector. After his brief visit to the British National Health Service (NHS), economist-consultant Alain Enthoven stated that 'the structure of the NHS contains perverse incentives' and advocated managed competition as a technique to break the power of organized elites. By measuring costs and outputs, establishing performance targets and fostering competition between different regional suppliers one could simultaneously increase the efficiency of health care professionals and stimulate medical innovation (Enthoven 1985: 1–4). Recently, the use of incentives has moved from UK professionals to the (future) recipients of health care as is the case with mothers who are offered two hundred pounds worth of vouchers when they breastfeed their newborns for six months (www.noshvouchers.org).

Education has also been a key area of incentive-infused reform. Dutch economic experts were concerned that teachers and schools did not perform optimally because they could make strategic use of the lack of knowledge about their performance. Providing parents with data about the relative performance of schools in their region was one way to address such instances of 'information asymmetry'. The public availability of information about school performance and the subsequent fear of losing pupils would be an incentive for principals to increase their school's performance. If this did not work out, then governments would introduce performance pay to incentivize teachers, as happened in different forms in the United States, Australia, The United Kingdom and The Netherlands. With a bonus directly related to the student test scores, teachers were given an interest in the performance of their pupils (Dix 2014c). When schools and teachers did not comply, governance would finally target the pupils themselves. In Dallas, Chicago and Washington a range of 'pay for grades' programs were established to incentivize children to apply themselves at school (Grant 2012: 111-112).

Guus Dix *is postdoctoral researcher at the Max Planck Institute for the Study of Societies and received his PhD from the University of Amsterdam. In his dissertation* Governing by carrot and stick: a genealogy of the incentive *he traced the emergence and subsequent development of 'the incentive' as an object of knowledge and technique of power. He is currently engaged in research on the relationship between economic expertise and remuneration practices in the public sector. Next, he will turn to the construction and reception of different incentive-infused narratives on financial sector reform.*

References

Beckert, Jens, 2013a: Imagined futures: fictional expectations in the economy. In: *Theory and Society 42*, 219-240.

Beckert, Jens, 2013b: Capitalism as a System of Expectations: Toward a Sociological Microfoundation of Political Economy. In: *Politics & Society 41(3)*, 323-350.

Clark, Wallace, 1942: *The Gantt chart: A working tool of management.* London: Sir Isaac Pitman & Sons.

Commons, John R., 1921: *Industrial Government.* New York, NY: The Macmillan Company.

Cottrell, Allin/Paul W. Cockshott, 1993: Calculation, complexity and planning: The socialist calculation debate once again. In: *Review of Political Economy 5*, 73-112.

Crouch, Colin, 2011: *The strange non-death of neoliberalism.* Cambridge, MA: Polity Press.

Dickson, William, 1935: Incentives and wage plans. In: *Personnel Journal 13*, 324-330.

Dix, Guus, 2014a: Ricardo's discursive demarcations. A Foucauldian analysis of the formation of the economy as an object of knowledge. In: *Erasmus Journal of Philosophy and Economics 7(2),* 1-29.

Dix, Guus, 2014b: *Governing by carrot and stick. A genealogy of the incentive. Dissertation.* Amsterdam: Amsterdam University.

Dix, Guus, 2014c: Expressing concerns about the incentive as a public policy device. In: Susi Geiger et al. (eds), *Concerned markets: Economic ordering for multiple values.* Cheltenham: Edward Elgar, 19-45.

Engelen, Ewald, et al., 2011: *After the great complacence: Financial crisis and the politics of reform.* Oxford: Oxford University Press.

Enthoven, Alain, 1985: Reflections on the management of the national health service: An American looks at incentives to efficiency in health services management in the UK. In: *Nuffield Provincial Hospital Trust Occasional Papers 5.* Retrieved from http://www.nuffieldtrust.org.uk/publications/reflections-management-national-health-service-american-looks-incentives-efficiency .

Foucault, Michel, 1972: *The Archaeology of Knowledge.* New York, NY: Pantheon Books.

Foucault, Michel, 1980: *Power/knowledge: Selected interviews and other writings, 1972–1977.* New York, NY: Pantheon Books.

Foucault, Michel, 1995: *Discipline and punish: The birth of the prison.* New York, NY: Vintage Books.

Foucault, Michel, 2008: *The birth of biopolitics: Lectures at the Collège de France, 1978–1979.* Hampshire: Palgrave Macmillan.

Foucault, Michel, 2009: *Security, territory, population: Lectures at the Collège de France, 1977 – 1978.* Hampshire: Palgrave Macmillan.

Gantt, Henry. L., 1919: *Work, wages, and profits.* New York, NY: The Engineering Magazine.

Gailmard, Sean, 2014: Accountability and principal-agent theory. In: Mark Bovens/Robert E. Goodin/Thomas Schillemans (eds), *Oxford handbook of public accountability.* Oxford: Oxford University Press, 90-105.

Gillespie, Richard, 1993: *Manufacturing knowledge: A history of the Hawthorne experiments.* Cambridge: Cambridge University Press.

Goldstein, Jan, 1994: Introduction. In: Jan Goldstein (ed.), *Foucault and the writing of history.* Oxford: Blackwell Publishers, 1-16.

Grant, Ruth W., 2002: The ethics of incentives: Historical origins and contemporary understandings. In: *Economics and Philosophy 18*, 111-139.

Grant, Ruth W., 2012: *Strings attached: Untangling the ethics of incentives.* Princeton, NJ: Princeton University Press.

Gutting, Gary, 1994: Michel Foucault: A user's manual. In: Gary Gutting (ed.), *The Cambridge companion to Foucault.* Cambridge: Cambridge University Press, 1-28.

Hall, Patricia/Henry W. Locke, 1938: *Incentives and contentment: A study made in a British factory.* London: Pitman.

Halsey, Frederick A., 1891: The premium plan of paying for labor. In: *Transactions: American Society of Mechanical Engineers 12*, 755-64.

Hammond, Peter J., 1979: Symposium on incentive compatibility: Introduction. In: *Review of Economic Studies 46*, 181-184.

Hay Group, 2009: Is bonus banking the answer to banking bonuses? Retrieved from: http://www.haygroup.com/downloads/uk/misc/bonus_banking_uk.pdf

Hayek, Friedrich A., 1975: The nature and history of the problem. In: Friedrich A. Hayek (ed.), *Collectivist economic planning: Critical studies on the possibility of socialism.* Clifton: Augustus M. Kelly Publishers, 1-41.

Hurwicz, Leonid, 1972: On informationally decentralized systems. In: Charles B. McGuire/Roy Radner (eds), *Decision and organization: A volume in honor of Jacob Marschak.* Amsterdam & London: North-Holland Publishing Company, 297-336.

Hurwicz, Leonid, 1973: The design of mechanisms for resource allocation. In: *The American Economic Review 63(2)*, 1-30.

Hurwicz, Leonid, 1987: Oral History III: An Interview. In: George R. Feiwel (ed.), *Arrow and the ascent of modern economic theory.* London: Macmillan, 258-292.

Koselleck, Reinhart, 2004: *Futures past. On the semantics of historical time.* New York: Columbia University Press.

Krugman, Paul/Robin Wells, 2012: Microeconomics. New York: Worth Publishers.

Laffont, Jean-Jacques/Eric Maskin, 1983: The theory of incentives: An overview. In: Werner Hildenbrand (ed.), *Advances in economic theory.* Cambridge: Cambridge University Press, 31-94.

Laffont, Jean-Jacques/David Martimort, 2002: *A theory of incentives: The principal-agent model.* Princeton, NJ: Princeton University Press.

Landsburg, Steven E., 1995: *The Armchair Economist. Economics and Everyday Life.* New York, NY: Free Press.

Lavoie, Don, 1985: *Rivalry and central planning: The socialist calculation debate reconsidered.* Cambridge: Cambridge University Press.

Layton, Edwin T., Jr., 1928: *The revolt of the engineers. Social Responsibility and the American Engineering Profession.* Originally published: Cleveland: Press of Case Western Reserve University, 1971.

Lazaer, Edward P., 1987: Incentive contracts. In: John Eatwell/Murray Milgate/Peter Newman (eds), *The new Palgrave: A dictionary of economics.* New York, NY: Stockton Press, 744-748.

Ledyard, John O., 1987: Incentive compatibility. In: John Eatwell/Murray Milgate/Peter Newman (eds), *The new Palgrave: A dictionary of economics.* New York, NY: Stockton Press, 739-744

Lee, Kyu S., 2006: Mechanism design theory embodying an algorithm-centered vision of markets/organizations/institutions. In: *History of Political Economy 38* (Annual Suppl.), 283-304.

Levitt, Steven D./ Stephen J. Dubner, 2010: *Superfreakonomics.* London: Penguin Books.

Mankiw, N. Gregory, 2014: *Principles of microeconomics.* Mason: South Western Cengage Learning.

Mayo, Elton, 1946: *The human problems of an industrial civilization.* Boston, MA: Division of Research, Graduate School of Business Administration, Harvard University.

Mirowski, Philip, 2002: *Machine dreams: economics becomes a cyborg science.* Cambridge: Cambridge University Press.

Mises, Ludwig, 1951: *Socialism: An economic and sociological analysis.* New Haven, CT: Yale University Press.

Mitchell, Wesley C., 1924: The prospects of economics. In: Rexford G. Tugwell (ed.), *The trend of economics.* New York, NY: Albert A. Knopf, 3-36.

Nelson, Daniel, 1995: *Managers and workers: Origins of the new factory system in the United States 1880-1920.* Wisconsin, WI: The University of Wisconsin Press

O' Conner, Ellen, 1999: The politics of management thought: A case study of the Harvard Business School and the Human Relations School. In: *The Academy of Management Review 24*, 117-131.

Pigou, Arthur C., 1921: *The economics of welfare.* London: Macmillan and Co.

Roethlisberger, Fritz J./William J. Dickson, 1934: *Management and the worker: Technical vs. social organization in an industrial plant.* Harvard University: Division of Research, Business Research Studies, no. 9.

Rose, Nikolas, 1999: *Governing the soul: The shaping of the private self.* London/New York: Free Association Books.

Stiglitz, Joseph E., 1987: Principal and agent. In: John Eatwell/Murray Milgate/Peter Newman (eds), *The new Palgrave: A dictionary of economics.* New York, NY: Stockton Press, 966-972.

Streeck, Wolfgang, 2014: *Buying time: The delayed crisis of democratic capitalism.* London: Verso.

Streeck, Wolfgang, 2015: Von der Gesellschaftssteurrung zur sozialen Kontrolle. In: *Blätter für Deutsche und Internationale Politik 1*, 63-80.

Strøm, Kaare, 2000: Delegation and accountability in parliamentary democracies. In: *European journal of political research 37*, 261–289.

Taylor, Frederick W., 1895: A piece-rate system, being a step toward partial solution of the labor problem. In: *Transactions: American Society of Mechanical Engineers 16*, 856-83.

Taylor, Frederick W., 1998: *The principles of scientific management.* New York, NY: Dover Publications.

Towne, Henry R., 1886: The engineer as an economist. In: Transactions: *American Society of Mechanical Engineers 7*, 428-32.

Towne, Henry R., 1889: Gain-sharing. In: *Transactions: American Society of Mechanical Engineers 10*, 600-14.