Governing by carrot and stick: A genealogy of the incentive
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In 1886 American mechanical engineers began to discuss an issue quite distinct from their normal preoccupation with the efficiency of machines used in industry. One engineer, Henry Towne, called upon his colleagues to address the question of how best to manage the industrial worker. The subsequent debate focused mainly on the so-called wage question: how could workers be induced to work at maximum speed without too sharp an increase in the labor costs? In the decade thereafter, engineers developed various piecework wage systems that could fulfill both conditions. Writing in the 1920s, British economist Philip Sargent Florence saw a common element in these systems:

Much thought has been spent on devising the form of remuneration most likely to appeal, and many rival plans have been advanced into which we need not enter. The general principle is similar to the well-known device of holding out a carrot before a donkey attached by a pole to his head (1924, 90).

Though there were subtle differences between one wage method and another, they all made use of the same basic idea: the industrial worker would only be willing to give his best when management offered him a reward for increased productivity.
One hundred and ten years after Towne’s call, economists James Mirrlees and William Vickrey received the Riksbank Memorial Prize in memory of Alfred Nobel “for their fundamental contributions to the economic theory of incentives under asymmetric information” (Nobel Prize 1996). In his Nobel lecture Mirrlees explained that imperfect information was a persistent problem in the private and the public sector. Government officials who deliberated whether to tax income or commodities lacked the necessary details about the preferences and the expected behavior of the individuals to be taxed. Similarly, the public regulator was hampered in his supervision of individual firms because the latter were in a position to hide certain facts about their performance. In addition, the employee usually knew more about the particular circumstances of his own work than did his employer. According to Mirrlees (1996), the economics of information asymmetry was equally an “economics of carrots and sticks”. For only with the help of a positive stimulus (carrot) or negative inducement (stick) could those in charge counterbalance the unequal distribution of information over the different actors involved¹.

The engineers may have been the first self-appointed experts in the field of managing human behavior via carrots and sticks and the economists of asymmetric information the last, so far, to claim such expertise, but throughout the past century, they were certainly not the only expert communities to do so. Between the final decades of the nineteenth century and the beginning of the twenty-first, an array of industrial psychologists, institutional economists, organizational sociologists and anthropologists of work turned the human subject into an object of knowledge to address the question of how best to manage it. These academic and non-academic experts had different disciplinary backgrounds but were united in their aim to develop a technique of governance available to everyone on the ‘right’ side of a power relationship. In contrast to the engineers of the nineteenth century and Mirrlees and Vickrey of the twentieth century, they made no explicit reference to Florence’s image of a donkey trying to catch something forever beyond its reach. Nor did they speak about the right way to induce or deter individuals to pursue a certain course of action in terms of ‘carrots’ and ‘sticks’. Instead, they used the term ‘incentive’ when it came to the knowledge and use of behavioral inducements.

In this thesis I present a genealogy of three successive attempts to develop a system of governing by incentives. In its ordinary sense, genealogy is synonymous with the study of one’s ancestors. In a more specific sense, genealogy is a Nietzschean term used by the French philosopher and historian Michel
Foucault for his inquiries into the relationships between power and knowledge. In the 1970s Foucault wrote and lectured extensively about a range of practices of “power/knowledge” in the human sciences (Foucault 1980). According to Foucault, the production of (scientific) knowledge about individuals and groups, and the wielding of power over them, often reinforce one another: “It is a double process, then: an epistemological ‘thaw’ through a refinement of power relations; a multiplication of the effects of power through the formation and accumulation of new forms of knowledge” (1995, 224). Thus, this thesis is Foucauldian in the sense that, in it, I study the incentive as a new and distinct nexus of power/knowledge.

The subsequent chapters make clear that it is difficult to determine exactly where the production of knowledge about incentives ends and their part in the wielding of power begins. The research locations I investigate are mainly located within or close to (industrial) organizations and government institutions. Institutional closeness, however, is only one of the necessary conditions for the intertwining of power and knowledge. Two additional observations make clear that there is more going on. On the one hand, the knowledge produced at these research sites often emerges from the very act of governing people. The researchers gain knowledge over the particular characteristics of individuals and groups either by observing their interactions with those in charge or by acting directly upon them in a simulation of relations of authority. On the other hand, the knowledge that is gained from these research practices is produced for the sake of governing people in a more effective way. It is either directly put to use in an attempt to multiply the effects of power, or it is mediated by practices of consultancy and advice. When it comes to the knowledge and use of incentives, one can thus equally discern the ‘double process’ articulated by Foucault: the wielding of power leads to new kinds of knowledge about the individuals and teams concerned, and that knowledge is in turn used to refine the techniques of governance.

The genealogy of the incentive, pursued below, is also Foucauldian in a second and more normative sense. The purpose of Foucault’s genealogical studies is to give a historical account of the persistence and self-evidence of current moral ideals, scientific categorizations and normalizing practices. Although ‘method’ is too strong a term to describe Foucault’s mode of working, the genealogical approach is intertwined with a normative agenda in ways that make it an interesting tool with which to study the emergence and development of incentives. Foucault used genealogy interchangeably 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. Foucault pursued his histories of the present with the help of a basic explanatory scheme—namely, that behind the socio-intellectual realities we currently conceive of as self-evident lay a patchwork of contingent and conflict-laden beginnings (1998a, 375). This very basic explanatory scheme led him away from all-too-general historical explanations of current phenomena. According to Foucault, an increased sensibility among enlightened legal reformers and their call for a more gentle approach to punishment are not adequate explanations for the birth of the prison (1995, 80–82). Similarly, the imperative to confess one’s true sexuality cannot be explained by reference to the emergence of a liberal culture after a period of severe repression (1990, 3–13). Genealogy, as Nietzsche and Foucault understood it, substituted the search for the origin of things for the principle that “whatever exists, having somehow come into being, is again and again reinterpreted to new ends” (Nietzsche 2006, 84).

But 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). 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? The genealogical accounts of the recurrent shifts of purpose and the 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). Foucault’s studies are therefore normative, but not in the full-fledged sense of being a systematic elaboration upon the arguments for or against, say, imprisonment as a punitive practice. Instead, they are normative in the explicit attempt to turn what is not presently conceived of as problematic into something we might wish to reconsider.

In reconsidering incentives, then, we can say that, at minimum, they are not much of a problem for contemporary consultants, managers and politicians. Incentives play their part in folk explanations of individual and group behavior and justify the use of certain instruments to change that behavior. Bureaucratic and managerial vocabularies are a rich source for such explanations. In a case study on privatizing welfare-to-work services in the Netherlands, I found that the term was used in many policy documents to explain the choices made and the results expected. The decentralization of the budget for these services was an incentive for local authorities to spend wisely; the introduction of performance pay was an incentive for companies to seek permanent employment for their clients; the
public display of the decisions of medical examiners was an incentive to limit the number of Social Security recipients (Dix 2010). In contrast, the Dutch hospitals’ monopoly on information means that there is too little external pressure to keep an eye on the costs of medical treatment. Therefore, administrators and doctors lack an incentive to work efficiently (Algemene Rekenkamer 2013). In America, the Obama administration continued the Teacher Incentive Fund, which rewards teachers for increased student test scores. With the possibility of bonuses, teachers could be induced to give their best (U.S. Department of Education 2012). In several American cities, moreover, primary and secondary schools have experimented with the use of monetary rewards for children. In “paying for grades” programs, students received money when they increased their test scores. With the prospect of performance bonuses, they had an incentive to apply themselves at school (Grant 2012, 111–112).

In the private sector incentives are equally part of the vocabulary currently in vogue. For example, consultants explain and justify the positive role of private equity by constructing a narrative around incentives. When investment funds buy a large part of the shares of a certain firm, they say they can exert leverage and give managers an incentive to realign their interests with those of the shareholders (Engelen et al. 2011, 74–75). In one of the ‘Viewpoints’ published by the Hay Group, a well-known consultancy firm, the author discussed a method of remuneration in which part of the bonus earned is not immediately paid out but kept on an account instead. Does such a method of ‘bonus banking’ provide an adequate incentive for employees to improve their performance? For the committees that consider bonus banking an option, it might seem to be an “acceptable approach to incentivizing their people”. Yet they should keep in mind that it is “a cardinal rule of reward that the more remote the payment becomes, the weaker the incentive” (Hay Group 2009). Regardless of the type of incentive, both the public and the private sectors have invoked the expected response to incentives as reason to enact and to justify specific policy measures and managerial techniques.

The use of the incentive as an explanatory term is equally uncontroversial in academic circles. In contemporary economic science, for instance, it is an important yet ill-defined concept that economists use to explain why humans act as they do. In a comprehensive overview written by two key players in the field, Jean-Jacques Laffont and David Martimort, incentives becomes almost synonymous with the subject matter of economics: “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” (2002, 1). Or as another economics pioneer, Edward Lazear, puts it even more boldly: “incentives are the essence of economics” (1987, 744). What goes for the theoretical core of economics goes for its popularizations, too. According to Steven Levitt and Stephen Dubner, authors of the bestselling *Freakonomics* and *Superfreakonomics*, the theme which unites the plethora of everyday and not-so-everyday situations they discuss is that “people respond to incentives, although not necessarily in ways that are predictable or manifest” (2010, xii).

Despite its acknowledged importance, economists do not seem concerned about defining the term in an exact manner. Of course, a term can have meaning without there being a definition of it. So, can we at least say that a concept was used in a more and more circumscribed manner over time? A quick historical glance reveals a negative answer. The history of the science of incentives does not meet the requirements of a linear conception of scientific progress. For instead of the accumulation of discoveries that leads to a more focused use of the term, we see significant shifts in its scope and in the kinds of problems addressed with it. Nor is a (critical) rationalist perspective on scientific development of any help here. For instead of the elimination of errors or the rectification of concepts, we see disciplinary demarcations and neglect of past results. The sequence of distinct attempts to delimit the nature of the human subject that is susceptible to incentives is not easily understood through these classical perspectives in the history and philosophy of science.

In regard to history, another striking feature of the vast economic literature on incentives is that there have been very few attempts to deal with the concept in a more reflective manner. In one of the few historical reviews I found, Laffont and Martimort recapitulate and systematize the theoretical research on incentives from the 1970s to the present day. In a short chapter on the history of incentives in economic thought, they mainly reinterpret the ideas of eighteenth- and nineteenth-century economists in terms of current incentive theory (2002, 7–27). With the benefit of hindsight, they concluded that the most important figures in the history of economics were all concerned, in some way, with problems that are only now fully recognized as being incentive related. A long list of precursors, such as theirs, is, of course, a fine way to strengthen the scientific legitimacy of a subject. However, without an epistemological grid to compare the many theories and evaluate their relevance for the economics of incentives, it does not make for good history. It is doubtful, for instance, whether some of the authors Laffont and Martimort discussed had any real sense of the problem that was only later
recognized as being incentive related (Hume, Smith); others were in fact highly skeptical about economic science and its ability to address incentive problems (Barnard). Thus, their presentistic narrative of alleged precursors locates the problematic of incentive where it is not and simultaneously fails to take into account the interwar institutional and neoclassical economists who did actually speak about incentives. All in all, the contemporary self-evidence of the incentive, as well as the current lack of an adequate historical account of its emergence, makes the incentive a promising candidate for a genealogical inquiry.

My genealogy of the incentive is Foucauldian in a third and final sense. Foucault’s studies published in the 1970s provide a general idea of how to write the history of power/knowledge and for what purpose. However, they also contain the specific conceptual instruments with which to do so. In the following chapter I will discuss three concepts Foucault developed or refined during that period. First, Foucault was interested in the way human beings were turned into an object of knowledge. In his methodological reflection on the archaeology of the human sciences, the formation of objects of knowledge became a distinct epistemological theme. Second, in the 1970s the question of the formation of the human subject as an object of knowledge became intertwined with the question of governance. More specifically, Foucault traced the emergence of specific techniques of power and their relation to practices of knowledge production. The third concept is that of governmentality. In a wide-ranging historical project, Foucault began to sketch the shifting rationalizations of central government from the medieval period to the present. These three concepts together make up the conceptual triangle I will use to trace the genealogy of the incentive (chapter 2).

As I described at the beginning of this chapter, the design of adequate wage incentives began with the work of American mechanical engineers turned management theorists and consultants. They were the first to systematically address the possibility of inducing the laborer via a method of remuneration that incorporated rewards for enhanced productivity. The most well-known of the engineers, Frederick Taylor, developed his own distinctive management system with a piece rate suited to scientifically established tasks. His pupil, Henry Gantt, developed an elaborate system of charts that informed workers and foremen about their performance and their bonuses. Although there was some level of abstraction in the engineering of incentives, the first rationalization of industrial government was dominated by the possibility of direct and practical application (chapter 3).

From scientific management onward, the incentive, as delimited by Taylor
and his fellow engineers, became more of an academic subject. Practitioners of different disciplines in the social and behavioral sciences complicated the mechanical conception of the relationship between wage incentives and employee effort. In neoclassical and institutional economics between World Wars I and II, the engineering of incentives was criticized for its harmful influence on the dynamics of economic life and its narrow take of human motivation. In Britain, the economist Alfred Marshall and his students focused on how scientific management restricted individual creativity and innovation in industry. Meanwhile, several American economists tried to broaden the notion of the incentive to cover a much wider range of motivations for working than the highest possible wage. The problematization was not lost on the management scientists who attempted to shift the meaning and use of incentives in the 1920s and 30s. Elton Mayo, for instance, developed a version of industrial psychology in which he stressed the need to keep good human relations in industry, while the sensitivity for different kinds of rewards became a new topic in Chester Barnard’s sociology of formal organizations. In a more constructive sense, the interwar social scientists all insisted that the incentive to enhance productivity came from the proper adjustment of the worker to the social and mental conditions of modern industrial life (chapter 4).

The birth of the economics of incentives after the Second World War marks the third and final rationalization of governing with the help of incentives. Postwar economists took their cue from the so-called ‘socialist calculation debate’ and shifted attention from motivational and organizational problems in industrial firms to the effects of information asymmetry on the communication between a central planner and a set of participants. Economists began to focus on the place of incentives in communication processes after they found a mathematical expression of strategic agency. Would self-interested participants reveal the information they had to the planner or did they have an incentive to send misleading messages? The challenge faced by these mathematically trained economists was to develop incentive schemes that would induce individuals to speak truthfully (chapter 5).

Concrete problems of government were initially pushed aside in the abstract economic models, yet the starting point in central planning shows that the issue of power lurked behind even the most mathematical facades. In the second stage of the development of a new governmentality, economists located the information-incentive nexus in many more relationships of power than that between central planner and peripheral participants. Thereby, they brought the problematic of information incentives closer to practices of government. To substantiate that
claim, I will focus on a specific case of public sector reform where economic experts smoothly translated abstract economic theory into concrete political advice. In 2010, the Dutch government began to experiment with monetary incentives to induce primary and secondary school teachers to enhance their performance, which was strictly defined as the increase in student test scores over a certain period of time. The route by which performance pay became political reality shows that reform-minded economists played a crucial role in articulating alleged problems in the current incentive structure of Dutch education and in propagating the techniques with which to solve these problems (chapter 6).

The final chapter contains a recapitulation of the preceding genealogy of the incentive in terms of Foucault’s conceptual framework. First, I will elaborate the relation between governors and governed in the three systems of governmentality. Each of these rationalizations of government linked a particular conception of the incentivizable subject with a particular role played by those in charge. Second, I will make explicit how the incentive, as a new technique of power, differs from the disciplinary techniques studied by Foucault. Finally, I will indicate what is actually taken for granted in our reflections on and uses of incentives (chapter 7).