

---

# PAST LEARNINGS

---

## The Division of Labour in Government and its Implications for Productivity Growth

George Yarrow

---

No. 4

---

August 2024

---

REGULATORY POLICY INSTITUTE

The Past Learning series of papers is predicated on the twin propositions that the great bulk of valuable knowledge about the principles of political economy is to be found in past work and that much of this knowledge is forgotten or ‘written off’ in the preoccupations of its current practitioners with their own, incremental contributions. Whilst the search for new incremental knowledge is admirable, the amnesia is not, because it implies a shrinking base to which the increments can be added. In consequence the total value of the associated, collective human capital applied to economic policy problems progresses more slowly than it could and is prone to major periods of regression. The contrast with the physical sciences in this regard is stark.

The aim of the series is to provide a mild corrective to the amnesia by re-presenting some of the older wisdoms and drawing attention to their direct and immediate value in application to today’s policy challenges.

*First published by the Regulatory Policy Institute  
9 Royal Belgrave House, Hugh Street, London SW1V 1RR  
[www.rpieurope.org](http://www.rpieurope.org)*

August 2024

© Regulatory Policy Institute

# The Division of Labour in Government and its Implications for Productivity Growth<sup>1</sup>

## Introduction

That there exists a strong connection between the division of labour in an economy and the economy's level of productivity is a proposition boldly made in the first sentence of the *Wealth of Nations*, a book motivated by the author's intense interest in promoting the material well-being ('wealth') of the citizens of his country. Smith proceeded from there to explore the implications of the proposition, the policy challenges it posed, past responses to those challenges and prospective future responses (i.e. future, potential economic policy strategies). It was an exercise in looking back over a long and wide set of economic histories in the cause of promoting greater foresight, which in turn could serve Smith's overarching purpose, understanding the chief causal chains that determine a country's 'wealth'.

This short paper shares the same motivation, but applies the method on a rather narrower front, to the division of labour within the organisational and institutional structures that we call 'government'. The size and scope of activities of the modern state are each much greater now than in Smith's time, so a full examination of things on this front would itself require a very major exercise. The attentional focus is therefore narrowed further to those processes concerned with economic policymaking. Consideration of routine administrative activities is excluded.

By way of establishing benchmarks for thinking, the first two of the following five sections are devoted to past learnings concerning the division of labour in civil society, the structure of which at any one time is brought about via both market and organisational processes. The major focus of economic analysis has been on the role of market transactions, particularly in coordinating different activities via the incentives and information signals they establish. The stories here are, properly told, of an *evolutionary* nature.

The third section therefore turns to consideration of the division of labour *within* organisations, one of which is the system of economic governance of interest. This is a road much less travelled by research economists, so attention is drawn to the work of three distinguished scholars who did beat out this different path: Ronald Coase, Edith Penrose and Oliver Williamson.

Moving on to greater specificity, the fourth section addresses division of labour issues in government policy systems, noting (a) some differentiating features of government when considered as an organisation and (b) the broad structure (the network topology) of status quo arrangements and the problems they entail. The key points are that, within these systems, the division of labour is determined *by design* and that there are only very limited external

---

<sup>1</sup> In 2012, in its *Essays in Regulation Series*, the Regulatory Policy Institute published a rather long paper with a long title, *Dysfunctions in Economic Policy Making Part 1: Complex Systems, Simple Stories and Corrupted Economics*. The intent then was to follow it up with a second paper focused on dysfunctions associated with the division of labour within government, but other, more pressing research and policy advisory priorities intruded. This shorter paper is based on skeleton notes made back in 2012/3.

pressures to adapt a given structure in productivity-enhancing ways, even in the face of major changes in the environment in which the relevant structure operates.

Finally, since major re-designs of policymaking systems are relatively rare events the fifth section discusses a past example of one of those events, to examine what might be learned from when thinking about the possibility of such a re-design in today's context of concerns about productivity growth. The example chosen is the development of the US constitution in the later years of the 18<sup>th</sup> century, a period of revolutionary change.

Running through the later discussions is a 'gestalt' that sees large organisational structures as information and action systems ("IASs"). They discover information; process analyse and interpret it; then take actions on the basis of the results. This perspective emphasises the point that determination of the 'division of labour' within government encompasses not only partitioning tasks (what is to be done and who does what), but also the *design of interconnections or communication channels* among the many performers of the tasks. These channels play a critical role in determining how the policy system functions/performs at a holistic level.

The effectiveness/productivity of the governmental IAS in conducting its operations is a matter of great significance to the public (it affects all aspects of economic life) and, at the time of writing, it seems clear that the productivity of government has been tracking downward for a number of years. The suggestion is that a major explanatory factor for this is a current, government configuration of its own, internal division of labour that has increasingly been out of sync with changes that have occurred in its environment. That in turn suggests that, though major system re-designs are rare occurrences, one may now be warranted.

### **The division of labour, productivity and the wealth of nations.**

Let's start the exercise with the heading and first sentence of Adam Smith's *The Wealth of Nations*.

*"Chapter 1: Of the Division of Labour"*

*"The greatest 'improvement' in the productive powers of labour, and the greater part of the skill, dexterity and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour."*

This is not a random starting point. In his posthumously published, uncompleted *History of Economic Thought* (1954), Joseph Schumpeter wrote that: "... nobody, either before or after A.Smith, ever thought of putting such a burden on the division of labour." And that judgment has held up well over the seven decades since the publication of the *History*.

The 'before' part of it is trite. For every significant advance in human knowledge it could be said that 'nobody before had thought of this'. The 'or after' part is, I think, an indictment of the subsequent narrowing of the economic mind, which is something that Schumpeter lambasted elsewhere in the *History* with some vigour (and even venom), in his critique of Ricardo.

Starting at the Smithian proposition is therefore to start from a high mountain top of economic thinking about productivity and productivity growth, not from some lesser base camp. From

here it can be asked: what are the interconnecting chains of causation that might serve to warrant such a high interest in questions concerning the division of labour?

A key to the answers, I think, lies in the notion of ‘human capital’, an economic concept that was not in the language of Smith’s time, but which is implicit in his analysis. In current terminology, labour is effort (whether paid or unpaid) applied in some defined-time period to the production and supply of goods and services *that are of value to others*, and capital comprises assets that can be applied to the production and supply of goods and services of value to others, not just in an immediate time period, but also in later periods.

On this basis, “*dexterity, skill and judgment*” are aspects of human capital: once acquired they have value not only in their immediate application, but also in later time periods. Their application to production and supply activities requires time and effort, but the greater they are at the beginning of any given time period, the more productive that period’s time and effort will be in yielding value to others.

‘Dexterity, skill and judgment’ is a shorthand expression for a variety of forms of human capital and each component can be disaggregated further, in all cases the common factor being an ability to perform tasks, whatever they may be, in ways more productive of economic value to others. ‘Skills’ for example, obviously includes the particular skills of, say, plumbers or doctors, but can also include more general capacities such as ingenuity, insight and imagination, which are potentially productivity-enhancing across a wide-range of particular tasks. In other words, skills (individual human capital) can take more- or less-task-specific forms.

When an employer hires labour the wages or salaries paid are in exchange for a trinity of things: time, effort (within the designated time period) and application of the employee’s own, inalienable human capital. Much economic theorising tends to ‘homogenise’ the trinitarian bundle, but in reality it is as massively differentiated as are the characteristics of each human supplier of it, with the human capital component arguably being the major source of the variation. Moreover, attempts to estimate the economic value of this component of the ‘labour’ input in aggregate, i.e. across the economy as a whole, produce huge numbers.<sup>2</sup> Adam Smith was really on to something in that opening sentence.

So far so good, but the next question to be asked is: how is it that the division of labour leads to higher human capital formation and hence, at least potentially, and depending upon how labour/effort is directed or applied, to a higher level of national productivity. And the answer is relatively simple: focusing the direction of effort toward relatively specific tasks or sets of tasks serves to promote the *accumulation of human capital* via the process that might nowadays be described as ‘learning by doing’ or ‘learning from experience’. It is a *dynamic* process driven by repetition of tasks and ‘error learning’. Think of how footballers or musicians hone their skills via constant practice and error-learning, then generalise.

At this point, both similarities and differences between human and physical capital come into view. Both types of asset/capital depreciate over time, but the depreciation rate of physical

---

<sup>2</sup> The precise numbers should be taken with a large pinch of salt, but, by way of example, a 2020 estimate for the UK made by the Office of National Statistics came out with a human capital value of £23.8 trillion, far higher than the estimated net physical capital stock (comprising buildings and structures, dwellings, and machinery, equipment and weapon systems) at £4.6 trillion.

capital tends to increase with its usage rate (wear and tear), whereas for human capital the depreciation rate tends to decrease with usage, passing through a level of usage where *depreciation* becomes *appreciation*: the ‘doing’ and the ‘experiencing’ of engaging repeatedly with a limited set of tasks actually increases the value of human capital available in later time periods: *usage leads to accumulation*.

The importance of human capital has, of course, been recognised in later economics, but the tendency has been to analyse it as another aggregate variable, ‘H’ say, alongside ‘L’ for labour and ‘K’ for physical capital. This leads to the obvious proposition that output can be raised by increasing investment ‘I’ in acquiring human capital, for example by putting more resources into research and development, formal education, training programmes and so on. In this vein, what are called ‘endogenous models of economic growth’ became popular in academia and filtered through into policy thinking in the 1990s. The theories subsequently passed out of fashion, being too abstract in nature to provide practical guidance on what governments might usefully do or not do in particular contexts. Government investment in research and development, formal education, training, etc. obviously comes with its own costs and the theories provided no solid, empirical basis for engaging with the relevant trade-offs.

In contrast, Smith’s first sentence comes from a very different gestalt based on micro-level observational realities. He ‘saw’ the inextricable link between (a) time and effort devoted to producing goods and services of value to others and (b) human capital at the level of the individual. To repeat, the individual human capital is inalienable: if an employer wants to make use of that capital, the employer has to hire the labour. Only the worker can put it to good use. Most fundamentally, the linkage is operative for all work, however menial the task-set is. It is not limited to, say, workers with university degrees or to those engaged in research and development.

It is very much a bottom-up theory of capital formation. In the language of his time, Smith might have said that labour/effort leads *naturally* (i.e. without further ado) to human capital formation when directed at relatively narrow task-sets.<sup>3</sup> Put another way, work/effort is by and of itself, at least partly, an investment in human capital.

### **The co-ordination challenge**

That (‘task specialisation increases productivity’) is the foundation stone of the Smithian gestalt and *The Wealth of Nations* moves on in its next chapters to add another stone to it in the form of a positive feed-back loop. The general enrichment sustained by a deepened division of labour will, by increasing demand for goods and services, itself lead to further deepening of task-specialisation. The mechanism here is that a higher average standard of living will increase the ability of the population to satisfy a greater diversity of wants, for, as it was put, the ‘conveniencies’ of life, not just the necessities of life. In turn, the higher demand for a widening range of ‘conveniencies’ will sustain greater task specialisation, a deeper division of labour. To illustrate, in the UK during the industrial revolution the ability of workers to afford a seaside holiday gave rise to the development of a whole new set of specialised employments,

---

<sup>3</sup> But note the earlier point that not all acquired skills are task-specific, so non-task-specific skills may be better developed by experience of engaging in a range of tasks, rather than by devoting time exclusively to one. As always, there are trade-offs to be resolved by balancing judgments.

including the culturally iconic tasks of the ‘seaside landlady’. The greater task specialisation then leads on to further increases in average productivity.

Given the interest of this paper in policy implications, I will not pursue this elaboration other than by noting that it makes clear that Smith was not dealing in static theorising, which would have simply taken a particular division of labour as an assumed given, but rather in evolutionary dynamics (e.g. the factors that influence changes in the scope and structure of any division of labour itself over time), with a primary focus on *the accumulation of human capital*.

The salient matter to be explored is that, while it is well and good to argue that task-specialisation increases productivity, that alone will not necessarily increase the wealth of a nation. To achieve the latter, what is produced must be of *greater value* to others. Task specialisation in activities that are criminal in nature illustrates the point, as so also could the production of unwanted pins.

In practice, increasing task-specialisation has the effect of increasing a basic asymmetry between production and consumption. The set of specialised tasks with which a worker is engaged is but a very small sub-set of the tasks required to achieve what might be considered to constitute a decent standard of living (i.e. an acceptable level of material/economic wellbeing, as judged by the standards of a relevant time and place). Thus, in reference to Smith’s famous pin factory example, it could be said that ‘man cannot live by pins alone’.

How then is the co-ordination required to ensure that pin makers can live be achieved? The thumbnail answer of the classical economists was: ‘by means of exchange transactions’, oiled by the socio-economic institution we call ‘money’. Pins are sold, generating a revenue stream that, divided among pin makers and suppliers, can be used to purchase the goods and services available from others engaged in their own, particular task-sets. The exchange process is dynamic in nature, reflecting ever changing economic contexts. Demands and supplies fluctuate, and hence so also do the revenues supporting those who specialise in producing/supplying the relevant goods and services. The division of labour, at least at the level of particular trades and professions, will then adjust accordingly.

The basic principle at work in exchange transactions is a very direct form of reciprocity: something of value is given and something of value is received in return. The exchanges are entered into voluntarily by autonomous economic agents/actors and, in the sense that the consent of both parties is required for a transaction to occur, can be described as ‘horizontal’ in nature. Co-ordination of activities (at a broad level) is achieved without need for any coercive action. This stands in contrast to the co-ordination achieved in a situation in which one party has the authority to direct the conduct of the other (a relationship that can be said to be ‘vertical’ in nature).

### **Coordination within organisations**

The focus on exchange transactions and on economic institutions that facilitate them, i.e. ‘money’ and ‘markets’, has been a pre-occupation of economists ever since. It is, though, only a partial answer to the more general coordination question and *The Wealth of Nations* opened its examination of the division of labour at a deeper, more micro level by examining task specialisation *within* a small pin factory with limited physical capital and a small workforce. Thus, we find at paragraph 3 of Chapter 1:

*To take an example, therefore, from a very trifling manufacture, but one in which the division of labour has been very often taken notice of, the trade of a pin-maker: a workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire; another straightens it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on is a peculiar business; to whiten the pins is another; it is even a trade by itself to put them into the paper. The important business of making a pin is, in this manner, divided into about eighteen distinct operations which, in some manufactories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed and where some of them consequently performed two or three distinct operations. But though they were very poor (and therefore but indifferently accommodated with the necessary machinery) they could, when they exerted themselves, make among them about twelve pounds of pins in a day.*

The division of labour at this more micro level is not determined by sequences of bilateral exchange transactions among those involved in production and supply, but rather by a set of formal and informal rules to which all participants (explicitly or implicitly) sign up. What we observe are business *organisations*, each of which can be conceived as an economic sub-system. The operative ‘rules’ – concerning who within the organisation does what, how and when, and how they are to be rewarded – are matters of choice, subject to constraints (‘checks and balances’) emanating from the wider economic system, including competition from other sub-systems (other pin-makers).

In the history of economic thought, Smith’s procedure of starting from the more micro level of specialisation within a sub-system (the small pin factory) was largely neglected until 1937 and the appearance of Ronald Coase’s paper *The Nature of the Firm*. That paper opened up what had hitherto been treated as a black box (the internal organisation of firms) and laid the ground for the school of thinking that has later been labelled the New Institutional Economics. It was followed up and further developed, inter alia, by Oliver Williamson in a book entitled *Markets and Hierarchies* (1975). As the title suggests, Williamson stresses the typically hierarchical (‘vertical’) structures of organisational sub-systems and goes on to analyse their various sources of strength and weakness.

Edith Penrose’s *The Theory of the Growth of the Firm* (1959) is another classic in the genre, which has the particular merit of engaging with organisational dynamics. It laid the basis for what became known as the Resource-Based View (RBV) of the firm, and is, I think, one of the most under-appreciated pieces of policy-relevant research of the later part of the 20<sup>th</sup> century. It’s a gem of past learning, of currently salient-but-forgotten wisdom, and its relative neglect can be taken as an illustrative example of the difficulty of displacing old gestalts with new ones, even when the new is clearly intellectually more productive than the old.

Looking inside organisational black boxes is an important exercise, because that is where a very large part of the division of labour in an economy is actually determined. While it is a



relatively simple task at the level of a small pin business, it becomes more complex at greater scale.

Smith bypassed the latter challenges, because he was primarily interested in the co-ordination challenge at a ‘whole system’ level. There is, however, a short discussion of the pin factory example in *Markets and Hierarchies* which goes a step further. It notes the sequential nature of the tasks described by Smith, which renders both the specification of the divisions between them and the allocations of them to specific workers a rather easy exercise: it can be done by a single manager (the ‘principal’). One layer of hierarchy suffices to displace the much more complex network of interactions entailed if each task-specialist (the ‘agents’) were required to contract with each and the all the others. If, say, one worker is temporarily absent (e.g. because of sickness), the principal can, under the terms of an employment contract, re-assign the tasks to others until such time as a replacement can be found. There would be some temporary loss of productivity because of the adjusted division of labour, but likely a lesser loss than would occur in the event that much more extensive re-contracting was required. The simple, one-tiered hierarchy suffices and can be judged the best, or least bad, of the alternative structures of economic interactions.

### **The division of labour in government**

At the other end of the spectrum from the pin factory in terms of both the scale and scope of its activities we find government, which can be viewed as a very large, organisational sub-system of the wider economic system. In addition to the extraordinary scale and scope of its activities, the most notable feature of the sub-system is its monopoly power. And the combination of these three characteristics (scale, scope and monopoly power) means that the exercise of its powers affects virtually all aspects of the whole socio-economic system of which it is part.

As explained in an earlier paper in the Past Learnings’ series<sup>4</sup>, there is no basis for a general expectation that the functions of government will be served in highly productive ways by such an organisational entity. More specifically, and unlike Smith’s pin manufactory, government is not under strong *external* pressures to discover more effective ways of structuring its own internal division of labour – a major source of weakness that is most salient when the economic environment itself is changing in ways that call for constant adaptation. In a nutshell, government has much more difficulty coping with *change* than with *routine*, because there are only weak incentives for it to develop and configure the requisite skill sets (i.e. its own, collective human capital).

Thus, unlike large organisations operating in market environments, if revenues are insufficient to support a *status quo* structure of activity, a government can simply raise taxation, i.e. make greater use of its coercive power. The ability to do this is not unlimited of course: feasible levels of revenue are bounded above by tax capacity, the level of taxation beyond which further increases in tax rates would yield lower, not higher revenues. Similar upper bounds exist for the capacities to raise finance by borrowing and by ‘printing money’. Nevertheless, that still leaves a wide range of discretion for government in which it can *choose not to adapt* its own internal structures in the face of changes in its environment.

---

<sup>4</sup> Why competition: 250 years of learning and forgetting in political economy.

The proprietor of the pin factory has a much narrower range of discretionary choice in regard to its level of revenues, outside of which the undertaking may not survive. If its market environment changes in significantly adverse ways, it is close to a necessity that the internal structure of activities is adjusted in response. Leviathan simply doesn't face anything like that level of pressure, except perhaps in periods of conflict when its own existence is under threat. Even then, Ronald Coase wrote of his war-time experience in government that: *"This war-time experience did not significantly influence my views but I could not help noticing that, with the country in mortal danger and despite the leadership of Winston Churchill, government departments often seemed more concerned to defend their own interests than those of the country."*

In relation to the challenges of changing its own internal structures, Leviathan is, consequentially, a very slow learner in comparison with the organisational structures of the business world. As the 2<sup>nd</sup> President of the United States, John Adams, put it toward the end of the 18<sup>th</sup> century: *"While all other sciences have advanced, government is at a stand; little better practiced now than three or four thousand years ago."*<sup>5</sup> That is some indictment.

To counteract a potential misunderstanding, the argument here is *not* about the speed of responsiveness of *decisions* taken by government in the face of changing circumstances. Indeed, government decisions and policies can be taken at a whim and be cancelled at the drop of a hat, and the UK system is relatively fast at this kind of adaptation. The issues are to do with the *quality* or *appropriateness* of decisions, things that are to be assessed in terms of value to others, which in this case means the electorate. And the quality of decisions is dependent upon the internal organisational structures dedicated to the discovery of new information, the transmission and assessment of it, and the development and implementation of policy actions.

The internal division of labour within government can broadly be described as a layered hierarchy, i.e. the task-sets established at any one level, other than the very top level, are delegated from above. At any level other than the bottom layer, the delegated task sets typically include responsibility for determining the task-sets at the next level below. In network topology terms, it can be characterised as a tree structure.

The potential dysfunctions of this type of structure are well known and it suffices to mention two of them. The first is goal displacement: the intrusion of the influence of 'private interests' (which come in multiple forms) into policy-making and decision-taking tasks. Ronald Coase's observation cited above is an example: a narrower 'departmental' interest intruded, even in the face of a compelling, unusually clear, 'public' interest. As a general statement based on the empirics, it can be expected that goal displacement will be a more serious problem for organisations that have a multiplicity of vaguely defined objectives with temporarily volatile ('unstable') priorities than it is for organisations with more limited, more clearly defined, more stable aims and priorities. The contrast between the pin factory and government is stark.

There is abundant evidence that goal displacement is ubiquitous in the government policy-making system, at every level. Consider, for example, the production of a policy document. It will be the work of many hands, operating at different levels of the hierarchy. It is built sequentially and, at each stage of development, there will be multiple opportunities for individuals to exert influence over its contents (and, because of the power afforded, government

---

<sup>5</sup> Letter to Thomas Jefferson.

policy processes are something of a honey-pot for would-be ‘influencers’ – not totally dissimilar to Instagram or Tik Tok in that respect, though less transparent and with a different reward structure).

The second dysfunction meriting mention is ‘impacted information’: information that is relevant for pursuit of a government’s purposes which is known to some parties, but, for whatever reason, is not (or is misleadingly) transmitted to others in the organisation for whom it would have value in their own tasks. Given textbook treatments of information asymmetries, it is worth stressing at this point that they are not, per se, a major problem: any division of labour comes with a division of knowledge. But information not known to others is a source of potential power and misuse of that power can properly be regarded as an organisational dysfunction. Arguably, it is a particular type of goal displacement. Alternatively, and in my view better, both problems can be seen as pathologies of complex information and decision making systems (IASs).

At this point we can come back to Edith Penrose. Change is particularly demanding of specialised types of human capital. Inter alia, and like entrepreneurship more generally, it calls for both the imagination and assessment of new possibilities for the configuration of the division of labour, and the resources to do that within any given organisational structure tend to be very limited, particularly at the top level of any hierarchy. As Penrose put it in the context of the growth of businesses, the growth process is “dynamically constrained”, and the most significant constraints are to be found at the top of the organisational tree.

In respect of governmental organisation, it is political leaders who have the responsibility for determining the patterned structure of the division of labour throughout the whole system, and for determining the system’s communication channels that serve in the co-ordination of the various activities, i.e. its *network design*. Under the current structure, political leaders have highly limited ‘bandwidth’ for processing information and taking decisions, and usage of the limited capacity available is subject to multiple distractions (many of which are regarded by the general public as of trifling importance, and some of which are regarded as examples of Hamlet’s ‘insolence of office’). The (governmental) *system design challenge* therefore tends to get very little attention.

Yet, if increasing productivity is the aim, it is a challenge that should not only be taken on, but also be adopted as a high-level *strategic* objective, i.e. an objective that, if achieved, contributes in powerful ways to the higher aim of increasing the wealth (productivity) of the nation. It therefore merits substantial attention on a continual basis (because the wider environment to which the division of labour should adapt is itself ever-changing). In practice, that is not usually achieved, though there are episodes in history when, the challenge has, been assiduously attended to for a limited period.

### **The ‘system design’ challenge: when have we seen it taken on before?**

One such episode was the development of the US constitution in the late 18<sup>th</sup> century, a very major exercise in *system design* that was aided and influenced by a familiarity with the then contemporary writings of the 18<sup>th</sup> century Scottish literati, including the *Wealth of Nations*. Indeed, in one light that whole exercise can be viewed as an attempt to create a ‘visible hand’ in the political sphere that could best address the co-ordination problem – reconciling the effects of inevitably narrow/partisan/factional interests with a much wider, well-functioning

‘whole system’ of government – which Smith had addressed in the economic sphere of civil society.

From this period I will take as an example Federalist Paper 62 (1778), usually attributed to James Madison, because it has particular resonances for today’s system design issues, though the latter are, as a matter of practicality, more limited in scope than the design of a whole new constitution. Its focus is on the merits of a Senate in a system of bicameral government which establishes a division of labour/function between the two legislative chambers, and, like all good strategic thinking, it contains a clear diagnosis of the problems to be tackled. For example:

*“It is not possible that an assembly of men called for the most part from pursuits of a private nature, continued in appointment for a short time, and led by no permanent motive to devote the intervals of public occupation to a study of the laws, the affairs and the comprehensive interests of their country, should, if left wholly to themselves, escape a variety of important errors in the exercise of their legislative trust. It may be affirmed, on the best grounds, that no small share of the present embarrassments of America is to be charged on the blunders of our governments; and that these have proceeded from the heads rather than the hearts of most of the authors of them. What indeed are all the repealing, explaining and amending laws, which fill and disgrace our voluminous codes, but so many monuments of deficient wisdom; so many impeachments exhibited by each succeeding against each preceding session; so many admonitions to the people of the value of those aids which may be expected from a well constituted senate?”*

*“A good government implies two things; first, fidelity to the object of government, which is the happiness of the people; secondly, a knowledge of the means by which that object can be best attained. Some governments are deficient in both these qualities: Most governments are deficient in the first. I scruple not to assert that in the American governments, too little attention has been paid to the last.”*

In Madison’s eyes, a well constituted Senate is seen as a ‘check and balance’ that can serve to mitigate the “blunders” and the higgledy-piggledy accumulation of “monuments of deficient wisdom” in the form of laws and regulations. The prose is of a rather superior quality to the what we are used to today, as is but there is an echo of it in King and Crewe’s *The Blunders of our Governments*, which examines some of the major mistakes of British governments over recent decades. And “monuments of deficient wisdom” would be a superb title for a book that examined both the accretion of laws and regulations over time and the continual chopping and changing of those laws and regulations.

The Federalist Paper is much concerned with mitigating what would now be called policy uncertainty, and the underlying economic literacy is, like the prose, rather superior to today’s level.<sup>6</sup> It concludes with the following paragraphs:

*“In another point of view great injury results from an unstable government. The want of confidence in the public councils damps every useful undertaking; the success and profit of which may depend on a continuance of existing arrangements. What prudent merchant will hazard his fortunes in any new branch of commerce, when he knows not but that his plans may be rendered unlawful before they can be executed? What farmer or manufacturer will lay*

---

<sup>6</sup> See the emphasis that Smith placed on the economic importance of one of his four canons of taxation, ‘certainty’, a canon that is routinely ignored by today’s political leaders.

*himself out for the encouragement given to any particular cultivation or establishment, when he can have no assurance that his preparatory labors and advances will not render him a victim to an inconstant government? In a word no great improvement or laudable enterprise, can go forward, which requires the auspices of a steady system of national policy.*

*But the most deplorable effect of all is that diminution of attachment and reverence which steals into the hearts of the people, towards a political system which betrays so many marks of infirmity, and disappoints so many of their flattering hopes. No government any more than an individual will long be respected, without being truly respectable, nor be truly respectable without possessing a certain portion of order and stability.”*

It is a message that is as relevant now as it was when first written: policy uncertainty arising from a poorly organised, poorly co-ordinated division of labour in the policy-making parts of government is deeply damaging to both economic productivity and public trust.

### **End comments**

Bicameral government is an aspect of structural *design* that rests on a division of labour/function at the highest legislative level, with a non-hierarchical relationship between the two chambers: they can be said to be ‘horizontally’, rather than ‘vertically’, connected. In their deliberations, members of the two chambers have similar information available to them, but, importantly, they are structured in different ways (different term periods, constituencies, age limits, and so on), *with the intention that they attend to the information in different ways.*

Strikingly, it is a structure that is analogous to that of human (and other animal) brains, divided as they are into two, ‘lateralised’ hemispheres, each operating with shared sensory inputs (the information to be processed) and performing similar tasks, but, crucially, endowed with: some differing functionalities, simultaneous/parallel information processing capacities, continual information exchanges across the whole system, and no dominant, hierarchical ‘tree topology’. Given that the human brain, with its circa 100 billion neurons, circa 3 trillion synapses and myriad ‘horizontal’ communication channels is arguably the most sophisticated IAS in known nature, there is, I think, much to be learned about governance from its network topology (just as AI experts have learned from the study of neural networks).

For example, maybe what Madison and other founding fathers of the US constitution recognised as good for the legislative branch of government, i.e. ‘lateralisation’, would also be beneficial for the much larger executive branch of government, where sources of “*blunders*” and “*monuments to deficient wisdom*” are to be found in great abundance. The bad news at this point is that the current structure of the division of labour provides no lateralised capacity for thinking about the relevant system design challenges, and the external pressure to remedy that deficiency is weak (the monopoly problem). The better news is that, because a commercial society is itself a massively interconnected *system*, the relatively limited act of developing such a capacity at the top of the executive tree structure, could be expected to have far-reaching, diffusive effects. And, while there is little external pressure on monopolistic entities to increase their adaptive capacities, political leaders can nevertheless seek to do that, *as a matter of choice.*