

# Hobbes's Failed Political Science

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## 1. Introduction

Hobbes scholars have written much about whether individuals could escape the state of nature. Hobbes himself wrote far more about how to avoid returning to it. One of his proudest claims was that he had created a political science which would show us how to avoid a state of nature. The main aim of this paper is to show fundamental flaws in Hobbes's political science.

Hobbes's key claim here is that monarchy is more stable than aristocracy or democracy. Yet by his own admission he could not prove this; the best he could say was that monarchy was *probably* more stable. His uncertainty casts doubt on his deeper claim to have created a fully deductive political science (or civil science, *scientia civilis*, or civil philosophy, as Hobbes called it). This issue has not been fully explored or explained in the literature (sections 2-3).

Where does Hobbes's argument go wrong? One possibility is his many logical overstatements, for example when he tries and fails to equate the monarch's public and private interest. No deductive political science will work if the wrong deductions are

This paper is a first draft of ch. 5 of my book, *Hobbes's Failed Political Science* (in progress). Comments and criticisms are welcome – this draft has a long way to go!

Year-old drafts of two related papers ('Hobbes on Corruption' and 'Hobbes's Practical Politics') are at [www.socialsciences.manchester.ac.uk/disciplines/politics/researchgroups/mancept/workingpapers/](http://www.socialsciences.manchester.ac.uk/disciplines/politics/researchgroups/mancept/workingpapers/).

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made. Nonetheless, even without logical errors, a fully deductive political science may still be impossible. We thus need to look deeper (section 4).

A more basic problem is that Hobbes's conceptual framework is far too sparse. Following Bodin more closely would have helped. Hobbes's emphasis on the value of good civic education should also have shown him the futility of trying to deduce stability from the monarchy/aristocracy/democracy distinction alone (section 5). His distinction between necessary and contingent truths should also have warned him off trying to deduce future consequences of commonwealths (section 6).

But ultimately, Hobbes's fundamental error was to assume the unity of civil science. He never justifies the view that ethics and moral philosophy should be analysed in the same way as empirical aspects of politics. Deducing the logical connections of values like liberty, in fact, is fundamentally different to predicting the effects of different kinds of commonwealth. Hobbes may have been right to model ethics on geometry. He was certainly wrong to think the same of politics (section 7).<sup>1</sup>

## 2. Hobbes's political science

This section examines Hobbes's idea of civil science. Readers should note that Hobbes's civil science includes what we now call (a) moral and political philosophy, which is the normative justification of values like justice and liberty, and (b) political science, which is the empirical study of political institutions and behaviour. When I talk of 'civil science', I mean (a) and (b), but when I talk of Hobbes's 'political science', I refer exclusively to (b).

Hobbes was trained as a humanist, but by about 1640 'Hobbes the humanist' had become 'Hobbes the geometer' (Skinner 2002, 65). *The Elements of Law*, finished in May 1640, and *De Cive*, first published in 1642, were thus part of a 'full revolt against the literary culture of humanism' (Skinner 2002, 60). I will sidestep the much-debated issue of the relationship between science, humanism and rhetoric in Hobbes (though see ch. 2 on rhetoric). Instead, I focus on logic. In Hobbes's ideal science, conclusions should be

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<sup>1</sup> Abbreviations used in the text: DC: *De Cive* (Hobbes 1998). DCO: *De Corpore* (Hobbes 1839). DH: *De Homine* (Hobbes 1991b). DP: *A Dialogue Between a Philosopher and a Student of the Common Laws of England* (Hobbes 1971). EL: *The Elements of Law* (Hobbes 1994b). (Users of the Tönnies edition of the *Elements* should note that Part II ch. 1 onwards is ch. 20 onwards in the edition used here.) EW: Molesworth's edition of Hobbes's *English Works*, in 11 volumes (1839-45). L: *Leviathan* (Hobbes 1991a). SB: Jean Bodin's *Six Books on the Republic* (Bodin 1606). I follow Hobbes's gender-language, but I have removed his italics.

justified by deductive reasoning, not by rhetorical appeals to classical authors. Whatever our qualms about Hobbes's conclusions, or his precise methodology, analytical philosophers today are firmly in the debt of writers like Hobbes and Descartes, who avoided 'Aristotle says' arguments and used logic in an attempt to move from first principles to definite conclusions.

Hobbes sees two main types of science, which we would now call 'deductive' and 'inductive'. Deductive science uses logic to reason from causes to consequences. If we start with acceptable definitions, make logically valid inferences, and use correct empirical observations where needed, our conclusions are 'demonstrated', producing undoubtedly correct deductions. Inductive science uses hypothesis and observation to make unprovable inferences from consequences to the alleged causes (DC Ep Ded, 4-6; DCO 1.2-3, 3-5; 5.7, 60; 6.7, 73-5; 6.13, 81-3; 6.16, 86-7; 25.1, 387-9; L 4, 28; 5, 31-3; DH 10.4-5, 41-3).

The prime example of a deductive science was geometry – 'the onely Science that it hath pleased God hitherto to bestow on mankind' (L 4, 28). According to John Aubrey, when Hobbes was around 40 he chanced on a copy of Euclid's *Elements* in a library, open at the 47th proposition – Pythagoras's theorem. 'By God!', Hobbes is said to have exclaimed, 'this is impossible!' So he read Euclid's proof of the 47th proposition, which led him to a previous proposition, and so on, until 'at last he was demonstratively convinced of the truth. This made him in love with geometry' (see EL 235; see also Grant 1996, 111). Albert Einstein had a similar experience at age 12, after being introduced to Euclid and told to prove Pythagoras's theorem. Einstein later remarked that it was amazing 'to find out the truth by reasoning alone, without the help of any outside experience' (Isaacson 2007, 17).

Hobbes repeatedly writes that the study of politics should be modelled on geometry. The title of the *Elements of Law* was of course a nod to Euclid (Skinner 2002, 75), and the very start of its dedicatory letter proudly links politics and mathematics (EL Ep. Ded., 19). Applying geometry to politics was, in Hobbes's eyes, a major philosophical advance (DC ep. ded., 5). True civil philosophy, he wrote, was a science 'no older ... than my own book *De Cive*' (DCO Ep. Ded., ix). (The same approach had of course been applied in the *Elements of Law* but this was only circulated in manuscript form and Hobbes rarely refers to it in his other writings.)

Physics is Hobbes's chief example of an inductive science: we make inferences from observed properties back to what we allege to be their causes (e.g. DCO 25.1, 387-

9). Induction does not allow proof: 'because of natural bodies we know not the constructions, but seek it from the effects, there lies no demonstration of what the causes be we seek for, but only of what they may be' (SL Ep Ded, 184). 'In natural causes all you are to expect, is but probability' (SPP 1, 11). Hobbes's point is this: a deductively valid conclusion follows *necessarily* from the premises, but one cannot *prove* a physical cause by investigating the results. In some senses Hobbes was anticipating Hume's problem of induction, which states that one cannot know for sure that X is causing Y even if one always sees X preceding Y.

Hobbes certainly does not reject the inductive approach. Indeed, he occasionally practised experiments himself (Boonin-Vail 1994, 26-30). For example, 'when Descartes claimed that refracted light acts like a bullet fired at an angle into a solid surface, Hobbes ... got himself an air gun and tested the theory' (Boonin-Vail 1994, 30). And Hobbes's largely neglected Latin manuscript on optics describes his experiments and sided with experimental physicists over those writers who argued about physics merely by assertion (Bunce 2006, 86-9).

The deductive approach needs some fleshing out if we are to understand Hobbes's political science. The essence of deduction is 'conditional' knowledge: for example, if we draw any straight line through the centre of a circle, then the circle will be divided into two equal parts (L 9, 60). Conditional connections have an 'if-then' form, i.e. 'if P, then Q'. The simplest kind of logical syllogism is now called *modus ponens* (see DCO 4, 44-64):

If P, then Q.

P.

Therefore, Q.

An example from Hobbes is:

Every man is a living creature.

Every living creature is a body.

Therefore, every man is a body (DCO 4.1, 45).

Here is a more politically important Hobbesian syllogism:

A sovereign's laws are just.  
This tax is a sovereign's law.  
Therefore this tax is just.

If the major premise is correct – that a sovereign's laws are just – then no one can logically deny that a tax approved by a sovereign is unjust.

Hobbes's syllogisms about liberty are also important. For example, if we define liberty as the absence of external impediments to motion, we can prove that neither fear nor laws restrict liberty, and that a citizen has the same amount of liberty under monarchy or democracy (L 21, 145-9). Hobbes thus thought he had demonstrated that liberty is not, as some people thought, maximised in republics. This kind of deductive reasoning about liberty is still common today, as with Gerry Cohen's argument that a class can be unfree, or Hillel Steiner's argument that there is a constant level of liberty in the world.

The fundamental problem in Hobbes's civil science is his assumption that we can deduce the empirical consequences of political institutions in the same way that we deduce the consequences of concepts like 'man', 'liberty' or 'justice'. Hobbes never explicitly queries this, let alone justifies it, so he probably never spotted that it was a problem.

The argument I will be presenting is that Hobbes errs by seeing deductive validity as necessary *and* sufficient for political science, whereas in fact it is necessary but not sufficient. One way to see the difference is to consider Hobbes's view that we should ignore arguments about the advantages of monarchy which 'work not by reason but by example and testimony', as in arguments that one should adopt monarchy because God rules the universe or because monarchy was common in ancient times (DC 10.3, 117). Hobbes is certainly right that these particular arguments are not convincing. The reason is that they are not deductively valid. The first argument, for example, is guilty of argument by analogy: just because God rules the universe by himself does not necessarily mean that a single person should rule a country by himself or herself. It is legitimate to argue *with* analogy, i.e. to use an analogy to illustrate a point, to give one's readers a concrete example of an abstract point. It is not legitimate to argue *by* analogy, i.e. to try to *prove* a point by giving an equivalent example. The second and third examples, meanwhile, involve false appeals to tradition: just because ancient times saw more monarchical rule does not mean we should necessarily follow their example.

So, *bad* logical arguments are unacceptable: deductive validity is necessary. But this need only commit Hobbes to the view that logical validity is necessary for robust institutional prescriptions, not that it is necessary and sufficient. To see it as necessary and sufficient is, in fact, not deductively valid: that does not follow necessarily from the premises.

Hobbes presumably treats deductive validity as necessary and sufficient in politics because it is necessary and sufficient for geometry, and (in his view) there is an essential unity between geometry and politics. Civil philosophy, like geometry, 'is demonstrable, because we make the commonwealth ourselves' (SL Ep. Ded., 184). As Hobbes puts it elsewhere, 'politics and ethics (that is, the sciences of just and unjust, of equity and inequity) can be demonstrated *a priori*; because we ourselves make the principles – that is, the causes of justice (namely laws and covenants)' (DH 10.5, 42).

So, Hobbes believes that deductive science applies to objects like circles, to values like liberty, and to commonwealths like monarchy. Yet as we will now see, Hobbes was aware that he had not fully delivered on his claim to have deduced the consequences of commonwealths.

### 3. The problem

Hobbes recognised that he had failed to produce a fully demonstrative political philosophy. While he believed that he had proved his conclusions about justice and liberty, legitimacy and obedience, he knew his institutional analysis was less successful. At least by 1647, he had recognized that *De Cive's* attempt to deduce the advantages of monarchy was 'the only thing in this book which I admit is not demonstrated [with certainty] but put with probability' (DC Preface, 14).

Hobbes scholars have not fully explained this problem. Two answers have been given: a contextual explanation which sidesteps the intellectual problem; and an explanation which denies that there is an intellectual problem, by asserting that Hobbes was not actually trying to demonstrate the advantages of monarchy.<sup>2</sup>

The first approach, offered by Deborah Baumgold (1988, 75) and Philip Pettit (2008, 121-2), is a contextual explanation which in effect sidesteps the deeper problem. They ask why Hobbes made this admission. If intellectual honesty required Hobbes to mention this failure of demonstration, why did he not say the same in his other political

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<sup>2</sup> I hope that readers of this draft can point me to more answers than these two.

texts, or indeed the 1642 edition of *De Cive*? If Hobbes only spotted the problem in between the 1642 and 1647 editions of *De Cive*, why did he not repeat the point at a later date?

Baumgold suggests that Hobbes's admission reflected political rather than intellectual concerns. 'In view of its date, too much should not be made of the remark', writes Baumgold. 'It may be less a statement of his own considered judgment than a passing opinion mirroring the current political climate ... of indifference to the constitution of government, a mood born of the experience of civil war.' Two political climates were relevant for Hobbes. The dominant climate in Hobbes's royalist circles in Paris was resolutely monarchical (although royalists disagreed about the precise form of monarchy – Sommerville 1995, 264-5). But parliamentary views prevailed in much of England, and Baumgold implies that Hobbes's comment was aimed here. Pettit argues, more strongly, that 'we need not give ... much attention' to Hobbes's arguments for monarchy in *Leviathan*. 'He may have been happy for the claim to assume a subsidiary position, wanting to make room for the possibility of a legitimate democracy. Something approaching democracy must have seemed to be on the cards in England right through the 1640s, especially after the execution of Charles I' (Pettit 2008, 121-2).

However, others see Hobbes's drift from monarchy happening later. Jeffrey Collins, in particular, thinks Charles I's execution in January 1649 was 'the watershed moment' for exiles like Hobbes. A few months before, Hobbes had told friends he did not expect to return home soon, but within weeks of the execution Hobbes was telling a different story. *Leviathan*, which was more palatable to parliamentary government than its predecessors, was 'almost certainly' started at this time (Collins 2005, 114-9).

Collins's argument challenges Baumgold's and Pettit's contextual explanation. But while Collins's argument about the content of *Leviathan* is very important, we should not overstate the breadth or depth of Hobbes's shift. Even in *Leviathan*, most of his arguments about commonwealths side with monarchy (Hoekstra 2004, 43), and he continues to argue that citizens should defend their government whether it is a monarchy, aristocracy or democracy (Hoekstra 2004, 47-8).

So, Baumgold's and Pettit's contextual explanation could well be correct: perhaps Hobbes was indeed hedging his bets in 1647 by explicitly stating that he had not demonstrated the advantages of monarchy. That does not explain why Hobbes ignores the issue in *Leviathan*, when it would have been even more sensible to highlight the issue. But whatever the contextual explanation, the underlying *intellectual* puzzle remains:

Hobbes never made convincing deductions about the consequences of different commonwealths, in *De Cive* or *Leviathan*, or his other political tracts. (This would have been a problem even if Hobbes had never admitted or even spotted it.) Given the centrality of deduction in Hobbes's philosophy, and the centrality of debates about the best commonwealth in this period, this is a recurring problem of some magnitude.

I now turn to the second answer, which denies the problem. For Alan Ryan (1995, 215), Jean Hampton (1986, 105) and Robert Ewin (1991, 7-10), Hobbes was not even trying to demonstrate the advantages of monarchy. 'Demonstration handles large structural features of political life and leaves experience to deal with particularities', writes Ryan. The science of politics explains that 'a state must have a certain constitution', but 'experience' is needed to tell us 'what a prudent empirical implementation of the constitution is'.

Perhaps Hobbes should have argued this; but he does not. I cannot find textual justification for the view that demonstration involves macro-institutional but not micro-institutional details. And Hobbes states that monarchy's superiority was the *only* thing in the book which was not demonstrated: so presumably he thought that he had demonstrated the many other empirical claims that he actually does list in *De Cive*. Ryan's interpretation offers sensible advice to Hobbes, but it cannot explain Hobbes's admitted failure to demonstrate the superiority of monarchy.

Hampton's answer is slightly different. Hobbes 'offers only reasons for preferring monarchy, not arguments *designed* to prove that it is the best structure of government' (Hampton 1986, 105; emphasis added). Hampton does not give direct textual support for this view and she may have been led astray by the *Philosophical Rudiments*, the (unauthorised) translation of *De Cive*, which states that the justification of monarchy was the only thing in the book '*not to be demonstrated*' (emphasis added). That could, perhaps, be taken to imply that the justification of monarchy was not *intended* to be demonstrated (as in the phrase 'this information is not to be given to anyone else'). The Tuck edition less ambiguously translates the Latin *demonstratam* as 'not demonstrated'. This implies nothing about Hobbes's intentions. (Hampton, interestingly, thinks that Hobbes actually could have demonstrated the advantages of monarchy; I reject her solution below – section 4.)

Ewin, who also uses the *Philosophical Rudiments*, argues like Hampton that Hobbes did not intend to demonstrate monarchy's advantages. Ewin holds that the demonstrative approach was purely logical and does not pertain to facts *in themselves*.



Deduction tells us 'if P then Q', but does not tell us whether what we are looking at *is* P or Q. Hobbes emphasises the probabilistic nature of his claims precisely to show that such conclusions are not capable of being demonstrated. Hobbes's deductive science thus applies to his moral and political philosophy, but not to his political science, according to Ewin.

Again, though, it is hard to find textual support for this. Hobbes writes that 'civil philosophy is demonstrable, because we make the commonwealth ourselves' (SL Ep. Ded., 184). Ewin's position would thus require Hobbes to make a distinction within civil philosophy, with moral and political philosophy following geometry, and political science following physics. As far as I know, though, the only place in which Hobbes treats moral and political philosophy as a different kind of science to political science is the bizarre table in *Leviathan* (L 9, 61) – a table which should not be taken at face value (Sorell 2007, 135-6), not least because it depicts ethics as a branch of physics. In any case, in the same chapter Hobbes restricts the non-scientific (i.e. non-demonstrative) analysis of commonwealths to history: he distinguishes knowledge of consequences (scientific knowledge) from knowledge of facts, which merely involves 'Sense and Memory' in the form of natural history and of 'Civill History; which is the History of the Voluntary Actions of men in Common-wealths' (L 9, 60).

Nor does Ewin's interpretation fit with what Hobbes does in practice. Hobbes's arguments about monarchy have the same form as his other attempted demonstrations, e.g. about justice and liberty. If empirical features of politics were meant to be analysed non-demonstratively, Hobbes's political texts would have included large sections modelled on physics, which they do not.

In short, Hobbes did not restrict demonstration to logical relationships alone, and he really did think that political science should follow the deductive techniques of geometry. We must therefore explain, not explain away, the intellectual problem: why could Hobbes not deduce the consequences of different kinds of commonwealth? I will start by looking at Hobbes's errors of deduction.

#### **4. Hobbes's errors of deduction**

Hobbes's account of monarchy's alleged superiority is marred by logical overstatements: the inferences he draws about the effects of commonwealths are not the

only possibilities. That is, his conclusions do not follow *necessarily* from the premises: other inferences are possible.

One of Hobbes's most striking overstatements is the repeated assertion that corrupt or ambitious politicians have more opportunities to abuse their position in democracies and aristocracies than in monarchies (EL 24.5-6, 139-40; DC 10.6, 119; L 19, 131). However, he could equally have held that an absolute monarch has more opportunity for corruption as there are no checks to stop him, as John Wildman would argue in 1689 (Malcolm 1999, 880-1). Both claims are plausible and there is no *a priori* reason to prefer Hobbes's version: something more is needed, as we will see over the next two sections.

A similar example arises in his discussion of Nero. Recognising that an absolute ruler can execute innocent citizens, Hobbes answers that 'the fault is the Ruler's, not the Régime's. Not all the deeds of Nero are of the essence of Monarchy' (DC 10.6, 120). This is true, but Hobbes is less convincing in arguing that this situation is less likely in a monarchy: in a democracy 'there may be as many Neros as there are Orators who fawn on the people. For every Orator wields as much power as the people itself, and they have a kind of tacit agreement to turn a blind eye to each other's greed ... and to cover up for any of them who put innocent fellow citizens to death' (DC 10.6, 120).

Hobbes makes a logical overstatement here by assuming that each orator holds as much power as a Nero. This clashes with his (equally unjustified) view that 'Power is equal in every kind of commonwealth' (DC 10.16, 125). But we do not need a zero-sum conception of power to recognise the implausibility of the initial claim, because in theory, it is just as plausible that two or more Neros would cancel out each other's power. In truth the answer will probably be somewhere in between these two extremes, and Hobbes's only justification for his view is the claim that these voracious orators would turn a blind eye to each other's actions. That claim appears to have no basis in any deeper Hobbesian principle and so it does not follow deductively from his premises.

Hobbes also falls well short of demonstrative certainty when *De Cive* criticises group discussion in large assemblies. His arguments here only seem to work because he smuggles in implicit factual assumptions. For example, there is no reason why deliberators *must* make rhetorical speeches which move hearers by emotion rather than reason, and no reason why defeated speakers *must* do all they can to see that the victor's policy works out badly for the country (DC 10.11-12, 123). That may have been what Hobbes saw in his day, but it does not follow necessarily from Hobbes's premises.

Perhaps the most troubling logical error arises several times in Hobbes's deeply unconvincing discussions of public and private, a longstanding problem for Hobbes (Okin 1982). As Sharon Lloyd summarises the matter, for Hobbes 'the most stable form of government (and so the best form) will be the one that gives the least scope to private judgment – namely, monarchy' (Lloyd 1992, 292-3). To reach this conclusion Hobbes must first deal with the fact that any sovereign individual (whether a monarch, or a member of an aristocratic or democratic assembly) bears both 'his own natural person' and 'the person of the people.' Because 'the passions of men are commonly more potent than their reason,' should 'the public interest chance to cross the private' then the individual 'prefers the private,' which includes 'the private good of himself, his family, kindred and friends' (L 19, 131; see also EL 24.4-5, 139). So the public interest is advanced most 'where the public and private interest are most closely united.' This occurs in monarchy, claims Hobbes, because a monarch's 'private interest is the *same* with the publique' (emphasis added):

The riches, power, and honour of a Monarch arise onely from the riches, strength and reputation of his subjects. For no king can be rich, nor glorious, nor secure; whose Subjects are either poore, or contemptible, or too weak through want, or dissention, to maintain a war against their enemies: Whereas in a Democracy, or Aristocracy, the publique prosperity conferres not so much to the private fortune of one that is corrupt, or ambitious, as doth many times a perfidious advice, a treacherous action, or a Civill warre (L 19, 131).

In other words, a monarch's welfare springs entirely from his subjects' welfare, so by furthering the latter he furthers the former, whereas in a democracy or aristocracy, corrupt individuals may profit more from subversive actions, even civil war, than from advancing the public good. Hobbes makes similar arguments on several occasions (EL 24.1, 135-6; DC 6.13, 83; L30, 240; DP 76).

This is weak. Why cannot a king be rich if his subjects are poor? A king who bled his people dry might one day run out of income, but sensible monarchs can find a balance. There is no logical justification for the inference that a monarch's welfare arises *only* from that of his subjects.

Hobbes is no more convincing in stating that 'the advantages and disadvantages of the régime itself are the same for ruler and subjects alike and are shared by both of them'. But Hobbes then talks about public goods like peace and defence (DC 10.2, 116). Let us assume for the sake of argument that such public goods always benefit everyone

equally, or at least that they are Pareto superior to the alternatives. Not all situations are like this, though. Hobbes tries to get round one such case – taxation – with fallacious reasoning. Hobbes compares two extremes: a sovereign who taxes citizens just enough for peace and defence, and a sovereign who taxes citizens so much that they end up with nothing. In both cases, the sovereign and the citizens are in the same boat; in the latter case, for example, the sovereign is in trouble as the commonwealth cannot be defended (DC 12.2, 117). Of course, even if Hobbes was right about these two extremes, less heavy taxation can benefit the sovereign at citizens' expense without reducing the commonwealth to a defenceless position.

Evidently the monarch's private and public interests may differ. And Hobbes knows this. The *Elements of Law* recognizes that the 'affections and passions ... reign in every one, as well monarch as subject', so 'the monarch may be swayed to use that power amiss'. This means that 'the monarch, besides the riches necessary for the defence of the commonwealth, may take so much more from the subjects, as may enrich his children, kindred and favourites, to what degree he pleaseth' (EL 24.4-5, 139; see also L 24, 173). *De Cive* is not as explicit about monarchs who abuse their power, but as Okin (1982, 64-9) shows, the *Dialogue on Common Laws*, written in 1666, is more frank: accepting the dangers of irrational monarchs, and perhaps comforted by the more moderate Restoration parliaments, Hobbes gives assemblies more say in counselling monarchs (DP 55, 68, 166). Even here he tries to excuse monarchs who enrich favorites, since this money will be 'so spent as it falls down again upon the Common People' (DP 66), an amusingly naïve economic theory – steal from the poor to give to the rich so they can spend it on the poor again. So, Hobbes's implicit and occasionally explicit position is that sovereigns may indeed misuse their position for private ends. *Leviathan* errs by equating the monarch's public and private interest: Hobbes weakens his case by making it too strongly.

In summary, a deductive political science only works if the deducer deduces correctly. Hobbes does not – and tellingly, each of the failed deductions points away from monarchy. It is difficult to say if Hobbes was aware of either issue. It is worth adding, incidentally, that Hampton is no more successful than Hobbes when she herself tries to show that monarchy's superiority can be deduced from Hobbesian principles. Hobbes had argued that mixed government is impossible: the different sovereigns will fight each other until the government ends up as a monarchy, aristocracy or democracy. Hampton applies this to aristocracy and democracy too. 'Suppose we invest [sovereign

power] in three people, making an aristocracy. Will not each of them be prone to power grabbing, either to advance her own glory or to increase her chances of preserving herself?' (Hampton 1986, 105-6). Well, maybe; or maybe not. (We could equally ask: will not the three aristocrats stick together if they know that only by uniting can they keep their enemies at bay? And the answer would be the same: maybe, or maybe not.) Hampton's deduction is no more certain than Hobbes's. Her argument is certainly Hobbesian, but it is no more convincing for that.

So, one reason why Hobbes could not demonstrate the superiority of monarchy was his errors of deduction. But the demonstrative approach itself might still be viable: I have not yet shown that a *correctly* applied deductive approach is bound to fail. We must therefore examine deeper problems with Hobbes's political science.

## 5. Hobbes's conceptual framework

Hobbes's logical overstatements have a deeper cause: an inadequate conceptual framework, due to insufficient factors in his causal explanations. Consider the first example in the previous section – Hobbes's claim that there are fewer opportunities for corrupt or ambitious politicians to abuse their position in monarchies. This only looks at the opportunity of committing a crime, not the chance of being stopped. Interestingly, he makes a similar error when discussing citizen criminality, overlooking the probability of being caught (Kavka 1986, 250-1). But he does not make this error when discussing judicial corruption: he recommends that a sovereign try to reduce the likelihood of judicial corruption by helping citizens complain about corrupt judges (DC 13.17, 152; EL 28.6, 175). So, Hobbes is aware of this factor but does not apply it consistently.

But there is a much more important and historically interesting conceptual gap, reflecting Hobbes's partial adherence to the great sixteenth century French theorist Jean Bodin. Hobbes owed many debts to Bodin. Parts of the *Elements of Law* may have been lifted from Bodin's *Six Books on the Republic* (Baumgold 2004), and when discussing mixed government, Hobbes ignores a century of English arguments and instead follows Bodin in targeting a 1543 text by Contarini (Skinner 2008, 60-3).

Yet crucially, Hobbes does not follow Bodin closely enough when discussing sovereignty. Bodin faces the same problems of classification and explanation as Hobbes, and proposes using essential properties such as the location of sovereignty, rather than accidental ones like a ruler's height (SB 2.1, 183-4). Bodin's conceptual framework thus

has three polities (monarchy, aristocracy and democracy), depending on whether sovereignty is held by the one, the few or the many. This was fairly standard, although unusually, Bodin denies that there are corrupt examples of these constitutions and that one can mix or divide sovereignty. Hobbes follows this schema in every respect (see especially L 19, 129), even paying Bodin the rare privilege of explicitly quoting him when talking of constitutional corruption (see ch. 2).

Bodin is right to focus on essentials rather than accidentals but his legal training may have led him to concentrate unduly on the location of ultimate sovereignty. Machiavelli's *Prince*, by contrast, distinguishes between republics and principalities, old and new principalities, principalities acquired by luck or skill, and so on (*The Prince*, chapters 1, 5). Each of these can affect political outcomes, Machiavelli shows. Clearly, we risk logical overstatements if we try to deduce political conclusions *solely* from a typology based on the location of ultimate sovereignty: other premises are relevant.

Luckily, Bodin accepts that the location of sovereignty is not the only influence on political outcomes. He distinguishes between the 'state' and 'form' of government. The former involves the location of sovereignty (the ultimately legislative authority), the latter involves who actually rules. For example, the Swiss combine a democratic state with an aristocratic government, making 'tumults and rebellions' less likely, while a monarchical state with a democratic government' could make 'the most assured Monarchie that is' (SB 6.4, 708; 2.7, 250). In Dicey's (1915, 26-9) terms, we must look at political (de facto) as well as legal (de jure) sovereignty. According to Hoekstra, Hobbes avoids this distinction because he thinks de jure sovereignty follows from de facto sovereignty (Hoekstra 2006, 203). But sovereignty is not power, and Hobbes should have placed more weight on the way that the distribution of power affects political outcomes. Bodin's solution is hardly perfect but it certainly improves the simple tripartite framework based on legal sovereignty alone.

Hobbes, alas, gives this distinction too little weight. He seems to differentiate legal sovereignty from 'administration,' noting for example that democratic Rome had an aristocratic council (EL 20.17, 116-7). He distinguishes the 'right' and the 'exercise' of government (DC 13.1, 142-3), and also separates 'him in whom the authority of the commonwealth resides' from 'the ministers of government' who handle 'the administration of government business' (DC 10.16, 125; see also L 23, 166-70). He mentions the 'almost infinite' variety in bodies politic (L 22, 158) – and importantly he sometimes spots that this variety affects political outcomes. Thus he writes that although

democracies are bad at discussing weighty matters, if the people were to 'concentrate deliberations about war and peace and legislation in the hands of just one man or of a very small number of men, and were happy to appoint magistrates and public ministers, i.e. to have authority without executive power,' then democracy and monarchy 'would be equal' in terms of deliberation (DC 10.15, 125; see also EL 24.8, 141).

This fascinating comment has had curiously little attention from Hobbes scholars (two exceptions being Tuck 2006, 186-9; Hoekstra 2006, 194). Hobbes is effectively describing the situation in many modern representative governments, but more importantly for present purposes, his comment shows that the precise institutional format affects how 'democracy' works. The same is true of monarchy and aristocracy, for example Hobbes advises sovereigns not to take counsel from assemblies as this may lead to rhetoric, faction-fighting and even civil war (L 25, 181). In effect Hobbes shows that monarchies with such assemblies incorporate elements of aristocracy, which weakens stability. Again, how 'monarchy' works depends on institutional details. Hobbes would have seen that England was less troubled in the 1630s, when Parliament did not meet, than in the 1620s or early 1640s, when monarchy coexisted with assembly politics. Non-institutional details also matter. Hobbes implies that monarchy would lead to stability if citizens were educated appropriately, and instability if the schools filled citizens' heads with seditious doctrines – as had happened in England (see chapters 2 and 4).

Hobbes would have been on firmer ground in arguing that monarchy is more stable than aristocracy or democracy, *other things being equal*. (He certainly had this conceptual tool available to him – see for example the *ceteris paribus* argument at EL 4.10, 33.) In other words, monarchy with good civic education will probably be more stable than aristocracy or democracy with good civic education. Yet even this claim cannot be successfully deduced by Hobbes. Nor can he quantify the effect of different commonwealths, or of variables like education. I do not wish to be too anachronistic: even the natural science of Hobbes's day had not reached this quantitative level. But quantification is ultimately what Hobbes needs to reach the conclusions he seeks.

So, if the precise configuration of polities can affect outcomes so much, we cannot deduce empirical conclusions which follow necessarily from the mere fact that a commonwealth is a monarchy, aristocracy or democracy. A fuller conceptual framework would have helped Hobbes to avoid overstatements. But avoiding logical errors is not the same as reaching demonstrative certainty, and nothing that we have seen so far

suggests that this was a realistic target for Hobbes. We must therefore turn our focus to Hobbes's stance on prediction.

## 6. Necessary and contingent

Hobbes's faith in demonstrative certainty reflects his account of the distinction between what he calls 'necessary' and 'contingent' truths. The statement 'man is a living creature' is a necessary truth, Hobbes explains, since it is part of the definition of man that he is a living creature. But the statement 'every crow is black' is only contingently true: it is true now but might turn out to be false in the future (DCO 3.10 37-8; see also DCO 5.9, 60-1).

Hobbes further states that 'all propositions concerning future things ... are either necessarily true, or necessarily false; but we call them contingent, because we do not yet know whether they be true or false', as when we do not know whether it will rain tomorrow or not (DCO 10.5, 130-1). Hobbes means that it is already determined for certain whether there will be rain or not, but as we do not know the precise physical cause of rain, we cannot know whether there will be rain. By implication, he is also saying that it is already determined whether all crows will be black or not.

This determinism is controversial – even more so if Hobbes were to say the same of social and political affairs, for example that it is already determined what action will result when a judge is tempted by a bribe or a citizen deliberates about whether to pay a tax. Fortunately we do not need to address the issue of determinism here: we simply need the Hobbesian premise that *we* cannot know what will happen here.

But this would points away from the possibility of a deductive political science – if we assume that empirical features of politics are equivalent to empirical features of the natural world. Hobbes clearly does not accept this equivalence. I therefore turn, finally, to Hobbes's inadequate claims about the nature of demonstration in the empirical political world.

## 7. The disunity of civil science

We are now well placed to assess Hobbes's assumption that politics should be modelled on geometry. Especially helpful here is a passage from the epistle dedicatory to the 1656 *Six Lessons to the Professors of Mathematics*:



Of arts, some are demonstrable, others indemonstrable; and demonstrable are those the construction of the subject whereof is in the power of the artist himself, who, in his demonstration, does no more but deduce the consequences of his own operation. The reason whereof is this, that the science of every subject is derived from a precognition of the causes, generation, and construction of the same; and consequently where the causes are known, there is place for demonstration, but not where the causes are to seek for. Geometry therefore is demonstrable, for the lines and figures from which we reason are drawn and described by ourselves; and civil philosophy is demonstrable, because we make the commonwealth ourselves. But because of natural bodies we know not the constructions, but seek it from the effects, there lies no demonstration of what the causes be we seek for, but only of what they may be. (SL Ep. Ded., 183-4).

The idea that we know what we make is not peculiar to Hobbes, who along with Bacon fits into the 'maker's knowledge' tradition (Pérez-Ramos 1996, 110-3). But whatever its source, Hobbes's argument is questionable in two key ways. First, the relationship between a circle's diameter and its area exists whether or not we 'make' a circle. We did not invent  $\pi$ , which exists independently of human conventions. Likewise the speed of light, the gravitational pull between two objects, and so on. So, whether something can be deduced from a premise does not depend on whether the premise is 'made' by humans.

Second, do we 'make' a commonwealth? Yes, we define justice and liberty, and can deduce some of their properties accordingly. And similarly, given Hobbes's definition of sovereignty we can deduce some properties of commonwealths, such as the impossibility of mixed government. But this is a logical property, not an empirical one, and the implication of Hobbes's arguments about necessity and contingency is that we can know logical consequences *but not empirical ones*.

From Hobbes's premises, then, we can deduce that all of a sovereign's laws are just, but not how many people will obey them. We can deduce that liberty is the same in any kind of commonwealth, but not what people will do with their liberty. We can deduce that a commonwealth must be a monarchy, aristocracy or democracy, but not which will be more stable. This confusion between different kinds of deduction is paralleled by Hobbes's confusion between logical and empirical 'causation' (Kavka 1986, 8; see also Malcolm 2002, ch. 5).

Hobbes's comparison with geometry should only commit him to the view that because we make the laws and contracts from which justice derives, we can make *a priori*

deductions about what is just, or that because we make the definition of liberty, we can deduce what makes us free or unfree. Moral and political philosophy can follow the deductive approach of geometry to a considerable extent (except as regards first principles), and analytical philosophers today owe Hobbes and likeminded writers a great debt for making this transition. But moral and political philosophy work differently to political science. Hobbes is wrong to claim that because we create commonwealths, we can deduce the empirical consequences of different kinds of commonwealths.

## **8. Conclusion: between facts and norms**

Hobbes misstates the place of empiricism in politics. He tries to restrict it to the very start of his civil science, using observation to 'read and know' how men act (L Intro, 10). Given these psychological premises, and definitions of terms like 'sovereignty', he then tries to derive conclusions about how citizens and rulers will behave under different kinds of commonwealth. Observation is not meant to have any other place. *Behemoth's* factual claims about the causes of the civil war, for example, are meant to do nothing more than illustrate truths which had already been demonstrated.

But Hobbes's deductive approach is based on a totally flawed view of the nature of politics. The value-based part of civil science rests heavily on deduction, but the fact-based part of civil science rests more on observation and induction. Hobbes's simplistic view of inductive science, and his vastly overstated faith in deduction, explain why he could only make probabilistic claims about the advantages of monarchy.

Empirical observation would have helped Hobbes with two of the errors discussed above. It is all too easy to make errors of deduction (section 4), and one way to test a deduced conclusion is to see if it works in practice. If it does not, the theory may need amending. This, note, treats observation as a higher form of proof than deduction, even if deduction is often a good way to generate explanations and predictions. This is how Einstein's theories were tested, in part, and many rational choice theorists also combine deduction and induction in an iterative manner (Tsebelis 1990, 42-3).

Hobbes's weak conceptual framework (section 5) would also have been fleshed out if he had taken more seriously the need to examine politics inductively as well as deductively. Descartes wrote that logic can be better at explaining what we already know than learning what is new, and Habermas too writes that deductive arguments 'do not bring anything new to light' (Habermas 1984, 24). Following Peirce, he states that the

only form of argument which 'extends our knowledge' is abduction, whereby we propose hypotheses which best explain observations (Habermas 1968, 113-4). Now, Descartes and Habermas undersell deductive logic: many arguments violate deductive logic, and we would dramatically improve the quality of political debate if we could prevent logical fallacies. Still, Habermas's point about abduction is important. And observation can be a helpful stimulus for abducting new hypotheses. Indeed, Hobbes may well have grasped the importance of civic education not by deduction but by his repeated observation that rebellious parliamentarians had been overly influenced by humanist and republican ideas. Inductive science would help Hobbes, not hinder him.

One final point. Hobbes was embarrassed that he had only made probabilistic claims. But contemporary social scientists do not expect to prove their inferences in the same way as mathematicians. Indeed, one of the most respected recent texts on social science sees uncertain conclusions as a core part of social science – such that good social scientists should try to report the degree of uncertainty of their inferences (King, Keohane and Verba 1994, 8-9, 31-2, 76). Very little that Hobbes did would now be regarded as good social science, but to his credit he did report the fact that he was uncertain about his claims about the stability of monarchy.

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