

Economics Meets *War and Peace*: Tolstoy's Implicit Social Theory

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I

Many distinguished commentators have declared Tolstoy's *War and Peace* to be the greatest novel of all time (vii)¹.

Tolstoy himself however, was insistent that the work is not a 'novel' in any standard sense. And one element supporting this claim is the amount of the text devoted to the exposition of his 'philosophy of history' – approximately one sixth of the chapters in Books Three and Four (about twenty-five chapters *in toto*) plus most of Part Two of the Epilogue, which in itself amounts to thirty-seven pages². The reader finds, obtruding into descriptions of the fine-grained psychology and emotions of his cast of characters – material that is characteristic of the novel as a genre – other matter that is more like a 'philosophical essay': criticism of how 'the historians' do history, and why what passes for explanation among historians fails a basic coherence test. These interruptions in the broader narrative seem to some to fit so oddly that many of Tolstoy's

critics have felt *War and Peace* to lack unity – to be, as Henry James put it, ‘a loose, baggy monster’.

Questions of artistic unity aside, we want to focus attention on Tolstoy’s ‘philosophy of history’ itself. We do, because Tolstoy’s ‘problematic’ is of a kind broadly familiar to economists – and indeed to rational-actor social theorists more generally. Simply put, Tolstoy is grappling with the question of how the actions and attitudes of his vast cast of characters, which he describes in acute detail and which provide his basic ‘novelistic’ material, combine to produce the aggregate effects that constitute the ‘events’ of human history -- those operating at the level of armies and nations and peoples.

What is, for example, supposed to be the connection between, on the one hand: Prince Andrei’s unsatisfying marriage to Lise; or Andrei’s father’s tyrannical and undermining treatment of Andrei’s sister, Princess Marya; or Prince Vasili’s manipulation of Pierre (and Vasili’s daughter, Helene) into a disastrous marriage; or Vasili’s son Anatole’s seduction of Natasha; and, on the other hand, Russia’s losses at the Battle of Austerlitz; or Czar Alexander’s negotiation of a cooperative treaty with Napoleon in 1807 (resulting in Russia’s acquisition of Finland in 1809 from Sweden); or the collapse of that treaty, culminating in Napoleon’s invasion of Russia in 1812?

One possibility is that details of events in Tolstoy’s characters’ lives are intended to *symbolize* the grander-scale events of human history. And there are certainly intimations in the text that Tolstoy may have had something of the kind in mind. Military analogies are not infrequently deployed. So, for example, Boris Drubetskoy is described as ‘laying siege’ to the wealthy heiress Julia Karagina; Dolokhov and Nicolai ‘do battle’ at cards; and so on. And in this connexion, it is worth noting that Tolstoy himself regarded the attempted seduction of Natasha by Anatole to be the ‘crux’ of the novel; so perhaps the reader is being invited to detect a parallel between this episode and the taking of Moscow by the French. In that spirit, the description of Anatole’s sense of entitlement and general moral insensitivity might be taken to suggest what Tolstoy made of Napoleon’s character and attitudes.

However, without in any way deprecating the artistic use of such parallels, it seems quite clear that these do not exhaust what Tolstoy had in mind in relation to his philosophy of history. Tolstoy seeks in *War and Peace* to lay out his social theory as a separate exercise – not inconsistent with, but lying alongside and somewhat independent of the more conventional

novelistic material. And the social theory in question has many features that will be broadly familiar to economists – for, on the face of things at least, Tolstoy reveals himself as a sophisticated methodological individualist, though one of a distinctive (and for economists somewhat alien) kind.

We shall take up the distinctive aspect of his thought later. But first consider his methodological individualism. As Tolstoy puts it, it is ‘only by taking an infinitesimally small unit for observation ... and ... integrating them (that is, finding the sum of these infinitesimals) can we hope to arrive at the laws of history’ (882). And again, ‘To study the laws of history we must completely change the subject of our observation – must leave aside kings, ministers and generals – and study the common, infinitesimally small elements by which the masses are moved.’ (883).

The leaving aside ‘of kings and ministers and generals’ is a significant upshot of this explanatory approach. In this connexion Tolstoy is especially scathing about military history, partly because he thinks that there are overwhelming informational challenges. No-one can know, with the kind of detail to which the historian pretends, what is going on in a field of battle which involves perhaps 100,000 men on each side spread over a vast terrain. In particular, the commanders cannot know, *at the time*, what is going on and hence cannot exercise the kind of tactical control over the deployment of their forces that military historians standardly ascribe to them. Much of the information to which the generals have access is, in any event, highly misleading, because the individuals who report on the tide of battle have incentives to lie – especially, to lie about their own accomplishments. Nicolai does this in relation to his performance at Schön Grabern, and his account is challenged by Andrei precisely on this basis (257-59). Furthermore, such history is typically written by the victors and with a tendentious purpose: to play up the brilliance of their own generals and the courage of their own troops, and to belittle the efforts of their enemies.

What Tolstoy takes to be the standard grand narrative of the 1812 campaign, in which Napoleon is lured to stretch his supply lines by the manoeuvring of the Russian army and by the Russian generals’ refusal to meet in battle until Borodino, Tolstoy exposes as an illusion:

all the hints at what happened both from the French side and the Russian, are advanced only because they fit in with the event. Had that event not occurred those hints would have been forgotten, as we have forgotten the thousands and millions of hints and

expectations to the contrary which were current then but have now been forgotten because the event falsified them. (733)

Moreover, those we intuitively look to as primary engineers of the great events – the so-called ‘great men’ of history – are in fact especially impotent: more constrained indeed than the common-or-garden soldier.

The actions of Napoleon and Alexander on whose words the event seemed to hang were as little voluntary as the actions of any soldier who was drawn into the campaign by lot or conscription . . . It was necessary that millions of men in whose hands lay the real power – the soldiers who fired or transported provisions and guns – should consent to carry out the will of these weak individuals and should have been induced to do so by an infinite number of diverse and complex causes. (649)

It is important to note that the term ‘history’, in *War and Peace*, is often used more or less synonymously with what we should now call ‘social phenomena’.

Each man lives for himself, using his freedom to attain his personal aims, and feels with his whole being that he can now do or abstain from doing this or that action; but as soon as he has done it, that action performed at a certain moment in time becomes irrevocable and belongs to history (649).

Is it possible to reconstruct a coherent social theory from the material in Tolstoy’s ‘loose baggy monster; not so much from his explicitly ‘philosophical’ musings about ‘history’ as more importantly, from the whole body of his narrative into which those musings have been interjected?

II

According to the Greek poet Archilochus (c. 640 BC) ‘The fox knows many things but the hedgehog knows one big thing’. Some thinkers are foxes, some hedgehogs. We may enjoy a parlour game deciding who are which. Plato, Dante, Lucretius, Nietzsche, and above all Marx are hedgehogs. Aristotle, Erasmus, Shakespeare and Molière are foxes. But Isaiah Berlin’s

([1953] 2013) famous and brilliantly illuminating essay ‘On Tolstoy’s View of History’ designates Tolstoy as a fox who wanted to be a hedgehog.

In Berlin’s view, no other author has ever had such a grasp of the ‘many things’ of ordinary human life:

The celebrated likeness of every object and person in his world derives from this astonishing capacity of presenting every ingredient of it in its fullest individual essence, in all its many dimensions as it were . . . always as a solid object, seen simultaneously from near and far; in natural, unfaltering daylight, from all possible angles of vision. (Berlin 2013, 44).

As Berlin sees it, this would-be hedgehog was torn by a

violent contradiction between the data of experience from which he could not liberate himself . . . and his deeply metaphysical belief in the existence of a system to which they *must* belong, whether they appear to do so or not. (45; italics in the original).

For Berlin, the whole of *War and Peace* is dominated by ‘this conflict between instinctive judgement and theoretical conviction’

Tolstoy’s theoretical convictions about the nature of history and historical explanation were – of course – not without precedent; and according to Berlin (50-53) were formed, in part, under the influence of Rousseau, Proudhon, Schopenhauer, Stendhal and Maistre. They are expounded in Part II of the Epilogue (1270-1317); and elements based on this material, or which illustrate it in the context of the narrative, are also to be read in Part I, chapters 1-4 of the Epilogue (1215-1225) and in the chapters identified in Note 2.

We propose focus our attention on Tolstoy the would-be hedgehog by ignoring his explicit attempts at explanation, and by showing how Tolstoy the supreme fox arrived at a true understanding of ‘History’ as the unintended consequence of the way he actually tells that History. Tolstoy’s ‘theoretical conviction’ is justified not by his confused and confusing ‘metaphysical belief’ but by implication from ‘the data of experience’.

We suggest in Table I below a summary of the elements of a social theory seemingly implied in *War and Peace* by ‘the data of experience’, identifying some of the pages on which specific

elements of that theory appear to be stated or implied. There is no attempt at completeness. Though Part II of the Epilogue has been ignored, we have considered evidence from the ‘theoretical’ chapters which usually begin each section of Books III and IV since these are intended to illustrate and/or interpret the narrative that follows (e.g. III.i.1, 647-50). Page numbers in bold type indicate strong evidence for the putative element, so for example,

Table I
Implicit Social Theory in *War and Peace*

1. (a) Social phenomena are almost always the unintended consequences of a myriad individual acts (195, **274**, **647-48**, 650, **732-34**, 736, 761-62, **842**, 881-82, 941-48, **1014**)
 - (b) What we observe—at a distance – is the ‘integral’ of these acts (260, **881-82**)
2. Individual acts are motivated by *love* of various kinds:
 - (a) *self-love, self-preservation etc.* (647, **649**, 650, **682**, 692, 722, **732**, 734, 755, 761-62, 781, 830, **940-42**, **962-63**, 996, 1106)
 - (b) *love of humanity: altruism, common humanity* (263, 374, 377-78, 382, 386-87, 404-05, 410, 415, 765, 780, 787-88, **925-26**, 994-97, 1028-29, 1060)
 - (c) *love of country or its ruler: patriotism and/or hero-worship* (e.g. of Bonaparte, the Czar etc.) 270-73, 332, 442, **446**, 651-53, 683, 722, 724, **728-29**, 761-62, 799-80, 829, 831, 894, 950,)
 - (d) or may be motivated by collectively irrational emotion, e.g. *panic*, ‘*swarm*’ *instinct* (**202**, **297**, 307, 309, **649-50**, 653-54, **690-91**,)
3. Rational individual acts are co-ordinated (or not) into collective social phenomena by
 - (a) obedience to orders of those in authority (94-5, 154-5, 789, 926)
 - (b) information available to decision-makers (180-83, 193-95, 278, **293**, 304, 678, 804, **824**, 829, 1025, 1069-72, 1082)
 - (c) markets, prices (920, 1080, 1110, **1195**)*
 - (d) esteem and the desire for it (17, 50, 62, 92, **168-69**, 171, 214, 217, 233, 241, 254-55, 258, 264, **265**, 390, 437-78, 464-65, 479-80, 495, 500, 600, 601, 604, 606-7, 608, **609**, **612-13**, 626)
4. Therefore historical narrative is generally unreliable, if not worthless, since historians’ sources generally deal with the actions of (actually impotent) Great Men (647, 649, 761-62, 808-10, 1077-78, 1109-10)

5. Nevertheless, and notwithstanding the foregoing, all outcomes are predetermined by ‘Providence’ (235, 732, 841, 877, 879, 1044) whose ‘ultimate purpose’ is beyond human comprehension.

the idea that social phenomena arise as unintended consequences of individual acts, is stated quite clearly:

the result of all the complicated human activities of 160,000 Russians and French – all their passions, desires, remorse, humiliations, sufferings, outbursts of pride, fear and enthusiasm – was only the loss of the battle of Austerlitz, the so-called battle of the three Emperors – that is to say, a slow movement of the dial of human history. (274)

Page numbers in plain type identify weak evidence. So, for example, the burning of Smolensk:

Smolensk was abandoned contrary to the wishes of the Emperor and of the whole people. But Smolensk was burned by its own inhabitants who had been misled by their governor. And these ruined inhabitants, setting an example to other Russians, went to Moscow thinking only of their own losses but kindling hatred of the foe. Napoleon advanced further and we retired, thus arriving at the very result which caused his destruction. (736)

In Table I, we can distinguish different elements of the overall social theory: first, a basic methodological commitment to explanation of the kinds of phenomena with which ‘history’ concerns itself {1a} and the identification thereby of the prime actors – individual members of the larger populations involved {1b}; second, a psychological claim about the various considerations that motivate those individuals [contained in {2a, b, c, d and e}]; and third, the structure of interdependence, whereby what all (others) do frames the choice setting for each and the decisions of each determine what all do. These structures of interdependence are embedded in social mechanisms or what are often referred to as ‘institutions’ – though they may be informal norms or conventions. These fall under set {3} in Table I. So far, this scheme, though not uncontroversial in certain circles, would be broadly acceptable to the economist and the rational actor social theorist more generally. The extra feature that Tolstoy inserts in this picture is set {5}. We set that aside for more explicit treatment in part IV below.

We may begin by noting one episode, at any rate, where *War and Peace* meets ‘Economics’ precisely. The bottom paragraph on page **1195** is a textbook example of the ‘invisible hand’ of

the market: resembling the treatment in Samuelson's *Economics* (1948) and recycling Whately's *Introductory Lectures* (1831, Lecture IV). For after the French quit Moscow

Within a week the peasants who came with empty carts to carry off plunder were stopped by the authorities and made to cart the corpses out town. Other peasants, having heard of their comrades' discomfiture, came into town bringing rye, oats and hay, and beat down one another's prices to below what they had been in former days. Gangs of carpenters hoping for high pay arrived in Moscow every day, and on all sides logs were being hewn, new houses built, and old charred ones repaired. Tradesmen began trading in booths.

Cookshops and taverns were opened in partially-burned houses.

Here is a real-life example of the efficacy of markets which may rejoice the hearts of all who desire an economy driven by the rational self-interest of free individuals pursuing their own, private objectives.

We note, however, that none of this would have happened but for the prior actions of 'the authorities' in re-establishing the rule of law. Whately and Samuelson took for granted what Adam Smith had explicitly identified: 'Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice' (*WN* V.iii.7). Self-love of the peasants is necessary but not sufficient for restoring the prosperity of Moscow. Though Tolstoy himself would almost certainly have repudiated such an idea, the subset {1(a), 1(b), 2(a), 3(a), 3(c)} of Table I contains what one might think of as Tolstoy's version of 'economic theory'.

But that subset is only a special case of a putatively more comprehensive social theory. Individuals may be motivated by other 'loves' {2(b) or 2(c)}; they may instead be motivated by blind unreason {2(e)}; and when rational, their individual acts may be co-ordinated into recognisable social phenomena by obedience to authority {5(a)} alone without {5(c)}; or by the desire for esteem {5(d)}; and because of information failure they may not be coordinated at all {5(b)}. The subset {1, 2, 3} can therefore be thought of as a general social theory which subsumes standard economic theory as a special case. Item 4 in Table I is then to be seen as a consequence of {1, 2, 3} – which forms a point of contrast with a salient rival account and exemplifies the distinctiveness of Tolstoy's view.

This analysis leaves two loose ends untied however.

Much of Tolstoy's narrative is concerned with what actually happens when an army is engaged in battle. The subset {2(a), 2(c), 2(d), 3(a), 3(d)} contains the elements of an explanation, but these elements need to be unpacked, and further explained in terms of the methodological individualism we perceive in *War and Peace*. We address this in part III below.

And {5} appears to deny or at any rate to call in question {1, 2, 3}. We need to consider how far, if at all, {5} renders Tolstoy's putative social theory incoherent. This we attempt in part IV.

In part V we present our conclusions, such as they are.

III

How might a methodological individualist approach the analysis of battle? The natural point of departure, we think, is the observation that the relation between members of a military unit has – at the first order of approximation – a Prisoner's Dilemma (PD) character.

We can see this by a simple example. Suppose A and B are strolling together down the street when confronted by a man, apparently mad, running towards them waving a machete about his head and yelling his intention to kill them. Each of A and B has two possible responses: to stay and fight; or to run. If they both stay there is a reasonable chance that they can overpower the attacker – but also a reasonable chance that one or other of them will be injured. Suppose the probability that together they will prevail against the attacker is 50% and that there is a chance of 30% that each of them will get hurt in the process. If one runs and one stays, there is a 75% chance that the one who stays will be injured but the one who runs will get away completely safely. If both run, it is certain that one of them, whomever the attacker chooses to pursue, will be seriously injured (so, a probability of 50% for each). The other will get away.

In other words, the structure of the interaction is as shown in the matrix in Table 2, where the entries show the probability for each that he will sustain serious injury.

Clearly, in this interaction with payoffs as stipulated, if each seeks only to minimize the chance of being injured, there is a 'dominant strategy' for each player: namely to run. Whatever B does, A reduces his risk of injury by running (because $0 < 30\%$; and $50\% < 75\%$). And analogously for B. So without other considerations, each has an incentive to run. However, the

outcome when both run is worse for each than when both stay to fight ($30\% < 50\%$): what is best for both is not best for each.

Table 2
Probability of Injury in Three-Person Encounter: A and B attacked by C

A's action	B's action	
	Stay and fight	run
Stay and fight	30%, 30%	75%, 0
run	0, 75%	50%, 50%

This structure of interaction is familiar to economists: its application to the military case is presented in Brennan and Tullock (1982). Allocation of the risks of injury to the various actions in Table 2 is designed to exhibit this structure. The actual percentages are of course arbitrary – but we think the illustrative percentages are plausible and of course can be modified over a significant range without altering the basic structure of the interaction. In that sense the basic PD structure, we think, is quite robust.

To be sure, the predicament that A and B find themselves in has some peculiar features. For one thing, the ‘opponent’ is simply assumed to have the intention to attack – and nothing that A and B can do can alter that basic fact. In the military case, this is typically not so. Whether the opposing force attacks or withdraws is itself a function of whether your force does. The way to think of the typical military case, then, is as an engagement both between and *within* ‘teams’. Let A and B be designated as one team; and C and D as the other. Clearly, the larger game *between* teams also bears on what incentives each individual within a team faces. In standard vocabulary, the right way to think about battle is in terms of a ‘nested game’ structure – one game between teams; and another between members of each team; with the incentives in each game influenced by the structure of the other game.

For example, if A and B are convinced that C and D will attack, whatever A and B do, then A and B face the simple prisoner’s dilemma within the team illustrated in Table 2. But this is analogous for C and D: if C and D are convinced that A and B will engage, then each of C and D faces that same incentive to run rather than to stay and fight. The game between teams has something of the character of the game of chicken. But what Tolstoy’s emphasis on the individual soldier makes salient is that the game between the larger units is, as we might put it,

not the ‘only game in town’ – and indeed that that larger game is not necessarily the most important element in understanding battle.

It is interesting to note that the French military theorist, Ardant du Picq had explained that ‘nothing can be wisely prescribed in an army... without the knowledge of the fundamental instrument, man *and his state of mind* ... at the instant of combat’ (Du Picq 1944, page 39; our italics). Du Picq, like Tolstoy, fought in the Crimean war. His writings on warfare were not published in any form until 1880 (ten years after his death in the Franco-Prussian war) and not in their entirety until 1902. Since *War and Peace* was not published until 1869 it is doubtful that Tolstoy had any influence on du Picq – and virtually certain that du Picq had no influence on Tolstoy.

Recognizing the underlying structure of interdependence *within* armies provides a rather different picture of military engagement than the more typical approach of focusing on the relation *between* armies. For a start, it suggests that the object of engagement may not be so much to *destroy* the opposing force as to prise apart the delicate bonds of cooperation that constitute that opponent *as* an army – to unleash the underlying n-person prisoners’ dilemma and thereby induce one’s enemy to flee in chaos.

This methodological-individualist, ‘Tolstoyan’, approach also makes salient the various ways in which the PD structure might be overcome – how incentives might be modified in such a way that the best thing for individuals to do is *not* to run away but to stay and fight. And it suggests that the army that is more successful in this incentive-modification exercise is more likely to secure victory.

Three possibilities seem to be available:

1. Changing individual preferences directly, so that staying and fighting becomes the dominant strategy: for example, if A and B care as much about each other’s injuries as they do about their own, then the PD is undone. This claim can be verified by adding the probability of injury to each in each cell of the Table 2 matrix. Of course, it is not necessary that each weighs injury to the other and to self identically. It can be verified that if A treats injuries to B as costing half as much as injuries to self, staying and fighting becomes the dominant strategy for A. Comradeship, and loyalty to the ‘regiment’ are examples.

2. Creating incentives both of a positive and negative kind. Deploying crack troops behind the line to shoot any ‘cowards’ on sight is one obvious (negative) possibility. Frederick the Great is reputed to have claimed that soldiers should be more afraid of their own generals than they are of the enemy. Medals for bravery are an obvious incentive (e.g. 702), more connected to the ‘economy of esteem’ (Brennan and Petit 2004, Frey and Gallus 2017). Material incentives are not irrelevant here of course – and various systems of ‘spoils’ and their allocation will also be relevant.
3. Changing the structure of interdependence itself. A striking example of this latter strategy is the institution of the British square – on its face an unpromising formation, since it sacrificed mobility and advantages of terrain. But in fact, it seems to have been a remarkably effective device, not entirely unlike the Roman practice of interlocking shields. It had the effect of making it more dangerous to break ranks and ‘run’ than to stay and fight.

Tolstoy does not develop anything like this kind of account of military engagement along micro-economic lines. But one thing at least seems clear. Commanders play at best a second-order role in his picture. To the extent that they *are* relevant, it is at the more abstract level of establishing the background institutions within which ordinary soldiers operate. Perhaps they play some role in inspiring their troops – but as Tolstoy makes abundantly clear, it is one thing to cheer the Czar on the parade ground and another entirely to sacrifice your life for the Czar. Once soldiers are engaged in combat, parade-ground rituals become second-order consideration for most soldiers.

One final point however. The Methodological-Individualist picture does allow a possible role for genuine heroism ‘on the ground’ as able to influence the tide of battle. If a force becomes persuaded that its opponents do not care for their own safety and will, like our initial exemplary madman, attack regardless, that in itself can put pressure on the incentives facing the opposing team. Recall for example the conduct of Prince Andrei and the regimental standard at Austerlitz (298).

A word of caution is in order here. Although the exercise of reducing social phenomena to the individual level is a powerful and often illuminating analytic device, it would be a mistake to think that ‘individuals’ are all that there is. For example, although the ‘within-army’ effects are no less relevant to the French army as the Russian, it would clearly be a mistake to conduct

an analysis of battle in which the distinction between Russian and French were set aside. The individualist picture has at least two moving parts – the psychology of the individual participants; and the structure of interdependence that governs their relations. Those structures of interdependence reflect the nature of aggregates larger than the individual – the nature of the ‘institutions’ that govern individual interdependencies. To say that the operations of an army ought to be reduced to the individual level is not to say that armies as such do not have an independent explanatory role. Tolstoy was acutely aware of this, and is explicit in contrasting the character and culture of the French and Russian armies, and the effect of these on the outcome of Bonaparte’s invasion in 1812 (e.g. 1107-1113).

IV

The most natural conclusion to draw from {1, 2, 3} is to suppose that the aggregate outcomes of history are the result of chance – or at least of processes so complicated and involving so many variables that their causal structure is inaccessible to the human intellect. On this view, the accounts offered by historians are merely *ex post* rationalisations: convenient stories, seemingly consistent with the facts but lacking any real explanatory content. The grand events themselves are essentially unpredictable and therefore in the case of individual events like Napoleon’s Russian campaign, largely inexplicable. This conclusion would go naturally with {4} – but it extends the claim about the impotence of ‘great men’ to a more general scepticism about historical narrative that would seem to be entirely Tolstoyan in spirit.

But Tolstoy seems not to believe that the course of history *is* a matter of chance. His view seems to be that the outcomes of 1812 were indeed inevitable: produced according to principles which though inaccessible to human understanding are totally determinate. In other words, Tolstoy draws a distinction between what is in fact determinate and what is knowable. Exercises in explanation in the historical domain may be essentially spurious; but that does not imply for him that the course of history might have turned out differently. On his view, it would seem, there are indeed laws of history: but human beings cannot know them.

This position raises at least two questions.

- (1) If the laws of history are unknowable, how can Tolstoy be confident that there are such laws and that they have a determinate character? What evidence might be provided to support such a claim? The issue here is not so much whether there can be known ‘unknowables’, but rather whether *meta* properties of such unknowables can be known even when the substantive matters are not. In fact, it seems plausible to suppose that Tolstoy’s position here owes more to his other metaphysical commitments than to evidence from human affairs themselves.
- (2) Does a determinate view of history commit Tolstoy to determinacy at the level of individual choice. For it is one thing to insist on disaggregation of the ‘great events’ of history to the level of a myriad individual choices and actions. But if those individual choices are themselves determinate, is Tolstoy dispensing with individual freedom? To be sure, the modern account of ‘mind’ as brain creates a range of questions about whether mental processes, caused (as most assume) by purely physical processes, can be consistent with genuine freedom of choice and individual action. Perhaps Tolstoy is foreshadowing these questions. There are certainly places at which he seems to declare that individual freedom may be an illusion.

However, that latter position would have it that Bonaparte and Alexander and other possible ‘great men’ of history are fully constrained by psychological determinism whatever their influence on historical events. That view would be totally consistent with an account of military engagements in which commanders were highly influential in determining the tactics and strategies and deployments of their armies. The constraints under which the commanders operated would be internal and psychological, rather than structural as Tolstoy elsewhere asserts. Put another way, it is not enough to claim that the ‘great men’ are subject to constraint: one must distinguish between two kinds of constraint to which they might be subject — *structural* constraints arising from the interdependence of all the figures who participate in the relevant social interactions; and *psychological* constraints arising (perhaps) from the physical nature of the human brain. Economists are entirely familiar with the former. They hardly attend to the latter, though the standard assumption is effectively one of total psychological freedom (perhaps of a Kantian kind).

These two kinds of constraints seem on the face of it to be independent. It would be perfectly consistent with psychological determinism for a relevant factor in determining A’s

actions to be B's actions (and for that matter C's and D's and so on). In that sense, the issue of psychological determinism simply muddies the waters as far as Tolstoy's social theory is concerned: if individual freedom is an illusion, then all are equally constrained. But this claim does not provide the grounds of an argument to the effect that the great men are merely tokens of aggregative processes.

Beneath all this, or related to it in some essential way, are Tolstoy's explicit appeals to Divine Providence: in most instances of which (235, 732, 841, 877) 'the course of human events is predetermined from on high' (841). This explicitly Predestinarian theology throws light on the two questions raised immediately above.

The first question concerns the 'laws of history'.

Though these are unknowable, Tolstoy's confidence both that there are such laws and that they are determinate are not, *and ought not to be*, based itself on direct evidence. If Tolstoy were a Popperian social scientist – which he most certainly was not – we might regard this belief as part of the 'hard core' of assumptions against which the negative heuristic is not to be applied, and on which his 'research programme' was based (Lakatos 1971). In fact, Tolstoy was a Russian Christian, born and raised in the Orthodox Church, of which in his teens, he was a pious and committed member (Wilson 1988, 35). According to St John of Tobolsk (1651-1715), of whose teachings Tolstoy would probably have been informed, 'Providence is divine will which maintains everything and wisely rule over everything'. Tolstoy's understanding of the laws of history is therefore almost certainly based on a specifically Christian dogma – which in an epistemological sense resembles Lakatos's 'hard core' both in its immunity from critical scrutiny and in being the necessary first step in constructing knowledge – in this case, knowledge of God.

The second question concerns human freedom.

Does Tolstoy's Predestinarian historical determinism allow genuine freedom of choice to his characters? Whether God's foreknowledge must preclude genuine human freedom has been actively debated by Christian, Judaic and Moslem theologians since New Testament times. Reassuring analyses have been provided by Augustine, Maimonides, Aquinas and many others. A convenient summary is provided in Levering (2011). Clearly this is an issue that goes beyond our remit. It is only necessary to point out in this connexion that the ontological status of human

freedom is irrelevant to our own discussion. For economists – and for other social scientists who employ methodological individualism – human freedom is merely an assumption: an element in the ‘hard core’ of our research programme. Its value is contingent upon its ability to allow us to construct what Samuelson (1947, p. 4) called ‘meaningful theorems’: hypotheses ‘about empirical data which could conceivably be refuted, if only under ideal conditions’. We have argued that Tolstoy’s implicit social theory is characterised by methodological individualism: which is based on the assumption that social phenomena can be understood as the unintended consequences of the acts of rational individuals freely pursuing their own objectives, in a setting of complex interdependence. Whether those ‘objectives’ are the result of ‘free’ mental processes is a question that social scientists can ignore.

V

What may we conclude from all this? The comprehensive and coherent account of ‘history’ desired by Tolstoy the would-be hedgehog – and which his own attempts at formulation failed to provide – can be inferred from the description of human society provided by Tolstoy the supreme fox. In his case at any rate there need be no ‘conflict between instinctive judgement and theoretical conviction’. We believe that the implicit methodological individualism that we have attributed to Tolstoy resolves the ‘violent contradiction between the data of experience from which he could not liberate himself. . . and his deeply metaphysical belief in the existence of a system to which they *must* belong’ (Berlin [1953] 2013, p. 45).

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Notes

- 1 All numbers in parentheses identify pages in Tolstoy (2010)
- 2 Book III, Part i.1; Part ii.1, 7, 19, 28, 38, 39; Part iii.1, 2, 20, 26. Book IV, Part i. 4; Part ii. 1, 7, 8, 10, 18, 19; Part iii. 1, 2, 19; Part iv. 4, 5, 10, 14

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