

«War and Peace» of Leo Tolstoy in sociology of science of Bruno Latour

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«Only when sociology has caught up with Tolstoy can we again be proud of our craft».

Bruno Latour

In 2015 «Pasteur: guerre et paix des microbes suivi de Irréductions» by Bruno Latour came out in Russian language¹. The title of the book evidently contains the name of the famous Tolstoy's novel "War and peace" and the numerous references in the book prove that "War and peace" has been important for Latour's thinking. But what particular thoughts of Tolstoy are valuable for Latour?

Before Latour's investigation, there dominated the vision that Pasteur's great genius had transformed the life of the whole Europe. In France, as Latour points out, Pasteur was especially praised: it was Pasteur who

“regenerated, revolutionized, created the new medicine, the new biology, the new hygiene” [Latour, 1988, p. 14].

In his research Latour aims to clear up what was accomplished solely by Pasteur and what was attributed to him. And Latour finds some useful ideas in Tolstoy's novel.

In "War and Peace" Tolstoy set a similar goal. Tolstoy believed that military historians had created false picture of Napoleon's invasions of 1805–1812. According to Tolstoy, historians had to find a reason for the already occurred military actions, and describe the acts of the thousands of people briefly, with just the reports of the commanders at hand. Consequently, historians took for granted that the discipline, which on the parade-ground strikingly subjects the will of the thousands of people to the will of the one person, would have the same effect in a life and death issue. Thus, the plain model was followed: the military commanders give the orders, the armies carry out the orders.

But Tolstoy new that real battles perform differently, that next morning after the battle no one – the chief commander least of all! – could tell how the action went on [Tolstoy, 1955]. So, in his novel Tolstoy focused not on the results, but on the events, he did not present any person as totally subordinated to the idea of complying with the orders for the sake of the victory over Napoleon, but showed the personages in different situations with different, often contradictory emotions and feelings. For instance captain Tushin during the bloody, bustling battle entered an unusual transpersonal state, and imagining himself a huge and robust man behaved bravely, and played the crucial role in the action. But later, in front of the commanders, Tushin turned out to be a feeble and timid little man. [Толстой, 1958, Т. I–II, с. 247–255, Tolstoy, 2009, Book Two, Chapter XX]. Tolstoy underlined, that there shouldn't be any heroes in his novel with no exceptions for Napoleon or Kutuzov. Latour admires

¹. In Russian language came out the second (2011) edition of the book. The first (1984) addition «Les Microbes: guerre et paix, suivi de Irréductions» has not been translated into Russian.

this Tolstoy's approach and draws a parallel between Napoleon in "War and Peace" and Pasteur:

"Do we have to speak of Pasteur when we speak of hygiene and medicine in the late nineteenth century? It is not immediately obvious that we do. Pasteur's position in this is rather like Napoleon's in that treatise on political philosophy which Tolstoy wrote under the name of War and Peace.

In that book, Tolstoy summons up hundreds of characters to give depth to what for him is the essential question: What can one man do? What does a great man like Napoleon or Kutuzov really do? It takes Tolstoy some eight hundred pages to give back to the multitude the effectiveness that the historians of his century placed in the virtue or genius of a few men. Tolstoy succeeded, and the whole of recent history supports his theories as to the relative importance of great men in relation to the overall movements that are represented or appropriated by a few eponymous figures. This is true at least where politicians are concerned. When we are dealing with scientists, we still admire the great genius and virtue of one man and too rarely suspect the importance of the forces that made him great" [Latour, 1988, p. 13, 14].

Following the example of Tolstoy, Latour wants to challenge the historiography of great scientists. He starts «Les Microbes: guerre et paix» (1984) with the words:

«On October 6, 1812, Kutuzov, general of the Russian troops, won a major battle in Tarutino over the Grande Armée led by Napoleon. » [Latour, 1988, p. 3].

Latour explains that at least that was the impression of Russian czar and of the French. But when Tolstoy writes about Tarutino battle in "War and Peace", he «is not quite sure that it took place at all». Latour refers to the passage from the novel, where Tolstoy shows that Russian military action in Tarutino went on in little agreement with the initial plan [Latour, 1988, p. 3, 4]. In fact, only one small detachment came in time to the stated in the disposition place. The other Russian regiments got lost in the woods [Толстой, 1958. Т. 3, с. 509–512; Tolstoy, 2009, Book Ten, Chapter I]. Latour asks whether Tolstoy talks about military strategy that epitomizes the plans of the action and about military chains of command. He answers "yes" and underlines that Tolstoy «has forever subverted the notion of leader, strategy, and chain of command» [Latour, 1988, p. 4].

Now it is Latour's turn to revise the predominated image of Pasteur, and in doing this Latour keeps in mind his «inimitable model», i.e. «War and Peace» [Latour, 1988, p. 111].

It is well known, that Bruno Latour reconsiders the contemporary notion of social and criticizes the term social context. Latour looks at those times when the words «social force» and «social context» were not repeated everywhere [Latour, 2005, p. 4–6] and he finds in Tolstoy an outlook which allows to avoid the concept of social context:

«Only if we distinguish between context and content does it appear contradictory to reduce the power attributed to a few great men and at the same time to highlight their personal contribution. The renewal by Tolstoy of the historical novel genre is a beautiful escape from this apparent contradiction: only after the crowds are put back into the

picture can the novelist afford each individual his or her own flesh and color» [Latour, 1988, p. 259].

From the very first description of war actions Tolstoy applies this technique and that is why, as Latour notices, the great writer manages to show that the victory of the Russian campaign was assured to a large extent by the army itself and not by Bagration or Kutuzov. In «War and Peace» Tolstoy develops his idea that as long as historians write histories of separate individuals and not the histories of «absolutely all those who take part in an event», it is quite impossible not to attach to a certain person the force compelling other men to direct their activity toward the needed aim [Толстой, 1958, Т. III, с. 756; Tolstoy, 2009, Second epilogue, Chapter III]. Latour points to the similar mechanism of exaggerating Pasteur's merits. Following Tolstoy Latour tends to restore all forces that acted round Pasteur, and to give freedom of action «to all the agents of French society in order to decompose Pasteur's efficacy» [Latour, 1988, p. 16]. Latour uses the word «agent» in the sense synonymous to his term «actor». One might expect that as soon as Latour introduces in his book the ANT's terms «agent» / «actor» the difference between Latour and Tolstoy reveals. We have a good reason to think so. Latour is the innovator in the modern sociology of science. Methodologically Latour looks on the Pasteurians similar to how Pasteurians look on microorganisms. This «laboratorial» approach gives birth to the new form of metaphysics which a priori does not accept the difference between natural and social. In Latour's thinking actors, the entities that act and which actions are experienced by other entities, can literally be anything provided that this entity «is granted to be the source of an action» [Latour, 1997]. In the story about Pasteur hygienists, doctors, drainpipes, hens, farm, insects, etc. are actors. Latour pays his attention not to the origin of the acting entities but to the way they manifest themselves, to the force of their action. The very intrigue of the book on «guerre et paix des microbes» arises from the tremendous destructive force that not yet discovered microbes displayed in all spheres of the society.

Unlike Latour, Tolstoy speaks only about personages, only about people. It seems that Tolstoy remains within the frames of the notions of social criticized by Latour. Nevertheless Latour notes:

«Each actor described by Tolstoy is summing up what the others do and is trying to make sense of chaos» [Latour, 1988, p. 259].

«Each actor », not «each personage», as it is written in Russian translation [Латур, 2015, с. 102]. There is no doubt that human characters play the major role in Tolstoy's novel. But Latour is mostly interested in war scenes of «War and Peace», and there, the objects of non-human origin constantly interact with the personages. Thus, during the panic retreat at Austerlitz, remains of Russian regiments were crowding around the dam near the village Augesd. On this narrow Augesd Dam, as Tolstoy writes, «for so many years the old miller had been accustomed to sit in his tasseled cap peacefully angling, while his grandson, with shirt sleeves rolled up, handled the floundering silvery fish in the watering can, on that dam over which for so many years Moravians in shaggy caps and blue jackets had peacefully driven their two-horse carts loaded with the wheat ...». Tolstoy draws the picture in the way, which

Latour, with no direct reference to Tolstoy, considers as an important for his view. Tolstoy does not concentrate the description, but spreads it, involves distant details, brings in latent connections. In his theoretical discourse Latour states that strength

«does not come from concentration, purity and unity, but from dissemination, heterogeneity and the careful plaiting of weak ties» [Latour, 1997].

The detailed description of the peaceful life in the dam before the war strengthen the impactive force of the Tolstoy's scene:

«...on this narrow dam amid the wagons and the cannon, under the horses' hoofs and between the wagon wheels, men disfigured by fear of death now crowded together, crushing one another, dying, stepping over the dying and killing one another, only to move on a few steps and be killed themselves in the same way. Every ten seconds a cannon ball flew compressing the air around, or a shell bust in the midst of that dense throng...» [Tolstoy, 2009, Book Three, Chapter XVIII; Толстой, 1958, т. I–II, с. 373–374].

Peaceful technical erection gathered retreating army in a very convenient for the shots of cannonballs place and thus significantly played into the hands of Napoleon, made the defeat of the retreating troops easy.

Another non-human actor of natural origin, a dense fog, considerably hastened the swift victory of Napoleon at Austerlitz. In the early morning of November 20 (December 2) 1805, following presuming plan of Austrian general Weyrother, Russian troops marched into the covered by thick fog hollow to their doom: the fog hid from Russian commanders that during the night Napoleon moved his army aboard the Russian troops. Napoleon smartly took advantage of the fog and ordered the action to begin only when the sun

«had entirely emerged from the fog, and the fields and mist were aglow with dazzling light» [Tolstoy, 2009, Book Three, Chapter XIY; Толстой, 1958, т. I–II, с. 353].

Latour in his book shows that due to a peculiar alliance with microbes Pasteur multiplied his influence on the society², Tolstoy in his novel shows that Napoleon reinforced his attack at Austerlitz due to a peculiar alliance with fog.

Latour clarifies the actions of non-human actors in order to determine more precisely what was done by one, standing at the head of the action, person, and what happened owing to «other actors». Besides, clarification of the actions of non-human entities lets Latour to reconsider the conception of the border between science and society, to show that this border runs far outside any scientific laboratory or institution. Tolstoy as a thinker involves non-human actors into description of actions just as circumstances, he follows his idea that all «innumerable people» who took part in the war with Napoleon acted «in accord with their personal characteristics, habits, circumstances, and aims» [Толстой, 1958, т. III, с. 107; Tolstoy, 2009, Book Ten: 1812, Chapter I]. Nevertheless, Tolstoy as a novelist does not miss the considerable role of non-human agencies in actions.

² Latour shows that Pasteur managed to demonstrated in his laboratory the model of how it is possible to avoid the unpredictable and harmful actions of “terrifying and mysterious” forces which in hands of Pasteurians obtained a clear origin – microbes.

Here we come right up to the appreciated by Latour Tolstoy's critique of the notions of power and strategy:

«L. Tolstoy (1869/1986) in the epilogue to War and Peace, criticizes mystical as well as social explanations of strategy. His critique of the notion of power is especially interesting for us...» [Latour, 1988, p.253].

According to Tolstoy, a possessor of power has a right to give orders, but is located in the farthest position from the action. A lot of unpredictable circumstances can interfere with the order, and only those orders which initially have a chance to be executed can be executed. [Tolstoy, 2009, Second Epilogue, Chapter VI; Толстой, 1958, т. III, с. 768]. Tolstoy explains his thought. After entering Moscow Napoleon became very close to the victory over Russians, he had never been closer. In Moscow Napoleon gave smart, genius orders, very much like the ones he gave in Austria. But if in Austria the orders ensured Napoleon's success, in Moscow they were doomed. Tolstoy underlines that for the order to be carried out there should be an interest of those who are supposed to carry out the order. Latour valued this Tolstoy's observation:

«For a reader of Tolstoy, on the contrary, no diffusion of a Pasteurian idea, no understanding of a Pasteurian doctrine, no advice, no vaccine, could leave the laboratory without others seizing upon it, desiring it, having an interest in it» [Latour, 1988, p. 60, 61].

Latour assimilated Tolstoy's notion of strategy as well. In the comments to the second chapter of his book Latour writes:

«The word "strategy" is always used here in its War and Peace sense. That is, the strategist make plans that are constantly drifting away; he seizes upon opportunities in the midst of confusing circumstances; he fights hard to make others attribute responsibility for the whole movement to him in case of victory, while leaving it to someone else in case of defeat».

And then Latour formulates an important statement:

«Each actor described by Tolstoy is summing up what the others do and is trying to make sense of chaos. Sometimes his interpretation is shared by others acting performatively on the setting, thus adding to the overall chaos. I call this performative summing up and negotiation of a global direction "strategy"» [Latour, 1988, p. 259].

In another work, in the article «Agency at the Time of the Anthropocene» (2014), Latour discusses an episode from «War and Peace» where supreme commander Kutuzov gave the order to march into the action while being completely sure that to initiate combat was senseless. Latour demonstrates how Kutuzov's strategical decision was formed. He cites Tolstoy:

«The Cossack's report, confirmed by horse patrols who were sent out, was the final proof that events had matured. The tightly coiled spring was released, the clock began to whirr and the chimes to play. Despite all his supposed power, his intellect, his experience, and his knowledge of men, Kutuzov – having taken into consideration the Cossack's report, a note from Bennigsen who sent personal reports to the Emperor, the wishes he supposed the Emperor to hold, and the fact that all the generals expressed

the same wish – could no longer check the inevitable movement, and gave the order to do what he regarded as useless and harmful – gave his approval, that is, to the accomplished fact.» [Tolstoy, 2008, p. XX; Толстой, 1958, т. III, с. 506].

Kutuzov did not insist on his opinion. However his obedience to the circumstances is not seen as a weakness of the supreme commander, but as his realism. Latour explains:

«If we tend to find this non-decision by a supreme commander so realistic, it is precisely because the author mixes up all the traits that could allow us to distinguish objects and subjects – “accomplished facts” and “inevitable movement” on the one hand and, on the other, “power, intellect, experience and knowledge”. Great novels disseminate the sources of actions in a way that the official philosophy available at their time is unable to follow» [Latour, 2014, p. 9].

Same episode from «War and Peace» is mentioned in «Pasteur: guerre et paix des microbes suivi de Irréductions» [Latour, 1988, p. 60; Латур, 2015, с. 102]. According to Latour, Kutuzov’s ability to summarize facts and to arrive to the decision in consequence, indicates a genius person. After la bataille de Borodino Kutuzov all nights was thinking over the latest rumors and news he had been gathering, he exerted every effort to differentiate his subjective guesses from objectivity:

«With his sixty years’ experience he knew what value to attach to rumors, knew how apt people who desire anything are to group all news so that it appears to confirm what they desire, and he knew how readily in such cases they omit all that makes for the contrary» [Tolstoy, 2009, Book Thirteen: 1812, Chapter XVII; Толстой, 1958, т. III, с. 548].

Latour adopts this Tolstoy’s model of genius for his analysis of Pasteur [Latour 1988, p.262, note 25; Латур, 2015, с. 136] and exposes two mechanisms of composition of the forces round Pasteur.

Latour restores the primary mechanism, which adds to one, emerged in the society necessity in scientific invention, another one and then the next, and the next. Reconstruction of this chain of necessities enables Latour to demonstrate Pasteur’s constant orientation on the forces able to seize his inventions. Many times Pasteur stopped his successful fundamental researches for the sake of the urgent for a bigger segment of the society projects. The second mechanism reduces long lasting interest towards Pasteur only to Pasteur’s genius. And here again Latour looks back on Tolstoy:

«When Tolstoy explains the Russian campaign, he describes the first mechanism, but he is well aware that the second is constructed differently, since the maneuvers are attributed to "Napoleon's genius" and "Kutuzov's genius." The same goes for bacteriology» [Latour, 1988, p. 42].

When needed Tolstoy depicts the second mechanism. For instance, he in details presents how after the defeat at Austerlitz without any reason, but being moved by irresistible desire, Russian high society made a national hero of Bagration [Толстой, 1958, т. I–II, с. 396].

Latour considers that Tolstoy skillfully chose a range of «winners» and «losers», that the composition of the opposing forces allows Tolstoy to test «his various hypotheses concerning the make-up of the forces» [Latour, 1988, p. 111]. Indeed, Tolstoy shows different principles of acting of different commanders: Miloradovich, Benningsen, Kutuzov, Napoleon. Tolstoy shows inconsistent actions of Russian and French soldiers and officers. Every battle in «War and Peace» is a dynamic composition of a considerable number of not subordinated to the initial plan forces. Latour refers:

«Let us not forget Tolstoy's lesson. Without any doubt, Napoleon and Kutuzov were at the "head" of their troops. Once the complex of forces that set them in motion is broken down, we have to recognize what those great men did and why Bonaparte and not Stendhal, or Kutuzov and not Miloradovich, entered Moscow» [Jatyp, 2015, c. 117; Latour, 1988, p. 71].

Tolstoy's readers clearly understand Kutuzov's wisdom, for instance, at Borodino. Not the prudence of Barclay de Tolly³ played a decisive role in the battle: when Barclay de Tolly saw a lot of wounded and the disordered Russian regiments he sent Kutuzov a report that Russian army was defeated. But Kutuzov had a different vision and at the crucial moment, when the losses were enormous and the strength of the army was nearly exhausted, he gave the order – «tomorrow we attack!» This order did not come out of logic of the battle. But these words immediately spread all over the army, because what Kutuzov said

«was not the outcome of cunning calculations, but of a feeling that lay in the commander-in-chief's soul as in that of every Russian» [Tolstoy, 2009, Book Ten: 1812, Chapter XXXV, Толстой 1958, т. 3, с. 267].

This order inspired the hope of victory in exhausted men, and played a significant role in the battle's ending.

Latour repeats at least twice that Tolstoy demonstrated that when in the midst of the battle we hear the cries «rout» or «victory» they do not reflect the situation but express the aspiration «to ward off fate» [Latour, 1988, pp. 111, 147–148; Jatyp, 2015, c. 167, 209]. Latour shows that the same eloquent rhetoric – "evidence of reason", "force of logic", "thrust of progress", etc. – exists in armoury of the winners of scientific wars.

It is when Latour speaks about composition of the forces he calls «War and Peace» his «inimitable model». Tolstoy shows the different principles of action of the people who took part in the war; similarly, Latour reveals different acting of army, colonial, civil doctors, and common people towards the Pasteurian hygiene measures.

Admiring many ideas of great writer, Latour utterly rejects Tolstoy's providentialism. In his writings Latour deliberately avoids using the notions "strategy", "sociology", "theology", etc. Due to Latour these empty notions conceal the real order of the things. Latour strives to generate new sociology or even philosophy where relations of actors are freed not only from anthropocentrism but from theocentrism, from the biased submission to any divine substance. So, when Latour spoke about the fre-

³ The supreme commander of the Russian army till the middle of August 1812.

quency of resorting to pseudo-scientific notions in scientific and political discourses, he points out that even

«Tolstoy himself proposes a global religious explanation for the vast movement that freed the Russians from Napoleon's army. This explanation revolves around God's providential plan for Russia» [Latour, 1988, p. 251].

Nevertheless, Latour did enrich his methodology with Tolstoy's approach and he draws the final picture of «war and peace of microbes» similar to Tolstoy's picture of the battle between "Napoleon" and "Kutuzov":

«Out of the magical combat between "Napoleon" and "Kutuzov," Tolstoy created a battle of crowds, which act sometimes in great masses and sometimes as individual characters. In the middle of those crowds, acting sometimes as crowds and sometimes as characters, Napoleon and Kutuzov (without quotation marks), among other things that they do, give orders which are misunderstood, wrongly obeyed, badly transmitted, distorted, and betrayed, and which culminate, from hour to hour, in the movements of regiments and cannon about which the information comes back belated, distorted, and betrayed. The words that the troops give to what is happening also act as selffulfilling prophecies. Depending on whether someone shouts the word "victory" or "each man for himself," this or that part of the front retreats or rushes forward. The battle to know what is happening and what has happened is endless...

The same goes for that war and peace of the microbes, which I have recounted so sketchily, as we wait for someone to turn up who will describe the Natasha of rabies and the Prince Andre of yellow fever. I had to give back to the sciences the crowd of heterogeneous allies which make up their troops and of which they are merely the much-decorated high command whose function is always uncertain. I had to show that these disreputable allies (hygienists, drains, Agargels, chickens, farms, insects of all kinds) were an integral part of so called scientific objects»[Latour, 1988, p. 147].

Resuming his research, Latour also point to its main difference from Tolstoy's thinking:

«Indeed, as soon as we stop reducing the sciences to a few authorities that stand in place of them, what reappears is not only the crowds of human beings, as in Tolstoy, but also the "nonhuman", eternally banished from the Critique. If we succeed in this emancipation of the nonhumans from the double domination of society and science, it will be the finest result of that perhaps clumsily begun "anthropology of the sciences." [Latour, 1988, p. 150].

And gives the following general opinion of «War and Peace» by Leo Tolstoy in recent (2015) correspondence:

«great novelist (Tolstoy – *E. Zh.*) multiply the agencies in my sense (better call them actants for that reason) and then when reflecting on the meaning of what he has done (something the artists are mostly pathetic about) he erases the textual multiplicity and replace it with a boring ideology of human action vs providential action which diminish the weight of the novel»⁴.

⁴ Fragment from the e-mail letter to the author of this article (22nd of august, 2015)

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