

# The Concept of Force in Political Science Research. On the Example of Conflict Between Ukraine and Russia

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Żmijowski, Oktawian Piotr (2021) The Concept of Force in Political Science Research. On the Example of Conflict Between Ukraine and Russia. *Ukrainian Policymaker*, Volume 8, 160-166. <https://doi.org/10.29202/up/8/16>

*The inspiration for writing the article was a fascination with physics and the understanding that transferring force to political science should not occur by establishing appropriate rules. The variable referred to in its original form is governed by specific laws, and so it should be in all sciences that adopt this concept. The determination of the rules of force must be done by defining the problem. The article will be an attempt to answer the interdisciplinary trend and is more an attempt to answer the question of what exactly is “force” and how to define it. By discussing the definition of force, the article attempts to understand how the crisis between Ukraine and Russia may evolve. It is an attempt to transfer the concept of force to the indicated case study.*

*Keywords: force, politics, strategy, physics, Crimean crisis*

Received: 20 February 2021 / Accepted: 06 April 2021 / Published: 29 May 2021

## Introduction

Force is a physical quantity subject to its laws. Political science and various Social Sciences have adapted this concept and made it a qualitative criterion. Many geopolitical researchers use this variable to determine the position of a given country on the world map. Still, the force criterion is different – depending on the thesis that someone proves or contradicts.

If you look at the scientific articles on “force,” you can see the qualitative approach mentioned above. The theoretical approach balances power with might. It is appealing to many authorities in the field of security and placing these two concepts on the level of strategy and policy. Presenting the achievements of specific scientists, he breaks down the concept of force into entirely different aspects and erroneously balances the two English words force and

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power. This is a wrong approach to the subject as it describes two different physical quantities. That is why such a relative approach to the subject of force should be abandoned. The word force denotes force, and power means power. These are close to each other, but physics cannot be treated relatively due to the description of certain rules on our planet, just as you should avoid so loosely adapting two separate quantities subject to specific rules. In concluding the introduction, it should be noted that the relative approach to force and power (Łoś, 2018).

## **Force as Physical Quantity**

To fully understand the essence of the discussed problem, it is necessary to combine the concept of force and power to understand a physical quantity. It is needed to refer to the physics textbook for a university. Understanding the problem at its root will allow you to grasp the nuances of this issue and give up a relative approach to terminology.

At the outset, physicists explain what force is and how it should be defined. In the opening words of the section on dynamics, the concept is referred to as the cause of the movement. This phenomenon is represented by three vectors, position, velocity, and acceleration. Each of them includes a different component. When we are talking about uniform motion, the acceleration speed is constant and equals 0. Why? Since acceleration is a velocity variable, these two quantities affect the last vector, displacement. Thus, these three values for movement help us find the body's position and prove the existence of one more basic physical concept, namely the frame of reference. The movement of the body occurs under the influence of force, momentum, power, and mass. However, equally important is what the movement takes place concerning (Kąkol, 2017).

With this basic set of information about the physical understanding of a change in position, motion, one can consider the concepts causing such a phenomenon. We are talking about the next branch of physics – dynamics. As part of the discussion with the source material, which is the textbook, it is worth noting that the rules of the exact sciences hamper the humanistic understanding of physics. Considering how often we use certain words interchangeably. After delving into physics, we will notice that displacement is not the essence of motion, but only its component, one of the vectors. The reference system is the most important in movement. It is the plane concerning which we compare the body's position, velocity, and acceleration.

This information significantly changes the perception of power in politics – but more on that later. In the next stage of considerations, it is worth considering the cause of the movement and the quantities that affect it. The following notions are in the lead here: momentum, mass, force. The first important aspect is weight determination. It determines other essential matters. Determining how “heavy” the body allows you to choose how it will behave concerning some frame of reference. Another factor that determines the cause of movement is momentum. So, the product of mass and vector velocity. If we could relate this to the example in the surrounding reality, it can be illustrated by the collision of two bodies with the same momentum value. Thus we are dealing with the phenomenon of impasse. A collision of the ship with the ice floe when both values are the same will cause the ship to get stuck in the ice structure. This will result in drifting in a certain direction. The phenomenon of impasse understood in this way also helps to understand the international situation differently – as discussed in the following pages. After this introduction, we move on to the clue of considerations, i.e., what actually force is in physics. We understand this quantity as a value capable of changing the momentum of a given body – an example of such force is gravity, which over time changes the trajectory

of a projectile when it loses speed. Thus, a force can be defined as the ability to resist specific rules. When we look at the case of a projectile, it is able to resist the force of gravity as long as its kinetic energy charge exceeds the value of gravity that it does not fall immediately after rejection from the barrel of the rifle. After the potential energy is lost, the cartridge will begin to dive downwards or will drop along the sloping trajectory. This means that force is a value that can be lost. Newton's first law of motion should always conclude his initial consideration of force, which says: A body that is not affected by any force (...) remains at rest or moves with a uniform motion in a straight line – this is the situation known as inertia. The second rule is that if a force of a certain value acts on a body, it is equal to the change in the body's momentum value. The third principle applies to what has always been of interest, i.e., interactions. When two bodies act on each other with a certain force, the two values balance each other, and the vectors become the opposite. The above situation describes a collision of two organisms. This results in a change of direction and the energy gained from this meeting. That if a body is affected by a force of a certain value, it is equal to the change in the momentum of that body.

### **Force in Social Sciences**

Nye Jr., when defining force, notices that this concept, like any basic idea, has no systematic level and constitutes a space for discussion. In his opinion, everything depends on the interests and values of a particular researcher. The same author notices that it is impossible to derive an unambiguous definition of force because it all depends on the context. However, when we recall the physical aspects of force, we will see that the definition of force becomes systematizable. The author rightly points out that the concept has become highly subjective (Nye Jr., 2012).

It is worth staying with the subjectivism of power, at least for a moment, to present a look at the force of other researchers. If we assume that this concept is explicitly related to ensuring our own safety, we will evaluate the entities in this respect. Józef Tymanowski notes that the state in which we can provide peace and comfort consisting of freedom from threats can be understood as the concept of security – at the same time, it indicates the lack of the same definition of security for all sciences. Transferring this to the ground of considerations about force, it can be stated that the subject capable of creating a comfortable reality is endowed with a certain force. Therefore, the ability to influence one's surroundings is the first criterion by which we can consider a state endowed with force. Paul D. Williams, in his book *Safety Studies*, notes that force is the ability to control the purpose of ensuring the safety of oneself and subordinate entities. At the same time, it creates a state of survival, which is a superior need. Only after fulfilling it, we can ensure our safety as a higher value (Tymanowski, 2009; Williams, 2012).

Any consideration of military power should begin with the Russian Federation. The successor of the Union of Soviet Socialist Republics exemplifies the evolution of power in politics. In the Federation, the concept of power depended on taking over the influence of the fallen state. This was possible partly through the creation of the Commonwealth of Independent States (Bryc, 2018).

Following A. Bryc, primary federal interests can be distinguished based on (Piątek, 2011):

- Systemic integrity;
- Sovereignty and territorial integrity;
- Economic, social, and political stability;

- Obeying the law and maintaining the legal order;
- Development of an equal and mutually beneficial international situation.

If you look at force as the ability to ensure security, you can see in the actions of Gorbachev and later Yeltsin a desire to build a space for dialogue with the West. The departure from the classical bipolar model characterizing the Cold War period will be visible for a few more years in how the Russian Federation conducts politics. The beginning of Putin's presidency brought about a redefinition of the concept of security. In the 1990s, Moscow felt a growing marginalization, which was reflected in the way it conducted politics. NATO's expansion to the east and talks with Poland about joining the alliance raised concerns in Russia that the Federation was being pushed away from – it would seem – its natural sphere of influence. The alliance's intervention in Kosovo in 1999 convinced the Russians of their weakness in relation to other strong players. This caused frustration and opposition. Diplomacy with several hundred years old referred to the issue of the alliance's intervention traditionally – calling this state of affairs a breach of international law, especially the Charter of the United Nations.

When referring to the concept of power, one must remember the consequence of such marginalization of Russia. Eventually, in 2000, a politician of a new format took power. Vladimir Putin was – as it turned out later – a successful attempt to break with the Federation's passivity. Internal changes, including the nationalization of the energy industry, allowed Putin to effectively rebuild Moscow's image not only in the international arena but also among the Russians themselves. Power ceased to be associated only with inept politicians helpless against the American hegemon. The new president has made it his primary goal to rebuild the sense of Russian pride and restore the importance of the Federation in the region and in the world. Therefore, it will be necessary to add the role of the power apparatus in shaping power to the conclusions of the considerations.

To be able to talk about the fact that the state or any other social entity can ensure security. You should first make sure that it is able to make a decision. It has an identified apparatus of power existing in the political system. The broadly understood "office" by the theory of political leadership does not have to have only positional competencies. Maciej Hartliński distinguishes behavioral features in the leader that will help him convince the community to himself, allow him to create a feeling in the group that after receiving the mandate of power, he will effectively carry out tasks to ensure happiness and security of the community (Hartliński, 2012).

Speaking of force, it is impossible to forget about Friedrich Nietzsche, who in his work *The Will to Power* draws us an image of a strong being, the concept of a Superman<sup>1</sup> who does not need morals or laws to understand their actions. The philosopher mentions that this being distinguished from others does not need religion or morality to be aware of the consequences of his act. It is the state of knowledge that determines a Superhuman being because it sees without moralizing what actions are harmful. The whole work subjects the way of thinking to criticism in terms of punishments and rewards. Assuming that man is born happy and the right path of development is the concept of freedom in the right way, without the need to impose moral restrictions on oneself (Nietzsche, 2009).

When trying to create the concept of forcefully adapted from physics, if you want to subject it to specific rules, you must remember that awareness, understanding your position and situation is the beginning to understand your force. Nietzsche indicated this as the basis for creating reality. This can be applied by analogy to force as a physical quantity in politics, but more on that later.

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<sup>1</sup> Misunderstood and adapted to the needs of the criminal activities of the Third Reich.

When considering force, one aspect of it should be looked at. The subject has it when he is able to shape an order or maintain a favorable state of affairs. Such a thesis can be done by looking at the Cold War deterrence strategy. Some authors mention that a new type of weapon contributed to establishing the Cold War order – the atomic bomb. The use of it by the Americans during the Second World War placed them in a powerful position for the fate of the conflict. The new player had a weapon with an unprecedented power of destruction, especially in terms of society.

After the world was later divided into two blocks, nuclear weapons became an indicator of force and superpower. The cornerstone of the Cold War deterrence strategy by Piątek was aware that both sides had nuclear weapons, which prevented the two powers from conflict. This assumption adds another aspect to the definition of force. In general, it is about having resources large enough for the opposing entity to consider entering into open conflict unjustified (Piątek, 2011).

Roman Kuźniar described a force as an element of strategic studies, described it with the ability to force the opponent to be submissive and passive. At the same time, he pointed out that the strategy itself consists of using a spectrum of means to achieve political and military goals. Force, according to Kuźniar, means exerting pressure on the state. The use of the word “submission” suggests that the purpose of using “force” is to win and dominate the opponent (Kuźniar, 2005).

The last and most important aspect of the discussed variable is the moments that should be highlighted. It's about using force and stopping. The art of warfare in the modern world indicates the case of the Vietnam war as an example of the fact that even an overwhelming force may not be enough to face the unfavorable conditions of the battlefield. We will then come to the point where the force used will exceed our ability to use it. We will cross the moment when we can “afford” to use it. Generally speaking, it is not strictly about economics. The focus should be more on the legitimacy of force in politics when it makes sense. This means that the subject is able to logically, doctrinally explain to himself why it is still worth using force (Smith, 2010).

When we cross this border, we do not only doom ourselves to a potential failure but also – more importantly – we take away the field to negotiate in the event of an unfavorable end to the conflict, in which we play the role of a loser.

Knowing when to stop using force, you should consider when to use force. However, when there are premises that the potential can be used before we focus on the moment of application, it is worth considering what the conclusions presented here led to.

Potential is a key concept for the consolidation of physical and political force. The determined value of gravity results from the fact that the body under its influence will respond with a charge in the opposite direction. The potential of the subject determines the answer or the lack of it. A falling apple will respond to gravity with its mass, so the falling will depend on how “big” the body is. If we relate this matter to the orbital motion of the planets, we find that these bodies, under the action of the solar magnetic field, act on the star with the same attraction, with the opposite vector. This means that the Sun, with its force, exerts an influence on the other planets, determining their orbital motion and not the other way around.

In conclusion, a robust political entity is fully aware of its potential. Assessing it subjectively, it can determine its forces and weaknesses. As a result, it is able to influence the sphere of other political entities objectively. Its force of a particular value is able to change the plane on which it moves.

Thus, force is a specific value capable of exerting an influence on the space in which the body that possesses it moves. It is a variable that all subjects are endowed with. The differences are in its value, which results in an interaction with opposite vectors. The influence is more significant the smaller the opposite vector is. When the forces are equivalent, the two entities will gather bodies of the lesser force around each other until they reach tangent points that may result in conflict or mutual deterrence.

### **Use of Force in the Case Study of the “Ukrainian crisis”**

The situation between Russia and Ukraine can be mentioned as an example of political influence. They existed as two entities before the crisis, one former sphere of influence still dependent on the other.

The force of these two bodies is independent of each other. But let's assume that body A emits a magnetic field (Russian Federation) and body B is attracted. As a result of the elections, there was a reversal. Thus, body A is no longer able to attract body B (Ukraine) due to mutual repulsion (invasion of Crimea), a part of structure B is broken, which returns to its original charge and is again susceptible to body A, finally striving for full integration with it (referendum). By design, polarity shift is an evolutionary process. This cycle in political science can be defined as elections.

As a result of the elections, the country is divided into two opposing political blocs. The change in the value of the “magnetic field” disturbs the structure, tearing away Crimea and triggering pro-Russian separatisms. This is the result of pole instability when the value changes. The reason for this is a “rupture” at the territorial level. The situation is similar in physics. When the body's structure is disturbed, its smaller fragments will be more susceptible to the stronger gravitational influence of a larger body, capable of generating a specific electromagnetic charge (influence). Hence the deepening crisis in Ukraine, as Russia is pulsating, time and time again, increasing or decreasing the power of its impact on more disintegrated regions (smaller parts of the B body).

### **Conclusions**

The author does not impose his definition of force on anyone. The article is a voice in the discussion and an attempt to standardize it. Given the origin of this concept, it seems evident that in social sciences, “force” should be defined. Such an approach to the subject will help in the future to understand the situation in the international arena, which already resembles a system of planets in mutual systems of interactions.

Since broadly understood politics and society are beginning to resemble multipolar zones of views and influences, it seems reasonable to give all this a new shape also in terms of concepts and principles.

Only as scientists will we be able to react to the globalized world by trying to understand it through an interdisciplinary approach to science. This can help enrich existing theories and create new ones that respond to social science challenges.

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