Global and regional security. A return to military strength (?)

The aim of the paper is to analyse the importance of military power potential in the creation of modern international relations. Research data encompass the perspective of both states and international organisations and the analysis proper covers the issue of military strength as the main component defining the status and operational capability of states and international organisations in a crisis situation.

Modern international relations are the resultant of multiple determinants. Over the past several dozen years it has been possible to observe various emphasis patterns as regards the majority of those. The phenomenon also affected, and that to a great extent, the perception of military strength. The strength in question still constitutes a basic factor determining the position of a state in political world order. However, there is no one, universally accepted and binding model of strength as a component of modern international relations. One can still come across arguments of supporters of both the so-called soft power and hard power approaches.

Key words: global security; regional security; transatlantic relations; military power; war strategies

Introduction

Modern security is composed of efficient utilization of the potential within diplomacy and strength. Security policy can be shaped by states, global and regional institutions. NATO and the European Union have such a character. Both of them are based on a specific closeness of ideas, goals, and cultural identity, and have also clearly defined their membership requirements (Gizicki, 2013, p. 11-12).
The objective of the analysis conducted in this paper is to present the nature of the contemporary significance of military strength as a tool employed to shape global and regional position of states and international organisations.

The concept of military strength is used in its broad sense in this paper. Firstly, it encompasses closely inter-connected capacities of states and international organisations, including some direct components, such as the number of soldiers and combat equipment. Moreover, it also contains equally important extra-military factors, such as economic, social and political potential. It enables the subject to effectively shape its military position, without incurring a collapse of the whole state system or some collaborating institutions.

The text unequivocally separates the concepts of strength and aggression. The fact that a state has military strength or power potential does not necessarily entail its use of those for aggressive purposes. It can, however, be the case and some of the subjects use this analogy in practice. Still, for the purposes of the present analysis strength is not a tool equivalent to aggression.

The standard subjects of international security are states and international organisations. The majority of definitions of a state specify its intrinsic features and components. These are, above all, government, territory, nation (Jellinek, 1924). The 1933 Montevideo Convention lists, next to the enumerated components, another factor among the legal criteria for statehood: a capacity to enter into relations with the other states. International organisations are, on the other hand, a means of the institutionalisation of these relations, with respect to the shift in the status and understanding of the role of a state.

However, regardless of the subjective aspect (i.e. the subject of security), it is the military strength that plays one of the vital roles in the process of shaping the global, regional and national order. Naturally, one has to highlight the differences in emphasis placed on its importance in theoretical and practical concepts of national and international security. Nevertheless, it is not possible to talk about responsible security management at a national and international level not taking that capability into account. Each political subject uses it, predominantly as a defensive measure, not a means of aggressive actions. Ensuring that all the features of statehood listed above are in place requires of the state to approach the subject matter rationally. What is then the modern understanding of military strength? What are its components?

Theory and standard conceptualisation

Military strength in the 20th century referred broadly to the achievements of classical security philosophy. Plato and Aristotle, while criticising a deviant military state, emphasised the validity of existence of armed forces under civil control in its modern sense, as well as the pos-

---

1 The author is very grateful to the anonymous reviewer and editors for comments and help to finalize the manuscript.
sibility of using military strength as a means leading to peace. St. Augustine’s and St. Thomas’s pacifist concepts also highlighted the ultimate possibility of occurrence of a just, defensive war, an instance of which could be the so-called War on Terror. Irrespective of the progressive diversification in the area of security, including the deployment of armed forces, Machiavelli’s words still seem valid: “the principal foundations that all states have, new ones as well as old or mixed, are good laws and good arms” (Machiavelli, 1998). According to Hobbes, the inevitability of war related to human egoism justifies taking radical actions, including substantial state power. Grotius, on the other hand, points to the supremacy of cooperation and partnership between states (Hurvey, 2006). Kant’s appealing vision concerning eternal peace is in fact a response to the imbalance and domination of a state over itself present in the world. The imminence and incessance of an armed conflict, a war dominated Clausewitz’s views (Clausevitz, 1873). Nowadays, one can note an increase in awareness of the need for cooperation and partnership aimed at minimising the risk of contingency of war.

Military strength is an area of disagreement between the supporters of realist and liberal theories. The former emphasises the superior role of a state, points to power potential as a basic component of raison d’état, recognises the necessity of actions aimed at repelling prospective enemies and maximising a state’s security (Morgenthau, 1986; Waltz, 2001). The latter highlights the dominant role of democracy, trade, close cooperation and supranational institutions (Nye, 2011; Kaldor, 2003; Kohene, Nye, 1977). The existence of armed forces is undoubtedly necessary but their deployment is limited to the contexts of ultimate threat.

Military strength played a superior role in many situations in the 20th century. Often enough it proved pernicious, especially to the aggressors. Difficulties involved in precisely specifying its importance in a given context can be observed on the examples of the two world wars, conflict in the Balkan Peninsula, in Afghanistan and Iraq. To use an ancient adage, “[i]t is only one who is thoroughly acquainted with the evils of war that can thoroughly understand the profitable way of carrying it on” (Sun Tzu, 2004). Numerical and qualitative advantage at the time of conflict does not ensure victory in all cases. The actual possibility of making use of the advantage constitutes a key factor and is in fact determined at the stage of preparing for war. Moreover, some researchers point to other conditioning factors, such as the importance of economy and limitations in the area of military power potential (Eugen-Knorr, 2015).

After World War II, in the bipolar world dominated by arms race and dichotomous division into the East and West, military strength was a vital component of raison d’état of each party. The issue of military security played a crucial role. The hard-line belief was that all evil comes from the outside, and the amount of arms and the mobilization capacity will determine the outcome of a prospective confrontation. Rivalry pertained both to the type of arms (including nuclear weapon capacity) and to the place of confrontation (the so-called “Star Wars”). There were also other supportive measures and tools which proved to be of great importance, to mention only the extensive intelligence and espionage operations. One question seems in order here. Is the
present-day situation different or does it closely resemble the seemingly long gone days, despite the apparent “dormancy” in the security area induced by the fall of the bipolar division of the 1989-1993?

**The importance of military strength in the modern world**

Military strength may act as a key factor in repelling and holding back an enemy or upholding a state’s position. It has its tangible results in the form of:

1. formal foundations in the area of security,
2. practical actions based on a state’s / international organisations’ own capacity,
3. practical actions based on multilateral cooperation.

Depending on the precise time and geopolitical context, the importance of military strength underwent numerous changes during the 20th and 21st centuries (Hirst, 2009). At the time of the Cold-War confrontation, the military capability of the two blocs increased rapidly. It was an obvious component of raison d’état, a factor in sustaining strategic balance and in many cases it also constituted one of the sources of the inter-bloc rivalry. The fall of the bipolar division of power brought about the “dormancy” in the area of security that I mentioned above. In many instances it meant a sharp decrease in armament expenditure and a shift of emphasis from military to extra-military criteria of security, where military strength was only one of the factors, and in many cases not the most important one. That situation had a rather negative impact on the military condition of many states and organisations, including NATO (Zięba, 2018). A gradual return to the increased importance of military strength can be observed in the asymmetric, hybrid world (Grigalashvili, 2020; Betts, 2012), i.e. the world after September 11, 2001 and the world after 2014 where the actions of many states, including Russia, are unpredictable (Pynnöniemi, 2018). Some voice the opinion that a number of characteristics of a peculiar balance of power might be currently influencing the modern global relations in various ways (Sokolsky, 2017; Rynning, 2015; Powell, 2015).

The key element of the transatlantic cooperation is the ability to shape regional and global security in multiple dimensions (Kupiecki, Michta, 2015), making use of the combined potential of the U.S, NATO and EU (including Central Europe - Baltic, Visegrád and Balkan states).

For the purposes of the analysis undertaken here, I briefly discuss the importance of the military strength within NATO, the EU as well as that of the U.S. and Russia. In almost each case one can observe a clear evolution of views, principles and actions. Is that only an outcome of egoism, especially national one? Or is it the changing dynamics on the international stage that shape the actions taken be these entities? Military strength is gaining importance, also in a geopolitical
NATO is in principle a defensive alliance. However, military strength is a permanent component of the institution and is referred to in the Treaty text itself. It goes without saying that the potential deployment of these forces corresponds to the observance of the regulations of the Charter of the United Nations (Art.1, 1945). Additionally, all member states are obliged to take care of their own military power potential (capability) (Art.3). And yet, an analysis of the actions taken by many of the NATO member states shows a clear decline in the implementation of this essential commitment while the majority of these states hold tightly onto the Alliance guarantees listed in Art. 5. One should bear in mind, however, that it is not possible to liberally select the Alliance commitments which one intends to implement, for instance when it comes to the GDP percentage spent on defence. Military capability is a tangible asset which can be used when necessary “to restore and maintain the security of the North Atlantic area”.

The war strategies of NATO also provide arguments in support of the importance of military strength in its operations. They stem, naturally, from a response to given threats at given times and undergo a clear evolution and shifts in emphasis. They make one realise, however, how actual the need to use armed forces is, in cases where it is necessary to defend its member states and the North Atlantic area (nowadays, exceptionally, also some areas outside the Treaty territory). During the large-scale retaliation of 1957 the possibility of launching a nuclear attack in case of a violent attack on the part of the Warsaw Pact (WP) was seriously entertained. The strategy of flexible response of 1967 made provisions for the prospective use of multidimensional military measures, both conventional and nuclear. Their deployment depended on the type of threat to be used by the WP. Since 1991, when a new strategic concept came into existence, one could observe much more varied types of military resources (conventional and nuclear) as well as a broad range of actions known as crisis response operations. Both the prospective aggressor and the operational area have changed. NATO has become virtually the only security organisation which is capable of undertaking effective actions anywhere around the world (Dragomir, 2018; Cimbala, Forester, 2016).

An analysis of the actual actions undertaken by the Alliance, especially in the context of its recent summits (2014 in Newport, 2016 in Warsaw and 2018 in Brussels), allows one to notice that the military capability and readiness to defend its member states and territory is NATO’s key objective (Gizicki, 2019). It is of great importance as far as the cooperation with the EU is concerned (Gardner, 2016). Even though in Newport one could still observe some restraint with respect to the unequivocal deployment of armed forces on the so-called Eastern Flank, already in Warsaw it was determined that taking that step was necessary. This gave rise to concrete actions, among others as far as the deployment of NATO’s armed forces and their equipment in Poland and Baltic countries is concerned. The reason for those was the conviction about volatile and unpredictable behaviour of Russia and its increasing military activity. A tangible instance of that
is the war in Eastern Ukraine. That is not to say that there are no other arguments in support of this claim, such as Russia’s more extensive asymmetric activities, including those in cyberspace. The summit in Brussels confirmed the determination to strengthen NATO’s Eastern Flank as the actions taken by Russia against Ukraine and the whole region escalated. Moreover, a need to intensify the activities in southern parts of the Alliance’s territory in view of the European migrant crisis presented itself. President Donald Trump’s firm stance as regards the implementation of financial commitments was of vital importance (Mandelbaum, 2017). The financial aspect determines, to a great extent, the effectiveness of the actions undertaken by the Alliance, including those aimed at strengthening the military power potential in order to repel enemy states and allow NATO to commence new operations. NATO’s activities could therefore be said to be shaped by the need to consolidate the Alliance in the face of Russia’s destabilising efforts, its untrustworthiness and striving for conflicts, not necessarily real ones but also those leading to a classic case of destabilisation (Kroenig, 2015).

The European Union is perceived primarily as a soft power. Democracy, rule of law and liberty are all virtues of utmost importance for the creation of security and prosperity zone (Holden, 2016). For this reason the EU uses diplomacy and economic cooperation as the basis for its operation. This is the approach dominating in the European Security Strategy of 2003. Efforts aimed at fostering a closer cooperation in this area were supposed to ensure (to paraphrase the subtitle of the document) that Europe would be secure and the world better. The EU’s ambition was to develop a more intimate supranational cooperation as a result of the actions taken to convince it that the bigger and more consolidated it is, the more effective it gets. It was also necessary to ensure a shared responsibility for the world security and stability. The document clearly pointed to the EU as a global player (Biscop, 2016). And yet, despite all of that, the soft impact has always been mixed with an awareness of the importance of military strength and necessity of improving defensive capacity. Nowadays, the issue is evoked during debates concerning the need to foster permanent cooperation as far as common defensive policy is concerned, entailing the use of each state’s own mobile and effective armed forces. That change/evolution in the perception of security can be clearly observed during an analysis of the EU’s new strategic document known as “A Global Strategy for the European Union’s foreign and security policy” of 2016. The EU’s role as a global player with the related soft impact is undeniably upheld in the document. However, it is equally clearly stated that Europe must also function as an effective military power. The document asserts that “[i]n this fragile world, soft power is not enough” (EUGS, 2016). Thus, efforts are also taken to strengthen the EU’s credibility in the areas of security and defence. And yet, are these actions reasonable, necessary and attainable within the limits of regular armed forces and by means of forming the EU’s own army? Is it not an attempt at duplicating and complicating NATO’s role in Europe? The migrant crisis harrowing Europe since 2015 has painfully exposed the EU’s limited capacity to respond using its regular police and border guard forces. Taking decisive and effective action in protecting the external borders in
accordance with the EU law and agreements from Schengen has proved to be difficult. Military power seems to remain a province of individual states or organisations whose priority is security. The EU is not quite prepared to be involved in such activities (Tocci, 2007). Its humanitarian and police aid, also outside Europe, appears to be much more efficient. Thus, if the EU’s impact is not to be limited to the soft power, it might be worthwhile to consider the so-called smart power strategy, i.e. the ability to recognise each party’s strengths and weaknesses in the implementation of their foreign policy, define and look for points of contact between them (Gehring, Urbanski, Oberthür, 2017; Wilson, 2008). One could venture to postulate that nowadays the EU does not function as a military superpower. Therefore, it seems warranted to concentrate on viable possibilities and the strengthening of those actions which are actually feasible. Naturally, it is possible to find fairly optimistic analyses of the matter at hand, but the question is: are they justified (Kuścielny, 2017; Yeşilada, B. A., Tanrikulu 2015; Coelmont, 2011)?

The United States are the only superpower with a dominant or at least important position in each aspect of security. And primarily as far as military strength is concerned (Cypher, 2016; Spykman, 2007). It would be difficult to seriously entertain the idea of solving a global problem without U.S. involvement. This is not to say that the state in question is without its own problems, also in the area of effective military operations. It needs support in this respect. And yet, its impact on global security seems unquestionable. Regardless of the U.S. president’s political affiliation, the country is characterised by political realism, particularly in the area of security. Military strength is therefore one of the basic factors determining the state’s position, its objectives, undertakings and actions. U.S. geopolitical location in itself guarantees their security. This awareness (barring the Pearl Harbour attack) dominated American politics until the end of the 20th century. The events of September 11, 2001, related to the plane attacks on New York and Washington, contributed to an increase in the importance of military power potential and defensive response both within the U.S. and beyond their borders (Nau, 2002).

The U.S. national security strategies reflect their attitude to security at a given point in time. They have grown in importance since the September 11 attacks. It is related particularly to the real threat of a hybrid attack which could be launched even on a superpower such as the U.S. Delineated in 2002, the so-called Bush Doctrine constituted a peculiar and radical breakthrough in the attitude to the necessity of ascertaining the security by means of decisive actions. The fear of terrorism, henceforth the biggest threat for Americans, has come to justify virtually any decision. This resulted in, among other things, the decision to wage a preventive war (in 2001 in Afghanistan, in 2003 in Iraq), stemming from the yearning to make the world a better place, and to undertake unilateral actions granting the U.S. discretionary and military power. Some of these actions were too radical and did not bear the expected results, of which the decision-makers learnt only later. It is clear nowadays that one cannot easily promote democracy using force.

Barack Obama’s (2008) ascent to the presidency in the U.S. started a new chapter in their strategic approach. Did it bring an end to the situation where military power is a significant com-
ponent in the implementation of the U.S. security policy? It does seem to be not completely true. This situation is much more complex.

Obama, who received a Nobel Peace Prize already at the dawn of his presidency (2009), continued for some time two extensive war operations, had the U.S. involved in the Syrian civil war as well as in some other minor war theatres. Military power and war constituted a major component of the American foreign policy also during the Democrat’s presidency. According to the National Security Strategy of 2010, the United States were supposed to continue to act as a global leader. Allies, including the EU, were acknowledged but at times it had only a symbolic value. Obama supported the idea of resetting the U.S.-Russia relations. He endeavoured to settle them in a pragmatic manner. It was only the escalation of the Ukrainian war that brought about an actual shift of attitude and the strengthening of commitments and allied operations in Europe (Davis, 2016).

The U.S. administration systematically surveys their security. In 2014 the results of the survey were captured in the Quadrennial Homeland Security Review, (QHSR, 2014). Taking into account the fact that global security and leadership take their beginning on the U.S. soil, the document has a special place in the current analysis. The review provides a multidimensional guide to the actual objectives, undertakings, chances and risks in the area of homeland security. The importance of military strength, in its broad sense, is obvious. It concerns in particular border security and fighting terrorism, unconventional weapon, including nuclear, chemical, biological weapon, cyberspace threats.

In 2015 the National Military Strategy of the United States (NMSUS, 2015) was created. Once again, the role and importance of military strength for homeland security were firmly asserted. The document emphasises how insecure and complicated the global situation is, highlights the unpredictability of (some) states, including Russia, and the necessity of making preparations to counteract multidimensional, hybrid threats. Armed forces are to be capable to respond to both conventional and multidimensional threats. They are to be prepared to operate in interest of both the U.S. particular needs and the implementation of allied commitments. Does then the emphasis placed on the importance of military power potential stem exclusively from the U.S. internal ambitions and current global objectives? It does not seem to be the case. The document highlights the volatility and military capability of other subjects, including Russia, which provides an objective justification for the focusing on strengthening one’s own military power. The U.S. actions are therefore multidimensional and take into consideration various conditioning factors (Skidymore, 2015).

Donald Trump’s (2017) ascent to the presidency in the U.S. brought about a change in the U.S. global involvement. Military strength has remained an important factor in the shaping of political objectives but Trump has put more emphasis on the need to extend the responsibility of European countries for global security, also as a part of their NATO commitments (Kozłowski, 2019). That attitude shaped the 2018 National Defence Strategy (NDS, 2018). The document
points to the indisputable need for allied cooperation but puts strong emphasis on the primacy of the U.S. strategic interests over any other (America First).

After the collapse of the Soviet Union in 1991, Russia, being the legal and bona fide heir to the former superpower, attempted to regain a dominant position in the world, or at least in East-Central Europe. Nostalgia for the former superpower is considerable in Russia (Pursiainen, 2017). But whereas Boris Yeltsin’s politics was amenable to a limited cooperation, Vladimir Putin’s Russia has unequivocally put emphasis on increasing its military strength as a tool to achieve its objectives in foreign policy, frequently not respecting the rights of sovereign states (Rummer, 2017). Since 2000 Putin has consistently pursued his geopolitical goals, using, to a great extent, the elevated importance of military force. It has been so to the detriment of belated or neglected political and economical reforms. The attitude is reflected in Russian strategic documents.

In the 2000 national security strategy a number of recommendations were put forward concerning the prospective response on the part of Russia to the, in their opinion, increasing importance of NATO in Central Europe after its enlargement in 1999. The use of military power, should Russia’s interests be infringed upon, was not ruled out. In the amended document of 2009, Russia took a turn in the direction of a slightly more subtle and diplomatic cooperation with the West. It did not, however, back down from naming the objects it perceives as a threat to its own security, among others NATO and the U.S. Security policy priorities were fairly firmly formulated, also those, as one could expect, concerning the implementation of Russia’s political objectives in its closest surrounding (the so-called close neighbourhood, the former USSR member states). Russia’s economical growth facilitates the implementation of its security objectives. In accordance with the perspective adopted in the document in question, Russia looms large as one of the leaders of global economic growth. The most recent revision of the Russian Federation’s National Security Strategy from 2015 (RFNSS, 2015) is a clear example of an increase in importance of Russia’s security interests as far as a threat from external entities is concerned as well as of the formation of its security policy taking into account military power potential. Vladimir Putin is sending a very clear message, primarily due to the need to ascertain a stable internal position for himself. Russia is to strengthen its potential in view of the volatility and threat from the West (Gvosdev, 2017). It primarily concerns inefficient institutions functioning within given states (the U.S., Ukraine) and international organisations (NATO, the EU). Those pose a threat to Russia’s affairs, its integrity, sovereignty and citizens, including the Russian people living in other states (casus belli against Eastern Ukraine). Nearly all the negative phenomena observed in the country have their source outside Russia. Thus, there is a natural need to strengthen Russia’s position, using all available means. A particularly vivid picture of that attitude is the striving to protect and ensure safety to the Russian-speaking people living outside Russia. Therefore, NATO’s security guarantees for the Baltic countries (Lithuania, Latvia and Estonia) are of utmost importance. The 2014 Military Doctrine of the Russian Federation (MDRF, 2014) complements the maximisation, especially since 2000, of efforts to implement Russia’s political interests, including the strengthening of the
military power potential. The document formulates the role and tasks of armed forces in the area of attaining the state’s regional and global goals. Armed forces play a vital role in the process of building a secure and strong state, capable of achieving its aims at an international level. On reading the documents phrased in such a manner, one cannot help wondering about the genuine reason behind their creation. It seems that they are supposed to divert attention from Russia’s own, aggressive schemes or important internal challenges (Rutland, Kazantzev, 2016; Giles, Hanson, Lyne, Nixey, Sherr. Wood, 2015). Russia is very effective at subliminal stimulation: it is strengthening its military capability, also by means of some cyberspace activities, weakening other entities’ defensive systems and resorting to the so-called asymmetric, hybrid war (Chivvis, 2017; Lanoszka, 2016). The most straightforward instances of such activities were the cyberattack on Estonia, the Russo-Georgian war of 2008 and the war in Ukraine. All those actions undoubtedly serve to attain Russia’s own goals and hone its military capability.

Table 1. The characteristics of the importance of military strength

<table>
<thead>
<tr>
<th>Subject</th>
<th>Operational area</th>
<th>Manner of operation</th>
<th>Threat recognition</th>
<th>Activ Military Personnel</th>
<th>Military expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO</td>
<td>Global, unlimited</td>
<td>Co-operational, hard and soft power</td>
<td>Territorial</td>
<td>3.5 mln.</td>
<td>Over 900 bn. USD Average 2.3% GDP</td>
</tr>
<tr>
<td>the EU</td>
<td>Global, limited</td>
<td>Co-operational, soft power, (smart power)</td>
<td>Territorial</td>
<td>1.5 mln.</td>
<td>Over 180 bn. USD Average 1.2% GDP</td>
</tr>
<tr>
<td>the U.S.</td>
<td>Global, unlimited</td>
<td>Co-operational, unilateral, multi-lateral, soft and hard power</td>
<td>Territorial</td>
<td>1.4 mln.</td>
<td>Over 730 bn. USD 3.4 GPD</td>
</tr>
<tr>
<td>Russia</td>
<td>Global, limited</td>
<td>Confrontational, hard power</td>
<td>States, (e.g. U.S); Organisations, (e.g. NATO)</td>
<td>1 mln.</td>
<td>Over 60 bn. USD 3.9 GDP</td>
</tr>
</tbody>
</table>

Own work based on GFP (2019)

**Conclusion**

The analysis undertaken in the paper allows me to formulate a few general conclusions. These stem from the research assumptions and are an attempt to answer the questions formulated here.
Firstly, it seems that the military strength is regaining its crucial importance. This concerns not only the strengthening of different subjects’ own defensive potential but also the tightening of their military alliances. Nowadays, a shift in the manner in which global security is shaped is becoming more and more apparent. Internal and external conditioning factors are changing, both within states, and within international and transnational organisations. States and international organisations are forced to increase their military potential in view of a few armed conflicts, terrorist activity and geopolitical changes. A decline in the area of defence noted in the decades following the Cold War appears to be over now.

Secondly, it is only natural that the military strength should correspond to the developments in other security areas. The very nature of the challenge and strong global alliances, especially in the area of economy, mean that no entity whose approach to security issues is serious can afford to neglect the remaining categories which have an impact upon internal and external security. Strong economy and stable socio-political system are inextricably linked with security policy and defence.

Thirdly, the present-day tendency to strengthen a state’s position in the security area is, on the one hand, related to the rephrasing of the definition of raison d’état, and on the other hand, stems from the visible weakness of particular components of the collective security system. This concerns for instance the growing superpower ambitions (e.g. in the case of Russia) and the persisting volatility and unpredictability of political regimes. Transnational threats, especially terrorism, are becoming an undeniable challenge even for the greatest and most efficiently functioning military superpowers. Lack of information concerning the enemy, uncertainty as to the place and manner of a potential attack make all the improvements in the area of military power insufficient. Therefore, cooperation of multiple subjects is essential in this area.

References


