

THE EFFECT OF DRONE TECHNOLOGY ON MILITARY ORGANIZATION  
AND FORMS OF SOLDIERY

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## **ABSTRACT**

### **THE EFFECT OF DRONE TECHNOLOGY ON MILITARY ORGANIZATION AND FORMS OF SOLDIERY**

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This thesis aims to provide an analysis of the effects of drone technology on the organization of the military and soldiery. Starting with the assumption that military organization is unique in terms of managing violence, concepts from the field of military sociology are used to explain organizational and professional patterns within the military. Under the topic of Institution/Occupation, Authority, Soldiery Types, and Warfare, different ideal types are discerned from the literature. In the light of these types, the organization of drone units and the profession of drone operators are analyzed. For this analysis, memoirs of drone operators and military documents are reviewed. We found that drone technology blurs traditional military values as well as changes authority relations by altering the flow of information. But also, it creates a new cyberspace in which soldiers have to develop new mental skills. Moreover, the same space raises the possibility of a bureaucratic warfare that has no spatial and temporal limits. All of these developments suggest important questions for the future of military affairs and their effects on the social.

**Keywords:** military organization, drone technology, soldier types, military authority, post-heroic warfare



## ÖZ

### İNSANSIZ HAVA ARAÇLARININ ASKERİ ÖRGÜTLENME VE ASKERLİK TİPLERİNE ETKİSİ

AYGÜN, Burak Yakup

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Bu çalışmanın hedefi insansız hava araçlarının ordu örgütlenmesi ve askerlik deneyimi üzerine etkilerine dair bir analiz sunmaktır. Askeri örgütlenmenin şiddeti yönetmeyi hedef edindiği için diğer örgütlenmelerden farklı olduğu varsayımıyla, Askeri Sosyoloji literatüründen edinilen kavramlarla askeri örgütlenme ve değişen askerlik açıklanmıştır. Kurum/Meslek, Otorite, Asker Tipleri ve Savaş başlıkları altında çeşitli ideal tipler tespit edilmiştir. Bu tiplerin ışığında insansız hava araçlarının örgütlenmesi ve bu araçları kullanan personelin deneyimleri analiz edilmiştir. Bu analiz için insansız hava aracı operatörlerinin anıları ve farklı askeri dökümanlar incelenmiştir. Araştırmanın sonucundaki tespitlerimize göre, insansız hava araçları geleneksel askeri değerleri karmaşıklştırmış ve askeri yapıdaki bilgi akış süreçlerini başkalaştırarak otorite ilişkilerini dönüştürmüştür. Bunların dışında, aynı teknoloji yeni bir siber alan inşa ederek askerleri farklı zihinsel yetiler elde etmeye zorlamış ve bu alanda bürokratik araçlarla yürütülen zamansal ve mekansal sınırlardan azade bir savaş

olasılıđı belirmiřtir. Tm bu geliřmeler askeri pratiklerin geleceđine ve toplumsala etkisine dair nemli sorular retmektedir.

**Anahtar Kelimeler:** askeri rgtlenme, insansız hava araları, asker tipleri, askeri otorite, post-heroic savař



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## LIST OF ABBREVIATIONS

|           |                                                                                                          |
|-----------|----------------------------------------------------------------------------------------------------------|
| BCT       | Brigade Combat Team                                                                                      |
| CAOC      | The Combined Air and Space Operations Center                                                             |
| CCO       | Chief of Combat Operations                                                                               |
| CDE       | Collateral Damage Estimation                                                                             |
| CENTCOM   | Central Command                                                                                          |
| CFACC     | Coalition Forces Air Component Commander                                                                 |
| DoD       | Department of Defense                                                                                    |
| DOTMLPF-P | Doctrine, Organization, Training, Materiel, Leadership, and Education, Personnel, Facilities, and Policy |
| EP        | External Pilot                                                                                           |
| FHP       | Flying Hour Program                                                                                      |
| G-2       | Assistant Chief of Staff Intelligence                                                                    |
| G-3       | Assistant Chief of Staff Operations                                                                      |
| GCS       | Ground Control Station                                                                                   |
| I/O       | Institution-Occupation                                                                                   |
| IEDs      | Improvised Explosive Devices                                                                             |
| IPB       | Intelligence Preparation of the Battlefield                                                              |
| ISARC     | Intelligence Surveillance and Reconnaissance Cell                                                        |
| ISR       | Intelligence Surveillance Reconnaissance                                                                 |
| J2        | Intelligence Chief                                                                                       |
| JAG       | Judge Advocate General                                                                                   |
| JOC       | Joint Operations Center                                                                                  |

|      |                                             |
|------|---------------------------------------------|
| JTAC | Joint-Terminal Attack Controller            |
| JTAC | Joint Tactical Air Controller               |
| MTS  | Multispectral Targeting System              |
| NGA  | National Geospatial Intelligence            |
| OODA | Observe, Orient, Decide, and Act            |
| OP   | Observation Post                            |
| PID  | Positive Identification of Hostile Activity |
| PO   | Mission Payload Operator                    |
| POL  | Pattern of Life                             |
| RL   | Readiness Level                             |
| RO   | Room Owner                                  |
| ROE  | Rules of Engagement                         |
| RPA  | Remotely Piloted Aircraft                   |
| RTB  | Return to Base                              |
| SIDO | Senior Intelligence Duty Officer            |
| SODO | Senior Offensive Operations Officer         |
| TAF  | Turkish Armed Forces                        |
| TC   | Internet Tactical Chat                      |
| UAS  | Unmanned Aircraft System                    |
| UAV  | Unmanned Aerial Vehicle                     |
| WOC  | Wing Operations Center                      |

## **CHAPTER 1**

### **INTRODUCTION**

When America invaded Iraq in 2003, I was just a little child who was shocked by the feeds on television showing the bombing of Baghdad. Since then –nearly two decades- we have continuously witnessed atrocities, clashes, forced migration in middle-east. Yet, today’s battles contain a significant difference. After the invasion, there was the existence of American soldiers on the ground. They literally “invaded” Iraq. Slowly, the numbers of soldiers on the ground decreased, but conflicts endured. The USA now continues engaging against different groups in the Middle East, but American soldiers are not present at the battlefield. Without deploying a single soldier, they can make strikes that can shape the course of international relations. One of them happened on January third, 2020. US military killed one of the most influential figures of Iran, Qasem Soleimani. It was one of the many shocking events in 2020 and caused significant tension between Iran and the USA. But how the US managed to kill another country’s general on foreign soil?

After the incident, we are informed that the attack was a drone strike (Doucet, 2020). US military deliberately followed Soleimani, and with the approval of the president, they assassinated him. It was not the first drone strike that the middle east witnessed. From Afganistan to Libya, drone usage rose significantly in the last two decades. Drones killed thousands of people with smaller costs, and their capabilities are increasing day by day. United Nations (2021) published a report on the ongoing clash in Libya. The report revealed that a Turkish drone named Kargu-2, which can operate autonomously, was used in the battle (United Nations, 2021: 17). Although the report does not indicate whether the drone killed anyone or about the extent of its autonomy, still the idea of an autonomous weapon drew significant attention. In any case, we

know that militaries aim to achieve autonomy with drone technology (United States Air Force, 2009).

Drones are mainly used against insurgents. But for the last few years, we are witnessing that they are also used against other groups. As in the case of Soleimani, their capabilities increased to enable their holders to strike any person anywhere. But also, drones are used in a battle between two countries, which maybe for the first time gave us a clue about their capabilities in a conventional war (Dixon, 2020). In the Nagorno-Karabakh conflict, Azerbaijani drones provided a considerable advantage for Azerbaijan and enabled them to achieve a decisive victory. Therefore, we will likely see more drone action in the future, and they will continue to have huge effects on warfare, politics, and social life.

With mentioned events, drones' fame has grown over the years. Through television and media, nearly every day, we come across a dispute on drone warfare. Experts with different backgrounds analyze drones' effects on politics, society, strategy, and other spheres. Yet, we are rarely informed about the processes behind drone labor. The word "unmanned" that is usually used to define drone warfare cause people to believe that drones operate with the participation of few soldiers who control them from a remote, riskless environment. It is assumed that drones "remove" the soldier from the battle. As a result of these assumptions, the military mind behind this technology is overlooked.

In his book "Modernity and the Holocaust," Bauman (1989) drew our attention to the relationship between the modern bureaucratic means and the holocaust. For him, without the means of modernity, the labor behind the holocaust would not have emerged. In a similar vein, I argue that without understanding the organization behind drone technology, one cannot fully comprehend this immense war machine. Mentioned transformation of the military logic would not be fully analyzed without reviewing the drone labor. Starting with this assumption, this thesis aims to analyze the relationship between drone technology, military organization, and soldiery from a sociological perspective. With the analysis of this relationship, I aim to develop a sense of changing soldiery and warfare, which would help us understand the contemporary conflicts and their effects on different social aspects.

## **1.1 Theoretical Framework**

To serve the mentioned purpose, we need a conceptual framework that explains the organization of the military. As the military is a closed community that rarely opens its doors for outsiders, civilians cannot inspect drones or other military technologies during the action. Yet, as a sub-discipline of sociology, military sociology provides useful concepts concerning military organization and soldiery. With these concepts, it is possible to explain certain military actions.

As an integral part of most societies, the military attracts attention to important sociological figures like Comte, Spencer, and Max Weber (Cafario, 2006). But the establishment of military sociology as a sub-discipline happened only during the Second World War when scholars –especially Americans- made detailed analyses on military cohesion (Cafario, 2006: 4). Since then, military sociology has produced knowledge on the inner working of military affairs. It focused on how military organizations changed over time, how soldiers behave during peace and war, and how their experience altered in different conditions.

As I intend to analyze drone technology with its usage in the military, military sociology provides the necessary conceptual framework. However, before getting into this literature, I have to clarify the structure of my analysis.

My main aim is to understand how the military uses drone technology. Of course, to understand this usage, we have to review the organization of units that use drones. But also, I would like to comprehend how drone technology affects the soldiery and the experience of warfare. These aspects, in return, will enable us to draw a picture of how drone technology is operated and how it causes transformation in military affairs. In addition, this analysis will also illuminate us on drones' capabilities and their effects on society. For this reason, my analysis focuses on organizational and individual aspects of soldiery.

The military organization is complex and contains various elements. That is why I will limit my analysis to four topics that I see as the most important elements of a military that reveal an overall picture. First of all, each military holds an institutional culture which imposed on the soldiers. In this way, soldiers adopt norms and attitude which

enable them to take the responsibility of soldiery. For instance, soldiery connotes sacrifice, bravery, and calling in common sense. These values are seen as unique elements that make one a true soldier. Yet, the increased technology and the end of the draft cause the professionalization of the militaries (Janowitz, 1966). These developments sparked debate on whether this new type of soldiery is different than an occupation within the market. Moskos (1977) argued that there is a tendency within the military due to technology and the end of the draft. This tendency is the occupational attitude instead of the institutional one. Latter implies a soldiery where institutional norms and regulations are more prominent, and soldiers define their jobs as an answer to a calling. Former, on the other hand, is more related with a market value of the soldiery. At the outset, Moskos (1977) defended that the military contains a tendency that occupational perspective would be dominant in the future. But after the critics, he revised his thesis and accepted the idea that both tendencies can co-exist within the military. In any case, his thesis presented a valid ground for us to discuss the meaning of soldiery. Thus, my first topic will be the relationship between drone technology and the I/O thesis.

Secondly, an important aspect of military affairs or unique element is authority relations. Militaries are organized to implement authority in a certain way that is altered with new technologies. Janowitz (1959) proposed two types to capture this change: domination and manipulation. Former meant the traditional authority where commanders expect strict obedience to their orders. In this type, inferiors mechanically respond to orders and have limited initiative. Latter, on the other hand, opens a space for soldiers to make their own decisions. With the increased complexity, different expertise groups emerged within the military. In return, commanders had to respect the expertise of their inferiors. Military organization at this point gave more importance to the group goals. Such change is mainly related to the changing flow of information. Feld (1959) underlined this aspect and argued that in a military structure, information is the main mechanism of authority. He makes this argument by referring to the split between soldiers on the front and commanders in headquarters. According to him, lower ranks give information to their superiors who stand behind the front and accumulate information. Subordinates are aware of this fact which makes them trust their superiors and their orders. We will see that this relation between authority and

information is crucial to understand the effects of drone technology on authority. Drone operators are the first witnesses of a vast amount of data. They are the constant watchers of several battlefields, which diverges the flow of information from the mentioned example. It is an example of the organizational difference caused by a technological environment. Soeters et al. (2006) underlined such difference with two bureaucratic types; enabling and coercive. The latter connotes the domination type where inferiors mechanically respond to orders and have little to no initiative. The former, on the other hand, presents an autonomous working environment for inferiors. These similar remarks show that with technology, the authority structure of the military gained a tendency towards more autonomous acts. In this thesis, I would like to make a similar analysis on drone technology to see how it affects mentioned tendencies.

My third topic is the soldier types. By soldier type, I imply the changes in the organizational expectations from soldiers. According to Huntington (1957), what differentiates the profession of officers from other occupations is the management of violence. Militaries are organized to apply violence. This means, what is expected from soldiers takes shape as a result of this profession. But, with the new technologies, soldiers' way of managing violence also changes. With improved technology, some of the soldiers deal with new military problems. Janowitz (1960), at this point, proposed two types: one is the heroic leader, and the other one is managerial. As the name suggests, a heroic leader is a soldier that is best known for his/her warrior spirit, which covers bravery, honor, and valor. These soldiers perfectly demonstrate military discipline and give greater importance to military authority. In a way, this type corresponds to authority by domination. However, managerial is more about pragmatic thinking on military affairs, especially in the domain of technology. Managerial soldiers deal with technological problems, and they are more "horizontally-oriented toward professional peers, military as well as civilian" (Nucari, 2006: 68). These soldiers also give importance to discipline as they are part of the military, yet their tasks contain more mental labor than physical ones. Problem-solving, managing both technical problems and personnel are their main tasks. Like heroic type corresponds to domination, managerial type is interrelated with manipulation. Janowitz (1960) proposed these two types during the Cold War when militaries had an arms race. After

the Cold War, when new missions emerged, such as peace operations and disaster reliefs, management of violence faced another transformation. Soldiers now have tasks that resemble diplomatic missions. They operate on foreign soil, deal with different cultural groups, and make contact with foreign counterparts. They also pay heed to their countries' interests within these missions, thus acting like a statesman. Hajjar (2014: 133-134) framed this type of soldiery as a "diplomatic-peacekeeper." It overlaps with Moskos and Burk's (1994: 154) projection which says scholar/statesman soldiers would be the dominant type of post-cold war period. As we can see, a similar approach to authority also is the case with soldier types. With the means of managing violence change, organizational expectations from soldiers also change. We will see how drone technology emerges new ways for soldiers to manage violence.

Lastly, we will review how drones affect war practices. Warfare is strictly related to military technologies. Especially increased firepower change the character of war. For instance, with the long-range weapons, the distance between clashing soldiers went up. Such change also alters the strategies and tactics implemented during the war. We can observe these facts by comparing today's battles with the ones that belong to the last century. In the World Wars, nations fought with each other where millions of people died. On the other hand, current clashes are mainly done between insurgent groups, which are also named proxies. The war between developed countries remains a remote possibility within this conjuncture. They cannot directly engage with each other as their improved military technology like nuclear weapons would mean a global catastrophe. But also, there are other political disincentives. A bold move in international relations would mean exclusion from the international community and may cause unrest among the public. For Luttwak (1995), these developments signal an era that he calls "post-heroic warfare." Within this era, militaries aim for partial results while minimizing the costs. It stands between Clausewitzian strategy, which aims a decisive victory regardless of any cost, and the Roman approach, which rests on defensive positioning to minimize the costs. This framework is useful to understand contemporary clashes. But Luttwak (1995) did not mention how this new way of warfare is experienced by the soldiers. King (2014) made such an analysis. For him, the post-heroic era means professionalism during warfare in which soldiers act as a group according to a studied choreography that was absent in the previous wars. He

mentions how soldiers were lonely in the battlefield during the World Wars, and fights were carried forward with heroic acts of single soldiers. But now, this individual initiative is replaced with group initiative. In post-heroic warfare, soldiers share the burden. With these two analysis, it is possible to deduce two points. On the one hand, there is a significant strategic transformation in which militaries become more sensitive towards costs. On the other hand, soldiers' position or condition during warfare changes with new technologies. Solitary, heroic soldiers of former wars leave place for professional, team player soldiers. These analyses are good starting points to see how drone technology creates new dimensions on mentioned aspects of warfare.

All of these concepts and theories establish an analytical ground for my analysis. Throughout the thesis, I will analyze drone technology in terms of these organizational aspects. I will refer to soldiery as management of violence and military organization aiming to provide efficiency for this management. This analysis purports the military as a unique organization. One reason behind my reference to the I/O thesis, authority, soldier types, and warfare is that I think these topics are essential to understand a military organization's characteristics. But also, these are the key topics that literature of military sociology frequently analyzed. Hence, another reason is to contribute to this literature and provide a continuance.

## **1.2 Methodology**

Military as a close community poses certain problems in terms of reaching data. Within this thesis, I tried to overcome this difficulty by using memoirs, military documents, and soldier accounts published in the media. There are three memoirs referred to in this thesis. Two of them are written by retired American drone pilots, and the other one is written by an intelligence operator who used drones to gather intelligence. Their accounts give significant clues on how drone labor is done, how drones are organized in our times. Also, they shed light on significant military events that happened in the last two decades. Another source of data that I use for analysis is public documents published by the US military. They are mainly concept documents, training manuals, and flight plans. Concept documents are instructions for specific

units that describe capabilities, give detailed organizational scheme, and instructs soldiers on how to act in specific scenarios. Training manuals are about training procedures and techniques that reveal expectations from soldiers. Lastly, flight plans are published by military forces that make a projection on the future. In our case, we will review expected drone capabilities in the near future. Such projection is especially important to make an analysis on organizational tendencies. Lastly, I used media stories on drone warfare that gives a detailed account of drone strikes and interviews with drone operators.

I am going to read mentioned data to find clues on military organization and soldiery. In the previous section, I summarized the main theoretical ground. Within this ground, there are concepts on different organizational points. Yet, the logic behind these concepts follows the same analytical approach. Mainly, they purport that with improved technology, the military organization becomes more complex, and there emerged new ways of soldiery. To connect these points, I will deduce ideal types from the literature, and through these types, I will analyze the data. Therefore, this thesis adopts a qualitative approach. With this approach, I aim to analyze the effects of drone technology on soldiery and military organizations. Ideal types here will provide reference points to see how drone labor overlap or diverge with them.

With this methodology, I also aim to reveal certain tendencies within the military organization. Like Moskos (1977), my object is to find new trends within militaries. In this way, it would be possible to identify new ideal situations for the future.

### **1.3 Significance and Limitations of the Study**

This thesis presents an analysis covering two spheres: military affairs and technology. We have seen above that sociology of the military produced significant concepts on military organization and soldiery. The authors clarified these concepts by referring to military technologies. Yet, their reference does not focus on specific technologies. In other words, they do not mention which military technology produced which effects and how they produced it.

On the other hand, there is also significant literature within the sociology of technology that studies processes behind technology and the effects of technology on organizations and society. Within this literature, there are also studies on military technologies (Mackenzie & Wajcman, 1985). But these studies are mainly about the development of technology and organizational effects behind this development. Therefore, there is a gap within the literature on how specific military technologies affect military organization and soldiery. This thesis aims to fill this gap by focusing on drone technology by connecting sociology of military and technology.

I also have to underline that drones attracted significant attention from academic circles within the last two decades. Some drone studies are about the strategic development of drone technology and its importance for military doctrine (Kindervater, 2016; Rogers & Hill, 2014). Some others are about the acquisition and public view on drone proliferation (Fuhrmann & Horowitz, 2017). And there are theoretical studies on the social effects of drones that inspect ethical, legal, and political aspects of drone technology (Chamayou, 2013; Hasian, 2016). All of these studies illuminate us on the different dimensions of drone warfare. Throughout the thesis, I will refer to some of them as organizational analysis overlaps with the mentioned dimensions. But these studies do not focus on the inner working of drone technology. They do not depict how drone units are organized. Therefore, there is also another gap in the literature about drone technology which is the organizational outputs of drones (Wiesner, 2017).

Yet, I also faced difficulties during the thesis that limit the scope of the analysis. Military –as I mentioned earlier- posed the problem of reaching data. My initial aim was to conduct field research on drone pilots in Turkey. But, due to the pandemic Ministry of Defense did not allow me to conduct interviews with officers. This is why I had to recourse secondary data of another military. Although this new data also provided useful insights, I have to limit my analysis on mentioned organizational aspects as I have no control over the data. On the other hand, secondary data means accounts are filtered by the authors and military authorities, which is another difficulty within the sociology of the military. As militaries give crucial importance to secrecy, they tend to withhold information about their technologies. Therefore, it seems not probable to observe any military technology during the action.

## **1.4 Outline**

The rest of the thesis will open up the points mentioned in the introduction section. In the following chapter, I will give a literature review to familiarize the reader with the sociology of the military. I will refer to different concepts and studies conducted in military sociology under the topics of Institution-Occupation, Authority, Soldierly Types, and Warfare. I will deduce specific ideal types from this literature to develop a single framework to analyze a military organization. Later, the methodology section will explain how these concepts are operationalized to analyze drone technology. With this operationalization, the section will also explain the main method of the thesis. Moreover, the section will cover detailed information about the data and limitations of the study. In the analysis chapter, I will present the analysis of data under the same topics written in the Literature chapter. Each topic will mention connected aspects of military organization and soldiery. Lastly, the conclusion section will summarize the significant points mentioned in the thesis. I will try to make a projection on the future by reviewing capabilities that militaries aim to add to drone technology in the future, and I will try to underline the possible effects of these capabilities on society in general.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Analyzing the organizational transformation of the military is not an easy task when we consider the rigid outlook of the armies that are usually associated with strict discipline and unique military ethos. It is not uncommon to think that the military has the same role over the centuries and has unchangeable values. But, this assumption is erroneous as the military cannot resist the ongoing changes within the society.

In every century military has a unique role within society, which is the management of violence (Huntington, 1957). Although the military contains and transfers this uniqueness over centuries, the meaning and aspects of this management change. Like other institutions military also has to adapt itself to new necessities of changing societal and technological determinants (Manigart, 2006: 324). Therefore, it becomes more complex and comprises new branches that manage the violence differently than the former ones. This thesis is about one of those branches which control drones to apply violence. It aims to capture the extent of how this new branch is organized and what kind of military profession drones impose.

To make such an analysis, we need a conceptual framework which is provided by the scholars of the military sociology. These scholars worked the military organization and profession through sociological concepts and methods. Moreover, their works provided a basis for further empirical researches about the military. In this way, the discipline of military sociology is consolidated, and conceptual continuity is achieved. I will follow this line of thought and construct my theoretical approach with the help of these works.

To construct this theoretical framework, I will first refer to the renowned “institution-occupation” debate to provide a basis for the analysis of military transformation within the last century. Later, I will open up other organizational aspects; authority, soldiery types, and warfare. At the end of the section, we will have the necessary framework that will guide us in reading our data.

## **2.1 Institution-Occupation Debate**

The military plays a unique role in society. It manages the violence, which cannot be done by any other institution. This unique role imposes a unique profession and ethos. But, Armies are also not isolated from the parent society; thus, they must be affected and had to adapt themselves to the new contingencies. Changes in the societal, political atmosphere had effects on the uniqueness of the military. Charles Moskos (1977) proposed one of the most disputed arguments that underline such effects.

Moskos (1977) argued that there is an organizational tendency in the military, which is the changing of the military profession from institution to occupation. By occupation, he means that the importance of the marketplace and self-interest are increasing for the soldiers. Contrary to this, institutional understanding represents a homogeneous institution where self-sacrifice and institutional norms are more prominent (Moskos, 1977: 42). When institutional values dominate the organization, we expect isolation from society and membership dedicated to the institution that answers a calling. But this sense of calling is eroded with the occupational outlook. For Moskos (1977), in military occupational relations are likely to increase. He tries to show this by referring to the end of the draft, increasing technology usage, and increasing ties with the civil sector. These changes undermine the institutional outlook of the military. Especially technology and working with civilian counterparts mean the gap between civilian and military professions is shrinking.

Moskos' (1977) analyses aimed at the US army, but it attracted many scholars who used it to measure this trend by focusing on different armies. As a result, Moskos (1986) made an update on the thesis to improve its practicality. He underlined that the transition from institution to occupation corresponds to increasing convergence

between the military and the civilian. But he also emphasizes that military and civilian life always have a particular relationship. An argument from institution to occupation, therefore, implies a scale. What happens is not an exclusive process but a change in a specific ratio that would initially affect the structure and the function of the military within the society (Moskos, 1986: 378). This ratio is contingent on geography and military culture. It can even be affected by the internal differences between ranks and branches. Moskos (1986) even argues that there can be “reinstitutionalizing” within certain units. As a result, he defends his thesis as an overarching trend but not a determinist one. Thus, the definition of the change rather than the direction of it is more important. In this way, it becomes possible to see where they oppose each other or coexist within the same military in a dynamic process (Moskos, 1986: 382). Besides these analytical insights, he also identifies certain criteria, which are the implication of occupational trends. Table 1 shows these criteria.

**Table 1. Military Social Organization: Institutional vs. Occupational**

| <b>Variable</b>       | <b>Institutional</b>                    | <b>Occupational</b>                      |
|-----------------------|-----------------------------------------|------------------------------------------|
| Legitimacy Role       | Normative values                        | Marketplace economy                      |
| Role Commitments      | Diffuse                                 | Specific                                 |
| Basis of Compensation | Rand and seniority                      | Skill level and manpower                 |
| Mode of Compensation  | Much in non-cash form or deferred       | Salary and bonuse                        |
| Level of Compensation | Decompressed; low recruit pay           | Compressed; high recruit pay             |
| Residence             | Adjacency of work and residence locales | Separation of work and residence locales |
| Spouse                | Integral Part of military community     | Removed from military community          |
| Societal Regard       | Esteem based on notion of service       | Prestige based on level of compensation  |

**Table 1. Military Social Organization: Institutional vs. Occupational (continued)**

| Reference Groups          | “vertical” –within organization   | “horizontal”- external to organization |
|---------------------------|-----------------------------------|----------------------------------------|
| Evaluation of performance | Holistic and qualitative          | Segmented and quantitative             |
| Legal system              | Military justice                  | Civilian Jurisprudence                 |
| Postservice Status        | Veteran’s benefits and preference | Same as civilian                       |

From “Institutional/Occupational Trends in Armed Forces: An Update”, by Moskos, Charles, 1986, *Armed Forces and Society*, Vol.12, no 3, p. 378.

Although Moskos’ (1986) thesis was very influential in its time, when we think about the armies after the 20<sup>th</sup> century, we face much more complex organizations that transcend the institution-occupation scale. Even Moskos (1992) had noticed this fact after the end of the Cold War. He continued to add new aspects to his analyses to capture the latest tendencies within the armies. Especially the end of the cold war forced the scholars to review their approach to the military organization as the understanding of war faced with a rupture (Dandeker, 1994).

One of the initial effects of the end of the cold war is the idea of a “warless” society (Moskos, 1992). As the cold war terminated -which reduce the probability of a conventional war between the superpowers-, armies’ structure and function are questioned in the emerging political conjuncture. To answer this questioning, Moskos (1992) tried to define new tendencies within the military by imagining a warless society. He used the word “warless” to refer to the new missions of the militaries after the cold war. These missions vary from peace operations to rescue missions during natural disasters. Hence, Warless Society does not refer to an ideal world where any physical conflict is absent. It implies the changing form of the war. This new form revealed its tendency before the end of the Cold War. Moskos (1992) could give certain insights about the structure of the army in a warless society by drawing on the experience of the North Atlantic countries, which already had similar missions ascribed to their armies. This fact enabled him to identify further trends. To classify

and differentiate these trends from the former ones, he made a typology between the societies: War Readiness, War Deterrence, and Warless. (Moskos, 1992: 5).

He argues that armies have the formal organization of cadre and reserve force in the warless society. Also, he adds that membership identification in the warless society will be civic rather than institutional or occupational. Therefore, armies will transcend the institutional and occupational structure, and civil understanding will be more convergent with the military one. We can define such a process as the extension of the scale beyond the occupational. (Moskos, 1992)

In another article by Moskos and Burk (1994), they also refer to the period after the cold war as Postmodern. They used the same variables to show how the armies' structure would be in a Postmodern society. But now, the scope is extended. Moskos' (1992) previous analysis was more about the changing forms of war. In this article, Moskos and Burk (1994) widen the perspective by focusing on the relationship between society and the military. The question now is the structure of the army in a Postmodern society. Such a question covers various topics like the role of women, conscientious objection, civilian employees, etc. (Moskos, Burk, 1994: 147). We again see a convergence between the civilian and the military in this period. In addition to this, they add cultural effects like the increased role of women and multicultural ideas. Typology in this analysis is made as Early Modern (Pre-Cold War), Late Modern (Cold War), and Post Modern (Post-Cold War). Thus, we can use the concept of Postmodern to refer to society in our age. Such typology is important as drones belong to the era called Postmodern or "warless" in Moskos' (1992) sense.

One can read these two articles as the revision of the institution-occupation thesis. They are written to make an update in the initial thesis to catch up with the new realities. The main argument stays the same. The military is facing a transformation where the military profession resembles an occupation. After the cold-war, this transformation gained momentum. New missions and technologies emerged a more complex military organization in which the variation within the scale of occupation-institution is diversified. Drones emerged during this period and became one of the most effective technologies. They are both effects and agents of this transformation. But, it would be a fallacy to assume that every new technology is a contribution to the

process of becoming occupational. There are scholars against such mechanistic assumptions.

One of the first critics of the institution-occupation thesis was Morris Janowitz (1977). For Janowitz (1977), Moskos' (1977) conceptualization has certain flaws. The separation between the institution and occupation assumes that both elements should be in a certain ratio. But for Janowitz (1977), there is no clue that occupational elements would diminish the institutional outlook of the armies. The military is still having autonomy, a unique profession and skills, and a strong identity. An overarching occupational trend should undermine such characteristics. An increase in the contractual relations, convergence between the civilian and the military are the results of a drive for equity in a democratic society. The military can cover its cohesion, identity, and profession while adapting these new policies. According to Janowitz (1977), what happens is a movement towards higher levels of professionalization. He argues that Moskos' (1977) conceptualization could not capture this and assumes a "zero-sum game" (Janowitz, 1977: 53).

Caforio (1988) made similar remarks. He analyzed the institution-occupation theory in terms of its suitability for measuring the change in the military profession. According to Caforio (1988), Moskos (1977) claims a total change in the armies. His theory took the military as a whole, which implies the overarching change within both horizontal and vertical strata within the military. But, the direction of change fluctuates when we shift our focus both horizontally and vertically. Therefore, it seems hard to implement the theory to the armies as a whole (Caforio, 1988).

There are also efforts to implement Moskos' (1977) theory. Segal (1986) referred to some of those studies in his article. He begins with underlying the necessity of clarifying Moskos' (1977) argument in terms of its concepts. He states that Moskos (1977) uses the word "occupation" to signify both "job" and "workplace" (Segal, 1986: 352). Therefore, he underlines that the analysis addresses two levels: organizational, which is comparing the military as an institution with the military as a workplace, and individual, which is comparing military service as a calling with military service as a job. This differentiation between the levels is important as the rationalization in both of them may produce incompatibilities (Segal, 1986: 352). Segal (1986) gives the example that rationalization in individual-level which imply the

occupational tendency among the soldiers who choose to be a soldier solely on market terms, may cause the organizational strains as military -as an organization- should maintain the combat effectiveness which is conditional to the traditional values. Thus, underlining these two levels enables scholars to address such strains.

Later, Segal (1986) refers to some attempts to measure the change in the military. In surveys, researchers focused on the issue of job satisfaction and soldiers' view towards their jobs. They reached conclusions that support Janowitz's (1977) view. Although in some cases there is an increase towards the military as a job, soldiers still think that their work necessitates certain values. Thus, both elements can coexist. This situation is defined as "pragmatic professionalism" by scholars. It implies that the institution and occupation are not the opposite of the same pole, but they are different dimensions that mean an increase in one of them does not mean a decrease in the other one. Such a statement conflicts with the idea of a scale.

Similar results are also found in the study of Stahl, Manley, and McNichols (1978). They attempted to develop a scale to measure occupational tendencies with surveys. They used Likert scales and asked questions about the job satisfactions and feelings concerning the missions and civil-military differences. Again, their findings undermine Moskos' (1977) "zero-sum game" assumption. They had found that in different ranks, there are different occupational tendencies, but soldiers who made a high score in occupational measure may also have a high score in institutional one. Therefore, the study partially confirms an occupational tendency and signals the persistence of institutional aspects.

If we summarize the critiques towards Moskos' (1977) thesis, there are three main points. First, the overarching trend of occupation seems not yet confirmed. The military contains both elements and will continue to do so in the indefinite future. Thus, it is difficult to identify an overarching structural change with the initial thesis. Secondly, concepts that are used by Moskos (1977) refer to different levels of analysis, which makes it difficult to implement them in the military as a whole. Thirdly, the army contains pragmatic professionals who have both occupational and institutional tendencies. As a result, the institution and the occupation are not the opposites of the same pole but different dimensions.

Moskos' (1986) revision, as mentioned above, accepts the third one in answer to these critics. Moskos (1986) admitted that the military could contain both elements; their ratio can change according to branch, rank, and military culture. But, with this modification, Moskos' (1986) claim that occupational trend is the overarching one seems to be undermined. The co-existence of institutional and occupational elements implies that the military profession will not be defined as an occupation in the near future.

At this point, we have to bear in mind that Moskos (1977) provided us with ideal types. Both institution and occupation concepts and their modalities are theoretical constructs. They are the logical inferences from technological and organizational innovations. With some modifications, they can be used in the study on the military organization. Firstly, one should not expect a perfect match with the concepts and the data. If we remember table 1, these criteria cannot be completely met by any army. They only give certain insight and the possible direction of the change. Secondly, it seems not probable to identify the overarching element in the military. Especially, the armies after the 20<sup>th</sup> century become much more complex, making it difficult to test a hypothesis at the level of the institution. Because of this very fact, it is more suitable to be implemented at the level of a certain branch. Therefore, the theory can be used to see the effects of a certain technology on the organization of a certain branch. In our case, it is drone technology and its organizational effects on the related branches.

We have to make another point about Moskos' (1977) theory and its critiques. As we have seen, scholars agree on the existence of a change. Those who criticize Moskos (1977) affirm that the military is facing an important organizational transformation. Janowitz (1960), for instance, proposed the concept of "constabulary" to refer to the new missions and structural transformation of the armies. He also expects a convergence between the civilian and the military profession with the new technologies. Disagreements are about the extent and the conceptualization of this change. Sorensen (1994) remarks on this and argues that these scholars had more in common than they thought. Both Janowitz (1977) and Moskos (1977) agree upon a certain trend. But this trend is named civilianization by Janowitz (1977) and occupational by Moskos (1977). They also agree on the fact that this change is felt mainly by the officers who consist of the main body of the armies. However, the

problem is that they use each others' concepts differently. While criticizing Moskos' (1977) occupational tendency, Janowitz (1977) refers to the profession, whereas it subsumes both profession and organization. In this way, Janowitz (1977) reads the occupational tendency as a decrease in professionalization. Later, he identifies certain criteria for professionalization which are autonomy, skill, and unique profession. As the army still contains these criteria, he resolves that occupational tendency is absent. But, Moskos' (1977) usage of occupation is closer to Janowitz's (1977) concept of civilianization than the profession. Therefore, when he says the occupational elements are increasing, he signals a change in the values and motivations of the officers rather than their professions.

Moskos (1977) opened an important discussion in the field of military sociology. Occupation-institution discussion still forces us to think about the meaning of being a soldier. This meaning is an important point of reference when we think about the new military technologies. Yet, Moskos' (1977) theory is limited concerning the complexity of the new technologies and warfare. It does not tell us in detail how the authority relations in the army had affected by this change or how these technologies emerge a different warfare. Therefore, we have to widen our scope to address these questions. Institution-occupation discussion provides us a base. It tells us an organizational change and its direction on the institutional level. Aspects of this change in terms of warfare, hierarchy, and soldiery are also important for us. Some scholars inspected the change in terms of mentioned aspects. Hence, I will refer to these scholars who provided us with necessary concepts and theories in the following sections. As it is not possible to cover every organizational aspect of the military, I identified three critical topics that surpass any other. These are; Changes in Authority Relations, Changing Soldier Types, and Changing Warfare.

## **2.2 Changes in Authority Relations**

As members of the army manage the violence, their profession necessitates a unique perspective about discipline. Armies must overcome relaxation or indetermination, which are opposites of disciplinary acts, to succeed on the battlefield. They need a

structure where discipline operates smoothly. For such an operation, authority is indispensable. It decides the quality of discipline. Therefore, armies are always cautious about the relations of authority within the organization.

Usually, authority within the military is thought to be strict and rigid. Advisement, freedom of expression, and flexibility are not the concepts that come to our mind when we think about war or soldier. We expect solid conformity and harmony over the chain of command. This may still be valid for some army branches, but after the Second World War, the military profession had significant revolutions that undermined such assumptions. These revolutions are defined by Huntington (1963) as; the technological and the strategic. The former one made the management of violence more complex and skillful. On the other hand, the latter implies a change in the strategic understanding, which is the transition from mass mobilization to deterrence. Now, armies have to administrate different branches with various technologies to implement deterrence policies. As a result, both the officer's profession and management of violence had changed.

Officers now have to be experts in various fields. Their current work necessitates more education, more mental labor, and more expertise than the traditional soldiery (Huntington, 1963: 786). Although the process of proliferation made some fields of military work approximate civilian occupations, it also brought out various expert fields on managing violence. In this way, we can also talk about a process of "militarization" in some instances (Huntington, 1963: 787). This process, contrary to the former one, implies new fields of expertise that have no correspondence in civilian life. For Huntington (1963), such processes cause two important career patterns for the officers: they can be specialist in a certain branch, which will diminish their chance of entering top command; or, they can be generalist, which means having necessary managerial skills for entering top command but sacrificing specialist knowledge (Huntington, 1963: 788). Therefore, the top command should manage the various specialists, and to do this, they need to have managerial skills which are different than the skills possessed by classical heroic leaders. We will see this change in the next section on soldier types. Now, it is important as such managerial skills and specialist knowledge transform the classical understanding of authority. It is necessary to review

how information is processed in the military structure to understand this transformation and the importance of knowledge

Due to the life-threatening, imponderable nature of war, discrepancy emerges between those who give the order and those who execute (Feld, 1959:15). Former specify the orders in a safe base far from the battlefield. On the other hand, the latter executes the given order in a threatening environment, which makes their work different. Contrary to the staff officer who reviews the different variables cold-bloodedly, soldiers in a fight must overcome contingencies that may cost their lives while executing their orders. The emergence of these two different spheres of action creates certain strains in the military. Decisions that are taken by staff members may not compromise with the realities of the field. The Cruciality of information becomes apparent at this point. Both parties, staff and field officers, rely on the information that is given to them. Thus, information becomes the bridge between the commanders and the commanded. It is essential for the smooth operation of authority (Feld, 1959:19). As decision-makers, staff officers have the accumulated information that is given by their inferiors. But, such knowledge is closed to the field officer. Soldiers in the field rarely share knowledge with their counterparts. This fact makes them aware of the greater information held by their superiors. Even though they do not know the reason behind the order, they conform to it as they know the order is given according to certain information. In return, superiors trust their inferiors in terms of the information they give. A consequence of this reciprocal relationship is parallelism between information and authority. Those who hold greater information, likely to have greater authority in a military environment.

It is obvious that new technology means diversifying the ways of gathering information which results in a change in the realization of authority. With the advanced technology, information can be processed fast and obtained more easily. The result is delayering, which is the transformation of the hierarchical structure of information (Manigart, 2006: 325). In a traditional structure, information flows from below to the top, which puts a barrier to the horizontal dissemination of information. But in a technological environment, information flows both horizontally and vertically. Inferiors are no longer constrained by lack of information. Drone technology provides a clear example for this case. Operators of the drone sit in front of a screen where

uncountable data flows. Unlike a foot soldier, their task is turning raw data into information. Therefore, one may even argue that they hold greater data or information about the battlefield than their superiors (Benjamin, 2012: 89). This fact pushed armies to consider teamwork and new advisement processes to control the information. Consequently, traditional authority mechanisms no longer correspond to the new necessities that are imposed by technology.

Janowitz (1959) identified a new emerging form different from traditional authority. Here, traditional authority corresponds to the domination which is defined by Janowitz (1959) as strict hierarchy and expectancy of mechanical response to the orders. Such authority leaves no room for questioning orders. It imposes a pyramidal structure where the decision-makers are on the top and the decision-making process is one-way towards below. Moreover, orders make no reference to the combat goals. In contrast with this structure, there is an emerging type of authority which implies greater room for teamwork and vertical dissemination of the authority. Janowitz (1959: 482) defines this authority as manipulation. Now, decisions are not taken in a dominant way but every decision may be discussed or resulted from an advisement process:

Military authority must shift from reliance on practices based on domination to a widening utilization of manipulation. By domination, we mean influencing an individual's behavior by giving explicit instruction as to desired behavior without reference to the goals sought. Domination involves threats and negative sanctions rather than positive incentives. It tends to produce mechanical compliance. By manipulation, we mean influencing an individual's behavior by indirect techniques of group persuasion and by an emphasis on group goals. Manipulation involves positive incentives rather than physical threats, though it does retain the threat of exclusion from the group as a form of control. The indirect techniques of manipulation tend to take into account the individual soldier's predispositions. (Janowitz, 1959: 482).

Red teams in the US army are the perfect example of such processes. These teams consist of expert members who discuss alternate views in order to think like an enemy. During the emergent missions of the post-cold war, armies interact with different cultures and various adversaries. This fact makes it harder to agree on a single policy (Fontenot, 2005). Red teams are created to overcome this difficulty. The result is alternate theories and critical assessment, which are hardly seen in a traditional military organization (Hajjar, 2014:130).

The advisement process is also a necessary result of technology. Operating a technological device during warfare means technical knowledge. This knowledge cannot always be held by superiors. As Huntington (1963) underlined, superiors sacrifice expert knowledge when they ascend their career ladders. Therefore, they must consult their subordinates in order to decide action. They need to develop communicational skills, and they must deviate from the traditional commander type.

Similar remarks are also made by Soeters et al. (2006). They referred to two bureaucratic types to analyze the military culture. These types are coercive and enabling bureaucracies. As the name suggests, coercive bureaucracy is a rigid structure whose members are strictly regulated by rules and norms. Under its authority, individuals enjoy no autonomy. Every task must be done according to established rules and orders. Contrarily, enabling bureaucracy provides more flexible space for the members. The aim of the bureaucracy is clearly identified and internalized by the members, which enables them to draw a line in terms of their work. Within the limits of that line, members enjoy autonomy. Traditional military authority or domination is clearly in line with coercive bureaucracy. But with increased expertise and organizational complexity, the coercive structure may cause difficulties in handling new tasks. Commander, who sacrificed serious amounts of expert knowledge in order to become commander, cannot give a coercive, detailed order to an expert subordinate. They can only draw a picture or refer to the goals of the task to open an autonomous space for the inferiors. For this reason, the coercive style of traditional attitude is replacing with more enabling bureaucracy, which opens space for relatively free action (Soeters et al., 2006: 244). In addition, the aforementioned change in information processes made information available for the soldiers at all levels. Traditionally closed information like the course of the war, terrain, technological capabilities, and detailed intents of missions can be accessed by the inferior ranks. With this accumulated information, inferiors became capable of questioning the missions. To prevent such questioning, the intent of the missions is more openly discussed with field officers in modern armies than the previous mass armies, which have a more rigid structure. Therefore, under the authority structure of enabling bureaucracy, "commander's intent" is conveyed to more soldiers, and the decision-making process is flattened (Manigart, 2006: 326).

Yet, technology does not always imply delegation of authority. Improved communication systems that enable commanders to surveil the operations and soldiers also endow them to intervene in every minute detail. Singer (2009: 360) gives the example of how unmanned technologies provided new communication channels for the generals and turned them into “tactical generals.” This means contrary to the traditional general who has a distance between himself and the battlefield; generals now can observe every detail on the ground. During this observation, they can intervene to the smallest details, which are usually left to the initiative of the officers in the field. This fact may give a clue about how dominative authority still persists and finds new channels to be realized with the help of new technologies.

To sum up this section, technical expertise and change in the processes of information caused the emergence of the new form of authority. Although some branches are still administrated with traditional authority, in branches where technical expertise is necessary, authority became more interactive and flexible. But also, unmanned systems caused the persistence of dominative authority in technical branches where commanders have the capability to intervene in their inferiors. As a result, we have two authority forms: domination and manipulation. These forms are important to see how technology is affecting the organizational outlook of a certain branch. Both of these forms are also strongly related to soldier types. Therefore, in the following section, it will be underlined how similar processes emerged new types of soldiery.

### **2.3 Changing Soldier Ideal Types**

An organizational transformation must also affect members and their relation with this organization. In our case, soldiers and their relation with the management of violence have been affected by the new technologies. More complex organization, less authoritarian structure meant differentiation in management of violence. I frame this management as soldier types. It refers to different individual skills and characteristics developed under different organizations. In this way, it would be possible to develop a theoretical framework that could explain the changing experiences of soldiery with the new technologies. For this purpose, I will follow the similar lines of thought

aforementioned and emphasize how technological transformation affected the soldiers.

As authority relations are directly related to the soldier types, the same scholars who argued that authority is more flexible in the emergent military organization also proposed an emergent type of soldiery. Janowitz's (1960) *Professional Soldier* covers such a proposition. One of the most important issues in his book is the emergence of a new soldier type which is the Managerial (Janowitz, 1960:19). To explain this new type, he makes an analytic distinction between the ideal types of Heroic and Managerial. Both of these types are characteristics of an ideal soldier who works under different organizations. They do not imply an entire transformation in the military, but they are coined to underline the diversification of soldiery as a result of increased complexity.

Heroism has always been linked with soldiers who are expected to embrace the risk imposed by the battlefield and overcome the terror of warfare through bravery and discipline. By "heroic type," Janowitz (1960) refers to this traditional understanding of soldiery. According to this understanding, soldiers must be "warriors." They need to develop a certain martial spirit and personal valor (Janowitz, 1960:21). Martial spirit means being always ready for a fight which is traditionally based on muscle strength (Kümmel, 2006: 423). It also means not hesitating during the war. To achieve this, soldiers have to control their emotions and push the limits of their bodies in order to be efficient during a fight (Darash, 2012). On the other hand, besides these physical capabilities, officers should also develop certain leadership characteristics as they command a group of soldiers. The warrior type, in this case, corresponds to a Heroic leader on the battlefield. Such a leader again must hold the virtues of the warrior to control his inferiors efficiently. He holds the authority through domination and uses coercive means when necessary. To use these means efficiently, officers should have a certain charisma. But charisma is something that everyone cannot obtain. Thus, armies develop an organization that ascribes charisma to the field officers. Rank on their uniforms, ceremonies, and segregation serves this purpose. They also gave the officers an elite outlook within the military (Boene, 1990: 30). Consequently, warfare that puts the risk on soldiers' lives, and necessitates a physical struggle, entails heroic

type. In other words, soldiers who physically engage on the battlefield should always hold a certain amount of heroic characteristics to be efficient.

On the other hand, today's complex military organizations have various branches where most of them are not directly engaged with violence. Soldiers within these branches do not have to embrace the risks that warriors do. Their relation with violence still exists, but the character of this relation transformed significantly. Tasks that are given to such soldiers may vary from bureaucratic ones to technological ones. Especially the rise of new technological capabilities caused soldiers who control these technologies to improve different relations with war. Besides exerting violence, these soldiers should solve technological problems, process new information, and interact with counterparts from other civilian institutions. These, in return, cause the emergence of a new soldier type which is the Managerial.

Traditionally, soldiers are described as conservatives. They had an aristocratic outlook which was undermined with the necessity of technical expertise (Janowitz, 1960: 23). This outlook means opposition to innovation as it may defuse the structure that empowers conservative elites. For Janowitz (1960), such understanding of professional soldiers in opposition to innovation is no longer applicable after the Second World War. Improved weapon systems and changes in forms of war necessitate soldiers to assess the needs and prospects of the armies in detail. Especially in the political conjuncture of the arms race, soldiers have to be open in terms of adopting different technologies. They need to determine the priorities, which means they have to be open to different knowledge and ideas. Therefore, managerial type is the inevitable result of this process.

It is also necessary to separate the managerial type from the military engineer or technologist. The latter one is more concerned with the technical problems. At the same time, the former one must be concerned with both the problems and the military personnel. Officers must have managerial skills in order to administrate technological problems and coordinate among the personnel. These aspects are in parallel with the changes in authority relations. As we can see, managerial skills are more compatible with manipulative authority. Conversely, the heroic type corresponds to domination. It is more related to the fighter spirit, which leaves no room for questioning the orders

or openness. Heroic leaders expect rigid conformity to their orders and attach great importance to the discipline.

To sum up the two types, heroic/warrior soldier corresponds to fighters who risk their lives to win a physical struggle where they must show bravery, martial spirit, and personal valor, whereas managerial soldier must deal with administrative tasks, provide coordination among different expert groups and hold a minimum amount of expert knowledge to contribute to the decision making processes.

At this point, it must be reminded that these are the ideal types. In actuality, Janowitz (1960) argues that the modern soldier must contain both elements in order to succeed in the military organization. In other words, modern military establishment necessitates skills that belong to both types.

Although technology implies an ever-increasing tendency towards managerial type, the uniqueness of the military organization causes the containment of the warrior elements. This uniqueness stems from the aim of the military organization, which is warfare (Janowitz, 1960:34). Unlike other bureaucracies, the military always must be prepared for a certain war scenario. Thus, elements of war always exist within the military. Soldiers, as a result, must always possess a certain tendency towards war. This is defined by Janowitz (1960:31) as “The Persistence of the Fighter Spirit.” This aspect causes an important dilemma for modern armies. Armies must recruit and retain officers who are skilled in military management for their elite, but, at the same time, many of its officers must be able to perpetuate the traditions of the heroic leader. Therefore, armies must develop an organization that would maintain a balance between the heroic leader and managerial type.

Another contribution to the topic of emergent soldier types is made by Remi M. Hajjar (2014). His article: “Emergent Postmodern US Military Culture” is an important one in the case of understanding postmodern military organization and the soldier type that this organization imposes. The article revolves around two concepts; postmodern and culture. He first defines a cultural toolkit to provide a working concept for the analysis. He used culture to refer to a repertoire, toolkit that is contested, filled with tools, schemas, frames, codes that provide collective identities and strategies. This definition of culture assumes heterogeneity. Different action repertoires are contained by this cultural toolkit. Therefore, culture is composed of cognitive structures where some of

them are contested, and the other ones are complementary. This means culture is something both enabling and constraining. This enables one to review the conflicting forces within the same culture. Especially, to make an organizational analysis, the cultural toolkit concept urges a multidimensional analysis (Hajjar, 2014: 120).

The cultural toolkit concept is related to the postmodernist view. Hajjar (2014) used postmodernism to refer to pluralism, heterogeneity, and ambiguity in contrast to modernism which he thinks bears stamps of rationality, universal truth, and homogeneity. Effects of passing from modern to postmodern can be seen on the culture of US military:

Postmodern currents influence the culture of the US military, including worldwide growth of ambiguity, multiculturalism, the information age, increased civilians in military positions, greater questioning of traditions, authority, ideas, and plans, and the rise of a multimission postmodern military that bears prominent and influential warrior and peacekeeper-diplomat cultural orientations and tools, as well as other cultural spheres. (Hajjar, 2014: 122).

There are certain aspects that affect the postmodern military culture. These are multiculturalism, the emergence of the information age, and the growth of civilians serving in the army. Multiculturalism directly affects the structure of the recruitment system. In the postmodernist era, minorities have a higher chance in the army than the previous one. It serves the idea of a more “open” military which traditionally had a more homogenous outlook. Information age caused a significant transformation in terms of militaries’ perception of warfare. New technologies implied more complex systems that necessitate a certain level of knowledge to operate. To meet such need, the military’s adopted a techno-scientific approach. New types of training are developed, and interaction with the civilian partners is grown. It also caused an increase in the number of civilian employees in the army. This increase caused certain strains in the military organization. Their ethical codes and relation with the war are questioned. In addition, they usually get higher pay than the soldiers who do similar work, which made some of the soldiers retire to get a civilian job. According to Hajjar (2014), this aspect resulted in the growth of occupational tendencies in the military.

The result of the mentioned developments is an innovation in the military culture (Hajjar, 2014). Now, the military is not a homogeneous organization whose aim is to fight a conventional enemy. Today’s military has various missions and complex

technological weapons. These necessitate an openness for innovation. Contrary to the former organizations, the postmodern military invites innovative thinking, which means orders can be discussed and decision-making is not solely the superiors'. Different missions also caused the adoption of new cultural toolkits. Soldiers in the field do not only fight an enemy but interact with people from different cultures and different social strata. For Hajjar (2014), this dimension of new missions resulted in two different cultural orientations or toolkit: the warrior and the peacekeeper-diplomat.

... warrior cultural identity possesses orientations and tools that enable service members to effectively conduct combat missions, including commanding, ordering, directing, telling, conforming, destroying, incapacitating, capturing, and killing, and an entrenched ethnocentrism- especially in relation to enemies... The Emerging peacekeeper-diplomat role instigates the formation of cultural orientations and tools linked to building, developing, mentoring, cross-cultural competence, diplomacy and ambassadorship, flexibility, teaching, learning from and empowering diverse people, creating and inventing, agency and other related cultural tools. (Hajjar, 2014: 133-134).

With these “cultural toolkits,” Hajjar (2014) underlines the complexity of the postmodern military culture. He argues that the former theories lack the variable of culture. He adds this variable to strengthen the analyses about the postmodern military. At this point, it may serve to us to state the commonality of the studies I have mentioned. Besides conceptual disagreements, all of the scholars agree upon the sophistication of the military organization over time since Second World War. In some cases, they add new variables to the analysis –like Hajjar (2014) had done-, in other cases, they choose different concepts and point out different dimensions. Yet, their analytical approach remains the same. They all took the military as an institution with the aim of managing and implementing violence whose organization become more and more complex with the developed technology. Therefore, my intention of referring to various studies and concepts in this part is to find a common conceptual framework among them.

Especially the consensus on the shift in the dominant professional type is obvious according to Moskos (1992). This consensus is about the dominant type, which was combat leader/heroic in time of war readiness and managerial in the time of war deterrence (Moskos, 1992: 8). Moskos and Burk (1994) added the soldier-

scholar/soldier-statesman as a guess for the dominant type in the postmodern period (Moskos, Burk, 1994: 154). Again their expectation overlaps with the Hajjar's (2014) diplomat type. They also thought that the soldiers in the postmodern period would handle diplomatic tasks. In addition, they argued similarly that the warrior elements would continue to persist in the military.

As a result, scholars agreed on three types of military professionals; heroic/combat leader, managerial, and statesman/diplomat. They also agreed that passing from one period to another does not mean the withering of one of these types. New types can be observed, but we have a handful of reasons to believe the persistence of the previous types.

Although these concepts are illuminating in the sense of the modern organization of militaries, we still need to operationalize them in order to apply them in the research about a certain branch of the military. There is a discussion about drone operators in terms of their profession. Their work is questioned, and some do not see drone labor as worthy of being called "soldiery." Thus, such a view already eliminates the ideal type of warrior. Yet, there are also some authors who argue the opposite. Such an argument is proposed by Caroline Varin (2017). In her article "Flying Without Risk: The Norms on Warriors and Their Application to Drone Pilots," Caroline Varin (2017) discusses drone operators as new possible warriors that societies need in the contemporary world. She begins with the traditional understanding of warrior. For her, the ideal western warrior holds three virtues. They are; courage, loyalty, and sacrifice. These virtues are necessary to meet the existential threats facing society (Varin, 2017:1). At the junction of these virtues, there lays the concept of risk. To be a warrior, one must be exposed to some degree of physical risk. The problem that is ascribed to the drone pilots is this lack of warrior ethos. Those who argue that drone operators are not warriors underline that drone operators do not enter a reciprocal relationship of risk with their enemy and cannot display any heroic behavior (Varin, 2017: 114). As a result, their relationship with the war is seen as problematic.

On the other hand, Varin (2017) argues that drone technology brings with it a new kind of risk and heroism. As the drone operators witness the war, they have a greater psychological burden (Varin, 2017: 111-112). This burden is caused by the intimate surveillance of the enemy. Operators witness the daily lives of their targets; this makes

them construct a new form of relationship with their enemy that is absent in the traditional conflicts. This experience is also covered by Benjamin (2012). From the accounts of drone operators, he showed that by witnessing the cruelty of the battlefield, operators' are enmeshed in the terrible effects of the battlefield: "Many drone pilots have witnessed similar events and are just as affected by 'survivor's guilt' as if they were like any other soldier who was party to a firefight." (Benjamin, 2012: 88).

Therefore, "despite being remote, drone technology has shifted war from the impersonal to the intimate" (Varin, 2017: 114). Another point is the anonymity of the drone operators. Nobody knows these persons, and their jobs are underrated compared to the other works done within the military. A similar argument had also been made by Enemark (2017). He argues that drone operators face the threat of "moral injury" by killing passive enemies who are unaware of being watched. This type of injury is different from a psychological one as it hurts one's beliefs on morality and justice:

"Moral injury is different from PTSD, it is rooted in the feeling (shame and guilt) one has about harm one has done to others." (Enemark, 2017: 8)

Consequently, Varin (2017) and Enemark (2017) think that drone technology causes new psychological and moral risks, which may change society's expectations from its warriors.

Varin's (2017) article made similar remarks with the previous works. As we can see, the aim of warfare maintains the warrior elements. Although dominant soldier type may change over time, I still expect drone operators to have certain warrior elements that may be unique. The uniqueness here stems from the concept of risk. Unlike soldiers on the ground, physical danger is absent for them. But now they are exposed to new psychological dangers. Embracing or overcoming these new dangers must raise a new form of a heroic soldier. This uniqueness stems from the new form of warfare which is our next case.

## 2.4 Changing Warfare

Moskos (1992) showed us how military organizations changed over time with the transformation of war. Yet, one should not hasten to ascribe unilateral causality into this relationship between the organization and the war. Militaries are the agents of war, and their means partially decide the structure or form of the war. For instance, without the means of airpower, there would be no war in the sky. But the realization of war is also affected by political and social means. Therefore, at the end of the day, we can talk about a certain form of war that changes over time, and this form, in return, affects the structure of the military and the experiences of soldiers. As a result, analysis of military structure must cover the characteristics of war. For this purpose, I will try to point out how warfare is transformed in the last centuries and underline the reciprocal relationship between war and technology. Later, I will focus on the sociological aspects of war. These aspects cover the changing experiences of soldiers during a fight. They are going to contribute my analysis on drones as a means of war which consists of the last part of this section.

One of the most transforming events in military history was the industrial revolution which made mass production possible (Wijk, 2014: 5). With this event, it became possible to maintain mass armies that emerged with the conscription system. Warfare between these mass armies meant the maximum utilization of industrial capabilities and population. The result was a total war in which every member of the nation are expected to put up effort (Morillo et al., 2014: 443). Technological advances also caused an increase in the lethality of the armies by improving firepower. They provided new means for managing violence. Trench warfare is one of the outcomes of such management. Europe witnessed its ultimate form during the Great War. For months, opposing forces held entrenched positions. Mass numbers of soldiers behind the trenches with improved firepower and artillery support made it impossible for the armies to advance. The time that soldiers spend in front is extended in great amounts. For months, soldiers lived in a life-threatening environment that intensified war's psychological effects (Bröckling: 2008). This stalemate along the trench lines created new puzzles for the armies. Although their effects were limited, new technologies such

as tanks and the usage of gas were the attempts to solve this puzzle (Morillo et al., 2014: 512).

Another limited but crucial advance is made in the field of aviation. Zeppelins are used for bombardment, but they were vulnerable and incapable of maneuver. Planes, on the contrary, proved much more effective in both senses. They were mainly used for reconnaissance, but their contribution motivated the decision-makers to invest in air power (Morillo et al., 2014: 519-521). Between the world wars, armies focused on these new technologies. They thought that effective usage of these new technologies would solve the problem of advancing through enemy lines.

Decision-makers saw the technology as a key for decisive victory with fewer casualties (Morillo et al., 2014: 532). Especially the developments in the technology of armored vehicles offered speed as a solution. Thus, the Blitzkrieg or lightning war emerged. This new tactic meant a swift move with overwhelming force towards the enemy. Infantry and armored vehicles realize the tactic with a surprise attack on enemy lines. Artillery and air power complement the attack with synchronous bombardments. Axis forces tried Blitzkrieg between the two world wars against different adversaries. But, its success is peaked during the occupation of Poland and France (Reilly, 1940). It produced the wanted effects in these two cases. Germans had a decisive victory in a very short time compared with the Great War. But still, these two victories were not the real test for the Blitzkrieg. Poland had very limited technology compared to Germans, and French Army made a great mistake by assuming that the Great War will be repeated in the east of the country. They did not expect Germans to act in such a swift way. Therefore, success against Poland and France may not be repeated against well-mobilized and equipped armies.

In such a case, other factors should be put into consideration. Population and mobilization capabilities again became the focus. This made Air Force a key actor. It has been used for strategic bombing, which means damaging the adversary's mobilization capabilities. Blitzkrieg aimed at the enemy army, not the population, but when it fails total war again rose to the surface. Industrial capabilities are pushed to the limits, and every member contributed to the effort. To maintain these capabilities strategic bombings focused on population and production facilities.

Improved air technologies bombed cities in an unthinkable way and caused the destruction of vast areas. War planes flew all over the continent. War is now dispersed immensely throughout Europe and the Pacific. Figures highlight the effects of these new tactics and technologies on warfare. In The Great War, the frontline was 14 km, and the depth was 17 km, whereas, in the Second World War, the frontline and depth increased significantly to 48 and 57 km (Moelker, 2006). More technology meant more destruction in Second World War, and it resulted in the catastrophic usage of Atomic bombs in Nagasaki and Hiroshima. These bombs made another rupture in the warfare.

After the war, USSR and the USA became the two great competing powers. The US was confident because it was the sole country that had nuclear capability. Strategists thought this capability would surpass any deficiency on the ground. But their confidence was disturbed with the finding of the Soviet Nuclear Program. After 1949, both countries had nuclear bombs, which triggered further competition. They wanted to inspect each other's progress in military technology. This made them invest in the field of reconnaissance. Satellites and surveillance aircraft were the products of such investment (Mahnken, 2009:15-19). On the other hand, ideology and political struggles also played an important part in the Cold War. Both countries tried to expand their influence through political means. Armies were also important for these means, and they developed unconventional ways of dealing with ideological warfare. Insurgents are supported in different countries to propagate the ideologies of the supporter country. Proxies have emerged in different parts of the globe, and when they were incapable, countries directly joined the fray. Vietnam and Korea can be given as examples.

As we can see both countries avoided direct conflict. As atomic warfare meant catastrophic results in an immeasurable way, armies chose not to escalate the situation. The concept of total war gave way to deterrence. Now the armies developed doctrines aimed not to conquer the enemy with mass force but to deter its capabilities to impose their will on the enemy. Technology was the key actor in deterrence doctrine. It is assumed that countries with greater technology and military capability would likely be more successful in deterring the enemy.

Although both countries avoided direct conflict, a nuclear war or a total war between the US and Soviets remained a possible option until the end of the cold war. But when

the Soviet Union dissolved, some scholars argued that such an option ceased to exist (Dandeker, 1994). The US became the sole power capable of imposing its will on the international arena. This had changed the US' perception of threat and risk. The absence of a rival who has equal nuclear capabilities shifted the US' focus on local actors. US Army put effort into consolidating its existence in different geographies. On the side of other advanced societies, developments in military technology made total warfare inestimably lethal. As a result, countries focused on "soft power" to raise their interests. The mass war between advanced industries became a remote possibility (Dandeker, 2006: 407).

The function of the armies in this conjuncture altered. New missions and international agreements consolidated the concept of deterrence and ascribed policing outlook to the armies. Especially western armies made operations in different countries to fight natural disasters and to reconcile local conflicts. They also made operations in different countries against local insurgents in order to protect their interests. Such variance in military operations caused blurring the line between warfare and other conflicts. For example, the struggle against the southern USA border against the drug cartels is also framed as war. This struggle is not so different than the warfare against Al Qaeda. Thus, the description of war also became ambivalent, and war became perpetual and everywhere (Gregory, 2011).

Especially terrorism consisted the focal point of new warfare. With globalism, terrorist acts became transnational. Even the countries that are considered as powerful and secure can be a target to a terrorist organization. Against such a threat, countries reacted by focusing on a certain locality and tracing the network of the organization. In this way, a bombing in the USA can result in a war in Afghanistan. This new condition of the planet is described by Bauman (2002) as a "Frontierland." It is a place where the threat is perpetual, and the law cannot decide which acts should be considered terrorism. Enmities and alliances in such conditions remain in flux. An organization that is considered a moderate group can become a terrorist with one act. These facts consolidate the ambivalence of war. Countries in this picture react in an experimental way (Bauman, 2002: 87). They cannot shed light on the darkness of ambivalence. What they do is blink the darkness to find a path to move. Rather than developing an international law that would regulate the violence and therefore end the

structural causes of terrorism, every country focuses on its locality. In this way, terrorism persists. Such focus on locality also imposes a reconnaissance battle between the countries, according to Bauman (2002). To blink the darkness, they attempt to get knowledge in any possible way. These attempts trigger other attempts which cause surveillance and existence in different areas of the globe. Especially the UAVs (Unmanned Aerial Vehicles) became key technological device in this period which will be mentioned at the end of this section.

Bauman's (2002) analysis implies a military logic that permeates into every aspect of society. It shows us how it is no longer possible for civilians to grasp complex military decisions with developed military technologies. In other words, today's military affairs necessitate unique professions that can only be held by military members. Mills (1956: 198) defines this process as "The Military Ascendancy." He argues that since the World Wars, military logic, or in his words, "military metaphysics," started to dominate political, economic, and other social spheres (Mills, 1956: 202).

With centralized military institutions, slowly but surely, military affairs gained important political effect. This enabled military members to achieve significant power in the state. The result is the dominance of the military view. Warfare becomes "the only reality of our time" (Mills, 1956, 202).

Within the same process, scientific and technological developments are dominated by the military approach. Especially with the arms race, military organizations constantly sought technological achievements. With each of these achievements, there arise new fields of military expertise, and these technologies started to permeate into civil life. But also, each military technology created an immense industry that caused military affairs to dominate the economy. Mills (1956) underlines how the military budget has expanded in the last century. Unlike liberal assumptions that defend military budgets would shrink under a free-market economy, Mills (1956: 215) showed that the economy of the last century is conquered by military needs.

Prevailing military logic created a new way of reading international relations. Mills (1958: 81) defined it as "crackpot realism." Under the military logic, nations now should always be prepared for war because war is the natural state of humans. In other words, it is more reasonable and inevitable to solve the problems with military coercion. Therefore, military leaders must always be respected and be given the

necessary tools to deal with military problems. In this way, the war became the sole reality of our times. Military in this world constantly deal with political problems and find a way to dominate social affairs.

With the latest technologies, such a trend seems to be intensified. We already underlined how with each new technology, new ways of fighting arise. In addition to Bauman's (2002) views, one also has to consider how military affairs change and permeate into other social spheres with each new technology. In this respect, Mills' (1956) arguments are illuminating in showing the effect of military metaphysics on society by raising a reality that revolves around warfare.

As we can see, technology became the main driver of the transformation of war. War now occurs as a result of the complex calculation of political interests and technological capabilities. New technologies made the war more lethal, but they also reduced the possibility of mass warfare between advanced societies. Rather, warfare is conducted through minor campaigns in remote geographies with the support of long-range missiles and aerial surveillance. These made advanced armies' intervention more swift and effective. They also ascribed modern soldiers a police-like role on the international level. Hence, warfare becomes completely different at the end of the 20<sup>th</sup> century. There were attempts to frame this difference through analyzing the changing character of war. One of them belongs to Luttwak (1995), who coined an important concept: Post-Heroic Warfare.

To identify the characteristics of modern warfare, Luttwak (1995) refers to two military approaches. One of them is Clausewitzian or Napoleonic, and the other one is Roman. In the former one, the military strategy aims a decisive victory. It emerged as a reaction to the classical strategic understanding of the 18<sup>th</sup> century in which wars had modest aims and armies were sensitive to casualties. Contrary, the Napoleonic war was conducted to achieve grand, national goals. Costs are less important as far as the war is won. This type of war is congruent with the social structure of industrial society. In such a society, population growth is high, and it is easy for a nation to identify its national interests. From the army's perspective, it is easier to explain the casualties and the reason behind a grand campaign (Luttwak, 1995:115). Moreover, casualties in such a society could be replaced easily due to a high growth rate contrary to the professional army where each member has certain skills, which was the case in the

Roman approach. As their army consist of citizens and paid professionals, Romans adopted a defensive approach to minimize the casualties. Every soldier in Roman Army was valuable and could not be replaced easily while their enemies fight in an irregular way and see death as an honor. Therefore, rather than conducting a decisive attack, they usually stood in a defensive formation to minimize casualties (Luttwak, 1995:116). For Luttwak, in the post-heroic age, military strategies stand between these two historical approaches. With its complex technological and political variables, the current conjuncture made it harder for countries to venture into a grand campaign. On the other hand, today's society is sensitive about any casualty. Military leaders are responsible for succeeding with minimum casualties. Yet, they also have to realize political goals on certain geographies. What happens is the mixture of the two aforementioned approaches; Military commanders now desire partial results, but they also want to give minimum casualties during the war (Luttwak, 1995: 122). At this point, it must be underlined that this concept is used to frame modern military strategies. But this fact does not diminish its importance for sociological analysis.

Such sociological consideration is done by King (2014). King (2014) borrows the post-heroic concept to analyze the role played by heroism in modern warfare. He begins by showing the importance of heroism in previous wars. Battlefields were empty spaces in the two world wars. Soldiers in such a space felt loneliness and isolation. Also, figures had shown that only a small proportion of the soldiers actually effective during the fight. Most of the soldiers did not fire their guns. In this stalemate, progress could be realized only in two ways. One is the bayonet charge which intensifies the feeling of collectiveness, and the other one is the individual initiative. Latter denotes heroic acts that made other soldiers take action. In both cases, soldiers who refrain from taking risks are encouraged by the bravery of their comrades. Therefore, King (2014) argues that heroism carried the fight forward in these wars.

In the period of Luttwak's post-heroic warfare, the form of heroism has changed. The change began with the end of conscription, which means armies had a downsizing. Besides the number of soldiers, their qualities also changed. Being paid members of the army, soldiers adopted a professional view towards their job, which was absent in the mass armies. This view is reinforced with the complex education and drills. Latter aims to realize collective harmony and feeling of attachment among the soldiers. Their

professionalism with this attachment endows them with the necessary skills to make the most efficient decision during a fight. Such decisions diverge from the individual heroic initiative in the previous wars. For King (2014), they resemble choreography. Every soldier joins the process. As the psychological effects of war are still intense, bravery is still expected from the soldiers. But contrary to the soldiers in the mass armies, where this bravery is concentrated in one soldier, it is democratically dispersed among the company.

Similar drills and instructions also existed in the mass armies, but they were ineffective as the soldiers were not professionals, and their training was limited due to the necessity of fast mobilization. It is expected from lower-rank officers to take the initiative in difficult situations. This initiative cannot be easily achieved with training, and it rests on the conditions of the battlefield. On the other hand, modern professional soldiers take this initiative as a group. They try to protect their harmony even in the most dangerous circumstances. To illustrate, King (2014) mentions a soldier who is given a medal of honor. When he is asked about his heroic act that made him gain a medal, he responded with coolheaded words:

“I did what I did because that’s what I was trained to do... There was a task that had to be done, and the part that I was gonna do was to link alpha and bravo teams.” (King, 2014: 231)

According to King (2014), this response is the perfect example of how heroism has changed. Even in the rarest actions that are defined as heroic, soldiers continue to maintain their professional view towards their tasks. They do not view those moments as an individual commitment but see them as necessary acts to complete the task. They underline that each soldier in their company would do the same.

The choreography during the fight evokes bureaucratic work. Therefore, King’s analysis implies a change in managing the violence during the war. It seems that momentary individual acts that made progress possible gave way to acts shared by the group in a harmonious way. Thus, it is possible to draw implications from King’s article about the organization of work done during the fight. Hence, the ideal type of bureaucracy would be beneficial to understand changes in warfare.

For most scholars, the military does not operate as a strict bureaucracy during the war. Aspects of bureaucracy like rationality, legal authority, impersonality that are identified by Weber (1978) are not sufficient during the war. For Clausewitz (1908), war necessitates passion, and emotion which are hardly seen in a rationalist bureaucracy. Therefore, researchers such as Miewald (1970) argue that officers have to adopt a different attitude towards the organization during a war. They should not act like a clerk who interprets every situation according to written rules and bureaucratic norms. Such comprehension would paralyze the soldiers who face indeterminate situations on the battlefield. They need to be open to different possibilities, and they should not hesitate to take the initiative. As a result, the incalculable nature of war would impose soldiers to diverge from their drills and norms.

On the other hand, these analyses are done during times of mass warfare. Today's means of warfare are much more complex and contain lots of different variables that need to be controlled by the officers. Soldiers do not hide behind the trench for months. Engagement occurs swiftly and after complex calculations. By calculations, I imply the probability of success and the risk that ground forces would be exposed. As clashes occur between the unequal adversaries, for instance, between an advanced army and insurgents, both groups can calculate the risks of different types of engagements. Such calculation was not possible during the total wars of the 19<sup>th</sup> and 20<sup>th</sup> centuries where the communication between ground and air forces was primitive, and there were thousands of soldiers on a limited battlefield which makes management of violence more difficult and inestimable. However, nowadays, soldiers can calculate most of the variables about the battlefield. They can study the terrain, weather, and capabilities of their adversaries before getting into the engagement. They also have improved communication systems that enable their superiors to surveil their action and intervene when necessary. Thus, the isolated soldier who is overwhelmed with the dangers of the battlefield gave way to the professional soldier who still faces danger but shares the burden with his mates. This change implies how technology and expertise caused a transformation in terms of soldiers' cohesion and organization during the war. Yet, the risk that soldiers face on the ground still continues. As long as this risk endures, soldiers' work on the battlefield would contain something different from the work done in a bureaucracy. But in our case, drone pilots do not share the same risk with the

soldiers in different branches. At this point, the history and characteristics of drone warfare would help us to draw differences.

Unmanned aerial vehicles are remotely controlled aircraft that are capable of surveillance, targeting, and bombing. Their origin predates the Second World War. The Larynx and the Ram were the two major programs aimed to develop unmanned aircraft. They were designed to fly at a limited distance to dive into the enemy or drop a bomb. Both projects showed partial success, but they were suspended due to the controlling difficulties and high expenditures (Kindervater, 2016: 226).

Similar projects re-emerged after the Second World War. The importance of reconnaissance during the Cold War engendered reassessment of the value and capability of unmanned aircraft. Contractors developed new projects to minimize the risk in the missions on potential enemy territories. New models were more successful than the primitive ones in terms of both cost-effectiveness and suitability for up-to-date military missions. First time in history, they are used in actual operations in this period. Especially during the Vietnam War, drones are used to surveil and gather information about the enemy's capabilities. Yet, these projects were classified because of the ongoing arms race, and they were not visible to the public (Kindervater, 2016: 228).

Despite their limited roles during the cold war, investment in drone technology continued. They gained new capabilities after the Cold War. These new capabilities emerged as a result of new types of conflicts, as aforementioned. Kosovo War was one of the new missions where the US army intervened to provide peace. US acted on behalf of others which made the US be cautious about casualties. This fact forced US commanders to develop strategies to minimize the risk while increasing the swiftness of their strikes. Air power and dynamic targeting, therefore, became the main instruments to achieve these aims. But, strikes from the air also necessitated constant surveillance and assessment of the battlefield. Drones entered the picture as a result of this necessity. Their surveillance capabilities are incorporated into dynamic targeting. They began providing coordinates to other weapon systems. In this way, targets are dynamically selected and struck. After the strikes, drones can also surveil the battlefield to assess the damage and the success of the attacks. In this way, they reduced the risk and expenditure of surveillance while increasing the capability of

targeting (Kindervater, 2016: 230). In 2001, drones gained another capability. For the first time, a Hellfire missile fired from a drone against a tank. This critical moment opened new possibilities for both drones and remote warfare (Gusterson, 2016).

As a result of armament and increased reconnaissance capabilities, investment in drone technology gained momentum after the 9/11 attacks. The effectiveness of drones increased significantly. Also, they are used in borders for constant surveillance. From these developments, two effects of drones on modern warfare can be drawn. First, they contributed to the process of passing from fixed targeting to dynamic targeting. During the World Wars and Cold War, air power was mainly used to target fixed positions. Roads, bridges, facilities were aimed to cripple enemies' capabilities. Although such targets still existed in modern warfare, a new battlefield necessitates dynamic targeting. Especially during the missions against insurgent groups, targets always shift. Drones played a critical role against this shift through constant assessment. Secondly, they added lethality to this process. Armed drones implied the capability of instant detection and destruction of the targets. This had both removed the physical existence of the pilot from the battlefield and provided constant control and surveillance over the ground. Kindervater (2016) defines the result of this process as lethal surveillance. Drones' effects on modern warfare also mean new military practices. Curtis (2016) identified an important aspect of drone warfare which is "The Explication of the Social" (Curtis, 2016: 528). Unlike the former technologies, which aimed to explicate the environment, which means destroying the environment –where enemy inhabits-, drone technology explicates the "social." Through the cameras of drone technology, enemies are surveilled constantly; every moment of their lives is recorded. Their social life is scrutinized in every possible way to create their network patterns or capture their "social" environment. In this way, war and risk are transferred into the social life of the enemy. These points are important to see the function of drones in modern warfare, yet they say little about how drones are controlled.

There are important differences between the operation of the drone and other military systems or weapons. Unlike the other weapons, the holder of the drone is not a certain person but a group. A single Predator drone requires 80 service personnel to keep it operational. Its control is also more complicated than any other weapon. Although the number of the crews may change according to the features of the drone, the crew of

large and lethal drones –like MQ-1 Predator and MQ-9 Reaper- consists of three people. They are the pilot, the sensor operator, and the mission intelligence coordinator. Although the pilot is the officer who is the commander of the drone, he is not in the position of full control of the weapon. Every crew member has a certain job, and without the sensor operator and the mission intelligence coordinator, the pilot cannot act or control the drone, unlike F-16, which contains only the pilot (Chapelle, 2014). It is obvious that operating drones are significantly different than being in close combat or being a pilot of a fighter jet.

While other soldiers are always moving during an action, operators continuously work in the same environment no matter how the situation is on the ground. They are thousands of miles away from the battlefield, but they are also the ones who closely witness the war. There are fifteen inches between their eyes and the visuality of the battlefield, which is their screen. This creates a feeling of intimacy. Contrary to the other aircraft pilots, drone operators see the results of their actions which makes them feel attached to the battlefield and ground forces. Again, unlike the fighter jet pilots who control the plane by themselves, drone operators are not alone. They are part of a communication and decision-making process which covers different branches and huge numbers of personnel. Derek Gregory (2011) mentions this process as a new “kill chain.” If we also count the people on the ground, the new kill chain is joined by hundreds of individuals where the responsibility of the actions is lost. Therefore, warfare conducted inside a trailer comprises contradictory aspects. It detaches the personnel from the physical reality of the battlefield but at the same time re-attaches them to the intensity of warfare through increased visuality (Rogers et al., 2014:70). It also blurs the line between warfare and peace as operators do similar work in both cases. Therefore, it removes the uniqueness of the battlefield, which diverts the military from other civil bureaucracies. Asaro (2013) refers to this situation as “bureaucratized killing.” During the operation of drones, there is bureaucratic labor and rationalization of the act of killing (Asaro, 2013). Drones are also seen as the discursive pre-structuring of the development of future autonomous weapons systems. These systems are characterized by the fact that they “are able to decide on the sole basis of algorithms and without human intervention” (Wiesner, 2017). These new systems create a certain military variant of bureaucracy during the war or combat,

which was absent before. As a result, bureaucratic characteristics seem to permeate into warfare.

Drones raise important questions about all concepts that we saw within the literature of military sociology. They remove the soldier from the battlefield. Therefore, their operation implies different organizational aspects from the other units of the military. Also, the distance between the battlefield and drone operators raises the question about the meaning ascribed to the soldiery. Here, the concept of post-heroism can be used to see how they conform or diverge from the other units. In addition, their working conditions also raise questions concerning the ideal types of managerial and heroic soldiers.

If we return to Moskos' (1977) analysis, the aforementioned analyses on authority, soldier types, and warfare are important indicators of a similar trend to occupational on within the military. Therefore, in this thesis, institution-occupation analysis is used to bridge the different analyses to develop a single analytical ground that will enable us to collect and analyze the data.

## **CHAPTER 3**

### **METHODOLOGY**

In the Literature review section, I tried to summarize the main theoretical, conceptual approaches to the military organization and changing warfare. In this section, I would like to connect these scattered arguments to develop a framework for the analysis of drone technology and the profession of drone operators. I will also discuss how we can connect this theoretical background with drone technology.

As it is already underlined in the previous section, apart from disagreements on certain concepts, referred scholars agree upon the critical points of military change in the last century. They agree that Cold War is the first rupture, and its end is the second rupture of the process of organizational transformation (Burk & Moskos, 1994: 147). They also agree that the military organization became more complex throughout these periods, its relationship with the parent society changed, and soldiery has been transformed. Therefore, these common points imply an organizational direction that most military sociologists agree. By eliminating few disagreements on certain concepts, we can identify common points that would help us see how today's military is organized and how soldiers experience their work.

For this analysis, I tried to identify ideal types that emerged with the mentioned ruptures. Ideal types will be used in the Weberian sense. They are the logical constructs about the military organization and soldiery that would help us analyze drone technology's characteristics. In Weber's (1949: 43) words: "Its (Ideal Type) function is the comparison with empirical reality in order to establish its divergences or similarities, to describe them with the most unambiguously intelligible concepts, and to understand and explain them causally."

In our case, ideal types refer to the categories or forms that emerged during the transformation of the military throughout the last century. But they do not imply a replacement. New skills, characteristics, and forms emerged over time, but these do not mean that the former ones are replaced or completely removed. Thus, another point of the agreement would be the persistence of certain elements within the military. What scholars argue is a change in the ratio. To capture this ratio, any organizational analysis should refer to ideal types.

Before getting into the concepts, we should also clarify the meaning of an organization. In case of the need for a specific definition, the organization in this thesis means: “A set of stable social relations deliberately created, with the explicit intention of continuously accomplishing some specific goals or purposes.” (Stinchcombe, 2013: 142).

A specific goal in the case of the military is the management of violence according to certain political ends. From this perspective, the military has a unique role that no other organization holds within the parent society. Yet, not all branches within the military directly related to those ends. Logistical and bureaucratic tasks also exist within the military organization, similar to labor in civil organizations. For this reason, it can be argued that there exist different organizational tasks or micro-organizations under the military organization. Starting from this argument, my thesis focuses on the organization of a branch within the military. The reason behind this attempt is the uniqueness of this branch and the belief in its transforming effects. As drone technology affects the understanding of warfare and experiences of its operators significantly, focusing on its organization would be helpful to understand the general direction of its effects on the military organization in general. Thus, our analysis focuses on both organization in branch and its effects on parent organization.

For these purposes, the institution-occupation thesis will be used as a starting point of the theoretical structure. The thesis implies a general tendency within the military that with the end of the draft institutional outlook of the military transforms into an occupation. With certain modifications, this analytical argument on transformation will be broadened to cover all other fields that are mentioned in the former section. This means, just as we move on from institution to occupation, we will also move from an organization where the dominant soldier type is the warrior to one where the

managerial type is prominent. Thus, all of the concepts will be used to identify the general tendencies within the organization. This usage enables us to connect different organizational aspects in the same direction. These aspects and the ideal types corresponding to them are summarized in the Table 2.

**Table 2. Organizational Topics and Ideal Types**

| Topic                  | Ideal Types    |              |                     |
|------------------------|----------------|--------------|---------------------|
| Institution-Occupation | Institution    | Occupation   |                     |
| Authority              | Domination     | Manipulation |                     |
| Soldier Types          | Heroic-Warrior | Managerial   | Scholar-Statesman   |
| Warfare                | Heroic         | Post-Heroic  | Bureaucratic-Visual |

I also need to explain why I limit my analysis on the mentioned topics. There are other organizational aspects within military sociology like civil-military relations and military families. The reason behind limiting my analysis on topics like authority, soldier types, and warfare is to focus on the management of violence. Starting with the I/O thesis, each topic tells another aspect of soldiery. At the end of the day, I aim to understand how soldiery is transformed with new technologies. For these purposes, we need to comprehend and connect each topic.

Until this point, we tried to clarify why we framed a common theoretical structure with different concepts. It is now necessary to clarify the usage of these concepts in our case because these concepts were coined for the analysis of the military in general, where our case covers a branch within the military. Therefore, we may need certain modifications on concepts and a bridge to connect them with drone technology and its organizational characteristics.

Our first modification or borrowing is from the institution-occupation (I/O) thesis. In this study, the fundamental argument of the thesis remains the same. Institution implies

a close organization with its own ethos and unique structure. It is the utmost realization of the communal character of the military (Kurt Lang, 2013: 848). When the organization gives greater importance to the institutional goals and mentioned ethos, it can be said that this organization is institutional. Effects of these can be seen on the members when they define their work as a calling. On the other hand, the occupational outlook is more open to the parent society. Market relations permeate into the organization, and structure converges with civil ones. Members under this organization would define the value of their work by referring to the market position. Military values like sacrifice, patriotism, and dedication lose their prominence. Besides the individual level, its effects can also be seen on the organization. The institutional military organization provides non-cash subsidies for its members, whereas in the occupational structure, such subsidies are provided in money.

These points had significant empirical values, which are accepted by the different scholars. However, critics of the institution-occupation thesis point out the problem of implementing it to the military as a whole. As the military became more complex, different branches showed different tendencies in terms of the institution-occupation continuum. Even Moskos (1986), as aforementioned, argued that there might be re-institutionalization in some branches.

In another article by Moskos (1973) about the emergent military organization during the 1970s, he adopted a similar approach. While analyzing the direction of the military organization, he mentioned two contrasting trends: convergence and divergence. The former assumes a civilianization of the military, where the latter implies differentiation of military profession from other occupations. Moskos (1973) observed that in technical and logistical branches, civilianization is the case, and there is plenty of evidence that shows the resemblance between civilian and military occupations. But, in the branches which are responsible for applying violence, traditional military structure and ethos still persist. As a result, Moskos (1973) concluded that contrasting organizational tendencies could coexist in the military. One may observe these in different branches to a different extent. As the Institution-Occupation thesis also argues an organizational tendency, a similar approach can also be adopted. Therefore, it proves that rather than arguing an overarching trend that covers military

organizations as a whole, it is more accurate to use it to analyze tendencies within different sub-organizations.

For this purpose, I will seek data for the I/O topic on two levels; one is individual, and the other one is organizational. The first one relies on the soldier's perspective about their job, and the second covers the unique organizational aspects like subsidies or complementary mechanisms. The reason for this, as Segal (1986: 352) underlined, the word occupation implies both workplace and job. They are the opposing ends of the institution and calling. This means, on the level of organization, movement is from institution to workplace, and on the level of the individual, it is from calling to the job. In other words, there may also be differences between these two levels. Distinguishing two levels is also important to reveal the organizational strains that may arise due to incompatibilities among levels. Individual tendencies may contrast with structural priorities. For instance, in branches where soldiers directly engage in a fight, occupational tendencies on an individual level may harm the operation of the structure. In short, I will analyze the organizational tendency as a result of drone technology on two levels. Empirical data will reveal whether this technology increases the occupational tendency or "re-institutionalizes" the branch, just like Moskos (1986) said.

At this point, there can be criticism about assumptions of this theoretical construct. In both the literature review and in this section, there is the connotation of a positive correlation between technology and occupational tendencies, which implies technological branches are more likely to have occupational outlook. Such theoretical assumption seems already put drone technology on the side of the occupation. But such presumption is flawed as there is no deterministic relationship between technology and organizational tendency. As Huntington (1963: 787) argued, certain military technologies raise new unique professions that have no equivalent in civil sectors. During the process of development of these technologies, interaction between civilian and military members would likely increase, but this does not mean that branches related to these technologies would immediately turn from institution to occupation. At this very point, drone technology proposes a riddle. Unlike other military technologies -like radars, guided missiles, nuclear weapons, etc.- which put a distance between the soldier and the battlefield in terms of both visibility and

physicality, drone technology creates a new dimension of intimacy (Gusterson, 2016). The operator of the drone technology observes what happens on the battlefield and can directly engage with the enemy. This fact creates new forms of engagement. Moreover, aspects of reconnaissance, bombing, and coordination among a military bureaucracy diverge drone units in the military from their civilian counterparts. However, one cannot purport an institutional tendency, as drone technology also removes the traditional physical elements of warfare. It overcomes one of the most fundamental aspects of the war, which is the threat. For these reasons, without the data, one cannot ascribe a certain tendency to the organization of drone technology.

To sum up the implementation of the I/O thesis, I will analyze the data in terms of two levels: organizational and individual. Organizational regulations and norms that strengthen the communal character will be compared with the aspects that familiarize the military with other civil professions. On the other hand, operators' perspectives about their job will reveal whether they answer a calling or see their work as an occupation just like any other profession in the civil sector. But these aspects are also connected with the other topics aforementioned. I argue that such change in the tendency of organization in terms of the I/O thesis would imply a change in the dominant soldier type, authority relations, and conduct of warfare. Therefore, starting with the I/O continuum, our analysis will extend to cover the mentioned topics in order to enrich the organizational characteristics that are imposed by drone technology.

Our next topic covers the authority relations. They indicate a change in the authority structure of the armies. But this change, just like the I/O continuum, realized differently in different branches. For that reason, the same methodological concern will be adopted. The two levels of analysis that we have mentioned in the I/O thesis will also be used in the analysis of authority relations.

Under the topic of authority, we have two types; domination and manipulation. At the level of organization, domination refers to a rigid hierarchy structure where the chain of command is strictly protected. It is a coercive bureaucracy where the organization prevents any autonomy or questioning that may come from below. Individuals under such organizations enjoy little freedom, and they rarely exchange information with their equals. Their superiors regulate their work, and they do not question their orders. On the other hand, manipulative authority is found within the technological branches

where soldiers have a certain autonomy which is given as a result of technical expertise. It corresponds to a flattened organization where counterparts can trade information, and the decision can be made through advisement. Individuals exposed to such authority are expected to be more open towards conflicting ideas and information. Manipulative authority refers to the group goals and provides incentives for these groups.

Dominative authority is an integral part of the communal aspect of military life. This aspect is necessary for a group of soldiers to be effective during the fight. As the nature of warfare enforces determination, dominative authority tries to remove any hesitation. The best way to achieve this is to implement domination in every aspect of a soldier's life. Therefore, in an army where the institutional outlook is prominent, we are more likely to witness dominative authority. On the other hand, manipulative authority is realized mainly on the technological and logistical branches where the members are indirectly related to violence. Members in such branches rarely share the threat that is faced by combat units. Their profession necessitates technical and group skills, which are more compatible with occupational tendencies.

Drone technology brings together the characteristics of different branches. It is directly related to violence, but it is also isolated from the threats of warfare. As a result, it would be superficial to ascribe a manipulative authority to drone technology by underlining its technological features. Just like a soldier in the field, drone operators also should remove any hesitation as their acts would cause significant effects on the course of battle. On the other hand, information that flows in the structure of the drone branch is unique as the drone enables its operators to get a wider picture of the battlefield. I expect this unique processing of information would necessarily affect the realization of authority.

There is manifest parallelism between authority types and soldier types. In fact, it is difficult to differentiate some of their characteristics as the type of authority is an inseparable part of officership. All of the officers, even the ones who belong to the lowest ranks, have certain authority; they control a group of soldiers. Consequently, changes in the form of authority necessarily affect the characteristics or the types of soldiers.

Our first type is heroic, which has similar characteristics to dominative authority. This type is the traditional definition of soldiery. It draws an ideal soldier who has personal valor, physical capability, and determination, which enable him/her to not hesitate during warfare. Risk is the key aspect of heroic soldiers. They should embrace the risk of battle, and their characteristics should empower them to act in a professional way even on the most dangerous occasions. These personal characteristics are supported by organizational regulations like ceremonialism. In this way, the organization empowers the superior ranks and provides charisma in order to provide a heroic outlook. This outlook cause inferiors to respect the superiors and see them as the sacred persons whose decisions cannot be disputed or refused. On the other hand, our second type, managerial, is usually related to manipulative authority where soldiers have more autonomy and different skills. Again, personal valor, physical capability, and determination are also expected from them, but these are not the key ones to be successful in a structure where dangers of warfare are not prominent. Instead, managerial soldiers handle the issues through advisement and positive incentives. They do not give dominative order to their inferiors but manage their work through expert knowledge. Thus, skills like expertise, communication, and administration are the ones we expect from the managerial soldier. Lastly, we have a third type which again resembles the manipulative authority form but differs from the managerial type. Emerging after the end of Cold war, this type is strictly related to policy-making issues and strategic thinking. Again these soldiers should hold expert knowledge and communicative, administrative skills, but their task is not managing a branch or a group of soldiers. They need to handle diplomatic tasks or produce policies that give the name of the type: Statesman/Diplomatic. One of the important aspects that differentiate this type from managerial is its multiculturalism. Unlike managerial soldier who works in a relatively homogeneous environment, diplomatic type implies contact with people from different social strata and cultures. In addition, they also should be informed about the policy issues, which means another aspect that differentiate them from managerial is politics. To conclude, statesman/diplomatic types are related to political and cultural tasks, which necessitate cultural and political knowledge.

The absence of risk during the work of drone operators seems to undermine their warrior tendencies. This is because the warrior type revolves around the concept of risk. Skills that warriors have are necessary to embrace that risk. When we discard it, what seems to have remained is like another civilian occupation with no physical risk of work. Yet, drone operators are part of the battlefield. They engage with their enemies, and just like other soldiers, their acts can cause the death of others. In the literature review section, we mentioned the works which show that drone labor causes intense stress and other psychological diseases among the operators. As Varin (2017) argued, these effects hint at a different form of risk and warrior elements that no other branch has. Therefore, I expect a different framing of warrior ideal from the drone operators.

Other types are also relevant to the drone labor as it covers both technical expertise and to some extent politics. Drone operators should know technical knowledge to control an unmanned aerial vehicle, but they also should have the necessary communicational skills for mission coordination. Besides technicality, drone operators should be aware of the knowledge of missions. They need to know the actors existing on the battlefield; they should be informed about the culture and behaviors of their adversaries, which would impose on them the characteristics of the diplomat/statesman type. In addition, they should also be informed about the importance of the mission to maintain their concentration and performance. They work in an isolated space far from the battlefield, which can undermine their connection with the battle and its realities. Also, most of the time, their work consists of constant observation of daily events. Without knowing the importance of their work, such observation would become a dull, meaningless experience. Hence, knowledge is a critical aspect of drone work, and it is one of the deciding factors of the organizational structure.

Our last topic on drone organization is warfare. In the previous section, it is underlined how different forms of warfare emerged in the last century. We underlined the reciprocal relationship between war and military organization. Both affected each other, and in return experience of war have changed significantly. It is an obvious fact when we examine the change from the stalemate along the trenches in The Great War to the drone warfare in our times. During this change, experiences of soldiers, the

military organization had also altered. Again, I will try to explain these changes with the forms or ideal types.

At the beginning of the last century, warfare necessitated heroic acts. Although all of the soldiers get certain education before the war, their education usually not enough to solve the problems they face on the battlefield. Moreover, as most soldiers are conscripts, their education is very limited compared with the training of professional soldiers. Therefore, one aspect of such warfare is its incalculability for the soldiers. They frequently faced problems that are unique to their current condition on the battlefield. To overcome these problems, they need to be brave, dedicated, and calm, which are characteristics of a warrior. Soldiers who have such characteristics could take the initiative during the war and enabled their armies to progress. These heroic deeds of soldiers solve the problem of stalemate, and they are decisive on the course of events. Therefore, our first type is heroism. It refers to warfare which necessitates personal initiative and heroic acts. Personal means heroic act is done by a single person who then motivates other soldiers to react and progress in order to accomplish a certain mission. During these wars, the military organization tries to maximize these characteristics among its soldiers. Heroic acts are encouraged by the organization through medal and sacrifice culture.

After the world wars, technological improvements and the concept of deterrence made the total wars that necessitated heroism unlikely. Although wars between developing countries have continued, western countries and their allies in NATO abstained from directly engaging with other developed countries. Instead, they made local operations in the different parts of the globe to protect their interests. Slowly but surely, the military gained a more professional outlook with these developments. Soldiers within these operations are not the common citizens who are enlisted as a result of the draft but professionals who are paid to serve their countries. With the improved technology, their engagement during the war changed dramatically from the heroic warriors of total wars. Unlike isolated soldiers who have limited communication with rear fronts and limited air and artillery support, professional soldiers of the cold war are much more equipped in terms of weapons and communication. As their missions usually have the outlook of a small operation, they have more opportunities to implement what they learned during the drills. These drills focus on different engagements and what a

soldier should do in a different environment. One of them, for instance, is called a close-quarter battle. It mainly focuses on clashes within the buildings. Soldiers are expected to clear buildings and neutralize the insurgent groups who held a position within districts. Through intense drills, soldiers familiarize themselves with different contingencies that might occur during a fight. They overcome these contingencies as a group by referring to their training. (King, 2016). Thus, unlike the heroic act of a single soldier, these soldiers act as a group. Heroism is not shouldered by a single person but democratically distributed among the troop. This period or form of war will be defined as post-heroic warfare. This term refers to both Luttwak's (1995) argument on changing military strategy and soldier's experiences during the war. Unlike heroic warfare, variables on the battlefield are calculated, and soldiers act as a part of a group through choreography. Individual initiative is replaced with group initiative. Soldiers in this warfare are expected to be informed about the battlefield, its variables and implement their professional education.

Lastly, I will add a third ideal type of warfare which is bureaucratic-visual. As we have mentioned in the literature review, previous types always cover a certain form of "initiative." Soldiers on the battlefield rarely act as if they are in a bureaucratic environment. But, with the emergent technologies, soldiery can be done in such an environment. Drone technology, missiles, and other technological weapons can raise the possibility of bureaucratic warfare. The main characteristic of this type of warfare is transferring the warfare into a techno-bureaucratic environment. This transfer removes the temporal and geographical limits of warfare. It becomes possible for the soldiers to calculate, advise and decide in a bureaucratic chain of command. Just like a bureaucratic environment, actions are taken according to judicial processes, and their outcomes are calculated according to a certain bureaucratic law. Another important point of such warfare is the absence of physical risk. Soldiers do not face the dangers of the battlefield, yet as we have mentioned in previous sections, they still witness the war. In fact, war becomes the reality of their daily lives. Drone operators working in Nevada are a clear example of this. These operators engage in war during work and return to their families after their shifts. In this way, bureaucratic-visual war blurs the line that separates war from peace.

All of the aforementioned ideal types of wars still occur in different parts of the globe. I expect that drone technology still contains certain elements of these types, and in terms of the bureaucratic war, it further complicates the warfare and has a transforming effect. But still, I do not argue that soldiers' initiative is completely removed. Soldiers still actively inspect the battlefield and decide what to do. Therefore, elements from former types would still persist within the organization of drone technology. As I argued under the topic of soldier types, soldiers' experience of heroism may change with these new technologies, and we would have to come up with a new definition for heroism. This will be highlighted with the data.

### **3.1 Data**

It is not an easy task to gather data about the organization of a military which is aimed to maximize concealment of the military tactics and technical knowledge. For this reason, armies are isolated from society, and it is difficult for civilians to inspect soldiers' work. Such closedness is even more rigid in the case of military technologies. Armies see their technology as a key to superiority. Therefore, they became more conservative about revealing their technical data. Especially technologies such as UAVs are considered vital for surveillance and intelligence missions. Hence their locations, operators, and other technical data about them are strictly protected or concealed from the public. UAV's development and utilization in different wars such as Vietnam or Kosova were the top secret of governments (Kindervater, 2016: 229). Still, drones slowly became more visible after the Iraqi war (Gusterson, 2016: 22). Now, drones are not only used for reconnaissance and intelligence but for striking missions as well (Woods, 2015). With this new capability, drones became apparent inevitably. An unmanned aircraft that can strike in a foreign country posed great ethical, international, and tactical problems that concern the army and governments, local actors, and other international agents. They had significant effects on local residents, which further called the attention of different scholars, politicians, and civil rights activists. Slowly but surely, drones became a popular topic, and their usage became controversial.

To prevent rumors about the misuse of drones, the US army began to conduct a more open communication strategy about their UAVs. Soldiers inform politicians, journalists, and researchers about the workings of drones (Martin, 2010: 207). In this way, the public started to have a chance of getting a glimpse of drones and their operation. Drones became one of the most popular military technologies. Still, the public has little information about the manpower behind it. The word “unmanned” caused a misleading understanding that it is assumed drones are operated autonomously. Such an assumption concealed the labor of drone operators. Although we had a chance to see how drones are used in the military, their inner organization or the work done by operators in their quarters remained a mystery until operators decided to write about their experiences.

The fact that drones are now visible and popular among the public encouraged operators to write about their experiences. US Army let these soldiers write their memoirs, but they substracted classified knowledge. Still, their memoirs enlarged our view about drones. Through these memoirs profession behind the drone technology surfaced. Selection of the officers and their training, operators’ daily tasks, difficulties of the job, hierarchy, and other invisible aspects of drone technology became visible. For that reason, I referred to three memoirs which consist of the first set of data in this thesis. They are written by Velicovich (2017), McCurley (2015), and Martin (2010). To show the importance of these memoirs for the analysis of changing warfare and soldiery caused by drone technology, I will open up the empirical points within these books.

McCurley (2015) and Martin (2010) are both retired drone pilots. Their story covers their experiences and thoughts about drone technology. Beginning with their personal choices of how they entered the drone community, they later told the story of the selection and training of the officers. From this account, we also learn how other soldiers join this new organization from different military backgrounds. Soldiers begin their new career with a long training which is aimed to make them familiar with this new technology. So, through experiences in training, memoirs explain the technical differences between controlling a plane and a drone. In addition, their experiences in training slowly open up the new working environment and relations between superiors

and inferiors within this new military branch. We get the chance to know tasks of different ranks.

Maybe the most important aspect of their training is learning the technology. From controlling the aircraft to communication, they explain every technical detail of drone labor. To exemplify, they introduce “Chatroom,” which is a communication system within the army. Through these rooms, they communicate with other military groups, hence maintain coordination. As technical tools like chatrooms are crucial for drone organization, they consist of important reference points for the analysis of how information is disseminated in military bureaucracy.

After the training, pilots assigned to their posts on different bases and began their careers officially. In both books, the military bases that operators work are clearly defined. Especially McCurley (2015) writes about different bases and their operational characteristics. We are also informed working order of these bases: shifts, rules during work, their place, etc. As in the other branches of the military, drone operators are assigned periodically. After a certain time of their initial assignment, they are dispatched to a forward base where aircraft are launched and recovered. “Forward” indicates a closeness to a zone of operation. This second assignment shows the segmented management of drones. Operators in the forward base launch the aircraft, and later they pass the control to the officers from the far end of the world. Contrary to the common assumption, it reveals that drone operators are not isolated from the battlefield in their homeland, which is an important point for the concept of “risk.”

Besides these organizational regulations, another important aspect of memoirs is the experience of soldiers during their missions. We get a chance to witness how drone operators engage in warfare. Their experiences in war shed light on drone soldiery. They explain every detail of how they communicate with other soldiers, how they use drones to surveil, analyze and even kill. It becomes possible to observe their feelings towards warfare and how violence they use or witness affects them. These points contribute to our analysis of soldier types. They gave us the chance to compare these experiences with the purported characteristics of different soldier types. On the other hand, we also apprehend bureaucratic processes in the military chain of command during warfare thanks to details of communication in the books. This point is important, especially to understand the effects of drone technology on changing

warfare. Controlling an aircraft that surveils the battlefield constantly enables them to draw a general picture of how modern warfare is conducted and the role of drones.

Velicovich (2017), on the other hand, tells another story. What makes his memoirs important for my case is his usage of drones to gather intelligence under a different military branch. Martin (2010) and McCurley (2015) are both recruited by Air Force with the title of “Remotely Piloted Aircraft Pilot.” But, Velicovich (2017) joined the intelligence branch in the army. He is not a pilot but a ground officer who is tasked with gathering intelligence and processing this information to his superiors and other operational units, which means he came across drone technology via a different career path. After entering the army’s intelligence branch, he passed training and tests -which are subtracted for being classified- and he joined the Delta Force. After this entrance, he is tasked with gathering intelligence about insurgent groups. What makes him connected with drone technology is his authority of using Predators. Through the feed of the drones, he does his intelligence task. Although he does not operate any Predators, he can order them to surveil any area. With the memoir of Velicovich (2017), we see a different working environment from the ones where drone operators work. His branch is connected to the operational special ops team, which he is tasked to support with intelligence. He also introduces his coworkers who have different specialties. As an intelligence team, their organization and tasks are different from any other unit within the military. Therefore, his story complements Martin’s (2010) and McCurley’s (2015) stories. The latter informed us on how drones are used in warfare and how operators experienced it; the former, on the other hand, told us the hidden processes go on before drones are tasked. His identity enables him to communicate with different branches and shows us how the army conducts its operations through the participation of different groups and how they communicate or coordinate with military technologies. His memoirs enlighten us on how drone technology connects different military organizations and is used for different missions. It opens up new aspects of drone technology. As a result, through memoirs, it is possible to gather qualitative data about military organization of drone technology and changing soldiery.

Although memoirs underline various aspects, they do not fully draw the organizational picture of drone technology. In the previous section, I ascribed two levels;

organizational and individual. Memoirs comprise data for both levels, yet for the level of organization, they lack a detailed structural schema of military branches that use drone technology. By structural schema, I imply the official order of the units, their task descriptions, hierarchy, and other official organizational aspects. To compensate for this deficiency, I referred to concept documents that are published by US Military:

A military concept is the description of a method or scheme for employing specified military capabilities in the achievement of a stated objective or aim. This description may range from broad to narrow. It may range from describing the employment of military forces in the broadest terms and at the highest levels to specifying the employment of a particular technology system or the application of a particular training system. (Schmitt, 2002: 3)

As this definition states, concept documents about drone technology try to define, instruct, and organize the units that control drone technology. They draw the main organizational picture of drone technology. Therefore, these documents are the starting point for any organization within the military. They provide the initial data about the organizational employment of a certain technology or military unit. They also reveal in what ways these technologies can be effectively used in warfare which makes it possible to infer clues about changing character of warfare.

To open up these organizational points, it would be illuminating to explain the documents and their content. Our first document is the “Unmanned Aerial Vehicle Aircrew Training Manual,” published by US Army Headquarters in 1997. As its title implicates, this document mainly focuses on the training of UAV Aircrew. It defines the basic skills necessary for operating UAVs. Later, it instructs commanders about how to grade the candidates, decide their learning levels, and other educational aspects related to UAV training. This document complements Martin’s (2010) and McCurley’s (2015) memoirs in terms of training. It provides detailed information about training which is absent in the memoirs. For instance, in the document, every necessary skill and grading is described in detail, including the levels of operators. These levels categorize the skills which indicate the progress of the operators. They have to pass all of the levels in order to complete training. On the other hand, the manual instructs about the communication between crew members and how they should coordinate among themselves during their tasks. This point is important as it

gives a hint about the organizational ideal of how the authority and buddy relations should be.

Other document is “Tactical Pocket Guide,” published by Unmanned Aircraft Systems Center of Excellence in 2010. This document is crucial for analyzing the structural schema of UAVs. It shows the hierarchy within the drone chain of command by defining the branches that control UAVs and their tasks. It also aims to guide commanders about communication with other military branches. For instance, for a drone to operate in a certain area, the commander should make sure that air traffic is coordinated, and s/he should make necessary contacts with central or local organizations that regulate air traffic. By the same token, drone technology necessitates coordination with various military participants by reason of disseminating information to other units. This fact is underlined in the document, and it is aimed to achieve standardization. As the document aims for the operators, it is written to inform them about every variable related to UAVs. Especially about the missions, the document gives detailed information. It contains scenarios for each mission of UAVs. In these scenarios, the situation is defined, and the organizational process of operation is illustrated in detail. Thanks to these scenarios, operators are informed about how to execute coordination with other military groups according to the mission. Thus it contributes to memoirs about how UAVs are used in warfare. It also makes it possible to make a comparison between the reality and perception of the military before going into war.

As drone technology is connected with new communication technologies, we also need to refer to the documents that explain the extent of such technologies. One of them, as mentioned in memoirs, is Tactical Chat. This system is basically a chatting technology that provides near-real-time communication via computers. It is used by every military participant, which means it connects the army. It is the most critical communicational means for drone operators. For that reason, I also reviewed the document “Tactical Chat: Multi-Service Tactics, Techniques, and Procedures For Internet Tactical Chat in Support of Operations,” which was published in 2009 by Air Land Sea Application Center. Besides explaining the technology and technical means that are necessary for operating this system, the document instructs soldiers on how to use it properly. It aims to standardize communication in order to reduce the risk of

misinformation and miscommunication. As such technology opens a new space for soldiers, it also introduces certain manners about how to behave while chatting. This point is important as the document wants to transfer the discipline and authority relations into a virtual space.

The last important document I referred to for data is a flight plan published by United States Air Force (2009). The document covers the years between 2009 and 2047. As its title suggests, it is a projection of the Air Force. In the document, the current capabilities of drone technology are summarized. Also, it is discussed how these capabilities are operationalized. Later, the document states the aims of the Air Force for the future. It explains the possible capabilities of the future, their possible contributions, and policies that should be implemented to achieve them. Thus, the document reveals significant clues on drones and their future.

Besides these documents, I also used various data that I could reach online. Especially to get information about the US military structure, I used the website of the Department of Defense (n.d.), which provides an online database for Combatant Commands and Forces. It also provides significant information on military terminology.

I mentioned how drones attracted public attention in the last two decades. In the American media, drones are widely discussed. Therefore, throughout the reading of data, I will also refer to these stories to connect my analysis with real events. One of those stories was an interview with a sensor operator. Brandon Bryant (Power, 2013) explained his story of retirement and his tough experiences during his tasks. He also answered some of the critics against his statements which also provides us an insight into drone warfare and its operation in the military.

For the analysis of memoirs, concept documents, and other data, I adopted an interpretive approach to discern social meanings that are hidden in them. Such a way is necessitated by my theoretical approach, which interprets change through ideal types. As we have mentioned above, these types ideally construct social patterns, tendencies, and experiences within the military organization. After this construction, one has to look into existing data to identify overlapping or diverging points, and this identification consists the analysis that will draw the effects of drone technology on military organization and changing soldiery.

For these purposes, in the documents, I addressed the previously stated topics. Under the grounding topic of the I/O continuum, I sought data on authority, soldier types, and changing warfare. Because of the fact that both memoirs and concept documents can provide data for each topic, I used the same qualitative approach for reading. It is qualitative as one has to interpret the hidden meanings in the texts to cover the divergent or overlapping points with ideal types. Although there are quantitative studies on topics like the I/O thesis (Segal, 1986), which measure the institutional or occupational tendencies through numbers gathered from surveys, I do not aim to test a hypothesis about the change in the military organization which requires strictly separated categories or concepts that can be represented with quantitative figures. Rather, through the modifications I made earlier, I argue to find meaningful organizational patterns that can be discerned qualitatively.

As logical constructs, ideal types do not purport clear matches between the data and the theory. They act, at least in the case of this thesis, as clues of certain social patterns within the organization. They are my starting point for describing how the military is organized in a way and how it is affected by new technologies or micro organizations. This also implies the possibility of emergent types through the inevitable relations raised by new technologies and new warfare. Therefore, I aimed to show change with relations of new technologies and how they cause the coming together of different ideal types and raise new organizations, experiences, and professions.

### **3.2 Limitations**

As I already underlined earlier, the military is a total institution that gives great importance to secrecy. The profession of managing violence causes soldiers to put distance between themselves and civilians. That is why studying the military is difficult for social scientists. Maybe the most important one of these difficulties is reaching the data. Although some militaries encourage field research within their institutions, most militaries are reluctant to share any information with civilians. Especially, they are more sensitive about military technologies. As a result, studies on militaries may contain certain limitations.

I also face similar difficulties while writing this thesis. At the outset, my aim was to conduct field research with active-duty officers in the Turkish Armed Forces. Due to the pandemic, the Department of Defense refused my request as TAF forbid in and out from military districts. Therefore, I had to recourse to secondary data. This obligation meant limiting the scope of the study.

Firstly, the study focused on the practices and organization of a single army. The data I have belongs to the US military, which means the inability to compare the effects of the same technology on other militaries. These effects can vary as each military may hold different institutional values stemming from their historical and cultural background. Therefore, to fully capture the effects of drone technology on military practices, we may also need further data from different military backgrounds. The second limitation concerns the methodology. The methodological approach of the thesis is to analyze the military through ideal types to reveal tendencies and characteristics within the military. Thus, the thesis also does not measure an overarching trend. There can be field research that can reveal the extent and effect of concepts, experiences, values, and practices mentioned throughout the thesis. In other words, the thesis presents specific ideal types concerning the military practices, but it does not argue about the frequency of these practices within the military. Again, a dataset from the field may reveal the full picture of how new technologies change soldiery to what extent.

All of these limitations are posed by the secret and total character of the military. They put significant barriers in front of social scientists. Still, I believe we have acceptable data to analyze contemporary military affairs. New technological capabilities also enrich our ways of reaching information on the military. We are maybe the first generation who watched a war via live broadcast. Now, nearly every day, we come across feeds and visuals from ongoing battles. These facts may enable researchers to study military practices and comprehend the character and extent of contemporary warfare.

## CHAPTER 4

### ANALYSIS

#### 4.1 Drone Warfare: Re-Institutionalization or Occupational?

What makes soldiers' profession different is its connection with the violence. Soldiers risk their lives in return for compensation. But more importantly, they may choose this path to answer a calling. When Moskos (1977) proposed the I/O (Institution-Occupation) thesis, he argued that this calling was being replaced with market values as a result of technology and the end of the draft. According to his thesis, technology does not only change the soldiers' way of managing violence, but it also affects the meanings they attached to their jobs. Therefore, under the emerging occupational military organization, a soldier can do his task without having the values of sacrifice, patriotism, dignity, and dedication. Surely no army on Earth would enlist such a soldier; still, what Moskos (1977) points out is a significant eroding of these values. Within the complex technological structure of the military, soldiers may not have the same view, same values, and characteristics of their antecedents. Soldierly within this picture faces the risk of turning into an ordinary occupation in the market. This risk, as Moskos (1977) already underlined, brings new organizational strains. Again, to understand these strains, we have to analyze the impact of technology.

Day by day, technological capabilities unburden soldiers from directly engaging with their adversaries. Considering the population of modern armies, too few soldiers now have to engage in the battlefield, face the terror of war and their enemies. Most military members, especially in developed countries' armies, do tasks not directly related to violence. In this way, it becomes possible for them to have a more occupational view of military affairs. Caforio (1988: 57-58) underlined this point and categorized the

military into sub-groups as officers, noncommissioned officers, and the rank and file. He argued that we move from an institutional context to occupational when we move from officers to rank and file. The important variable in this argument is the management of violence.

Yet, in this section, I will defend that drone technology raises complexities about I/O concepts. Technology, in this case, produces a different effect. Drone operators inflict violence with technology, and although thanks to this technology, they are physically risk-free, the same technology connects them to warfare in an unseen way. With the high-resolution display and capability of surveilling the ground for hours, operators witness every event on the battlefield. This witnessing has two aspects; on the one hand, operators act as if an observer of war; on the other hand, they witness the effects of their tasks. In this way, their attachment to the battlefield is provided by the drone capabilities. Throughout the memoirs, I observed that such attachment prevented them from considering their job as an ordinary occupation. They attached significant meanings to their jobs, and they felt what they do is important, not for themselves but for their country, their fellows, and civilians. They felt a unique responsibility.

To understand the construction of the responsibility via drone labor, I will first open up what operators do. I will specifically mention their tasks and the meaning of these tasks for the operators. Later, I will connect these meanings with the I/O thesis and reframe drone labor to see its implications for soldiery.

#### **4.1.1 Supporting the Troops on the Ground**

Primary purpose of a screen is to provide early warning to the main body; defensive in nature with observation posts (OPs) and surveillance patrols. UAS (Unmanned Aircraft System) superior mobility, day and night TA capabilities, long-range digital or voice communication or RETRANS, and video sensors make them ideally suited for screen missions. UAS units may conduct screen operations independently, as part of a team, or as an integral part of a larger ground unit's task organization. UAS may be used as an extension of ground surveillance to see-over-the-next hill, or may be employed in support of a series of OPs by providing air patrols en route between Ops. (Joint Unmanned Aircraft System Center of Excellence, 2010: 556)

This excerpt taken from Tactical Pocket Guide (2010) summarized what UAVs do best: providing information. Like an unblinking eye that constantly surveils the battlefield, ground units rely on the information gathered by the drones. This fact indicates drones' usage to provide support.

There is not yet a war that can be won solely by drones without risking soldiers. In one way or another, some branches within the military face the threats posed by the battlefield. Still, with drone technology, these branches also get support. Therefore, drones have the capability of not just removing the physical risk of their operators, but they can also reduce the risk taken by other soldiers. This section will try to show how this fact arises a feeling of responsibility for the operators.

The capability of drone operators to communicate with other units and see what they do in the field connects them to these units. They are well aware of the risks taken by their fellows. The mass information they are exposed to is not limited to this connection. They are also well informed about the operations, variables concerning geography, their enemies, and residents in the operation zone (Benjamin, 2012: 89).

In 2004, Matt J. Martin (2010) was operating drones over both Afghanistan and Iraq. After US Army dispatched soldiers to these countries, Predator drones are tasked to hunt down insurgent leaders by constantly surveilling. Martin (2010: 113) thinks that their task is aimed to provide stability within these countries. For the purpose of stability, they needed to conquer cities or towns where insurgent groups established their authority. One of these cities was Fallujah. Al-Qaeda Leader Al-Zarqawi occupied it. To break the power held by Zarqawi in the region, the US Army prepared to decide to push to Fallujah. Predators were part of the plan. Martin (2010) and his team were tasked to provide support during the operation. Being aware of the importance of the operation, Martin (2010: 121) mentioned what he felt before the operation:

‘It’s going to be bloody when the marines return to Fallujah,’ I confided in Trish one night. ‘There are going to be a lot of our kids killed in that damnable city. I have to do everything I can to minimize our casualties’

Trish observed how I looked haggard, worn, how I wasn’t sleeping well and not laughing so much anymore. Perhaps it was difficult for someone not involved with unmanned warplanes to comprehend how pilots and sensor operators 7,500 miles away from the action could become so involved, so

personally invested in the war. After all we weren't getting shot at, wounded, or killed. Even if we got shot down, we didn't really get shot down.

What they failed to understand was that I knew people down there. Each day through my cameras I snooped around and came to recognize the faces and figures of our soldiers and marines, unbeknownst to most of them. I sometimes chuckled over their youthful pranks and hijinks when they were off-duty and in secure areas. I cried with them as well whenever they lost a comrade and they huddled together with their arms over one another's shoulders.

Martin (2010) clearly indicates his care for his comrades. Observing the effects of war on his friends and knowing the course and possible dangers that other soldiers are exposed to burdens him with the responsibility. His condition of being risk-free makes the burden heavier. At this point, an interesting question arises. How a soldier who is physically absent on the battlefield can feel such attachment? For Holmqvist (2013: 542), we need to find ways to conceptualize the drone technology and its effect of approximating soldiers to the battlefield while removing their physical existence from it. Although they are far away from the action, they still develop bonds with others.

We see that technology enables operators to comprehend every risk taken by others, forcing them to create a concern towards their comrades.

A similar concern can also be observed with Velicovich's (2017) case. After deploying to his new position where he would work with ground operators who are tasked to make operations according to intelligence gathered by Velicovich (2017: 103), he is greeted by an Army Lieutenant Colonel. Officer immediately informed Velicovich (2017) about the importance of his job:

'We're going to risk our lives because of your decisions.' He looked me in the eye. 'You are choosing who lives or dies because you're the guy who finds the target... You're the guy who's signing a target's death warrant. (Velicovich, 2017: 103)

Velicovich (2017) used drones to gather intelligence later in his career. He works in a trailer where he called "the box." In this dark, technological room, he analyzed drone feeds, other reports to hunt down insurgents. After he entered this Box, we find out that his concern for ground operators intensified:

After one long day, I lay there on my stiff single bed, a paperlike sheet over me, while my mind played through different strategies as if part of it were still back in the Box. What had we missed that day and how we might have done it better? I spent that night dreaming I was a camera in the sky, scanning a city I'd never seen before. (Velicovich, 2017: 161)

Although he does not physically engage in warfare, his mind constantly works to process intelligence. This constant working stems from the unlimited capacity of the mind to work, at least in theory. An infantry's physical capacity is limited; he can engage in one place at a time according to a particular operational mission. But gathering intelligence from drone feed seems to have no such limits. Velicovich (2017) can gather data day and night in multiple locations with no exposure to threats. This fact forces him to engage in warfare in an intensive way mentally. He also knows that other units rely on him, which further makes him push his limits:

We worked two or three missions at a time, dozens a month. There was always a drone up, sometimes three or four at a time, depending on who we were following. We could be conducting a mission against one target while at the same time refining the location of another with a separate drone in another part of the city. This new way of warfare came with the mental burden of never being able to shut down; having so much information at my fingertips meant I had to put that information to use. My mind never stopped thinking about which target to set my sights on next. (Velicovich, 2017: 134).

The capability of drones also puts unexpected responsibility on operators. McCurley (2015) faced such an incident. After coming to his usual workplace at the usual time, he learned that a Seal team had been overrun. Another team dispatched to find lost soldiers also shot down. Drones became the last hope of possible survivors. Due to bad weather and lost radio signal, he couldn't find the survivors within his shift. At the end of the day, he turned over his seat to other crew and returned his home:

I left the ops cell and walked to my car. The sun was rising and I knew most of Las Vegas was shaking off their Saturday night hangover. I felt the same way, but for a different reason. I'd really wanted to find the SEAL team, but I'd failed.

As I drove back into town, I felt like the weight of the whole mission rested on my chest. It was worse than the stress of shooting. (McCurley, 2015: 151)

It is obvious that it is difficult for drone operators to leave behind what happened during their shifts. McCurley (2015) is swamped with warfare as any other soldier from the other side of the world. It also shows that drone operators do not simply leave their workplace and arrive at their home, which we will later mention to underline the relationship between compartmentalized military life and the concept of occupation. For now, we have to underline that operators' condition of being risk-free does not imply that they are isolated from the warfare. As an integral part of the battlefield, they are still burdened with responsibilities towards their institution and fellows.

Contemporary warfare is not destructive as World Wars, or in the case of drone operators, the war they are engaged in is not an immediate threat to their homeland. Still, the violence they engage in affects thousands of people. Unlike any other soldier, drone operators are informed about these effects. Most of the time, they witness these events near-real time. Such witnessing not just connects them to their fellow soldiers but also their enemies, again in a unique way.

#### **4.1.2 Constant Surveillance of the Enemy**

During a war, soldiers tend to demonize their enemies. They would like to think that they are fighting against an impersonal evil. Such thinking helps them to reconcile with the violence they apply (Welch, 2014). This impersonality replaced with intimate personality in the case of drone operators. Drones' capability of constant surveillance enables operators to watch their enemies for months. They surveil enemies' daily lives, families, and other contacts to come up with a pattern which they call "pattern of life" (Velicovich, 2017: 114). Through this pattern, they try to draw a network of the insurgent group, which results in immense data about the monitored persons:

Then we go through their shit-their cars, homes, phones... everything. And we look for pressure points (friends, family) at the same time. There's no more useful leverage than family in these parts of the world.

Then we start to build a pattern of life (POL) on the target- places they visit, previous residences, even if they know that US forces are following them. Still, I needed to find a real "start point," a spot in the sky to start the drone.

With all that in place and a mission approved, we'd start the hunt. Following leads, connections, and relationships until we'd catch a break –an exchange between parties that was out of the ordinary, a trip into the middle of nowhere in a white bongo, multiple stops at markets without a single purchase, a visitor to residence who suddenly appeared one day with no rhyme or reason. (Velicovich, 2017: 114-115).

Unlike an impersonal, demonized enemy who is a threat that soldiers must face on the battlefield, insurgents watched by operators have no such figure. Operators get used to knowing everything about their targets. From their personality to their families, shops they enter, residences they visit; in short, all of the aspects of the target's daily life are scrutinized by the drones. That is why drone operators usually called their targets by their names or nicknames. They do not fight against a demonized-impersonal enemy but an enemy who is personalized. In this respect, each enemy has unique characteristics, capabilities, and reputations. What operators do is to get information about these variables. In this way, they became connected to their targets. When US citizens heard about a terrorist attack, they do not know the processes behind it or the ones who planned it, at least in detail. But, the drone operators who watch the responsible people behind these attacks also feel responsible for these attacks. Their enemies and their actions become another aspect that immerses operators in warfare. In a way, operators should control their enemies' actions. They have to guess what they would do in specific situations and find ways to prevent them from harming others (Curtis, 2016: 528).

McCurley (2015) mentions his hunt for an Al-Qaeda Captain in Afghanistan. He attracted attention due to his fast climbing in the organization's chain of command. Intelligence analysts believed that he could lead them to Bin-Laden and Al-Zawahiri, which were the two most important leaders of Al-Qaeda. Captain was a guy who drove a motorcycle to visit other members of Al-Qaeda. When McCurley (2015) and his crew finally identified him, they began to watch him for days. They memorized every place he visited, every person he communicated and every other aspect of his daily routines. After such intense surveillance, McCurley (2015: 119) writes his feeling on the day when they finally decided to capture the Captain:

It felt strange to be flying what we hoped was our last mission against this target. There was an intimacy about following someone for months. We spent so much time with the family that I knew what the Captain's kids looked like and what roads they took to school. I knew how his wife did the family laundry and where she stopped for dinner. In the back of my mind, I knew the Captain was a terrorist and plotted to kill Americans. But it was hard not to see him and his family as very human. He wasn't a James Bond villain plotting from a massive mountain hideout. But his job was to kill Americans. On a visceral level, I wanted to return the favor. This guy was responsible for planning attacks. He was the very reason for our presence in Central Asia.

Clearly, following the Captain made operators understand his importance for Al Qaeda. McCurley (2015) underlines this person's humanity. He does not portray the Captain as evil. Yet, he can ascribe a reason for capturing. The Captain is seen as responsible for killing Americans. McCurley (2015) knows that if he hesitates, he can give a chance for the Captain to plan the next attack. Therefore, operators both comprehend the humanity of their adversaries and their capabilities. This fact further convinces them to feel responsible about the course of the war. Velicovich's (2017: 111) statement reveals such feeling:

Every hour wasted debating would be another minute the target had an opportunity to adapt to our technology or plan his next attack on an unsuspecting populace. We needed to move at the speed of war because the enemy wasn't waiting.

Operators hold immense information about their enemies. Their feeling of responsibility is intensified with such knowledge. Their concern expands to cover the course of the war. They now feel responsible not just for the protection of their fellows but also for their success in the battle. It is obvious that other soldiers also may be concerned with the course of the war or their enemies. But what makes drone operators different is their capability of seeing various variables, which posits them to the front in every battle. No other soldier has the opportunity of seeing their enemies in their daily lives. Thus, there is a certain connection between operators and enemies, which adds another dimension to their profession. Their experience during the war is a surreal one as it both distances and connecting them to adversaries. Gusterson (2016: 59) frames such experience as "remote intimacy." We will later open up this concept, but

it perfectly captures the relation between drone operators and war events for this section.

#### **4.1.3 Effects of War on Civil Life**

Besides concerning the safety of their comrades and the doings of their enemies, operators also witness the effects of warfare on civilians. It is widely known that drone usage in different countries caused the deaths of thousands of civilians and other traumatic effects on local people (Cavallaro et al., 2012). These deaths raised new problems concerning the relationship between warfare and collateral damage. We have seen that in the second world war, the population became a target to diminish the mobilization capabilities of the adversary. Such targeting did not discriminate between soldier and civilian. But, after the world wars, when the concept of deterrence became the main doctrine of the developed countries, armies drew a clear line between civil and military. This meant that every civilian lost is considered as a loss for the responsible army. Martin's (2010: 203) commander summarizes this aspect: "Every time we drop a bomb, it's a strategic failure even though it may be a tactical success." By strategic failure, he implies that killing civilians harms the course of grand strategy, although it can be defined as a success considering the mission. In other words, one may destroy an enemy with collateral damage, but this does not mean a clear success in the long term. International reaction to this damage may harm the policy of attackers. But the concept of "collateral damage" becomes more controversial in the case of drone warfare. As we have seen, drone strikes are usually done as a result of lengthy surveillance and according to strict bureaucratic rules. Drone operators can see the terrain situation, decide the variables, and choose the best ways to deter collateral damage, which again connects them to the battlefield in an unseen way.

Drone operators dive into civilian life during their surveillance tasks. They make lengthy observations on residential areas. The reason behind this is carrying the battle to the enemy (Anderson, 2011). When Velicovich (2017) mentioned the "speed of war," he implied this notion. Enemies must be sorted out before they act. To achieve this, operators should observe civilian areas where enemies live. In a way, drones brought warfare into the flow of life or they sought fight in ordinary life. This fact also

carried the risk of collateral damaging and drone operators necessarily witness this effect.

It is known that drones caused the death of civilians. But we had no account of how operators dealt with such incidences. Both Martin (2010) and Velicovich (2017) told events in which they witnessed civilian casualties.

During his task in Nevada, Martin's (2010: 50) team was tasked to hunt down an insurgent in Iraq, nicknamed as The Rocket Man. He was famous for shooting rockets to American soldiers. After his one attack, Martin (2010) was on the seat and identified him. He then followed the rocket man with Predator. As there are two seconds delay between order from ground control station and execution by the aircraft, shooting a moving target was risky (Martin, 2010: 50). Thus, to get a better shot, Martin (2010) had to wait until the rocket man stopped with his car.

The Rocket Man drove a while until he thought he was safe. He entered a neighborhood and stopped under a tree near a house. The neighborhood was away from the engagement zone; thus civilian life was going on as usual. Martin (2010: 51) knew the danger of attacking him there. He could see the other civilians and know that a strike means danger for them:

Kids in the street chattered past the mud-brick wall, laughing as they took turns rolling an old car tire. A woman on the flat roof of the house in whose courtyard my guy hid was hanging out laundry. She cast a single nonchalant glance at the vehicle parked underneath her tree. The Rocket Man probably didn't live here, but the woman more than likely knew who he was and why he was laying low. (Martin, 2010: 52)

He later had to decide with JTAC, who is a joint-terminal attack controller, whether to strike or not:

I carried two Hellfires -one the Special K Model that detonated upon impact and directed its force outward at the point of impact, the other an M with a time delay fuse that punched through a target before blowing up and out. Nothing could ruin a tank driver's day like an M penetrating his armor and detonating inside his tank. But since the M was likely to go right through a soft-skinned vehicle like the Ford and expend its energy deep in the soil, I selected the K model as my best chance to destroy the vehicle, driver and rocket tubes.

I was nevertheless hesitant about firing. The thought of living in the aftermath of having harmed or killed innocent people chilled the marrow of my being. The JTAC and I had to decide together whether the payoff was worth the risk.

We were comforted in the knowledge that the brick wall surrounding the vehicle should contain much of the blast energy. (Martin, 2010:52)

When JTAC gave him a “cleared hot” call, the only thing left for him is to decide to strike from which angle and when. He contemplated about every possibility:

I began preparations for a shot by scrutinizing the target from all angles in order to choose the best approach to minimize collateral damage... Nobody else should be hurt, which was an integral element of our rules of engagement. I doubted whether B-17 and B-29 pilots and bombardiers of World War II agonized over dropping tons of bombs over Dresden or Berlin as much as I did over taking out one measly perp in a car. (Martin, 2010: 53)

At last, they fired the hellfire. There were thirty seconds for the missile to reach its target. Unfortunately, an older man entered the picture before the missile hit the car:

And then I saw the breached wall with bricks blasted into the street. I looked for the old man, who must have been the most unfortunate SOB in Sadr City because he just happened to be walking by at the wrong time, I saw that the shock wave had carried him into the middle of the street, where mobs of people swarming in the aftermath hid him from my further view. I was unable to determine whether or not he got up... I sat silently, contemplating my console and screens for a few minutes, as did Airman Abado. The Rocket Man had it coming. The old man did not.

By the time this war was over, I later reflected during dark moments, I was apt to have more innocent blood on my hands. Innocent blood on my hands, rubble and wreckage in my wake, and Iraqi mothers and wives cursing me –or the idea of me- and praying for my damnation.

Those who would call this a Nintendo game had never sat in my seat. Those were real people down there. Real people with real lives. (Martin: 2010: 54-55)

This lengthy account of Martin (2010) shows us the process of how drone operators witness collateral damage. They watched the rocket man until he entered a neighborhood where people are unaware that they are being surveilled. Later, they had to decide whether shooting the rocket man is risky or not. After the operator is ordered to engage, he had to deliver the missile, watch it's going, and surveil the aftermath to confirm the death of his target. But, he is also aware of the civilians and their innocence. He knew that one small mistake could cause the death of these people, and he had to watch the result of his mistakes. Even deciding the angle of the missile puts pressure on the operator. Every variable in the picture turns into a matter of life.

What happened to the older man is not the only incident Martin (2010) witnessed. During his task in Iraq, he was watching a feed by a drone which was after an insurgent group. Drone crew surveilled the group for a while, and after getting the call, they fired the hellfire:

Everything looked perfect until...

Two kids on a bicycle unexpectedly appeared on the screen approaching the truck and the insurgents. Both were boys. One appeared to be about ten or eleven; the other –possibly a younger brother- was balanced on the handlebars. Tooling along on a summer day laughing and talking. ‘Oh, god! Not again!’ escaped my lips.

When the screens cleared, I saw the bicycle blown twenty feet away. One of its tires was still spinning. The truck was a mangled scrap pile of wreckage. The bodies of the two little boys lay bent and broken among the bodies of the insurgents.

The responsibility for the shot could be spread among a number of people in the chain –pilot, sensor, JTAC, ground commander. That meant no single one of us could be held to blame. Still, each of us shared in the tragedy. (Martin, 2010: 211-212)

Martin (2010) mentioned the reaction of his crew; they are devastated by the event. Still, he and another officer within the crew defended. They had to go on. What happened was unavoidable. In a way, they argued that they have to develop certain mechanisms to deal with such incidents:

Boby the Okie, with his ability to philosophically detach himself, was the first to find word. ‘Break up the pity part’, he scolded. ‘What’s done is done. No good can come from obsessing about it. It’ll only distract us from doing our job.’ Were it that easy. (Martin, 2010: 212)

In both incidents, we see drone operators are left alone to deal with the situation. Although their reactions may differ according to their characteristics or views towards their jobs, the fact that they are forced to face the death of the civilians shows how their technological capabilities burden them with responsibility. Martin (2010), when he gives the example of other pilots of bomber planes, underlines this fact. Not all the soldiers who inflict violence on civilians or cause collateral damage had to face these deaths or have the time to contemplate it like drone operators. Technology, in the case of these soldiers, becomes a barrier between the cause and result. They push a button

and return to the base. Contrary, drone operators push the button and watch every consequence of that button.

Another point that intensifies the feeling of responsibility is the capability of disseminating the feed to different soldiers. In the incident of children, Martin and his crew did not control the plane. They were just bystanders. Still, they cannot elude the incident easily. They know what happened is, in a way, the inevitable result of war. The same thing can also happen during their missions. They have to deal with it even if they are not the ones who push the button. On the other hand, the operator who controls the aircraft knew that what he caused is watched by others; his actions affected the others.

The effect of drone feeds can also be observed in the case of Velicovich (2017). After an intel told them the location of a low emir of ISIS, he informed the ground operators, and they are dispatched to raid. During their raid, a man fired at the team. They reacted with counter-fire and found out that the man was a civilian who seen the operators as a threat and wanted to protect his house:

In the moment, I didn't think much of his death, though. Mistakes happened and we considered it collateral damage. The thing about a drone-related kill is that there are a lot of people involved in the operation and it is easy to distance yourself from any mistake. The SEAL who shot the gun could say, "Well, the intel guy put us there so it's his fault" and I could say "Well, I didn't pull the trigger." Same thing with a hellfire strike. These are the new realities of networked wars. Success has a thousand fathers, while failure is an orphan. But the truth was, I could not escape it then, and cannot escape it now: His death should not have happened. And I'm responsible for it. (Velicovich, 2017: 297)

Again we observe a process of dealing with collateral damage. Velicovich (2017), as an intelligence analyst, did not pull the trigger, nor the SEAL team knew –at least on this account- the man shooting them was a civilian. Still, Velicovich (2017) sees the incident. He blames himself for misleading the SEAL team. He further mentions the paradox of drone warfare. It relies on various variables that cannot be controlled easily. Many soldiers participate in the process where each actor can find a way to minimize their role. Gregory (2011: 193) frames this participation as a kill-chain. It means that modern military means cause a blurring on the responsibility of the actions as various

actors from various backgrounds operate them. Thus the responsibility of the actions is lost within the kill-chain, but the same capabilities of drones inform soldiers about the results of actions by giving them the possibility of seeing everything. Therefore, although they can handle the situation or can deal with collateral damage, they may still feel responsible for these actions.

#### **4.1.4 Military Organization of Drones: Institution or Occupation?**

We have seen in the previous sections that Moskos (1977) had defined an institution as an organization whose members answer a calling. He argued that such organization diverges from other civil organizations. Its members work for the institution's good, and administrative regulations maintain this normative approach of members. As we can see argument reveals two dimensions. On the one hand, institution implies an individual –or a soldier in our case- who has certain norms concerning their profession. These norms are developed to answer a calling that is unique to the profession. This means a soldier with institutional values would not be satisfied by any other job, or s/he would not consider being a soldier as an ordinary market job. S/he would ascribe a meaning to the profession, and that meaning cannot be found in other organizations. On the other hand, the institution also implies a structure or organizational mechanism that aims to maintain its members' normative approach. In the literature section, we summarized these mechanisms in a table written by Moskos (1986). We saw in the table that soldiers would be compensated in non-cash forms; they are an integral part of the military community, they would try to find an answer for their grievances by asking their superiors, they do not have a clear separation of workplace and residence, etc. Yet, these mechanisms do not guarantee the complete dedication of their members. As we will see, there may be strains between the two levels.

Drawing from the experiences in memoirs, I argue that drone technology within the army creates a structure that is closer to the occupational end at the level organization, but capabilities of this technology place a unique responsibility on its users, which raises institutional values on the level of the individual. By this argument, I do not imply that all of the operators of drones have -or must develop- institutional norms. Unlike the assumption that military technologies isolate soldiers from warfare or new

occupational mechanisms erode traditional military values, I just propose that the capabilities of drones make soldiers still an important integral part of the battlefield. Drone technology forces them to take actions that had no equivalent in any other market job. This fact creates new strains within the army. To clarify these strains, we have to review the effects of previously stated topics on responsibility. I gave the experiences from memoirs to show in what ways operators' feeling of responsibility is built. Now, we have to see how these ways turn into a "calling." In this way, we would be able to underscore strains between the levels.

#### **4.1.4.1 Changing the Course of War**

We have mentioned that few soldiers in modern armies directly engage with their adversaries. This means few soldiers have a direct effect on the war. In this respect, drone technology gives a chance to operators to affect the course of the war through the important tasks we mentioned earlier. In fact, some of the operators chose to be drone pilots exactly for this reason. McCurley (2015: 24) is one of them:

It was 2003 and the war in Afghanistan was already two years old. The war in Iraq was just beginning. When a slot opened in the Predator training pipeline, I asked for it. After some wrangling, I got it. It wasn't a fighter, but I wanted it because the Predator gave me a chance to stay in the cockpit and contribute to the war effort. (McCurley, 2015: 24).

He chose Predators as he knew that predators are actively used in warfare. Controlling a Predator meant killing enemies, getting useful information, thus affecting the warfare. His aircraft seems did not fail him in this respect. On different occasions, when he utilized predators in action, he mentions how they changed the course of war:

In a way, we were happy we took out the target. We had had our chance, which few others got, and I was able to fulfill my promise to make a difference in the war. (McCurley, 2015: 135).

I hoped my aircraft would get a chance to shoot. Occasionally, a Predator would come home without its missiles. That raised morale, as a shot provided a tangible effect to show my troops we were making a difference in the war.

The squadron thrived on the stress of maintaining a constant stare when they knew it mattered. (McCurley, 2015: 294).

A similar feeling can also be observed in Velicovich's (2017) case. He wants to do something tangible:

I was starting to feel a bit of that now. I was out for blood, too, for my fellow soldiers back in the 82nd who suffered regular strikes from the enemy and had their hands tie to do anything about it, for my family and friends back home, for America. I wanted to kill as many of them as possible. (Velicovich, 2017: 131).

We clearly observe that he thinks he can make a difference, not for himself but for Americans. Martin (2010) also shows us how he is not satisfied with his current effect on the war and how his team can do more:

Still, the United States had 150,000 troops in Iraq, and some were going home in body bags nearly every day or shipped out maimed and disfigured. All of us were negligent if we failed to provide the best support possible to protect them. I, especially, continued to feel that we were not utilizing Predators to their fullest capacity. There was so much more we could be doing, should be doing. (Martin, 2010: 200).

He, just like other operators, know that he is physically isolated from the war. Others are in danger. Thus, he wants to contribute to the war as much as possible.

As we can see, they are convinced that drones are contributing to the war effort. To understand how drone technology brings such "calling," we have to see how it convince operators. Firstly, immense information obtained by drone operators makes them aware of the losses during the war. When they witness an engagement, they see every casualty and effect of these casualties on the course of the war. This fact convinces them about the importance of the role they play in the battle. They can change the course of it by reducing the risk taken by others as much as possible. Secondly, they know the next step after the success of their initial mission. During the battle, the operator sees the battlefield from the sky with enhanced visuals. Also, they have improved communicational means, which makes them aware of every variable

in the battle. Therefore, they can calculate what would be the next step after the success of their current missions. This fact makes them motivated and convinces them that their efforts are not futile

McCurley's (2015: 59) statement shows us this awareness:

This was an opportunity to thoroughly document the courier's actions. We were building a pattern of life so we could anticipate where he would be if or when the JOC (Joint Operations Center) decided to roll him up. Our mission was to capture, not kill. Alive, captured terrorists allowed us to piece together enemy networks. We wanted to pull intelligence from these guys, then use it to work our way up the chain until finally reaching the top.

Although pulling intelligence from the guy they capture is not his task, McCurley (2017) still knows that his contribution would be huge for the army. When the network in question is finally dealt with, he would know that he is contributed to the process.

Another aspect that affects operators to feel that they can change the course of the war is the impact of their actions:

Our successes were briefed to the highest levels of leadership. Our higher-ups told us that some of the captures made it into the president's daily brief. The requests for help on other targets only made things more frenzied. The CIA wanted us to hit a guy in the south. The FBI wanted us to look into someone moving IEDs (Improvised Explosive Devices) with connections stretching back to people in the US. (Velicovich, 2017: 263)

Not just the presidency or their superiors are informed about the successes of drones, but also their actions are heard all over the globe, especially when they capture or kill well-known terrorists.

Again, I have to underline the role played by the information. With the improved technological capabilities, operators turn into important actors on the battlefield. Their bird's-eye view equips them with knowledge about every variable, which also shows them the results of their actions. Eventually, they develop a sense of responsibility concerning the war. From the accounts, this sense becomes visible as they usually refer to the broader picture. When they hunt down an insurgent, they do not just tell the story of that mission, but they explain why that insurgent is important, what would be

the effect of the mission on the enemy network, and finally, in what ways this hunt down would contribute to the war effort.

Yet, besides convincing operators about changing the course of the war, the capabilities of drones also assure them of doing something meaningful. Not just for their people or nation but also for humanity as well.

#### **4.1.4.2 Doing Something Meaningful**

We have mentioned above that soldiers tend to perceive their enemies as a demonized, singular people. Contrary to this perception, each enemy is considered with his/her unique characteristics with drone technology. In this way, operators know everything about their enemies, which covers their capabilities. They know what these people can do to other people. For that reason, they frame them as “bad” people. Throughout the memoirs, I observed this label when the authors mentioned their enemies. Of course, such labeling is inevitable as there is a war between adversaries. My point is to underline the difference between a “bad” enemy and a “demon” enemy. During the World Wars, enemies are considered as the whole nation. But former one implies a specific person who must be sorted out from other innocent people:

The point was to protect Americans and other innocent people who didn’t wield the same power I had now. I don’t want to disappoint people, but it’s really much more complicated than that. We were after terrible people. End of story. (Velicovich, 2017: 162).

“Innocent” people on the ground must be freed from dangers posed by “bad” people. This thinking imposes a morality that covers not just the country of the operators but the whole of humanity as well. It ascribes a meaning to drone labor. Operators clear the ground from the bad guys by operating above. They constantly seek, hunt, and destroy persons who harm others. Their feeling of doing something meaningful comes exactly from this morality. But this exact morality also stems from the capabilities of drone technology. Without the unblinking eye of a drone, without their high-resolution feeds, one cannot easily seek and find a person in a population. When Velicovich

(2017: 162) mentions his power, he points out this capability. He feels he can do something that can touch the lives of others. In fact, he mentions a case where he detoured from his missions to save a woman.

An Iraqi general informed Velicovich (2017: 231) that ISI had captured a doctor's wife and asked for ransom. Although accepting to help them is not Velicovich's (2017) official responsibility, when he saw the picture of the woman, he decided to go after it. He knew that he could save the life of this woman:

My inner voice wrestled with itself: If you saved this woman, it would be one of the few times that we could see the tangible results of our actions. Isn't saving this one life the real reason you're here anyway? It wouldn't even take very long, and yet it would mean the world to her family. (Velicovich, 2017: 233).

After they finally rescued the woman, he kept the photo to remind himself. He saved someone's life. Yet, this specific case of rescue does not draw the full picture. Velicovich (2017) succeeded, but Martin (2010) was not lucky as him. One of his missions was to locate the captured contractors by insurgents. He is tasked with scanning certain areas to find clues about the location of captives. After he finally caught a glimpse, ground units raided the building, but they found nothing. Later, Martin (2010: 100-101) found out that one of the contractors was beheaded. He was devastated by not being able to rescue them:

'I feel so helpless' I murmured. 'I tried, Trish... I tried to help save them.'

'You did what you could.' She commiserated.

'It's never enough, honey. It's never enough. And what we're doing isn't working.' (Martin, 2010: 100-101).

Both accounts of Velicovich (2017) and Martin (2010) show us how a technological capability creates new ways for them, which are framed as "meaningful." With the huge amount of information and firepower, drone operators feel significant responsibility. Their actions may emerge huge impacts on the course of warfare. They also can see the tangible results of their acts which also makes their profession more meaningful. In this way, it becomes clear how their job is more than an "occupation."

Velicovich (2017) noticed this when he calculated the money he earned. Considered the value of the guys he hunted, what he made was trivial. What mattered for him is the job itself:

The math was just for kicks, to kill time when sleep didn't come. It really didn't matter to me because I loved what I was doing. Money obviously didn't drive me. It didn't drive any of us. The mission did. It had taken over my life and at that point I would have done it for free, despite the toll it had taken on my mind and body. (Velicovich, 2017: 242).

#### **4.1.4.3 Organizational Strain**

These points are clearly closer to Moskos' (1977) framing of "institution." In the memoirs, soldiers clearly identify their work with meaningful values. They rarely talk about the market value of their jobs. This does not mean that every operator would consider their job as a "calling." Yet, it is obvious that the capabilities of drone technology place great responsibility on the shoulders of its users. Especially pilots are exposed to huge amount of information about the course of the war, effects of this war on civilians and their fellows, which in return makes them aware of the importance of their job. Starting from this point, I argue that even if soldiers have occupational concerns during the recruitment, after a while, they should develop an institutional approach to bear the responsibility imposed by the job. At least, we can be sure that they must decide on actions that are a matter of life for other people. This means an operator would be more likely to think for his institution, for others, than acting solely with individualistic motives.

At this point, we must return to Moskos' (1986: 378) table. When we look at it, we immediately see that drone operator in US Army work under a structure which is closer to the occupational end. This means, on the level of organization, UAV branches, especially in the bases located in the US, have occupational regulations. For instance, operators work in shifts, and their residence is separated from the base:

Flying predator was shift work. We lived at a hotel. I got up, drove over to the compound, shifted my mind-set from family man to combat pilot, flew my shift, went back to the hotel, and tried to shift back to a family man on the way home. Do that for weeks and flying the Predator was more like working in a factory. All of the sexiness of being a pilot was gone. (McCurley, 2015: 70)

Separation of work and residence means for operators that their spouses are also not an integral part of the military. Moskos (1986) underlined this aspect that in the traditional military, where soldiers live adjacent to military bases with their families, spouses are expected to conform to military code (Moskos, 1981: 13-14). But in our case, we see that operators' spouses are isolated from the military; they are not expected to meet other soldiers' spouses or conform to certain norms.

Another occupational dimension of operators' work is related to their technical skills. Their skills are segmented, and their performance is evaluated quantitatively. Each operator should pass the exams before assigning their posts. Each exam is done to evaluate the operator's level, and these levels are named "readiness levels":

Readiness levels (RL) are the training status classifications of the individual operator. They identify the training phase in which the operator is participating and measure readiness to perform assigned missions. The readiness levels provide a logical progression of UAV (Unmanned Aerial Vehicle) training based on task proficiency. A crew member may be at more than one RL at a time; i.e., RL3 (refresher training) as PO (mission payload operator) and RL1 (continuation training) as EP (external pilot) (34-212, P. 8: 2711). (Unmanned Aerial Vehicle Aircrew Training Manual, 1997).

There are three readiness levels in which the operator should complete certain tasks. In this way, operators' progress is measured, and they can join their posts after they meet all of the requirements. (Unmanned Aerial Vehicle Aircrew Training Manual, 1997: 9). These levels inform us that, qualification of drone pilots is done according to their skills which can be measured quantitatively. But also, their compensation or progress in their careers also decided on their skill levels which are considered by Moskos (1986: 378) as occupational dimensions. This means qualitative factors are not as effective as in traditional, institutional military organizations. In addition, drone operators' mode of compensation is also salary and bonus (Losey, 2016).

When we consider the institutional aspect on the individual level, these organizational regulations create a strain. What is expected from operators is specific, technical tasks that diverge from the traditional, institutional military. Especially working in shifts and having residence separated from military bases gives an occupational outlook to drone labor. It is obviously different from traditional military tasks. Yet, the

capabilities of drone technology raise unique institutional awareness at the level of the individual. The effect of such incompatibility can be observed in the lives of drone operators.

We have mentioned that residences of operators are separated from their workplaces. This means operators working in Nevada can engage in warfare during their shifts and return to their families on the same day. It sounds like an ordinary occupation in the market, yet such shifting from warfare to daily life would not be easy for operators. Usually, what they see during their shifts affect their life outside the base. It is difficult for them to leave warfare behind. They cannot escape from the war.

It was after dark when I pulled into traffic and headed back toward the lights of Las Vegas. My daily metamorphosis on Interstate 215 from combat aviator to normal civilian started after I cleared the gate.

Each day was the same. Wake up, complete the morning routine, and start the long, forty-five minute drive to work. En route, I changed my mental state to that of someone capable of killing another human being without thought, hesitation, or remorse. The return trip home was worse. I had to remove myself from the war. The easiest days were the ones when nothing happened. (McCurley, 2015: 136)

To live an ordinary life, operators should leave behind what happened during their shifts. All of the responsibilities they took, all of the information they are immersed in should be removed until their next shift. After witnessing the chase of an insurgent, Martin (2010) rose from his seat to let the next operator replace him. He was excited during the chase and chuckling when the other operator arrived:

‘What’s so funny? Maj. “Slack” Roberts asked. ‘How about taking my shift if you’re having such a good time?’

I slapped him on the shoulder. ‘I’ve had all the fun I can stand for one day. I’m taking Trish out tonight.’

He sat down ‘War is hell’, he observed.

It was enough to make a Predator pilot schizophrenic, what with fighting two wars simultaneously 1,500 miles apart and balancing them with a wife and kids, if he had them, paying the bills, and calling the plumber because the toilet was stopped up. It didn’t get much more surreal than that.

‘Honey, you seem a million miles away,’ Trish would notice.

Not quite that far away. Sometimes it’s hard to keep switching on and off. Back and forth. It’s like living in two places at the same time. Parallel universes. (Martin, 2010: 85).

After having such difficulties in his daily life, Martin (2010: 85) even considers being in forward base, where he would just launch and recover the planes, would make getting rid of the war easier. For him, being closer to battle physically is less weary than engaging with it mentally. At this point, I also would like to underline that both McCurley (2015) and Martin (2010) did not mention difficulties they have after their shifts when they work in forward bases. It seems when they are closer to battle, and when there is no need for them to shift from military life to civilian life, they do not have to make tiring-mental changes in a single day as they are insulated from the civilian environment. Yet, we also have to remember that they can have difficulties concerning the common challenges of living in a forward base. What matters is their relationship with warfare in two cases.

Still, drone technology also poses unique psychological strains in forward bases. Velicovich’s (2017) career is a good example. As an intelligence analyst, he worked in forward bases. So, he did not have the comfort of returning home at the end of the day. Still, he faced unique difficulties, especially when he returned to his homeland:

But still I just couldn’t get the war out of my head –the cameras looking down at our targets, following them wherever they went, watching other people’s families and lives unfold right in front of me. I was killing the worst terrorists in the world one day and the next day sitting at a cozy restaurant, chomping a burger with cheese and bacon and watching people around me talking and laughing, without a care in the world. Could normal life be this surreal? It was like I had been living inside a nonstop action and all of a sudden someone hit the stop button, ejecting me out of it. Now I didn’t recognize the place I had landed. (Velicovich, 2017: 190).

Although he is not exposed to physical risks, or he would not engage with the enemy like an infantry, what he saw have huge effects on him mentally. In both cases – operator and analyst- we observe that soldiers, even if they return to their daily lives, still having institutional concerns. Such concerns bring the risk of psychological (Chappelle, et al. 2014) and communicational problems in civil life. These problems

verify the organizational strain, and they are important clues about how drone technology raises new kinds of soldiery, organization, and warfare.

We have used both institution and occupation as ideal types, which refer to a certain ideal organization and individual motives. What I tried to show in this section was to analyze how drone technology imposes individual motives which converge with institutional characteristics. But we also have seen that operators work under an organization closer to the occupational end. Such differences between levels created strains. These strains are important starting points to analyze the possible transformations in the military organization and warfare yet to come. I will try to outline these outcomes in the concluding chapter. For the present, these strains show us the co-existence of different trends in the same military sub-organization. Now, it is possible to see how with the changing technology relation between warfare and soldiery is being transformed. Drone operators do not work under the institutional structure Moskos (1977) pointed out, but still, they develop institutional concerns about warfare. Such contrast within the levels of organization and individual also signifies important transformations on the topics we have mentioned: Authority, Soldier Types, and Warfare. In the same manner, it is difficult to draw a full picture of the modern military concerning these topics, but we can find similar strains with ideal types that would give a clue about how modern warfare and soldiery transforms. From the same perspective, in the next section, I will analyze how drone technology affects authority relations within the military organization.

## **4.2 Drone Technology and Authority Relations**

In the previous sections, we have shown that technology affects the way of warfare and transforms the structure of armies. With technology, new fields of expertise arise, which produce different relations. By relations, I imply the forms of communication, decision-making, and action under a structure. For instance, under the dominative authority, there is a strict chain of command where information flows from below to the top and is accumulated by superior ranks. In return, inferiors mechanically respond to orders coming from the top. When technology enters this picture, it changes these processes. It alters the means of communication and the flow of information. Both

cause different authority relations. In this section, I will review the characteristics of these relations in their connection with drone technology. I will try to show how drone technology emerges new ways for the implementation of authority.

As authority is related to the organization's structure, we will first look at the US military structure. Although modern armies have similar structures, there may be some differences stemming from tradition. We are focusing on the US military for its practical usage of drones over many years. But also to support the data we get from memoirs which are written by US soldiers. For this purpose, I will try to show the structural position of drones in the US military. In the previous section, we got a glimpse of how they are operated and the types of missions they are used; in this section, we will understand under which structure they are employed. Starting from a brief overview of the US military structure, I underline two spheres related to military drones. One is the structure of drone units, and the other is about the relation of these units with other military units. With these spheres, it would be possible to draw the effects of drone warfare on military power relations, which consist of the last part of this section.

#### **4.2.1 A Brief Overview of US Military Structure**

Like other modern militaries, the US military is composed of different forces which report to the Department of Defense. The forces are Army, Marine Corps, Navy, Air Force, Space Force, Coast Guard, and National Guard (US Department of Defense, 2021). Each one has unique responsibility and capability, segregated by technological apparatus and area of operation. For instance, the space force is tasked to protect US interests in space (US Space Force, 2021). Yet, this does not mean that each one operates independently. They are all reporting to the Department of Defense. They contribute to joint missions with the cooperation that is realized all around the globe.

The United States has the most expenditure allocated for the Army (The World Bank, 2019). Such expenditure is the result of its capability of being active all around the globe. Eleven combatant commands are established and tasked with a particular geographical area or specific function to command this enormous military. For

example, Central Command is responsible in middle-east. It is tasked with cooperating with middle-eastern countries and protecting the USA's interests in the area (US Department of Defense, 2021).

Armed Forces are tasked under the authority of these combatant commands. Yet, each command is also responsible to the Joint Chiefs of Staff, which is between combatant commands and the department of defense in terms of authority (Congressional Research Service, 2021).

As we can see US Military is structured to distribute authority to different commanders under civilian control. In this process, commands gained autonomy to a certain extent. But Joint Chiefs of Staff makes sure coordination among them. Same coordination is also realized under the commands as they make operations with the partition of different forces and countries. For this purpose, there are also other organizations under commands. As it is difficult to mention all of these organizations, we will open them up when showing how drones are localized within this structure. For now, under this structure, we have to mention that drones are used with the partition of different forces. They are organized just like other units. For instance, in the air force, a drone squadron consists of two or more drones like other aircraft units (US Department of Defense, 2021). But, the capabilities of drone technology make this organization more complex.

Drones are mainly used to support other units with firepower and information. Also, they are used for targeted killings which shows their connection with intelligence units. All of these capabilities place drone organizations at the junction of different military forces. For this reason, drones affect authority relations in other spheres in different ways. I will analyze authority relations in two spheres to capture them: Authority within the drone units and authority relations raised by drone technology that covers other units.

## **4.2.2 Authority Within RPA Community**

### **4.2.2.1 Organization**

To review how authority is realized within the RPA community, we have to inspect this community's organization. For this purpose, we have to look at different types of drones as organizations vary according to the capability or the aircraft group. Drones are divided into five groups. These groups imply different capabilities; flying altitude, weight, and flying time. For instance, the model called "Predator" belongs to Group 4. On the lower groups, we come across with smaller drones. Besides their capabilities, groups also imply the differences between these aircraft in terms of technology. Smaller aircraft can be launched by a single person, controlled via radio signal, whereas higher groups necessitate a station, a robust data transmitter, and a satellite signal (Norton, 2016: 28). Therefore, in each group composition of the organization varies.

Although drones are aircraft, the Air Force is not the only force using them. Each force acquired different drones to meet the operational needs. For instance, Army primarily uses Small Unmanned Aircraft Systems, which belong to Group 1. Aircraft within this group are used for dynamic support to the ground troops, which provides essential capabilities (Norton, 2016: 32). As these aircraft are cheaper and less complex, they do not require many soldiers to operate. Their organization is intertwined with other units' organizations. On the other hand, drones belonging to Groups 4 and 5 have separate organizations. Air Force mainly uses these drones. Both McCurley (2015) and Martin (2010) used these types of drones and were both pilots in Air Force. For this reason, in this chapter, I will analyze these aircraft and their community.

Air Force refers to their drones as RPAs (remotely piloted aircraft). Like other air force assets, RPAs are also organized to answer the calls from the Department of Defense. They operate regionally to conduct specific missions by coordinating with other forces.

The basic unit responsible for the operation of two or more RPAs is the squadron (US Department of Defense, 2021). Within the squadron, there are soldiers with different

ranks and tasks. Mainly, they are pilots, sensor operators, and maintainers. Pilots are officers who control the aircraft (US Air Force, 2021), whereas sensor operators are enlisted soldiers who support the pilot with managing the camera and weapon systems (US Air Force, 2021). Lastly, maintainers are tasked with the maintenance of the aircraft (US Air Force, 2021). For the operation of a single aircraft, all of these soldiers must do their parts. We are going to analyze how drone technology creates a specific authority relation within this organization.

#### **4.2.2.2 Authority**

We tried to draw the organizational scheme of drone units in the last section. This scheme tells us where authority lies within the organization. For instance, in a drone squadron, we would expect that a lieutenant colonel commands the squadron. Under the rule of the commander, enlisted maintainers, sensors, and officer pilots work according to orders they get. Such a scheme is no different than a traditional military structure. Like other squadrons or troops –in terms of the Army- there is a particular chain of command where tasks are segregated, and the outcome of the labor is the management of violence. Still, I will show that conveying authority contains unique elements stemming from drone technology under this structure.

I identified two unique relations that emerged with drone technology. By relations, I imply the relationship between pilot and sensor operator, and; military laws and drone labor. In each case, drone technology both affects the soldiers' attitude and organizational authority. To analyze these effects, I will open up each point.

##### **4.2.2.2.1 Pilots and Sensor Operators**

In a military, rank means not just the soldier's authority but also his/her position in a certain social environment. For instance, an officer with a higher rank belongs to the sub-group corresponding to his/her rank. For this reason, in most of the units, there is a social boundary between officers and enlisted personnel. Its most obvious example

can be given from the Turkish Army (TAF). In TAF, enlisted personnel and officers had separate residences, separate clubs, and different rights (Ünsaldı, 2008: 202). This picture reflects the traditional, total military organization. Within this organization, soldiers more tend to develop buddy relations with their counterparts. We would expect more horizontal touch. Also, we would be more likely to see that vertical relationship would be more formal and contains domination in Janowitz's (1959) words.

When we consider the RPA cockpit, things diverge from the picture we depicted. In the cockpit, pilots and sensor operators work side by side where each one tasked with different technical tasks:

Pilot/operator. Responsible for controlling the flight of a UAS to include, in the absence of automatic systems, taking off and landing.

Sensor operator. Controls on-board sensors and receives data and images. For many smaller UAS, this role is combined with that of the pilot/operator. (Norton, 2016)

Martin (2010: 18-19) opens up these tasks through a metaphor of bee used by his commander:

'It's a big bee, gentlemen, with one hell of a sting.' The pilot "stung" through what he called a multispectral targeting system (MTS) located in a ball under the aircraft's nose. An enlisted "sensor operator" aircrew member in the "cockpit" with the pilot, performing copilot-like duties, fired a laser or an infrared beam from the MTS. The laser beam reflected off the target and pulses to attract laser seekers in the Hellfire missile. Either that or an onboard computer used the laser beam to calculate location, distance, and other battlefield variables that could be transmitted to manned aircraft or ground forces so they could destroy the target. This was called 'lasing the target.' (Martin, 2010: 18-19)

Without the "copilot," it is evident that pilots cannot do their tasks. Therefore, both sensors and pilots rely upon each other while operating. Such reliance over long working hours during their shift transforms the authority relation between them. Pilots can work with the same operator for months, which means that they would work side-by-side for hours without seeing different soldiers.

He was also good company in the cockpit. Our missions were often boring, so we'd all become skilled at staying engaged. Jantz and I played hangman on the whiteboards mounted to the walls or just talked about his upbringing in Oregon and his wife. He was recently married. (McCurley, 2015: 88).

The inevitable result of doing the same task for hours is the unconventional contact with his inferior:

We were less rank conscious in flight. It started in training. We pushed the enlisted sensor operators to forget that the pilots were officers. We were just "two crew dogs" doing a job. I didn't want the sensors to be afraid to point out something if I was doing it wrong. (McCurley, 2015: 88).

From this account, we can underline specific vital points concerning the authority. Firstly, drone technology makes pilots and sensor operators dependent on each other. Their tasks are complementary. For instance, when the pilot decided to shoot a target, it is the sensor's job to ensure that the missile is heading towards the right target. Therefore, any mistake concerns both of them (Asaro, 2013: 12). This brings us to the second point. There should be healthy communication between pilots and sensor operators to prevent errors. Such transmission means both parties must be able to warn each other. That is why McCurley (2015: 88) underlines that they are trained to be "two crew dogs." During a task, their differences in terms of rank must not harm the communication between them. The inferior position within this picture must be reactive rather than being passive. S/he should conform to the orders and must not hesitate to inform the superior about a possible mistake.

The relationship between sensor and pilot gives clues about the bureaucratic regulations where a specific authority lies. By this authority, I imply what soldiers understand from "mistakes." The existence of mistakes means a normative regulation imposed on drone labor. Such restrictions also affect the conveying of authority.

#### 4.2.2.2 Drones and Regulations

Like other military units, drones are also subject to military laws. These laws regulate the utilization of drones. Maybe the most important one of these regulations is the Rules of Engagement (ROE). As drones are capable of striking, they must conform to the ROE. The fact that drone operators are risk-free makes these rules even more critical. Drones are capable of producing precision strikes on a target who is not able to react. That is why drone technology offers overwhelming power to its holders. ROE aims to limit that power and prevent arbitrary usage. The purpose of these rules are summarized in the Operational Law Handbook published by International and Operational Law Department (2015):

As a practical matter, ROE serve three purposes: (1) provide guidance from the President and Secretary of Defense (SECDEF), as well as subordinate commanders, to deployed units on the use of force; (2) act as a control mechanism for the transition from peacetime to combat operations (war); and (3) provide a mechanism to facilitate planning. ROE provide a framework that encompasses national policy goals, mission requirements, and the law. (International and Operational Law Department, 2015: 81).

This reference informs us that decision-makers in the RPA (remotely piloted aircraft) community should consider the national policy, mission requirement, and conformity of the act to the laws during the engagement. Such consideration adds another dimension to the calculation process of drone strikes. It affects the conveying of order to the inferiors by limiting the extent of orders that the superiors can give. But also, it includes specialists in law in the process.

The intervention of ROE during the action can be observed in the incidence told by McCurley (2015). After starting his shift, he immediately warned to get ready for a strike. They were following an insurgent leader for months, and now they are going to strike him. Still, after the initial order, McCurley (2015) waited for hours for the completion of bureaucratic processes:

After getting the order to spin up our missiles, we waited for the order to move for the next three hours. Mongo sat quietly in the back of the GCS (ground control station) as Jantz and I dodged clouds, rain, and ice. We had our hands full just keeping the bird in the air. (McCurley, 2015: 127).

The reason they are waiting for so long is the completion of ROE. Other specialists are checking the situation and deciding whether the strike would be conforming to ROE or not:

‘Hey, Squirrel,’ Pusher said. ‘We don’t have a lot of time.’ ‘I can’t help the clouds,’ I said. ‘How’s the checklist?’ We still didn’t have clearance to engage, even if I could see long enough to shoot. “Working it,” Pusher said, his familiar refrain. Of course, I thought sarcastically. ‘ROE is done, just awaiting final approval,’ Pusher said a minute later. ‘I need you to get below the clouds.’ That shocked me. ROE complete meant only the final decision authority remained. Right now, I guessed staffers were calling the White House for the go-ahead. (McCurley, 2015: 128).

Pusher, who communicated with McCurley via chatroom, was a liaison officer working in Joint Operation Center. His task was to transfer the order to pilots. In this case, he states that although they decided to shoot the insurgent, they still had to wait for the ROE process. What makes this case connected with drone technology is the possibility of calculation. When soldiers face an immediate threat, they are usually authorized to engage. They can quickly assess such a situation as they are facing a risk. Yet, in this case, none of the decision-makers are in danger. They can calculate and get advice on the subject. They can even reach the White House to inform about the possible political side-effects of the strike. Therefore, we see that authority is affected by different variables and calculations which stem from drone technology.

McCurley’s (2015) another account shows such effect. After a staffing job, he was dispatched to Creech as a Wing Operations Center (WOC) director. Another director defined his task as follows: “We are the oversight for anything flying. When nothing is going on, we are building the programs that run the WOC.” (McCurley, 2015: 226). Although he is not a squadron commander, his task was to contribute to the operations processes. Such centers were organized to ensure coordination among aircraft. They are the bridge between drones and other military units which we will mention in the

analysis of how authority is realized outside the RPA community. For now, it is enough the state that McCurley (2015) was not a pilot or a squadron commander but a director in the operations center. As drone feeds are published with the authorized personnel, he could see what pilots were doing. During one mission, he realized that a pilot was preparing to take a shot. McCurley (2015) followed the process and found out that the strike was not conforming to the ROE. He took the initiative and intervened:

WOC-D> RE27 ABORT ABORT ABORT

BY41> Say Reason.

WOC-D> Invalid ROE, invalid clearance, shot is not legal. (McCurley, 2015: 229).

Once WOC intervened, the pilot had no option but to call off the shot. Later, the pilot reacted angrily to McCurley (2015: 230). He insisted that his shot was ruined. McCurley explained to him what he did was to him save from getting into jail:

‘First, there was no 9-Line passed. The important pieces of information used to pass a target were never issued by the JTAC (Joint Tactical Air Controller) or validated by you. Second, ‘shoot, shoot, shoot, shoot, now’ does not qualify as a shot clearance. The chat logs clearly show you engaging without a legal clearance. Third, CDE (collateral damage estimation) was invalid once the vehicle moved. He was more than a mile away from the house before you rolled in. You had no way of knowing what lay between you and the target. The missile could have landed anywhere or hit anything. I don’t think the JAG (Judge Advocate General) would take kindly to you putting a missile into an innocent’s house.’

The JAG, the military lawyers, analyzed every shot to ensure that all the rules were met, The JAG would have charged the pilot had he shot and killed an innocent (McCurley, 2015: 230-231).

The pilot’s reaction to WOC director implies that they are not in a direct relationship. WOC director is not the pilot’s commander or supervisor. Still, a chatroom and drone feed enabled director to intervene by referencing ROE, which authorized him to call the shot off.

The last account showed us how various soldiers and organizations supervise drone technology. Different actors and organizations may affect the decision-making process

of drone labor. Thus, to understand the effects of drone technology on authority, we also have to analyze the relationship between drone units and other organizations.

#### **4.2.3 Drones and Different Military Units**

In the previous section, we have seen that drone technology raised unique authority relations within the RPA community. This section will try to draw how drone technology affects the authority in other related branches.

First of all, we have to underline that drone technology necessitates coordination with other units. The purpose of support and providing intelligence connects drones to other military sub-organizations. As there are numerous military units with various tasks, coordination is realized through central commands:

The Combined Air and Space Operations Center (CAOC) in Qatar headed up all joint air operations in that theater of the world, which included Iraq and Afghanistan. Within the CAOC in order of rank appeared the Coalition Forces air component commander (CFACC- a three-star general), his deputy (a two star), the CAOC director (a full-bird colonel), and the chief of combat operations (CCO- a lieutenant colonel), who oversaw the day to day execution of the air war. A senior intelligence duty officer (SIDO) and a senior offensive operations officer (SODO) worked for him. Because the Predator was first of all an intelligence asset, RPA operations fell underneath the SIDO. (Martin, 2010: 291-292).

We have underlined that drone feeds are accessible by different actors. The reason behind this is to ensure coordination between other aircraft and enable decision-makers to employ drones effectively. In such a picture, those who have the authority –mainly the leaders in command centers- seem to have absolute power over their inferiors and can intervene with every asset within their region. Yet, this fact does not imply vertically structured authority. Immense information and mass variables that must be calculated in every task impede commanders from intervening in every aspect of the battlefield. Instead, drones are operated according to an overall scheme:

The division commander establishes the overall scheme of maneuver, tempo, and focus by fusing employment of all available joint and organic aviation assets. The G-2 (Assistant Chief of Staff-Intelligence) coordinates ISR (intelligence, surveillance, and reconnaissance) requirements with G-3 (Assistant Chief of Staff-Operations) to ensure balanced UAS employment. The G3 is primarily responsible for planning and employment of UAS in support of tactical operations and coordinates joint assets through higher headquarters. (Joint Unmanned Aircraft System Center of Excellence, 2010: 1)

Therefore, although constant surveillance and supporting other units necessitate central organizations, the same capabilities also create a certain autonomy on the lower levels. Especially, intelligence units are organized to realize such autonomy.

From this picture, we have two critical points that can be ascribed to drone technology. First, it necessitates a central organization and coordination between army units. Secondly, big data produced by drones creates autonomous tasks. To understand how authority is shaped in these two points, I will refer to tactical chat, which is the most important mean of communication for drones, and intelligence branches that use drones to gather intelligence.

#### **4.2.3.1 Tactical Chat**

Drone labor necessitates near-real-time communication between the participants of operations. To meet this need, US Military uses Tactical Chat. As its name implies, it is a chat program that provides near-real-time messaging:

Internet tactical chat (TC) is a near-real-time synchronous conferencing capability designed for group and private message data transfers to provide online communications with other users. TC enhances critical communications capabilities through improved data messaging across units and echelons by simultaneously transmitting and receiving information among all participating and monitoring organizations. (Air Land Sea Application Center, 2009: 1).

The main reason behind its usage is to provide systematic control and coordination of multiple actors joining the military operations. In modern warfare, tactical chat makes possible for military members from different units and force structure to easily communicate in the cyber environment, which implies new ways to issue an order,

thus altering authority. This change can be observed in the characteristics of the Tactical Chat.

Like other military environments, Tactical Chat also contains strict regulations and rules. Mainly, it is aimed at controlling the information. Quick and easy communication in cyberspace bears the risk of spreading misinformation. In the case of this misinformation, armies may face devastating results. To prevent such circumstances, they saw the necessity of a particular structure within the TC. One of the most remarkable regulations is the protection of the chain of command while chatting:

TC is used in the command role when a commander issues an order using text messaging. Command TC normally occurs only in command TC rooms. (Air Land Sea Application Center, 2009: 3).

Yet, the complex nature of the cyber world also necessitates specific tasks to control communication:

- a. Room Owner (RO)—Just as radio nets have net control, TC rooms must also have an overseer to function effectively. The RO is the individual responsible for a specific room with the authority to administer that room.
- b. Participant—Participants are active members of the TC room accomplishing a particular mission or task. Participants are expected to contribute to room communications. Participants will be required to document critical traffic as directed by their chain of command.
- c. Observer—Observers are passive participants who monitor TC chat rooms for situational awareness only. Observers are not expected to contribute to the room dialog. Observers may be required to document critical text traffic as directed by their chain of command.
- d. Communications Staffs—Communications personnel are present at nearly every level of military operations to maintain and operate the network infrastructure upon which TC depends. Early and constant interaction with communications staffs will help develop a maintenance battle rhythm to limit TC down times. (Air Land Sea Application Center, 2009: 3-4).

Chatting brought different tasks and other technical issues to protect the military discipline and authority. But more importantly, these tasks and regulations are essential to prevent the spread of misinformation. Another vital regulation for this purpose is the separation between official chat rooms and unsanctioned rooms:

There are two basic types of chat rooms, official and unsanctioned.

(a) Official Chat Rooms. Official chat rooms are approved rooms that are established and used as published in TC procedures documents. They are used to conduct TC specific to a function or mission and are permanent in nature.

(b) Unsanctioned Chat Rooms. Unsanctioned chat rooms are those created by users to temporarily augment official rooms and facilitate discussion outside of the approved TC structure dictated in special TC procedure documents. Due to excessive proliferation of unsanctioned chat rooms, their use is highly discouraged unless they are critical to accomplishing a specific mission and there is intent to publish them properly as official chat rooms. (Air Land Sea Application Center, 2009: 14).

Transferring chain of command also means transferring the military customs. Although it is difficult for soldiers to salute their commanders or stand up when they are chatting, they still are ordered to be sensitive about the way they are chatting:

TC users must realize that context and intent are extremely difficult to convey over chat and users may perceive information passed differently. For example:

- a. Use of capital letters can be misinterpreted as “yelling” or “anger.”
- b. High priority message traffic that is not highlighted or directed to a particular user may be perceived as less of a priority.
- c. Use of capital letters should be limited to TC messages that are of high importance to the chat room population such as flash traffic. (Air Land Sea Application Center, 2009: 23).

Soldiers are expected to conform to the regulations within this new space to contribute to the flow of information, which brings us the results of Tactical Chat in terms of information. Maybe the most significant effect of it is the dissemination of information vertically and horizontally:

As an integration tool, TC text windows allow for the free flow of common information between all echelons of users while also enabling collaboration and the cross flow of information. (Air Land Sea Application Center, 2009: 1).

Within the chat, program soldiers can follow the flowing information on the war, operations, and other matters. For instance, Martin (2010) explains how he developed a habit of inspecting chat rooms:

I always liked to keep a number of chatrooms open on my control console in order to feed my curiosity with greater insight into how the War on Terror was going. In one window, for example, JTAC's discussed things they'd like to blow up and how they intended doing it. In another, generals at Central Command (CENTCOM) or the Combined Air and Space Operations Center (CAOC) discussed "big picture" issues such as strategies and the broad range use of troops and armies. (Martin, 2010: 64).

Martin (2010) can follow the operations he participated in and other matters discussed by the higher command. He underlined that he could meet his need of curiosity via the chat rooms. This means tactical chat gives soldiers from different ranks an opportunity to gather insight about the course of war, which would not be possible with other communicational means.

Besides the dissemination of information, chat system also increases the communicational capabilities between different units, ranks, and organizations:

We had our laptops out, running a sophisticated chat program that allowed us to have about twenty different classified conversations with every intelligence agency running at once, including the CIA and NSA, our ground force elements, senior officials in the US government, and the technical side of the operations in Iraq and across the globe. (Velicovich, 2017: 18).

Lastly, maybe the most crucial result of a chat system is conveying authority in cyberspace. Especially drone operators should always view their chat rooms to get an order. Most of the time, they get their orders, necessary information on the mission via chat rooms.

It was the mission commander in the ops cell. I scanned our mission chat room. A note from the Marine Air Traffic Control caught my eye.  
DASC>Roulette, TIC in progress, cleared off tgt, get eyes on ASAP  
(McCurley, 2015: 89).

When the space of authority changes, its manner also changes. We can see that soldiers have to use abbreviations for efficiency. In face-to-face interaction, commanders can yell or show other physical characteristics to intensify the conveying order. Still, in the chatroom, this physicality leaves a place for technical skills to improve efficiency:

I sighed. We worked to keep the chat rooms efficient. “C” meant copy. The chat room’s messages came in streams like in the Matrix. You had to watch it closely or risk missing vital information before it was pushed off the screen. Typing while flying was a pain in the neck. I was as likely to do something stupid with the aircraft while typing on a keyboard as I was if I were texting behind the wheel of a car. (McCurley, 2015: 100).

What makes this relationship between the commander and his subordinate unique is that these conversations are written and may be witnessed by multiple actors. We have seen how other soldiers can intervene in the operations.

The importance of chat rooms comes from their transforming effect on the relation between soldiers and creating a new space to realize authority. Its importance for information also adds another dimension for authority.

Without the chat system, efficiency of drones would be significantly diminished. For that reason, one may not reveal the effects of these technologies on authority in modern military structure without analyzing both technologies and their relationship. This relationship is also important for showing how different units are structured. Especially intelligence units strongly rely on these technologies.

#### **4.2.3.2 Intelligence**

Velicovich’s (2017) book is important in providing data on how intelligence branches in the US military operate and the importance of drone technology for these units. In the book’s title, Velicovich (2017) defined himself as a “drone warrior,” which indicates the connection between intelligence and drones. From his account, it is possible to draw an organizational picture of intelligence units and how their association with drone technology affects military authority.

We have mentioned how drones are used to gather intelligence. This intelligence can be gathered to support specific units. In Velicovich’s (2017) case, we find out that his team is authorized to command a certain number of drones. This means their

organization is a separate, autonomous organization that can directly ask for drone support in certain instances. Martin (2010) mentioned the structure of these units:

Certain special forces, on the other hand, were apparently free to do pretty much whatever they wanted, ranging theater wide to collect intelligence and launch unannounced raids. These groups mostly worked independently of the normal military command structure and were so secretive that I sometimes thought they didn't even talk to one another. (Martin, 2010: 264)

He also mentions a case when he supported one of these units with feed. The team had him check a house, ordered him to look for suspicious activity, then they stormed the house and thanked him:

I had no idea what it was all about; I wasn't "read in." Obviously, that was the way these guys wanted it, all hush-hush. They often came in like gangbusters and then left everything in a mess for local troops to clean up. Free-ranging behavior like that tended to foster resentment from regular grunts and their commanders (Martin, 2010: 265)

What the team did was an intelligence task. They tried to keep their actions secret; even the drone operators who watch them may not know these teams' aim. In Velicovich's (2017) book, we are informed about how these teams are organized. Although his account does not fully draw the picture as he could not give classified knowledge, it is still possible to draw specific insights. Maybe the most important insight he gave is the information about his teammates, which reveals the team-based structure of these units:

My team was around ten now. Kate was my new Jake, the tactical controller, who sat next to me, passing along my instructions through chat to the camera operator and Predator pilots.

One of the superstars was the map genius, Brian. Straight out of college, he'd joined the NGA (National Geospatial-Intelligence) and worked his way up the chain to land here. It was like he was born with maps in his head. He could get me things that others couldn't –the 3-D layout of a building in Baghdad, all kinds of military terrain maps. He could literally move top-secret satellites in order to give us crystal-clear images from space of neighborhoods from every imaginable angle. Like all of us, he was young and eager, and he was always in my ear, saying things like, "you seeing this, dawg?" "Check it out, bro." He talked like kids on the street.

Mark, my teammate and superior from back home, was also there. Being so close to Baghdad, we'd frequently meet up with various US general and senior Iraqi government officials, like Prime Minister Maliki, who wanted to be briefed regularly about our missions. Mark took on those high-level meetings and spent most of his time keeping the seniors out of my business. I ran the day-to-day targeting. (Velicovich, 2017: 205-206).

In short, what they do is gathering intelligence inside a "box" filled with technological means. Although they have various assets, drones consist of the most important part. With them, they can produce and operate the intelligence.

Within this picture, the secrecy of the tasks they do provides a certain autonomy for intelligence teams. At the beginning of the section, we mentioned how commanders had to draw an "overall scheme" (Gusterson, 2016: 111). The same case also applies to intelligence groups in a way to increase autonomy. With a grand strategy, team members are tasked with specific missions, like hunting down insurgents.

I would quickly learn that our core responsibility was very straightforward: hunting down the world's most dangerous terrorists. To that end, I'd be provided with all the assets and gear I needed to take out the enemy, including the most sophisticated unmanned aerial vehicles (UAVs) in the US arsenal. ...The main job of our team was something that I'd been doing for years but was expected to take to another level: building target packages of terrorists, figuring which one to go after, and finding them on the ground to capture or kill. (Velicovich, 2017: 89-94)

Intelligence teams are given an aim and necessary technological means. With these means, they work autonomously to reach the purpose. Using drones to get constant surveillance makes this autonomy even stronger:

The first thing I did was pop open my laptop and flip it on. This was the brain of the operation now. We didn't even really need the Box these days. I could set up a top secret encrypted Internet network anywhere in the world with connections through satellites. I could control a fleet of drones from a hotel suite if necessary. (Velicovich, 2017: 203).

He mentions that he can even control a fleet of drones outside his workplace if he sees it necessary. On the one hand, their job contains secrecy; on the other hand, drones'

capability increases their capabilities and their information. Both of them affect their autonomy positively.

Still, they do not have unlimited options. Their autonomy may be limited in certain circumstances. Area of possible operations, characteristics of the conflict, and political outcomes of the mission may cause the superiors to intervene in the process. For instance, the process is faster when the operation is done in a war zone:

Inside a war zone like Iraq, we could launch a hellfire with the approval of our higher headquarters commander. I'd submit a justification for why we were targeting guy, and once the target was in the Pred's crosshair and cleared for hot –to shoot- the pilots and sensor operator would fire away. (Velicovich, 2017: 221).

Thus, the process varies significantly according to the conjuncture of the geography. When they had to operate in a civil, warless area, the decision is made after a strict bureaucratic decision-making process. This is also related to the strategic consequences as we have mentioned earlier:

When Obama came into office rules about killing began to change. When the war started it was more incautious about bystanders. As the years went on, an intolerance for collateral-damage grew. If even one or two innocents were in the line of fire, we called the strike off. The change was brought about in part by the fact that there were a lot more drones going online in 2010 and people understood there needed to be more oversight. It was also because tactical mistakes in our world had strategic consequences, as killing even one innocent would play out on the world stage. (Velicovich, 2017: 221)

Still, this intervention happens only before the final strike. Intelligence teams are autonomous during their task of intelligence gathering.

It is possible to observe two effects of drone technology in this picture. First, intelligence teams can gather immense data and have increased surveillance capabilities which result in autonomy. Secondly, through central organizations and possible strategic consequences, drones make it possible for superiors to intervene in the process. Although these effects seem to conflict with each other, they give clues about how drone technology raises new ways to implement authority.

#### 4.2.4 Authority Types in Drone Warfare

Until this point, I tried to show how authority is realized in the units where drone technology is essential. In this section, we will see the implication of this technology in terms of authority types mentioned earlier.

At the outset, it is necessary to underline the dissemination of information and its relation with authority. Feld (1959) showed us the importance of information for staff commanders. He gave the example of a traditional authority structure in a fighting army where staff commanders stood at the rear of the battlefield and made plans, whereas subordinate soldiers fighting in front execute the orders and provide information to the staff. In this case, information is transferred from subordinate to superior. Lower ranks rarely share information with each other. This fact is the reason behind the trust towards the order of superiors. Soldiers in front are aware of greater knowledge held by their commanders.

Yet, in the case of drone technology, the dissemination of information significantly diverges from this traditional account. Drone feeds are accessible by soldiers from different ranks, and these feeds contain immense details on the battle.

Few aircraft had their missions transmitted live around the world like Predator did. Pred porn permeated every office that could access the video feed. In a way, the world was watching. (McCurley, 2015: 202-203)

Dissemination of information with drone technology has two aspects. Firstly, unlike the traditional account given above, we see that drones cause horizontal information dissemination (Manigart, 2006: 325). When it is connected with chat rooms and other communicational means, interaction among lower ranks also increases. Secondly, information accumulates in the lower levels, then disseminated both horizontally and vertically. Lower ranks get the chance of having more information about the battle than their superiors. The result is the inevitable transformation of authority on both individual and organizational levels.

On the level of the individual, drones affect authority by transforming the relationship between soldiers. One example of it is the communication between pilots and sensor

operators. Both have segmented technical skills, which creates what Janowitz (1959: 488) called “Fraternal” authority. He defines this type of authority as the “recognized equality of unequals” (Janowitz, 1959: 488). Each soldier aware of the rank difference and its implication for power relations. But, the technical skills of inferiors necessitate recognition from higher ranks as technical knowledge can affect the decision-making process. In this respect, the relationship between sensor operators and pilots fits such a picture. Especially during the missions, they are less rank-conscious and respect each other tasks. Besides, the technicality of drones extends such recognition to the higher ranks. For instance, Martin (2010: 223) mentioned how he taught a general to fly a predator:

I turned over Predator’s controls to him the next day while I stood by to supervise. It was like training a new first lieutenant to fly, except my student in this instance wore stars and was a general officer. It was exhausting for me, exhilarating for him and worth it all. (Martin, 2010: 223).

Obviously, his commander did not have a grasp of how drones operate. Such lack of knowledge may force superiors to get advisement from their inferiors. In this respect, they have to recognize this difference of knowledge. Fraternal authority comes precisely from this recognition.

Another result of drone labor is the accumulation of information in the lower ranks. The task of drone operators is to gather intelligence through constant surveillance. Like soldiers in front, they are also executing orders, but what makes their profession different is gathering information for execution. Therefore, the relationship between staff commanders and soldiers in front seems to be altered in the case of drone operators. They have access to the most crucial information via drone feeds and chat rooms. Martin (2010: 64) showed us how he developed a habit of following warfare through chat rooms. He could develop a sense concerning the course of the war. This sense may cause clashes between superiors and inferiors in some cases. During the operation in Fallujah, Martin (2010) told how he identified insurgents yet hesitant seniors prevented immediate action:

When we happened across some scruffy insurgent types loading weapons and ammo into the back of a pickup truck that was already hard-mounted with a

machine gun. I tagged along when the pickup left until imagery analysts at one of the intel hubs confirmed that what my sensor and I saw really was contraband. Having been so conditioned to err on the side of prudence, they often took so long to make up their minds that the opportunity to do anything passed while they were still discussing it. (Martin, 2010: 129)

He and his sensor followed the truck until they found a second truck, again loaded with ammunition and mortar tubes. He was aware of the possible dangers that these insurgents pose to his fellows on the ground. For that reason, he rushed into chat rooms and criticized the analysts who had not yet given any confirmation:

All you have to do is look, for Pete's sake. That's a machine gun, that's a mortar tube... What do you think they're going to do with them? Have a bake sale? They're going to use them against our guys unless we do something to stop them. (Martin, 2010: 130)

This case clearly shows how information held by operators would cause strains between both superiors and counterparts. Although he is ordered to continue surveillance, Martin (2010) questioned the order's validity as he obtained significant knowledge on the subject. As a result, it becomes difficult for him to mechanically conform to the orders.

When we look into the picture from the commanders' perspective, drone technology capabilities raise new possibilities for them to command. When Feld (1959) mentioned the difference between staff commanders and soldiers in front, he also implied separation between planning and execution. It means planners rarely got the chance to intervene with soldiers in front on how they should fight. This incapability is no longer the case due to improved communicational means and near-real-time drone feeds. Now, commanders can immediately intervene with the soldiers. Singer (2009: 359) defines such commanders who adopt a micromanagement-like attitude as "tactical generals." These generals can interfere in every aspect on the ground, unlike their predecessors. They can even order the soldiers on the ground about their positions and deployment (Singer, 2009: 360). This adds another dimension to authority relations. Although technical skills can create a fraternal type for lower ranks, they imply higher rates of intervention for commanders. In a way, it may cause generals to adopt a more dominant view towards management. Such adoption seems to conflict with the

fraternal type. It can raise new strains during operations. During the hunt of the facilitator, McCurley's (2015) squadron commander decided to replace the sensor as he thought McCurley's current sensor was inexperienced for a strike. As McCurley (2015: 130) trusted his sensor, he found that decision unnecessary. He immediately called the commander and questioned the order:

'MCC, pilot' I called the squadron's mission commander.

'Go ahead,' said Stew, speaking in his calm monotone.

'Sir,' I said. 'Why is Jantz being pulled?'

'Because I want Alan in the seat.'

'Sir,' I reasoned 'Jantz is spun up. We've got this wired. I don't think it's a good idea to swap sensors just before a running.'

'Put Alan in the seat,' Stew said.

The discussion was over. The squadron commander's word was always final. (McCurley, 2015: 130).

The capability of seeing and intervening in every aspect opens a door for authoritarian commanders to dictate. Still, this intervention cannot extend to the technical or specialized areas. For that reason, the military organization provides autonomy to some units –especially for intelligence branches- which brings us to the organizational level.

Intelligence gathering necessitates specialized members for analysis. These members operate under team-based organizations where they constantly process the intelligence gathered by drones. As this gathering is constant, these teams are operating under an overall scheme (Gusterson, 2016: 111-114). Tasks done by Velicovich (2017) and his team are good examples. They are given the scheme of gathering intelligence about the network of insurgent groups. They are also given the necessary technological equipment and support. With this aim and equipment, they work in secret and autonomously.

Usually we got the guys we hunted. Maybe not that first tour, but eventually we got to them –and if I didn't another team did. My team was always followed by another team, which was followed by another, all of us hunting around the clock. (Velicovich, 2017: 300).

On the individual level, information brought the risk of strain between inferiors and superiors. On the organizational level, autonomy brought similar risks, but now between these autonomous groups or between different organizations.

During the hunt of an important insurgent, Velicovich (2017) and his team finally identified their target. They had to decide whether to strike him or follow him to get more intelligence about the network. Velicovich (2017: 152) chose the latter. He thought following him would reveal more important information. At the same time, the drone feed watched by Velicovich (2017) and his team also shared with rangers which is the closest unit on the ground to the insurgent. Max, the team leader, communicated with the rangers and told them the situation. He ordered them to stand down. Yet, rangers showed up on the scene and attempted to capture the target. After a heated discussion between Max and Ranger commander, they blamed Rangers:

Ranger commander blamed the whole thing on a breakdown of their comms system; he was unable to call his guys off before they showed up at the house. 'That's such bullshit,' I said. 'I don't believe it.' The comms systems don't just go down. It was clearly a case of the Rangers wanting to take credit for a big target. We were on their turf and they didn't want anyone showing them up, even if we'd found the guy. (Velicovich, 2017: 155).

This account reveals important points on authority. Firstly, we see that the intelligence team can make its own decisions. Without addressing higher ranks, they decided to follow the insurgent as they thought it would be more efficient for gathering intelligence about the insurgent network. Secondly, the same drone feed gave another group the chance of intervention. Even if the commander blames the communication system, they can still use initiative. Again, we have to underline the importance of information and communication. Without the shared feeds and communicational means, such interaction between different teams would not be the case. Especially chat rooms disseminate information horizontally, which increases the capability of autonomous groups. Technology can turn warfare into a race where soldiers compete with each other to reach the enemy.

Clearly, autonomous intelligence branches imply what Manigart (2006: 325) called "delaying." With a mass amount of information and technological capabilities given to the intelligence teams, the military needs less hierarchical levels. Under an overall

scheme, these teams can operate autonomously without requiring permission from their commanders. Their working environment conforms “enabling bureaucracy” type (Soeters et al., 2006: 244). A similar point can also be observed in the RPA community. The relationship between sensor and pilot indicates teamwork. Their reliance on each other shows how the technicality of the job prevents a vertical structure. During their shifts, each decision they take must conform to this technicality. For that reason, the organization imposes a more enabling environment rather than a coercive one.

Lastly, we have to underline the relationship between law and drone warfare. Mentioned autonomy of units and their characteristic of being “risk-free” can raise the possibility of misconduct of military power. Drones give these units overwhelming power over their adversaries. They can surveil over long periods of time without the awareness of the person being watched. But more importantly, they can strike the same person who has no chance to defend himself. Consequently, the ethical dimension of drone warfare is highly debated. To minimize these ethical concerns, armies develop specific rules, which we mentioned as rules of engagement.

As collateral damage would cause an international reaction, we see that law intervenes decision-making process. With the rules of engagement, every strike is calculated, inspected, and responsible soldiers are held accountable if there is a mistake (Gusterson, 2016: 104). What makes this intervention possible is the calculability of drone warfare. Various actors can view each strike, and unless there is an immediate threat to forces on the ground, each strike can be discussed before taking action. This discussion time is given by the drone’s capability of flying over long hours.

In the future, such intervention may produce more complex civil-military relations. When we consider that law experts joining in decision-making, it is likely that civilian thinkers would have a chance to participate in the war efforts. Therefore, drone warfare opens up new dimensions for authority. From the sensor operator to the presidency, each layer can affect the process of decision-making. With such participation, both intervention and autonomy become possible in different military spheres. But when we compare with the previous, vertically structured militaries, it is pretty valid to argue that drone warfare flattens the military organization by equipping lower ranks with information and unique technical skills.

With constant surveillance technology, drone warfare emerged a group of soldiers who constantly engage in warfare and develop a sense of what is happening on the ground. In this picture, not just the authority but also soldier types are differentiating. New forms of authority also imply a change in the characteristics of soldiers. Especially the latest technical skills transform the relation between soldiers and warfare. In the following section, I will analyze this transformation with reference to soldier types.

### **4.3 Soldier Types**

Until now, we have analyzed the implications of drone technology on the meaning of profession and authority. In this section, I will present a similar analysis on soldier types. These types correspond to the ideal characteristics of soldiers. For instance, soldiers have been expected to discipline their bodies as warfare means a physical struggle (Bröckling, 2008: 51). Yet, to be a soldier means more than physicality. Soldiers face the risk of losing their lives during the battle. As a result, their mental capabilities are also essential. Their mentality should support their physical attributes to overcome fear and face the terrors of warfare (Bröckling, 2008: 246). Although such mental and physical characteristics may change according to culture, political context, or military technology, they are enough to show that we can draw an ideal soldier type and show its relation with culture, political context, and technology (Morillo et al. 2009: 5). In our case, we are interested in the link between technology and the changing soldiery.

In the modern military, there are different branches consisted of various soldiers with varied technical capabilities. As Laswell (1941) indicated, management of violence connects these different branches and separates soldiers from civilians. Yet, with each military technology management of violence change, and become more complex. One of the most significant effects of technology is the distance it put between soldiers and the battlefield. Especially after the 19th century, new weapon systems made it possible for their users to manage the violence remotely without facing the terrors of the battlefield. Bombard planes, nuclear weapons, long-range missiles minimized the risk their users take, and they also put significant distance between soldiers and the battlefield. This meant soldiers would not witness the full effects of their strikes. New

technologies blurred the notion of responsibility and caused the questioning of soldier's characteristics. The physicality of the previous wars replaced with technical knowledge and skill management. We had framed these aspects as the emergence of a new soldier type; managerial.

There are specific capabilities that differentiate drones from the mentioned technologies. Drones complicate the relation between war and soldiers. They physically distance soldiers from the battlefield in an unseen way, but they also cause soldiers to be mentally involved in warfare. Therefore, unlike previous technologies, drone labor consists of a mental dimension which was not the case until now. Gusterson (2016) framed this relation as "Remote Intimacy." It means drone soldiers are physically away from the warfare, but they are mentally participating in the war. With the high-resolution feed, they witness every effect on the ground.

I will argue that such complication signals an emerging soldiery. We mentioned three different types. Mainly, they are heroic-warrior, managerial, and scholar/statesman. I will try to show that drone labor poses unique characteristics that can be ascribed to these types. For that reason, I will mention each type and show how their relationship with drone labor. I will try to show how drone labor produces new relations. Later, I will argue an emerging type signaled by these relations.

#### **4.3.1 Heroic-Warrior**

In the literature section, we have framed the heroic type with particular virtues such as determination, sacrifice, courage, and discipline. More can be added, but it is enough to underline the relationship between these virtues and the concept of "risk." Warriors should hold these virtues to face the risk of warfare (Varin, 2017: 107). Starting from this argument, we can propose that heroic soldiers are determined to achieve something by facing certain risks that can cost them their lives.

In this section, I will try to show how drone warfare adds new dimensions to mentioned account. I will argue that drone labor comprises elements that can be ascribed to the heroic type. Yet, these elements are unique as they cover new forms of "risk," "determination," and "sacrifice."

#### 4.3.1.1 Risk

At first glance, drone operators seem to immune to any risk. They remotely operate an aircraft which makes their work physically “risk-free.” Yet, this assumption is partially false. Just like soldiers from different military backgrounds, drone operators are also dispatched to warzones at a specific time of their career. They launch and recover aircraft on forward bases. During these tasks, they can witness threatening attacks by their adversaries:

Nonetheless, insurgents fired several mortar rounds a day at the base, causing an injury now and then and a few fatalities over a period of two years or so, prompting Balad’s nickname of ‘Mortariville.’ (Martin, 2010: 188).

Still, such risk is minuscule compared to the risk taken by other units like infantry. However, drone labor embodies different types of threats, and these affect mental health. We can underline two significant mental risks posed by drone labor: Psychological and Moral.

Although operators are physically isolated from the terrors of warfare, their constant mental engagement with war may harm their mental health. A study conducted on the United States Air Force members revealed such effects. Chapelle et al. (2011) found that nearly half of the operators exposed to occupational stress:

A summary of responses to the item assessing self-report ratings of occupational stress over the past 3 months from Predator/Reaper operators revealed 340 (57.34%) being “not at all” to “occasionally” stressed, 162 (27.32%) being “stressed,” and 91 (15.34%) being “very” to “extremely” stressed. A summary of responses from Global Hawk operators revealed 130 (49.43%) being “not at all” to “occasionally” stressed, 82 (31.18%) being “stressed,” and 51 (19.39%) being “very” to “extremely” stressed. A summary of responses from noncombatant airmen revealed 390 (66.21%) being “not at all” to “occasionally” stressed, 125 (21.22%) being “stressed,” and 73 (12.40%) being “very” to “extremely” stressed. (Chapelle et al, 2011: 6).

The study also covered emotional exhaustion. According to findings, the mean of emotional exhaustion among operators is significantly higher than the mean of other

noncombatant airmen (Chapelle et al, 2011: 9). Such results validate that drone labor brought different risks. Like other soldiers, operators may be negatively affected by the action they see.

Such mental burden is caused by drones' capability of showing everything concerning the battle. It makes the operators aware that they are not in danger, but others are. Combined with long shifts and immense mental labor, this feeling of conscience results in mental risk.

Brandon Bryant, a former operator, reported how he witnessed incidents that had long-lasting effects on him:

After a strike he was tasked with lingering over a site for several haunting hours, conducting surveillance for an 'after-action report.' He might watch people gather up the remains of those killed and carry them to the local cemetery or scrub the scene by dumping weapons into a river. Over Iraq he followed an insurgent commander as he drove through a crowded marketplace. The man parked in the middle of the street, opened his trunk, and pulled two girls out. 'They were bound and gagged,' says Bryant. "He put them down on their knees, executed them in the middle of the street, and left them there. People just watched it and didn't do anything.' (Power, 2013).

After his retirement, he is diagnosed with PTSD (Power, 2013). But, what makes this diagnosis important is its relationship with moral injury, which opens up a new dimension of drone labor. Moral injury is the mental state where individuals feel shame and guilt as a result of their actions. It is related to the morality one holds, and when this morality is breached, individuals may question themselves, which can produce profound effects (Enemark, 2017: 7). Moral injury among soldiers can be found as their actions may cause drastic effects on other's lives. Besides watching the violence on the ground, drone operators also apply violence. Thus, similar to other soldiers, they can cause the death of other people, even civilians, in some cases. Such incidences may haunt the operators in their civilian lives. As in the case of Bryant, it would not be easy to leave behind what happened during their shifts:

By the spring of 2011, almost six years after he'd signed on, Senior Airman Brandon Bryant left the Air Force, turning down a \$109,000 bonus to keep flying. He was presented with a sort of scorecard covering his squadron's missions. 'They gave me a list of achievements,' he says. 'Enemies killed, enemies captured, high-value targets killed or captured, stuff like that.' He called it his diploma. He hadn't lased the target or pulled the trigger on all of the deaths tallied, but by flying in the missions he felt he had enabled them. 'The number,' he says, 'made me sick to my stomach.' Total enemies killed in action: 1,626. (Power, 2013).

Like Bryant, operators are aware of playing a part in actions where people die. Some operations make it harder for them to cope with deaths. Especially the targeted killings cause serious questioning on the ethics of warfare. Operators can follow a target for months. The drones can easily kill the same target who has no chance of reacting, which can make risk-free operators question the morality behind such a way of killing. That is why operators may feel more comfortable about supporting the troops on the ground than targeted killings. After killing the facilitator, McCurley's (2015) questioning of the incidence summarizes this aspect:

I was almost home when it hit me. Sitting at a traffic light, I was overtaken by the idea that I'd taken a life. It wasn't the first one, but this one stuck with me because of the intimacy of it. My other shots were in defense of troops under fire. That made sense to me, and they were nameless fighters, targets with guns aiming at my brothers-in-arms. But this one was different.

The engagement was never a "him or me" scenario. There was no way the Facilitator could harm me. I had all the power. He also wasn't shooting at American troops at the time. He was on the phone with his wife. I knew his name. I'd followed his every move for more than a month.

One of the biggest misconceptions surrounding the RPA community is that the aircraft allows us some distance from the killing, since we're thousands of miles away. The opposite is true. We are too close. We know too much, and when it is time to shoot, we can zoom in until our target fills the screen. It was never us and they had no chance. There was coldness to the way we killed, but it never lacked humanity: At the end of the day, the pilots and sensor operators took the images home. (McCurley, 2015: 136).

Operators are not free from the violence they saw and exerted. Their mental engagement with warfare can cause severe damage to their mental health. This damage may harm the psychological state of their mind and morality they ascribed to the

events. Therefore, assuming that drone labor is completely riskless is flawed. Like other participants of warfare, it contains risks, but these risks are differentiated from the others. Similarly, drone operators also show a unique determination during warfare. Again, it is connected with their physical remoteness to the action. Like other warriors, they can affect the course of the war through initiative but differently.

#### **4.3.1.2 Initiative**

Even in the most threatening situations, warriors should remain firm as any hesitation may cost their lives. They can even be forced to take the initiative. We had mentioned heroic soldiers who took the initiative during the World Wars (King, 2014). They solved the problem of stalemate by encouraging their brothers in arms.

When we consider drone warfare, such an initiative seems improbable as operators get into action after a calculation process. Yet, drone operators feel responsible as a result of the significant capabilities they have, thanks to drone technology. With their efforts, they can affect the course of the war. This fact may force them to take the initiative from time to time. Of course, such an initiative is different from the former examples.

Drone technology and developed communicational means give commanders the capability of intervening in operators' actions. Still, operators read a vast amount of data about events on the ground. In this way, they can develop an insight concerning the war.

When Martin (2010) dispatched to the LRE squadron, he realized insurgents could easily attack the base with mortars. Although his squadron could spot these insurgents, bureaucratic regulations prevented them from directly engaging with the attackers. Knowing that utilizing Predators would easily deter mortar attacks, he began scanning the periphery of the base during the recovery missions. He took control of the Predator from the pilot placed in the US. His task was to land the Predator at the base, but he used it for surveillance around the base if the aircraft had the necessary fuel. He spotted a place where mortar attackers would quickly attack and disappear. Yet, his warning to intelligence teams went unanswered. Later, he opened up the case with his commander:

The insurgents already have the mortar base plates planted out there. They sneak up at night, fire off a round or two, and then disappear. Even if we locate them within a minute, we're not integrated enough between Nellis and our local operation to get eyes on, establish PID (positive identification of hostile activity), and take action. What we need is an integrated base defense plan. (Martin, 2010: 205).

His commander supported his idea and gave him the task of preparing a concept of operations which is a document on how military units should organize during a specific incident. After he completed this concept, they made a successful drill which meant that the concept would be officially accepted (Martin, 2010: 230).

It was not the sole incident where Martin (2010) took the initiative. In another case, he pinpointed a target for a bomber plane. After the bomber plane missed the mark, Martin (2010) was ordered to return to the base to catch the flying schedule of the aircraft. Yet, he refused the order as he knew that the targets were not destroyed. Even if he knew that his superiors would be aware of his responsibility, he still decided to stay on the air and make another pinpoint:

With Predator's assistance, the B-1 pounded the cave, sealing the Taliban fighters insider forever. I instructed my Predator crew to RTB (return to base) as directed, advising the pilot that if he pushed up the power a bit, we could still keep on the ISARC's (Intelligence, Surveillance, and Reconnaissance Cell) schedule. (Martin, 2010: 294)

We witnessed a similar initiative when Velicovich (2017) decided to rescue a general's wife. Such incidents reveal two aspects of drone warfare. On the one hand, drone operators hold immense information about the war and their organization. They can assess the value of their aircraft and think about how they utilize it better to positively contribute to the war effort. By questioning the current regulations, they can develop technical solutions that –similar to the heroic soldiers of world wars- can contribute to the military.

On the other hand, their awareness of warfare may force them to refuse orders and take critical actions. The unexpected nature of conflict can cause drones to diverge from their schedules. As a result, we see that operators have significant capabilities, which makes it possible for them to take the initiative. Still, their efforts are not easily seen by the public or recognized by their comrades.

#### 4.3.1.3 Invisibility

One of the essential characteristics of the heroic type is sacrifice. Warfare always costs something, and warriors are the ones who take the risk of such sacrifice. They sacrifice themselves for a certain aim. This aim may be religious, nationalistic, or moral. What matters is their physical sacrifice for those aims. Contrary to most of the soldiers, operators do not sacrifice their physical bodies. Although the mental burden they have would be considered a sacrifice, I would like to underline another form of sacrifice in this section.

Operators do tasks that necessitate intense mental labor. Velicovich (2017) told us how he was never able to mentally shut during his deployment. His mental state even harmed his body. He lost significant weight (Velicovich, 2017: 184-185). His constant mental engagement with warfare caused him to neglect his physical needs. We also saw similar efforts produced by drone operators. Rather than leaving behind what happened on their shifts, they considered war a part of their lives. They felt responsible, and drone technology forced them to push their limits on every occasion. In a way, if there is any success ascribed to drone technology, we need to consider the immense human labor behind it. But, viewing drones as “unmanned” causes the neglect of such work. In return, efforts provided by operators, maintainers, and other members are usually not seen by the public. Especially, intelligence branches learn how to live without being recognized:

I had learned to give up the idea that I should be patted on the back or hugged every time I did good, which is what I had grown up in school learning. None of that mattered. I had an important job to do and American lives depended on me to do it well, whether they knew about our existence or not. (Velicovich, 2017: 102).

In the case of drone operators, similar invisibility also exists. Even if they participate in an operation that would be heard from all around the globe, their contribution to the process would not be seen easily. In addition, they cannot easily discuss what they witness in their daily lives. They cannot tell their successes, but also they cannot open up their burdens:

I kind of finished the night numb,” Bryant says. “Then you just go home. No one talked about it. No one talked about how they felt after anything. It was like an unspoken agreement that you wouldn’t talk about your experiences. (Power, 2013).

Their efforts are also not easily recognized by military organizations. Gusterson (2016: 64) gives the example of how operators worked 630 hours to find Al-Zarkawi, and received a thank note, whereas the F-16 pilot who bombed Zarkawi awarded with the Distinguished Flying Cross. Operators complain that their efforts in warfare and contributions are undervalued (Gusterson, 2016: 63-64). Considering the immense labor that operators put behind drone warfare, it seems the general public and military organizations do not readily recognize soldiers’ efforts. This fact signals a form of sacrifice which is producing immense, undervalued mental labor.

I gave all of these accounts to imply that drone technology may produce new ideal forms related to heroic warriors of the former centuries. They indicate a significant change in the relationship between the warrior and the warfare, which I will try to point out at the end of the section.

#### **4.3.2 Managerial**

There emerged new military branches with new technologies that meant new fields of expertise. Janowitz (1960: 21) argued that more advanced technology and diversified expertise means a new type of soldiery, which he called managerial.

He described managerial soldiers as having a pragmatic and scientific attitude towards military affairs (Janowitz, 1960: 21). In other words, the main features of managerial type are related to the management of expertise and dealing with technical problems. Rather than facing the terrors of the battlefield, soldiers deal with the administration and develop a sense of technology. It implies management of military affairs similar to civilian management. In other words, managerial type indicates that soldiery approximates civilian professions in some instances. Resteigne and Soeters (2009) showed such approximation by implementing Mintzberg’s management model on a study about the management done by two commanders. Working in an international

security force, these commanders handled their daily tasks similar to civilian managers. They managed information and used it to administrate their inferiors while making necessary communications with higher levels and foreign counterparts (Resteigne, & Soeters, 2009: 322-325). Still, they argued that the military contains elements of crisis that may occur from time to time and make it necessary for urgent actions by commanders. Also, they underlined managing in the military varies according to rank, workplace, and mission types (Resteigne, & Soeters, 2009: 322). However, their study supports Janowitz's (1960) argument that modern military organization imposes managerial roles on soldiers.

As a technological marvel, drones created a similar workplace to one implied by managerial type. This part will review what this workplace points out in terms of managerial soldiery and how it emerges new management fields.

#### **4.3.2.1 Managing Knowledge**

Most drone labor consists of gathering information and processing it. During this process, technical knowledge is essential for soldiers for the operation of aircraft. Commanders and operators should manage knowledge and know the ways of processing information. For this purpose, commanders are given specific means to address their inferiors. These means are aimed towards identifying different variables that affect the performance of operators. Mainly, commanders are tasked with maintaining combat readiness by calculating these variables.

##### **C-1 RESPONSIBILITIES OF COMMANDER**

The high costs associated with UAV operations require that each commander calculate a flying hour program (FHP).

The FHP must be based on the minimum number of flying hours necessary to maintain individual, crew, and unit proficiency. To achieve the ideal balance of readiness at the lowest cost, the commander must consider—

- a. Crew member density.
- b. Annual crew member turnover.
- c. Number of UAVs assigned.
- d. Mission support requirements.
- e. Number of hours necessary for UAV maintenance.
- f. Current status of unit training. (US Army Headquarters, 1997: 28)

According to the training manual, maintenance of a specific unit relies on the calculation of capabilities of both aircraft, their maintenance, and crew members. Commanders should calculate and plan mentioned variables according to mission requirements. Such calculation and planning indicate administrative skills.

On the other hand, operators also can come across problems that necessitate similar skills. When Martin (2010: 165) had been tasked with the training of an Italian RPA unit, he realized that a screen that shows airspaces was missing. Being aware of the importance of this screen, he manually made necessary connections after finding a spare screen. The only thing left for him is to train other soldiers on the techniques of drone warfare:

Pilots took turns while I stood behind them with a running pattern on tactics and techniques –how to position the aircraft to obtain the best view of a target; how to prevent being detected through orbiting against the sun and staying downwind to muffle engine sounds; what behavior to look for in a bad guy. (Martin, 2010: 165).

What enables Martin (2010) to transfer his knowledge on drones is his skills in problem-solving and training. To effectively control an aircraft, these skills are necessary for every operator. They should communicate clearly and effectively, but also they should be prepared for technical problems. They should employ their experience and knowledge, which are accumulated over operations.

When we focus on other organizations outside the squadrons, or other RPA units, we see that drone warfare creates workplaces that burden soldiers with pure managerial tasks. Examples can be given from combatant commands and organizations which operate under commands to maintain coordination among different aircraft within the region. Soldiers within these organizations do tasks similar to managerial type:

My job wasn't easy. I was in Qatar to manage fourteen reconnaissance platforms in CENTCOM's area. It was my job to make sure they were doing the correct missions in both theaters as well as a new hot spot developing in Yemen. I didn't really meddle in the daily operations. Mostly, I pushed paper since the platforms were fairly self-sufficient. There always seemed to be some crisis I had to solve to keep the planes flying. (McCurley, 2015: 218).

McCurley (2015) was tasked with supervising mission allocation on different platforms within the middle-east. Under the Central Command, he was no longer engaging with enemies or contributing to the information gathering. What he did was mainly about the management of these operations.

To sum up, drone labor necessitates particular dealing with technical issues and administrating knowledge at nearly all levels. All of the participants of drone warfare should hold a specific sense of the working of drones. But also, communication between these participants matters.

#### **4.3.2.2 Managing Soldiers**

Contrary to the soldiers on the ground, operators are not on the battlefield. They work in a technological environment where their physical capabilities are not as crucial as other soldiers'. Therefore, the management of operators aims at mental capacities more than physical ones. For that reason, commanders are tasked with supervising their inferiors' skills. Training Manual (1997) underlined this fact:

The operator grading system provides the commander with a complete and continuous performance record on each operator in the unit. These records reflect the performance of individuals at a given time. Poor performance may or may not indicate inadequacy on the part of the operator. The problem may be with the unit training program itself. A detailed analysis of all records should tell the commander where the problem is. (US Army Headquarters, 1997: 19-20).

Such an account points out the importance of technical processes and the smooth operation of segmented tasks. For that reason, participants should develop relationships between themselves according to these variables. In this respect, such management also transforms the communication between soldiers.

When McCurley (2015: 245) was assigned as squadron commander, he mentions how he was concerned with different squadron groups. To provide the combat readiness of the squadron, he had to manage and motivate his inferiors. Especially, he had to maintain the motivation of maintenance soldiers:

He helped me understand the need to assuage the maintainer's concerns by making sure they were an equal part of the team, not the guys who kept the pilot in the air so he could take the credit. (McCurley, 2015: 245).

But also, he should supervise his inferiors' skill levels and had to intervene when necessary. During a hard landing, he decided to take control of the aircraft from the pilot. But, rather than doing this replacement by blaming the pilot, he explained the reason to keep the motivation of the pilot:

'Don't worry,' I said. 'I trust you, but I'm not going to make you land in conditions like this. Anything happens, we can say the most experienced aviator was in the seat. I'll take the hit.' He deserved to hear that. MacDrawers was an excellent pilot in whose flying skills I held great confidence. MY replacing him wasn't like pulling Jantz out of the seat before a shot. I hoped to protect him from an awful situation, one I could manage-to an extent. (McCurley, 2015: 301).

His reference to a former incident shows that not all of the squadron commanders act similarly. Yet, in the manual, it is underlined that what McCurley (2015) had done is the right way:

Communicate positively. Good teamwork requires positive communication between crew members. Communication is positive when the sender directs, announces, requests, or offers; the receiver acknowledges; and the sender confirms. Crew members must use positive communication procedures for essential crew coordination actions identified in the description of each task. Positive communication is quickly and clearly understood. It permits timely actions. Due to multiple crew locations and other environmental factors, crew members should use a limited vocabulary of explicit terms and phrases to improve understanding. (US Army Headquarters, 1997: 6).

Manual underlines the importance of communication for "good teamwork." Although the quoted section is more about the importance of clear communication, it still connotes that what matters is crew coordination, teamwork, and completion of tasks. Drone labor raised a workplace where soldiers constantly interact with each other and deal with technical issues. In such a workplace, we have seen that soldiery covers a managerial aspect. Given accounts support what Janowitz (1960) argued and findings of Resteigne and Soeters (2009). On the other hand, this workplace is directly related

to warfare, and labor produced by soldiers may cause significant effects on war. This fact adds another aspect to drone labor which covers diplomacy, statecraft, and insight.

#### **4.3.3 Statesman/Scholar**

Soldiers collaborate with counterparts from different countries in a postmodern military setting. For instance, CENTCOM operates within the Middle East region and ensures the coordination of coalition forces. Various nations had participated in this coalition after the September attacks (US Central Command, 2021). Such coordination among different armies means warfare is now intertwined with politics and law. In other words, militaries should consider the political implications of their actions in each operation. Therefore, soldiers should also communicate with other institutions. They must tell their story to the media to legitimize the violence they apply.

Under this conjuncture, there emerged a new professional soldier type. Moskos and Burk (1994) called it as “soldier-scholar” and “soldier-statesman”:

In the postmodern period, we expect the appearance of alternative professional types: the soldier-scholar, reminiscent of certain career officers in the period between the two world wars, and the soldier-statesman, the officer skilled in handling the media and adept in the intricacies of international diplomacy. Our argument is not that officers, having less to do in the way of war fighting, will turn to alternative pursuits. Rather effective performance of the officer’s task in their postmodern period requires additional skills and capacities to justify on substantive grounds the military’s role and its claim on social resources. (Moskos, Burk, 1994: 154).

From a similar perspective, Hajjar (2014) mentioned new soldier characteristics emerged in the postmodern period. He framed these characteristics as a “toolkit” to imply new necessities of militaries. The result of the toolkit is the rise of a new soldier group which he called “diplomatic” (Hajjar, 2014: 134).

To prevent conceptual confusion, I will simplify these claims by calling this new type “scholar/statesman.” Statesman here also implies the diplomatic aspect mentioned by

Hajjar (2014). In this part, I will review drone technology under the topics of scholar and statesman to show its implications for these types.

#### **4.3.3.1 Statesman**

Modern warfare was as much about public relations as it was about shooting. If we bombed a terrorist's parked truck and got some shrapnel in an abandoned ambulance next to it, some media outlets were all too willing to go along with insurgents' claims that Americans had dropped ordnance on an ambulance full of women and children. (Martin, 2010: 88)

Today's conflicts can be heard all around the globe. This means what soldiers do during the battle may produce unwanted political effects. For that reason, soldiers must be aware of the political implications of wars. Considering the capability of targeting high-profile persons, the effect of drone technology is even more in terms of politics. Most of the drone attacks are done in foreign countries. Various actors witness these attacks. Without collaborating with these actors, each strike brings the risk of harming international claims. That is why the US military adopted an open communication strategy after the 2000s. They underlined this fact in their Flight Plan (2009):

Effective communication is an operational imperative in order to gain and maintain credibility while boosting understanding of and support for UAS operations. A command-supported proactive communication program hinged on communicating timely, accurate and truthful information to American and world audiences is integral to mission success and directly supports the Department of Defense (DoD) policy of "maximum disclosure with minimal delay" regarding coverage of military activities to include people, assets and operations. (United States Air Force, 2009: 71).

For operators, this meant communicating with different actors and sharing information on the operations:

Although during the first usages of drones in 90's it was top secret but after 2000 it became popular, everyone was talking about it: An air force officer, especially one in a high-profile business such as RPAs, wore many hats. It was almost enough to make you schizophrenic, if you weren't already. Not only did I have a squadron to run, I was also expected to attend dinners with generals,

entertain visiting politicians and VIPs, and now, it seemed, make myself available to the media. (Martin, 2010: 207).

Soldiers are expected to explain the operation of drones. But also, they may have to interact with counterparts from other countries or local actors. We had mentioned that Martin (2010: 140) was assigned to provide expertise on Italian soldiers. Similarly, as drone operators use the airspace of foreign countries and work under the coordination of different countries, they always must be ready for such interactions. In addition, drone operation in foreign countries necessitates diplomatic interchange between local actors. Soldiers, in this case, may act like diplomats and may communicate with local bureaucrats:

Mark, my teammate and superior from back home, was also there. Being so close to Baghdad, we'd frequently meet up with various US general and senior Iraqi government officials, like Prime Minister Maliki, who wanted to be briefed regularly about our missions. Mark took on those high-level meetings and spent most of his time keeping the seniors out of my business. I ran the day-to-day targeting. (Velicovich, 2017: 205).

Drone warfare consequently necessitates collaboration between different actors. Soldiers in this setting must hold the necessary skills of communication. From stating to media to handling diplomatic issues, their tasks varied. All of this interaction means a "report" on the course of warfare. Soldiers now have the opportunity of seeing the effects of their effort on the public. Drone operators, in this respect, are even more aware of what is going on.

#### **4.3.3.2 Scholar**

New military technologies created expertise in knowledge and information management. We saw drone operators and intelligence analysts mainly process information. They know different variables on the battlefield. Any misjudgment may cause unwanted political effects. For that reason military expects caution about every variable:

Planning – Stability operations rely on an extensive understanding of the operational environment, to include the people, topography, economy, history, religion, and culture. Leaders must be aware of every village, road, field, population group, tribal leader, and ancient grievance. The ability of the BCT (brigade combat team) commander to identify essential stability tasks may not become clear until the BCT has occupied the area and performed intelligence, surveillance and reconnaissance (ISR) to identify local requirements. (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 86)

Soldiers must be aware of the culture of locals, international law, the extent of operation, etc. Especially drone operators who gather a huge amount of information must be more sensitive on mentioned issues:

As targeters we had to be historians, reporters, and prophets at the same time. Not only did we need to understand a target so well that we could recite an enemy's life story, but we also were constantly providing up-to-date assessments to commanders and others high up in the US government and ultimately predicting a target's next move. (Velicovich, 2017: 112).

For that reason, the military gives importance to informing operators. Each participant in drone warfare previously reported about the operation:

He was now mainly tracking high-value targets for the Joint Special Operations Command—the same secret-shrouded branch of the service that spearheaded the hunt for Osama bin Laden. “We were going after top dudes. They started showing us PowerPoint presentations on who these people are,” he says. “Why we’re after him, and what he did. I liked that. I liked being able to know shit like that. (Power, 2013)

Martin (2010) give another example of how they were briefed on the war in Iraq:

...logic behind the US mission in Iraq: at least it was in the “squeeze chart” briefings we received. Each of three concentric circles on the cart portrayed a segment of the population. Casual citizens, moderates, radicals. (Martin, 2010: 109)

These regular briefings and their capability to see everything may cause drone operators to develop a sense of technology and warfare. Martin (2010: 103) explained how he could follow the agenda contrary to the soldiers on the ground. He argues that

soldiers on the ground have less chance than him about following the criticisms on warfare or their technology. These facts force operators to illuminate what they do. Like Martin's (2010: 64) habit of following Chatrooms to get insight on the course of warfare, McCurley (2015) also reflected his tasks:

Following the Facilitator shot, I had an epiphany while drinking that martini on my buddy's balcony. It occurred to me that the Air Force had just entered a great transformation as significant as that seen following World War I. (McCurley, 2015: 328).

It is evident that each soldier may think about the philosophy behind warfare or the causes that forced them to fight. What makes operators unique in this case is their position in battle. Unlike any other soldier, they can view the battlefield from above; they can follow the discussions about it and reach more information than any other participant. These facts force them to reflect on their doings and their consequences. When we consider their tasks which are mainly managing knowledge, it would not be an overstatement to argue that such reflection is part of their job.

As we can see, drone operators show characteristics that can be ascribed to different soldier types. Complexities such as being both intimate and remote to warfare make possible such an ascription. This fact signals a new set of characteristics which I will frame as a new type.

In the Heroic type, we saw that soldiery meant physicality, discipline, and valor on the battlefield. In managerial, soldiers started to manage both their inferiors and technological problems due to new fields of expertise. Lastly, statesman/scholar implied new roles adopted by soldiers in contemporary international relations. Complexities of new technologies emerged new skills and connected different spheres that caused transgression of mentioned roles. Now, drone operators engage in risk-free and technological warfare, which means new management and warrior skills. Under the topic of cyber-surveyor, I will show how we witness a new type of soldiery with the new complexities of military technologies. By cyber, I would like to underline their relationship with technology. Surveyor implies their active engagement in war and their relation to information assessment. Thus, the main focus is their connection to warfare with technological means that remove the risk.

#### **4.3.4 A New Type of Soldier: Cyber-Surveyor**

Drone technology creates a new way of fighting. Soldiers can now engage with their adversaries via technology from their homeland. Such engagement covers two critical points. One is the virtuality of war, and the other one is the bureaucratic aspect of it. Former implies how warfare is conducted over technological means. Soldiers who face the terrors of the battlefield now physically removed from the battlefield, and they access the battlefield via drone feeds. Latter, on the other hand, means war can be made in a bureaucratic environment. Both have unique implications for a new type of soldiery. Each changes the experiences of soldiers, their characteristics, and their relation to warfare. By opening them, I will try to draw the main lines of this new type.

##### **4.3.4.1 Virtual Warfare**

Maybe the most transforming effect of drone technology is its way of providing a new way of remote warfare. Such transformation raised ethical concerns and caused the questioning of soldiery. Critics argued that drones bring the risk of turning warfare into a videogame. Operators' experiences partially support this argument:

‘It’s like playing Dungeons & Dragons,’ says Bryant. ‘Roll a d20 to see if you hit your target.’ His training inspector, watching over his shoulder, would count down to impact and say, ‘Splash! You killed everyone.’ (Power, 2013).

By video games, they underline the risk-free position of drone operators. Drone capabilities make warfare an effortless affair which means killing becomes as easy as pushing a button. This idea is supported by the remoteness that drones put between warfare and soldiers. Such remoteness may remove the psychological burden of killing. Grossman (1995: 98) defended that soldiers develop more resistance when they physically close to their enemies. For instance, artillery soldiers are more comfortable with their actions in warfare than infantries who engage in a closer distance. Yet, drone technology also produces another effect. Although it is true that it physically removes the soldier from the battlefield, it also complicates this distance by approximating the operators to the battlefield mentally. Artillery soldiers are distant

from the battlefield, and they rarely observe the full effects of their bombardments. But drone operators can see everything happening on the ground, which means a new type of intimacy. Gusterson (2016: 76) defined this as “remote intimacy.” Although they are physically remote from the battlefield, they are intimate to warfare. In a similar vein, Gregory (2011: 199) also argues that drones do not detach the operators from the battlefield. They experience it mentally.

The suddenness of action played out long distance on computer screens left me feeling a bit stunned. A surreal experience. Almost like playing the computer game civilization, in which you direct units and armies in battle. Except with real consequences. (Martin, 2010: 31).

The result is the new ways of fighting, which change what is expected from the soldiers. I frame such a way of fighting as virtual warfare. Soldiers within this warfare merge with technology. The operation of these technologies becomes the most important thing. For that reason, rather than disciplining their bodies, soldiers now have to meet every technical need. Their physical capabilities, their look, even their manners become less important:

I was the youngest J2 –intelligence chief- in my organization by a few years. That meant I had to work hard to get respect and prove myself. Surrounding me I had a young team from different backgrounds –mostly in their late twenties, early thirties. All of them were tech wizards, partly nerdish though a little hipster, too, in a War Games kind of way. Everyone spoke in techie slang: ‘Z in’ (zoom in), ‘IR’ (go infrared), ‘RTB’ (return to base), ‘SP’ (give me a starting point), ‘Put up a Roz’ (‘restricted operations zone’). Uniforms weren’t worn in the Box. It was mostly cargo pants and T-shirts, headphones dangling around their necks when they weren’t in use. One guy always wore an NYPD ball hat, another the Yankees. They were the new generation of warfighters, equipped with the newest technology. IT’s like they were born with chips in their heads. They’d logged more time behind computer screens than at shooting ranges. So had I. (Velicovich, 2017: 133-134).

Velicovich’s statement shows how new technologies differentiated its users from traditional soldiers. Technology now stands between these soldiers and the battlefield. Within this picture, the soldier becomes a means for the smooth operation of technology. Soldiers who carried the battle forward in World Wars now must ensure the operation of technology to succeed in battle. This fact undermines the main

characteristics of traditional soldiery. As soldiers are traditionally expected to face the terrors of warfare, and they should not hesitate in front of these terrors, they must be disciplined in every aspect of their lives. Their uniforms, bodies, manners, and attitudes must show such discipline (Bröckling, 2008: 54). When we discard these terrors and place these soldiers in a technological environment, the extent of such discipline also changes. What is expected from soldiers is now no longer cover their bodies but their minds. This is why, Velicovich's (2017) team is not seen as undisciplined, divergent soldiers by the army. Their characteristics are exactly corresponding to the modern needs of the military. At this point, we have to open up these needs to further analyze the new type's characteristics.

One of the primary skillset expected from soldiers working in a technological environment is multi-tasking. Soldiers must deal with different variables at the same time. They should handle each variable with a specific focus to not harm the operation of the technology. Especially drone operators must be capable of reviewing each variable and immediately react according to the situation. In addition, they should process necessary information and transfer them into other soldiers. They must assess, control the aircraft, and communicate at the same time:

The chat room's messages came in streams like in the Matrix. You had to watch it closely or risk missing vital information before it was pushed off the screen. Typing while flying was a pain in the neck. I was as likely to do something stupid with the aircraft while typing on a keyboard as I was if I were texting behind the wheel of a car. (McCurley, 2015: 100).

According to Benjamin (2012: 78), these tasks bring a "new breed of pilots." They are not exposed to g-force or the adrenaline posed by aircraft. Still, their comfortable position away from the battlefield burdened them with constant mental multi-tasks that last hours every day. Within these tasks, another important one is information management. While controlling the aircraft, operators should manage the information they get.

We witnessed that drones are mainly used for ISR (intelligence, surveillance, and reconnaissance) missions. In other words, drones are used primarily for gathering information. Such usage gives the operators important responsibility. As being first

witnesses of gathered raw data, both analysts and operators should be capable of assessing this information. As they cannot report every data they get, they must eliminate the unnecessary ones and decide which one is crucial or worth following. At this point, their tasks force them to develop a certain narrative towards their missions. They watch foreign geography for hours to get clues about the movement of an “enemy.” Usually, they seek these clues among residents in their daily lives. Considering their remoteness to the culture of these locals, they develop specific mental structures that help them ascribe meaning to the actions of the locals. Gusterson (2016: 80) framed this as “remote narrativization”:

As drone operators watch people on the other side of the world from thousands of feet above, they create mental stories that help make sense of the people they watch. In the process, they can make interpretive leaps, fill in informational gaps, and provide framing moral judgments as they integrate shards of visual information and turn pixelated figures into personalities. (Gusterson, 2016: 81).

Therefore, information gathering forces operators to adopt a mental attitude toward the daily lives of civilians. They are inclined to interpret the locals’ culture with its relation to their enemies. For instance, when a ground team attacked with mortar rounds, they asked Martin (2010) to search for ambushers. When he arrived at the scene, an older man who was digging the road got his attention. He immediately interpreted him suspicious as digging the road might mean planting a bomb under the road. Later, he realized that he was just an ordinary citizen who was clearing the debris. (Martin, 2010: 75). Still, he could not convince the ground team. They dispatched a group to inspect the older man. In this case, we can observe how drone operators are positioned in warfare. They observe, assess, and report. Chamayou (2015: 43) gave the account of an intelligence analyst to underline this assessment process of drone labor. Analysts argued that analyzing drone feeds stand between police work and social science. Especially the analysis of “pattern of life” necessitates interpretations on social life. Operators should develop a sense of residents’ daily lives to identify the suspicious acts that also make their job closer to policing.

Similarly, Shaw (2016: 202) mentioned the connection between policing and soldiery. He argued that the primary function of policing is the ordering of social life with confinement. He underlines similar tactics used in the military against insurgency. Like police in the city, operators in the sky become the police of a warzone where they should confine insurgents and prevent future incidents.

Mentioned theories also explain how drone operators develop a sense that enables them to be called “scholar-soldiers.” Understanding the behavior of a group of people is a significant part of their jobs. During the “pattern of life” analysis, they build big data about a single person’s life, analyze it to find networks, abnormalities, and use each analysis to contribute to the overall methodology (Chamayou, 2015:50). Although the success of such an investigation or the morality behind it may be disputed, it still implies analytical labor that increases the awareness of operators and enables them to think about their jobs.

Drone technology puts a distance between the soldier and the battlefield. It positions the soldier in a risk-free, technological environment, where the engagements are done virtually. In this picture, a soldier’s mentality becomes essential. Physical difficulties and risks replace with mental burdens and mental risks. Soldiers are now expected to provide the operation of technology by laboring incessantly. Such labor undermines the traditional understanding of the discipline. The main aim of the discipline becomes the mental capacities of the soldier. This mental development is also related to the policing outlook of drone labor, where soldiers assess and process the information. But it is also connected with the working environment. All of the mentioned tasks are done in a bureaucratic environment which turned into a new front.

#### **4.3.4.2 Bureaucratic Front**

In warfare, front means the furthest position soldiers progressed where they continue engaging with their enemies. Headquarters stand behind the front, and it is the place where commanders decide on tactics and convey orders to the front. This military structure implies physical struggle in front and bureaucratic-mental labor in

headquarters. In the case of drone labor, characteristics of front and headquarters merge in cyberspace. Communication systems like chatrooms make possible near-real-time communication between participants. When remotely controlled vehicles are added to these communication capabilities, the result is a bureaucratic environment where soldiers participate in warfare without facing any physical risk. In this cyber environment, decision-making and executing processes go simultaneously. That is why operators work in shifts. For the constant operation of technology, soldiers must constantly control them. Thus, another replacement occurs. Physical struggle in front leave place for mental effort in cyberspace:

The pace of work in the box unraveled Bryant's sense of time. He worked twelve-hour shifts, often overnight, six days a week. Both wars were going badly at the time, and the Air Force leaned heavily on its new drone fleet. A loaded Predator drone can stay aloft for eighteen hours, and the pilots and sensors were pushed to be as tireless as the technology they controlled. (Power, 2013).

Soldiers in this context became the managers of technology. Their task is to provide the operation of technology. In this working environment, they face new problems. They do not physically engage with the enemy or have to deal with unexpected issues raised by the battlefield, but they face problems that may harm the technology's constant working. Mental struggle raise at this point. Therefore, the bureaucratic environment raised by technology imposes a new type of managerial outlook. The distinctive characteristic of this type is the relation between soldiers and technology. Soldiers in this relation are not engineers who ensure the autonomous working of technology, but as we have mentioned, they are merged with technology. Physically technology stood between them and the battlefield, but mentally soldiers become the minds of technology. Old problems of the battlefield, like casualties and progress, were rearranged in this new relation. For instance, the concept of casualty is reframed in drone warfare. In every operation, even during the training, soldiers are warned about the costs of flying a drone. They are ordered not to risk any aircraft:

An intense training environment stresses both operators and equipment, creating a high potential for accidents. The potential for accidents increases as training realism increases. Thus realistic training can pose a serious drain on warfighting assets. Commanders must find ways to protect operators and equipment from accidents during realistic training. An accident loss in war is no different in its effect than a peace time loss; the asset is gone. (Department of Army, 1997: 22).

Since their training, operators have become aware of the importance of aircraft. They know that any harm to the aircraft is harm to their career. Martin (2010: 63) illustrated this when he mentioned how he was stressed when his plane entered the cloud, which caused the disconnection. He and the sensor were shocked as both aircraft and the mission were in danger:

Senior Airman Mata, my sensor operator, was glued to his black screen, as fully alarmed as I, his lean face looking pale and stricken. ‘Jesus, Jesus ....’ He murmured in a continuous litany. (Martin, 2010: 63).

This concern towards aircraft also signals new bonds between technology and soldiers. Singer (2009: 350) gave accounts on how soldiers named their technological tools or attempted rescuing robots during a firefight. Therefore, a new type of soldier also covers the redefinition of military concepts like cohesion and casualty.

There also other clues about the unique relationship between operators and technology. Throughout the memoirs, we witness that operators frequently face unexpected problems which can harm drones’ operational capabilities. For instance, each aircraft must fly according to a schedule. When McCurley (2015) became the squadron commander, he faced a problem concerning such a plan. He had to increase flying time, yet his existing aircraft did not capable of catching the schedule. He had to find ways for an increase:

‘We’re going to cannibalize the remaining aircraft to keep the others flying.’ I told him. It was a drastic move but the only way we could keep up. I ordered Jon and the maintainers to take apart the worst aircraft in the squadron to create parts for the remaining aircraft. We ended up tearing apart five of the squadron’s seven aircraft. (McCurley, 2015: 266).

In another case, they wanted to watch an insurgent leader for 24 hours, but having two GCSs made it unfeasible as they had to control three aircraft. A general solved this problem:

His solution provided the right balance. The squadron used its two cockpits to fly to and over the target and released the returning aircraft to fly home alone. This way, we could fly one aircraft over target with the first GCS. The other GCS would control an aircraft en route to the target. The crews would sever the link to the third Predator, and it would fly itself on autopilot to the landing and recovery unit in Kandahar. (McCurley, 2015: 125).

Similar technical problems can also arise in other technological systems like Tactical Chat:

When a problem with TC is first detected by a user, the extent and nature of the problem must be quickly assessed to ensure minimum loss of critical information during the down time. Some problems may be quickly resolved by the users themselves. Other problems may require involvement by communications personnel. It is critical to record essential information in open chat rooms and document the time the system went down prior to resetting. This will help ensure continuity and determine the need to acquire information missed during the time TC was inoperable. (Air Land Sea Application Center, 2009: 45).

As we can see, soldiers are tasked with solving technological problems to maintain the operation of technological systems. This fact implies significant effects on warfare, but now we have to focus its impacts on soldiery. Within this picture, soldiers have clearly become the participants of the technological system where each has unique responsibilities. Coordination under such a system became essential.

The inclusion of crew coordination in ATM (Aircrew Training Manual) task descriptions reflects the philosophy that no task is an individual undertaking. Coordinated effort by the entire crew ensures safety and effective performance. (Department of Army, 1997: 5).

This coordination affects bonds between the soldiers. In terms of authority, it transforms the relationship between different ranks, but also it may change the buddy relations. Singer (2009: 344) mentions the impact of new communicational systems

on unit cohesion. For a group of soldiers, unit cohesion is significant for facing difficulties on the battlefield. Their relations with their buddies enable them to cope easily with emotional problems. With the technologies like chatrooms, such closeness between soldiers is no longer the case. For Singer (2009: 347), virtual chatting poses the problem of anonymity where participants rarely feel the same closeness as soldiers felt on the battlefield. Therefore, another effect of new military technologies is the replacement of emotional communication with technical coordination.

Soldiers are still an integral part of the battlefield where they can affect the course of the war, witness the losses, and face certain risks. Yet, with the new technologies, soldiers started to witness these events in a virtual world. In this world, their role is slowly turning into the administration of technological systems. These systems, like drones, constantly operate, which means they have a tendency to limit the role of soldiers in the future. Constant operation means drones operate in a certain area according to certain threat assessment which seeks patterns. For instance, when drones are tasked with certain geography according to a specific political aim, technology itself provides certain acts. It aims at a particular population and location where soldiers find possible threats. In a way, drone technology produces an algorithmic approach. For Curtis (2016: 529), drones raise the possibility of seeking unrealized actions. According to him, holders of drones claim to know what specific people will do in the future. For our purposes, his point supports the tendency lied within the technology. Any soldier obviously may act according to the unrealized intentions of their adversaries, or soldiers would guess what their enemies would do in specific scenarios. What diverges drone technology is transferring such an approach to the social life where technology itself constantly operates to find out possible threats and eliminate adversaries even before they are capable of engaging. More importantly, this technology may produce methodologies for gathering data, resulting in what Schuppli (2014) called “deadly algorithms.”

It is clear that mentioned algorithmic tendency in drone technology would diminish soldiers’ role and effect on the battlefield in the near future. In the document published by United States Airforce (2009), this fact is underlined as the autonomous flight capabilities in the future.

Advances in computing speeds and capacity will change how technology affects the OODA (Observe, Orient, Decide, and Act) loop. Today the role of technology is changing from supporting to fully participating with humans in each step of the process. In 2047 technology will be able to reduce the time to complete the OODA loop to micro or nano-seconds. Much like a chess master can outperform proficient chess players, UAS will be able to react at these speeds and therefore this loop moves toward becoming a “perceive and act” vector. Increasingly humans will no longer be “in the loop” but rather “on the loop” – monitoring the execution of certain decisions. Simultaneously, advances in AI will enable systems to make combat decisions and act within legal and policy constraints without necessarily requiring human input. (United States Air Force, 2009: 41).

The given scenario indicates a type of soldiery that would only intervene during the execution. Even such intervention may not be necessary if there would be legal regulations to ensure the constraint of technology. Thus, one may easily argue that soldiers slowly but surely will exit the loop. Although it might take decades to reach such a point, I argue that drone technology has already started the change in terms of soldiery that would result in warfare without soldiers.

We have seen that with each technology and new military mission, soldiers took different roles. Their position in the military organizations decided their connection with warfare. Some are tasked with diplomatic roles, while others continued the physical struggle in front. With drone technology, another role was added to the picture. Soldiers now can make war without risking themselves. Their labor merged with technology, and through that technology, they redefine what makes a soldier.

#### **4.4 Drones and Warfare**

I analyzed how drones implied a change in the meaning of soldiery, authority, and soldier types until this point. With these different aspects, I wanted to open up how drones affect military organizations and soldiery. However, these effects also imply a change in warfare. In this section, I will try to capture how drones implicate new ways of fighting. I will first present how drones are used in war. Later, we will review the roles played by soldiers in drone warfare. The first two topics will reveal how warfare in general may be affected by drones which I will analyze at the end of the section.

#### **4.4.1 Understanding Drone Warfare**

To understand drone warfare, we need to see drones in action. Starting from describing their capabilities, we will see how soldiers and enemies are positioned in drone warfare.

##### **4.4.1.1 Capabilities**

From natural disasters to policing, drones can be used in various civil and military spheres. In our case, we are interested in their usage for military purposes, which vary according to the type of conflict, doctrine, and missions:

While RPA have been used in “atypical” military missions, such as humanitarian relief and/or support to non-governmental agencies, the core Air Force missions flown today focus on close air support (CAS), ISR, CSAR, and strike coordination and reconnaissance (SCAR). (Norton, 2016: 27).

As we are interested in their relation with changing warfare, we will focus on their usage in conflicts or any incident that belongs to ongoing warfare. In these cases, drones become prominent with their use in fields of reconnaissance, providing near-real-time support to other units, and striking:

Reconnaissance – Near Real Time combat information received.  
Surveillance – Area surveillance in friendly or enemy territory.  
Situational Awareness and Situational Understanding: Provide commanders with battlefield posture.  
Security – Reaction time and maneuver space for main body and area security.  
Targeting – Target detection and recognition, target designation and illumination and BDA.  
Communication Support – Voice and data com’s retransmission.  
Movement Support – Convoy security, mine/IED detection. (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 2)

Rogers and Hill (2014: 50) summarized mentioned missions as “dull, dirty, dangerous, and deep.” Dull implies time-consuming surveillance missions. Dirty means

hazardous environments where drones can operate. Dangerous underline the risk-free conduct of drones, and lastly, deep describes the capability of working above the enemy (Rogers & Hill, 2014: 50-53). In other words, drones may easily conduct missions that are called by other military units as “dull, dirty, dangerous, and deep.” During the missions, drones gather a vast amount of data that can be used for different purposes. For instance, a drone can use the data to pinpoint a target for other aircraft or military units. But also, drones can destroy targets.

Strike – A mission to attack or damage or destroy an objective or a capability. Strike missions include close air support (CAS). UAS integration into a CAS is done by a JTAC. UAS video provides JTAC SA required to deploy weapons on target possibly using UAS weapons. (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 15)

At this point, one may ask the difference between drones and traditional aircraft. It seems conventional aircraft have more capabilities in terms of striking, maneuver, and speed. As a result of these capabilities, a drone has no chance against a fighter jet or other aircraft. Still, the reason behind militaries’ choosing drones for surveillance and support missions is the constant operation presented by drone technology. Without risking any personnel, drones can operate on particular geography constantly. Velicovich’s (2017: 86) colleague perfectly captured the most important capability of drones by calling them “the unblinking eye.”

To sum up the main features of drone technology, they are mainly used for support and surveillance missions. They can provide a constant flow of information according to the needs of the militaries. They process this information for other units as well as use it to destroy specific targets. All of these capabilities provide significant contributions to the war effort.

#### **4.4.1.2 Calculability**

Like any other competition, warfare is done according to a specific strategy to defeat an adversary. Before engaging, both parties consider ways of acting, and they try to guess how their opponent would react. Such forethought can be called strategy. On the

other hand, parties also use specific ways of engagement during the competition, which vary according to contingencies. It consists of what Clausewitz (2007) called tactics.

The difference between strategy and tactics is mainly about their use, timing, and objective. In Clausewitz's words: "...tactics teaches the use of armed forces in the engagement; strategy, the use of engagements for the object of the war." (Clausewitz, 2007: 74). According to this definition, the strategy covers grand objectives, and tactics are related to contingencies on the battlefield. But, they are both calculation processes. Armies' chance of being successful in their tactics and strategies increases when their calculations become stronger.

One of the main effects of drones on warfare is technical features that increase calculation capabilities. Drones can provide huge amounts of information to different levels, making them one of the most efficient aircraft concerning data gathering and processing (Rogers & Hill, 2014: 60). Such contribution enables decision-makers to calculate each variable that results in more consistent strategies and tactics. To open up, I will show how drones provide helpful information on different aspects of warfare. First of all, maybe the most remarkable feature of drone technology is providing a clear image of the battlefield. Drone feeds give the possibility of identification of each person existing on the ground. They make it possible to track enemy movement, inventory, and other variables such as terrain, civilians, etc.

We could fly the birds at a low 4,000 feet in the city, compared to around 12,000 feet in the desert. Everything was clearer, colors richer. It made our work easier. I could almost make out a guy's face in the street and distinctly see that, say, his shirt was yellow with a pocket or that he was holding a pack of cigarettes. (Velicovich, 2017: 218).

On the other hand, drones also capable of calculating the optimal working conditions. Such calculation covers the drone technology itself. It gives the decision-makers the necessary variables to decide when they can use drones and get maximum efficiency. Tactical Pocket Guide (Joint Unmanned Aircraft Systems Center of Excellence, 2010) provides detailed information on optimal weather, terrain, and other conditions that drones can work efficiently:

Desert terrain provides optimal conditions for UAS sensors; mountainous, heavily vegetated terrain greatly reduces sensor effectiveness. Loss of Signal is more likely in mountainous areas requiring multiple GCS sites. (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 3).

Precipitation, wind, temperature all degrade the operating parameters of UAS, but icing presents a major dilemma as there is no de-icing capability for any UAS. Consider lowering altitude in icing conditions (with 5<sup>0</sup>C of freezing and visible precipitation) (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 4).

The document also informs users about the different capabilities of drones –like cameras, sensors, weapons- and how these capabilities should be used in mentioned conditions (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 4-5). As a result, drones make it possible for soldiers to review each variable before engaging, implicating transformation in strategic and tactical decision-making processes. If we return to Clausewitz's (2007) argument, he defended that strategy is related to the decision of engagements before going to war. In contrast, tactics are realized in warfare and can vary according to contingencies. But, we see that drone technology can offer a calculation before going to war, making it possible to decide on tactics before engaging. In a way, it unites strategy and tactics. Militaries, in this way, can develop different scenarios before meeting the adversaries. Tactical Pocket Guide (Joint Unmanned Aircraft Systems Center of Excellence, 2010) gives specific scenarios to show how drones can be utilized on different occasions. For instance, one of them is about an area defense mission. The scenario shows how different levels would act to deter an enemy from entering a certain terrain:

To support this complex mission, the commander directs his staff and subordinate commanders to ensure all plans emphasize effective and flexible control, synchronization and distribution of fires. The brigade is organized with Ravens (Group 1 UAS), a Shadow Platoon (Group 3 UAS), and has been provided an armed Predator (Group 4 UAS) for combat air patrol (CAP) support. The Shadow platoon GCSs are co-located with the HBCT TOC and their full motion video (FMV) feeds directly into the HBCT Maneuver Control Station (MCS). Each of the subordinate battalions receives the FMV feed via OSRVT and chat with the aircrews via mIRC. (Center Of Excellence, 2010: 72).

Scenarios leave little room for unexpected events. They nearly show every variable and depicts a clear image of what would happen and how units should act. Without an unblinking eye in the sky, such a depiction would bear the risk of falling short. At this point, we have to mention drones' contribution in the sphere of intelligence.

#### **4.4.1.3 Intelligence**

“We watched everything. Like a darker Truman Show.” (Velicovich, 2017: 132).

What made drones famous in the last two decades is their success on intelligence missions. With drones, the US army could hunt down important insurgent leaders without risking any personnel. This section will mention the reasons behind this success and how drones have changed intelligence gathering.

Rather than mobilizing an army to fight an irregular group, military leaders found out that hunting insurgent leaders would be more efficient, which can be achieved with the constant operation of drones. They realized that drones are excellent aircraft for following a target. With a couple of drones, militaries can follow an unaware target for months. They can observe every movement, every contact and draw a perfect picture of the person's life who is being followed. Within that picture, they seek patterns that can reveal necessary information about the insurgent network.

While the Facilitator's movements didn't adhere to a pattern, his meetings did. He concluded each meeting with a phone call to his wife. So he had a habit of walking outside. After the call, he disappeared for the night. We'd watched the house until the next day, when he'd emerge for his next round of meetings and travel. (McCurley, 2015: 125).

When they successfully identify a pattern and an overall picture of the network, they decide whether to destroy the target or follow him to reach other persons in the network. In any case, drones increased intelligence capacities. But more importantly, they made possible what Kindervater (2016: 228) called “dynamic targeting.” It means drones significantly reduce the time between gathering intelligence and processing it. Such time difference is important as intelligence on a specific person, for instance, a target's location, may be useless if the period between intelligence and execution is lengthy. By dynamic, Kindervater (2016) underlines that drones reduce this time

significantly and gives the possibility of keeping the intelligence up-to-date. When we add striking to this dynamic targeting result is “lethal surveillance” (Kindervater, 2016).

Strikes consist maybe the most important contribution of drones to intelligence. In the US military, there are mainly two types of individual strikes. One is signature; the other one is personality. Latter is done to persons being followed. Former, on the other hand, implies the killing of persons whose identity is unknown. These persons are killed after a conviction that they are terrorist threats (Gusterson, 2016: 111). Both signature and personality strikes aim to degrade an insurgent group. With these strikes, the military seeks to collapse the insurgent network. The result is the transferring warfare into the daily life of adversaries. In other words, intelligence gathering makes drone warfare be conducted in civilian areas where so-called “terrorists” mobilize their organizations. The most significant aim of drones is to deter this mobilization. Curtis (2016) framed this focus of drones as an “explication of the social.” Drones aim to capture civilian life by recording every movement and calculating the possible actions, mobilizations to defuse the enemy organization even before it acts.

In intelligence gathering or other drone operations, it is evident that soldiers play different roles. Although it is commonly thought that soldiers play a minor role during the battles, we will see that they are still important actors.

#### **4.4.2 Soldiers in Drone Warfare**

Each technology brings different roles and alters the placement of soldiers on the battlefield. In this section, I will mention the relationship between drone users and warfare. I will cover how operators use drones to conduct war and address what happens during the action.

While jet pilots are exposed to g-force, infantries face difficulties on the ground. Thus, each soldier bonded with the battlefield via technology differently. In a similar vein, drone operators are connected to warfare over unique means. As we have mentioned in the soldier types, what operators do is more related to their mental skills than physical bodies. In a way, their relation with war is what Rogers and Hill (2014: 68)

called “mediated.” This means operators are physically distant from the battlefield, but they are mentally close to warfare over virtual technologies. To further understand such a complex connection, we have to open up how operators control a drone and what they do during an action.

#### **4.4.2.1 Operator’s Cabin**

Operators control unmanned aircraft from a Ground Control Station (GCS). Smaller UAVs can be controlled by small GCSs that are slightly bigger than a computer. On the other hand, larger UAVs –which are our focus- are controlled by operators from a container-like room. Operators call these rooms “box”:

The box was a modified Sea-Land container technically called a ground control station (GCS). The tan container had a vault-like door at one end that opened into a narrow walkway that led to the ‘cockpit’ at the other end. The floor and walls were covered in rough gray carpet and the lights were dim to eliminate glare on the monitors. (McCurley, 2015: 32).

Within this “box,” there are communicational means, screens that show drone feeds and other necessary information, and a “cockpit” similar to ones in manned aircraft:

Both the pilot and sensor operator stations had a throttle on the left and a stick on the right, but only the pilot’s controls flew the aircraft. The sensor operator’s ‘throttle’ and ‘stick’ controlled the targeting pod. (McCurley, 2015: 32).

The pilot and sensor do segmented tasks on controlling aircraft, cameras, and weapons in the cockpit. In addition, the station also has communicational means that inform the operators about missions and enable them to communicate with other units:

The mission computer, between me and my sensor operator, was split down the middle: the right half was a map showing the positions of all U.s air and ground forces in the vicinity as represented by appropriate icons, the left half was divided into several “chatrooms” like those on the ordinary Internet. Except these chatrooms functioned through a separate classified military Internet. (Martin, 2010: 29).

As the operators constantly stay in their seats during the shifts, stations are located in protected military areas. With the increased infrastructure capabilities, the US military can control its UAVs from the homeland. This means a GCS sends a signal to EUROPE via fiber optics; then, the same signal is transferred into the satellite, which transmits into the aircraft (Norton, 2016: 28). Still, there is a latency between the order given from the homeland and its execution. Although such latency creates no problem during missions, it can be fatal during take-off or landing. That is why the US military also employs Launch and Recovery Elements in forward bases (Norton, 2016: 28). These elements take control of the aircraft after the missions and safely land it at the airfield that is near to mission location. In this way, the military sends fewer soldiers to the forward bases and minimizes the risk that is posed by latency. As we can see, drone operators can engage in battle from their homeland, but they are also dispatched to forward bases at some point in their careers. Still, their tasks in their homeland are the main part of their jobs. What they do in LRE is, in a way, a supportive task that can be boring:

Not much excitement in that. Even before I reached Balad, I was starting to feel the same impotence that our LRE must have felt. I was among those back in Nevada actually flying missions, getting the glory. (Martin, 2010: 190).

In any case, operators rarely leave their seats in the cockpit. They always look into the battlefield through the feeds, and when they want to achieve in warfare, they have to press a button. Now, we can delve into what they do in missions, how they fight, and how they are affected.

#### **4.4.2.2 Drone Operators in Action**

With drones, soldiers and technology merge during the war. Soldiers' physical existence is removed from the battlefield, but they can see everything through drone feeds, which makes them witness the battlefield more than any other soldier. Therefore, they participate in various conflicts during their shifts:

Then I took my seat at the Predator's controls and became immersed in warfare for the next six to eight hours. (Martin, 2010: 45).

Such immersion during a shift causes a split between operators' civilian and military lives. In each day operators should leave their civilian identity and become a warrior in the battlefield:

I lived a schizophrenic existence between two roles, one as a combat pilot fighting a war halfway around the world, the other as an ordinary American citizen. No one who saw me off-base and out of uniform would have ever guessed what I did for a living. (Martin, 2010: 44).

It is clear that the relation between battlefield and soldier transforms in the case of drone operators. When two different group clashes in the field, both parties know that every person in the field belongs to a group, and share the same danger. We had mentioned how the extent of such field expanded in the Second World War compared with the First World War. Soldiers' existence on the battlefield makes this expansion identifiable. In other words, we can ascribe the word "battlefield" to a place if there are clashing soldiers. But, in drone warfare, one party is restricted to a certain geography, whereas the other party safely joins the fray from a significant distance. Hence, one may ask if the location of drone operators can also be considered as a battlefield. Gusterson (2016: 60) underlined a similar complication. He asked his students if the insurgents have a right to kill a drone operator in the United States when the operator is not on the shift. For him, such a question implies that drone warfare globalizes the battlefield. Drones can be employed anywhere, and operators can control them from various locations, which results in a borderless battlefield. As a result, operators' connection with the battlefield becomes ambivalent. On the one hand, they witness every atrocity of war; on the other hand, they have to live their civilian lives, which causes difficulties. In each mission, operators should constantly gaze on the ground. They have to concentrate on every detail. During the action, this observation becomes atrocious:

The smoke clears, and there's pieces of the two guys around the crater. And there's this guy over here, and he's missing his right leg above his knee. He's holding it, and he's rolling around, and the blood is squirting out of his leg, and it's hitting the ground, and it's hot. His blood is hot. But when it hits the ground, it starts to cool off; the pool cools fast. It took him a long time to die. I just watched him. I watched him become the same color as the ground he was lying on. (Power, 2013).

Operators do not have the chance of looking away, which may cause them to miss important information. They also should continue watching after the action, which is called a “Battle-damage-assessment.” It means operators should confirm the deaths, and if it is necessary, they should make another strike to eliminate survivors. Strike after the first one is called “double-tap” (Gusterson, 2016: 114). After assessment and double-tap strikes, drone operators witness every aspect of action from beginning to end. They cause operators to connect the battlefield more than any other soldier by producing emotional effects. One of them is the intense feelings towards warfare which causes a significant effect on the life of the operator. Bryant, for instance, mentioned how atrocious events traumatized him. When another soldier criticized operators for dramatizing drone labor, he reacted furiously:

Combat is combat. Killing is killing. This isn't a video game. How many of you have killed a group of people, watched as their bodies are picked up, watched the funeral, then killed them too? (Power, 2016).

The atrocity of warfare may also cause operators to canalize their negative emotions towards other people. Witnessing the brutality of war can raise a strong feeling of hate towards adversaries or locals.

I began to feel an extreme hatred for the locals and the Iraqi people, even for those in the country who didn't mean us harm. It wasn't like me to hate so much and so broadly. It wasn't the way my mother raised me. I began hating these people whom I didn't even know because they clearly had so much hate for me. That hate started to manifest itself, slowly taking me over. (Velicovich, 2017: 72).

One may easily argue that drone technology puts a drone operator in a position that reveals every atrocity of warfare. Operators are expected to struggle with these atrocities. Such struggle is done constantly.

The days drenched in blood remained difficult. How many convoys did I have to watch get hit by Improvised Explosive Devices (IEDs)? I once watched helplessly as Taliban Fighters executed suspected spies because the rules of engagement didn't let us defend them. (McCurley, 2015: 13).

The result of drone technology is blurring the position of operators in battle. Their mental engagement or their constant gaze makes them more than a witness. They are

active participants in the war. They can affect it and can be affected by it. But their condition of being physically risk-free obscures such affection from others.

Drones, in brief, transform the position of soldiers, their physical and mental conditions. A similar transformation can also be observed in the case of “enemies.”

#### **4.4.2.3 Framing Enemy**

With each technology, enemies are framed differently. By frame, I imply soldiers’ feelings or thinking towards the enemy and what enemies can do. Drone technology, from this perspective, significantly transforms the idea of the enemy.

The immediate effect of drone technology on the enemy’s existence is removing reciprocity (Rogers & Hill, 2014: 82). We witness in operators’ memoirs that drones followed each target for days. Each aspect of targets’ lives is recorded; their families, relatives, contacts, etc. The reason behind this immense surveillance is to neutralize enemies before they act. As a result, drones raise the idea of a passive enemy who is to be scrutinized, observed, and must be eliminated.

But as I walked out to my car, I thought back to the two runners in Iraq. They’d had no idea we were watching and they’d had no chance of escape. (McCurley, 2015: 108).

In this way, the enemy turns into a subject of constant observation (Curtis, 2016: 529). Like a scientific subject, drones produce knowledge of adversaries to come up with an algorithm that enables soldiers to find ways of damaging enemy networks. Such context also raises the idea of potential enemies within the population. Anderson (2011: 222) shows how population became important for counterinsurgency. With new technologies, militaries framed the population as consisted of future friends and enemies. What drones do, in this context, is to sort out the enemies from friends by constant gaze. At this point, we also need to refer to Shaw’s (2016: 202) argument on confinement. Maybe the most important feature of drone technology is confining the enemy into a specific area where the enemy is destined to be captured or killed until the drones produce the maximum knowledge that produces another effect.

Today's militaries are organized to answer various missions by cooperating with other countries. This is a result of the post-cold war period when a conventional war between developed countries became a remote possibility. Instead, modern armies mainly fight against proxies which means local insurgent groups. This means, rather than framing a nation or country as an enemy; modern militaries seek to find out persons, pressure groups within states to deter the capabilities of a certain group or a state. Drone technology contributes to this doctrine. It gives the possibility of tracking important individuals who play key roles in the organization of insurgent groups. In this way, enemies turn into an object of interrogation. Soldiers must understand their actions. Drones serve this purpose perfectly:

It felt strange to be flying what we hoped was our last mission against this target. There was an intimacy about following someone for months. We spent so much time with the family that I knew what the Captain's kids looked like and what roads they took to school. I knew how his wife did the family laundry and where she stopped for dinner. In the back of my mind, I knew the Captain was a terrorist and plotted to kill Americans. But it was hard not to see him and his family as very human. (McCurley, 2015: 119).

With this proximity to the enemy, soldiers now also define them differently. Throughout the memoirs, we observe that they refer to adversaries as "bad people." However, one may argue that any enemy can be called "bad"; still, an enemy within modern context bear different meanings. First of all, it indicates a personality that belongs to a specific person. Secondly, militaries see such personalities as a risk towards other people. Thus, military technologies aim to deter these individuals from affecting other people. In this way, enemies are no longer whole countries or nations but specific persons with dangerous ideas. When a marine Major talked to McCurley (2015), he mentioned the guys he killed:

'I killed over sixteen hundred people in that fight' he said.  
'But they were all bad guys.'

He said 'bad guys' as if seeking absolution for his actions, confirmation that he had done the right thing. He may not have pulled the trigger himself, but he felt the responsibility anyway. Every time he mentioned an engagement, he repeated his bad-guy mantra to himself. (McCurley, 2015: 197-198).

The reason behind seeking such absolution is the mentioned doctrine behind the modern military. Soldiers feel the responsibility that they should act against “correct” targets. That is why we come across the “bad guy mantra” frequently.

Until this point, we have seen that drones increased the calculability of warfare, they created new ways for intelligence, they changed the soldiers’ relation with warfare by submerging them with technology, and lastly, they confined the enemy into certain geographies and turned the enemy into an object of an algorithm. All of these different processes or effects of drone technology imply significant transformation in warfare. I will explain such transformation in the following sections by referring to two types of warfare: Post-Heroic/Choreography and Bureaucratic.

#### **4.4.3 Post-Heroic**

In terms of warfare, the end of heroism signaled two aspects. On the one hand, it reframed what acts during warfare can be considered “heroic”; on the other hand, it implied a change in the strategy. Former one framed as “choreography” by King (2014). He underlined the professional soldier and having a professional attitude during the warfare. Participants in post-heroic war share the burden of risks posed by the battlefield. They solve each problem by resorting to intense drills, which tell soldiers how to act in specific circumstances. In this way, individual, heroic acts slowly effaced from the warfare. The important point within this process is the approximation between drills and action. In other words, soldiers face more similar events to their drills in today’s warfare. Such approximation is related to the developed technology that increased calculation. Similarly, during drone warfare, operators usually do what they learned in training. In fact, the risk posed to the aircraft is almost the same in both peacetime and in most of the missions:

It is performed during actual combat as well as in peacetime. Leaders must learn to assess risks during training events and apply the same techniques during combat actions. During combat, risks may be taken but only after they are evaluated and weighed as they are during training. (Department of Army, 1997: 22)

Applying the training techniques in warfare implies teamwork where each participant shares the burden. King (2016) observed a change in close-quarter battles. Starting from the training, soldiers' doings on the battlefield are scrutinized by militaries. Trainers observe their posture, skills, and collective movements to increase professionalism and collectivity during the battle. Each problem in battle is solved with coordinated actions (King, 2016: 287). Communication, at this point, has paramount importance. Similar importance can also be observed in drone warfare.

Communications are one of the most important aspects of the tactical employment of UAS. Communications provide both capabilities and limitations to the UAS user, whether to control the UA, or to manage sensors and information flow. (Joint Unmanned Aircraft Systems Center of Excellence, 2010: 47).

With communicational means, operators are placed at the nexus of operations, which means they always should coordinate with other units to support or strike:

In my HUD, I watched the fighters load the dead into the back of the truck. They were most likely taking them to get buried. Islam required burial before the sunrise of the day after death. There wasn't enough room for all the fighters in the truck, so several ran behind it.  
'Pacman, you are cleared in,' Mongo said. 'Primary target is the truck.'  
(McCurley, 2015: 161)

Especially, coordination is essential during the action where drones can provide near-real-time intelligence to ground or other units. When McCurley (2015) assigned to support a raid done by ground units, he observed the ground to prevent an unwanted action by providing intelligence:

Jack zoomed out. The wider field of view allowed us to see the compound on one side and the black dots fleeing on the other. We took the initiative to follow the rabbits, even though our mission was to watch the compound. Normally, we would have stayed on the scene until the troops finished the raid, collected any intelligence like papers, maps, and computers, and eventually departed. The runners were too suspicious to pass up. (McCurley, 2015: 102).

In each phase of the battle, operators must be aware of every variable, and they should make necessary contacts with other units in order to inform them about possible

dangers. It perfectly fits what King (2014: 2014) described as the “institutionalization of the combat choreography.” Each participant in drone warfare needs information from their fellows in order to act. It becomes more evident in support missions where operators must protect the ground units from possible dangers. In these cases, heroism in warfare turns into a collective act. Such transformation also has implications for military strategy and tactics.

Luttwak (1995) framed the post-cold war military period as a new “war season” where the previous strategic considerations have altered (Luttwak, 1995: 109). In this new season, parties do not strive for a decisive, overwhelming attack on their adversaries but consider other variables which turn around the ideas of casualty-aversion and partial results. There are various reasons behind this strategic transformation, such as public sensitivity towards casualties, increased firepower that implies catastrophic effects in the case of a decisive push, and the danger of a global war between developed countries as their interests may clash after a bold move done in the international arena. One may add other reasons also, but it is enough to underline that today’s war necessitates caution on different variables. But it also does not forgive completely indecisive actions. Drones serve these strategic purposes in both aspects. On the one hand, they decrease the risks taken by soldiers; on the other hand, their constant gaze and strike capabilities increase the chance of getting solid results. When military decision-makers identified this capability of drones, they decided to increase their usage for providing support to other units:

Most of our missions were in support of a specific Army unit. We needed permission to leave the unit to help another. But a fundamental shift in Army tactics occurred over the summer. Leadership decided that minimizing casualties was more important than offensive operations against al Qaeda. In the risk-averse atmosphere of Iraq, Army commanders recognized the potential of the Predator and how it could maximize their advantage on the battlefield by providing up-to-the-minute intelligence on a target. (McCurley, 2015: 167).

Such success in risk-aversion enables militaries to conduct prolonged operations in different locations. It means decision-makers can conduct what Luttwak (1995: 120) called “Patient Air Power.” Drones’ constant existence in a certain location means superiority over an adversary by confining it into an area where the military can get

the successful result one way or the other, making it possible for militaries to legitimize their actions to their public. Fuhrmann and Horowitz (2017) found out that democratic and authoritarian countries are more likely to buy or produce drones than mixed regimes (Fuhrmann, & Horowitz, 2017: 412). They explained this result as democracies are sensitive to casualties, and drones become an ideal weapon for democracy by reducing the losses. On the other hand, autocracies also have a higher tendency of employing drones as authoritarian leaders get the capability of increased surveillance and repression with drones (Fuhrmann, & Horowitz, 2017: 411-413). Similarly, Gusterson (2016: 163) argued that in democratic countries, leaders can legitimize the usage of drones by claiming that they do not risk any soldier. They can even argue that they do not engage in warfare as there are no soldiers on the ground (Gusterson, 2016: 162-163).

Although drone operators witness every aspect of warfare, they do not act alone. All of their tasks are segmented and necessitates the participation of other soldiers and units. It is clear that such a way of fighting turns the practice of war into a collective doing. From a strategic point, such collectivity presents perfect capabilities for the legitimization of war and getting solid results. These points imply an important character of newly emerging warfare which is related to military bureaucracy.

#### **4.4.4 Bureaucratic-Visual Warfare**

We have seen that drones increase the capability of calculation. They enable decision-makers to plan accurate warfare scenarios. When soldiers engage with the enemy, drones make it possible for commanders to follow every phase of the battle and intervene if necessary. The result is warfare in which actions can be planned, coordinated, and even executed in a bureaucratic environment.

For clarification, I use “bureaucracy” in the Weberian sense. It means an organization where authority is legally ascribed, and the work done by officials is regulated according to written rules (Weber, 1978: 958- 956). Actions within this working environment follow a stable pattern and limited. Therefore, there is little room for initiative and unexpected incidents.

Weber's (1978) definition of bureaucracy has important implications for the army. In fact, when explaining bureaucracy and discipline, he frequently referred to the military organization. Mommsen (1965) argued that for Weber, the army and the business developed the necessary quality for bureaucratic decision making, which is rationally ordered discipline (Mommsen, 1965). Miewald (1970) also claims that in Weberian theory, even the warfare has been conquered by the irresistible force of rationalization: "Military activity in the modern world, along with most other human enterprises, was so precisely predictable that it could be conducted from inside a bureau." (Miewald, 1970).

Bureaucracy's essential feature of organizational discipline is also found its earliest forms in the military unit. For Weber (1946), disciplining the armies in most cases caused the transformation. In war, the usage of muskets is not important if they are not used in a disciplined way. As a result, like he thinks that bureaucracy is the most efficient form of organization, he also thinks that discipline is the most efficient way to fight. Just like a business, the military also tries to control its members' responses through calculation. Every variable is put into calculation in order to be controlled by the officers. (Weber, 1946)

For Miewald (1970), Weber's analysis is innovative in terms of presenting a picture of a modern rational world. Yet, in the case of the internal organization of the army, he argues that the Weberian ideal type falls short. The strict discipline does not operate as in an economic organization as in the war because it means calculating and controlling the variables. Miewald (1970) refers to Clausewitzian theory to show this incalculability of war. For Clausewitz (2007), it is nearly impossible to predict the soldiers' response in a threatening environment. There is no way to tell whether a man would charge forward or panic under the pressures of combat. Human passions cause innumerable factors, and none of them is stable (Clausewitz, 2007). Colmar Van Der Goltz (1986) sums up this nature of war in an elegant way:

In the domain of the art of war, such mathematical calculations are somewhat dangerous; they might be the cause of false expectations and of treacherous confidence. War is rich in thousands of accidental occurrences and accessory details which exert a qualifying influence on events and increase or diminish their importance, so that the most careful calculation in advance is often

completely overturned. Uncertainty and insecurity form the natural elements of war. (Goltz, 1896)

To overcome this difficulty caused by the nature of war, officers adopted a positive attitude. Miewald (1970) defines it as education aimed to harvest soldiers who would take the initiative in a battle and obey the orders not because they are orders, but they would know what that order meant. This attitude implies that each soldier is turned into an independent professional capable of carrying out his duties on his own initiative (Miewald, 1970).

Although Miewald's analysis provides good insights to understand the weaknesses of Weber's ideal type in a war, it still does not give the full picture of military organization. War is a rare occurrence in the timeline of such an organization. Hence, for our purposes, it is also necessary to think about the military during peace.

Using the term peace may be problematic to capture the military's organization when the war or conflict is absent. It will be more functional to separate logistics from combat (Janowitz, 1959). Logistics here refers to the administrative and logistical operations, whereas combat is comprised of combat preparation and actual fight on the battlefield. It is evident that what Miewald (1970) argued is not the case in the former one. Logistical operations necessitate precise bureaucratic work. For instance, maintaining personal affairs necessitates dense paperwork. During the month when the supreme military council takes place, officers work long hours in the service commands to regulate the promotions or make regular appointments. These are no different than a specific bureaucratic organization of a state.

Soeters (2000: 473-474) similarly mentions the subculture of "hot" and "cold" in uniformed organizations. Cold organization refers to "a real bureaucracy" placed behind the frontlines, which handles the paperwork, and routine tasks. Labor within this subculture is rational and no different than white-collar work (Soeters, 2000: 473). On the other hand, a hot organization implies an unstable environment where uniformed personnel must deal with the crisis and face possible threats. It contains more emotional elements than the cold organization, and it necessitates strong leadership, which means the rationality of bureaucracy may not answer the needs of a hot situation (Soeters, 2000: 474).

What makes a military organization unique is the turbulent and risky nature of battle in which soldiers must have strong emotional abilities. One can hardly argue that rational action of bureaucracy would answer the problems posed by war. At this point, drone technology causes another transformation. It increases the capabilities of soldiers to control the battlefield by enabling them to inspect every variable on the ground. In other words, drone technology makes it easier for soldiers to face the terrors of the battlefield. Even if the adversary can make an unexpected move, with the risk-free character of drones, soldiers can still maintain their working in a usual way. Therefore, drone warfare blurs the line between “hot” and “cold” situations. Its operation is done in a bureaucratic environment, and the same environment is not disturbed during a hot situation. I refer to this blurring as the bureaucratization of warfare. It indicates that warfare can be done within a bureaucratic environment, which also implies a significant change in the form of warfare. But before getting into this form, we have to see how drones bureaucratize the battle.

First of all, actions within the RPA unit are done through segmented tasks. Each participant plays his/her role. Thus, when a drone flies, it is a result of the sum of tasks done by various personnel. Even the shooting necessitates more than one personnel:

When a Hellfire was launched, it was a joint operation: the pilot pulled a trigger, and Bryant was responsible for the missile’s “terminal guidance,” directing the high-explosive warhead by laser to its desired objective. (Power, 2013).

Asaro (2013: 3) likens drone labor to the killing work of the sniper. With the segmented tasks and increased capabilities of calculation, drones rationalized the killing at both organization and individual levels. Asaro (2013) frames this rationality as “bureaucratized killing.” In each phase of drone labor, we witness this bureaucratization. From surveilling the ground to supporting other units, drones necessitate a flow of information within the military bureaucracy. In a way, drone units connect different military organizations and create a massive war bureaucracy that reduces the unexpected events of warfare by increasing the chance of calculation:

As the units expect to be facing a wide range of challenges and an uncertain operating tempo, UAS assets are employed to build information to feed IPB (intelligence preparation of the battlefield) requirements, and the intelligence running estimate (Unmanned Aircraft Systems Center of Excellence, 2010: 87).

Especially personality strikes leave no room for unexpected events. To make a strike on a person, units need to have a bureaucratic confirmation which means from beginning to the end, these strikes are done according to a rational plan. Starting with the drone unit, information flows to the top, and during this process, each variable is rationally inspected by experts. Such a process of a strike is clearly closer to bureaucratic labor, where each decision is taken rationally by addressing written rules, procedures, manuals, etc. Soldiers within this process had to act according to rules of the bureaucracy; their role contains fewer emotional aspects than the ones on the battlefield:

We ended up calling this huge bureaucratic process death by PowerPoint. Drone strikes outside of war zones were literally being decided at the executive level based on the efficacy of our PowerPoint presentations, how well we essentially “sold” the idea that a guy was evil enough to obliterate. In the end, even after the president’s approval, the commander had to bless the strike. But before he did, there were final considerations: Was the target at the location? Were there any women and children? Was capture impossible? (Velicovich, 2017: 223).

Velicovich’s (2017) account clearly shows how drone labor is done inside a bureaucratic chain. In each phase, experts are calculating different variables, and soldiers who intend to kill a target have to rationally “sell” the idea to their superiors. Action is taken only if these conditions are met. On the other hand, his insight contains an important point about this bureaucracy. “Outside of war zones” implies that drones can operate globally, bringing us to how this bureaucratic machine affects different aspects of warfare.

Drones can follow multiple targets in different locations. Although not every country has such a chance of flying drones in different locations, countries like Russia, the USA, and China, who have bases in different locations around the globe, have the capability of transferring warfare to these locations without risking any of their

soldiers. Such existence in different locations implies that enemies can be traced to different locations, their relations with other actors can be identified. As a result, it becomes more and more difficult to identify a definitive battlefield. Rather, drones turn battle into events that may happen anywhere around the globe (Gregory, 2011: 239). This globalization of war also indicates that international tensions may arise through strikes. Gusterson (2016: 159) drew our attention to how drones confuse globally accepted norms on warfare. For instance, drones blur the idea of self-defense. Countries that use drone strikes for hunting down different insurgent figures accuse the same figures of being terrorists and threats. Yet, one can hardly argue that the same persons pose an imminent danger to drone holders. In addition, striking in a foreign country usually disturbs the local authorities as these strikes sign a breach of national sovereignty (Gusterson, 2016: 157).

It is also possible to read the mentioned arguments as an extension of the globalization process. Like economy, politics, and culture, military affairs also faced a transformation. Bauman (2001) framed the “globalizing wars” to analyze the wars in this era. He argued that these wars are made between a stronger country that can calculate the pros of war and a weaker adversary who has no chance of reaction or winning the war. Former one goes to the war only after ensuring that intervention would be successful and contribute to the “globalizing” of the intervened location (Bauman, 2001: 16). Bauman (2001) likens the globalizing powers as nomads who use speed to intervene and leave adversary’s geography and devastate them. Therefore, one important aspect of “globalizing wars” is the hit-and-run rather than a conquest. Globalizing means that these interventions are done to sort out local actors which deemed to be “divergent” from globalized values. That is why armies are reluctant to dispatch ground forces to maintain order in such wars, which prevents “running” from the battlefield, and brings the risk of meddling into foreign affairs that present no benefit. From this perspective, drones and bureaucratized war machine provides significant capabilities. Without landing a single soldier, drones can control an area. It enables globalizing powers to permeate into different locations with fewer costs. With drones, developed countries no longer had to hit-and-run. They can hit and maintain surveillance for long periods.

This process can also be read as the deepening of what Janowitz (1960) coined as the “constabulary concept.” It implies the modern structure of militaries that enable constant readiness and immediate intervention when necessary. Yet, “constabulary” implies a protective understanding for the interests in the international arena rather than achieving military victories, which would put risk on the relationships with other countries. Another important aspect of the constabulary concept is the removal of the difference between wartime and peacetime. Professional members of the army should be ready ceaselessly for incidents.

Similarly, we see that the bureaucratic characteristic of drone labor fits such depiction. Drones can immediately react to any incident, and soldiers who face no physical risk can answer the needs within the bureaucracy. Therefore, drones give a more “policing” outlook to the armies. They are perfect for the permanent ordering of aimed geographies (Neoclaus, 2013: 590).

During the mentioned ordering, drones create a vast amount of information on persons, networks, or organizations, making it possible to trace individuals all around the globe. This causes the possibility of operating the war machine everywhere. Gregory (2011) gave the example of how US military doctrine replaced the concept of the “battlefield” with “battlespace,” which has no spatial limit like “battlefield.” Within this battlespace, borders are also blurred. A country’s weapon can operate within the soil of another country which would have meant an attack on national sovereignty in the past. Similarly, Agius (2017) showed how reliance on drones made war “unbordered and unbound by the constraints of sovereignty” (Aguis, 2017: 370). Yet, the removal of borders and spatial limits of warfare also brings a temporal extension of war. With a mass amount of information, militaries also produce knowledge about the possible “future” enemies. This means there will always be a certain “threat” that can be identified by drone technology. The result is longer conflicts. Especially, the fight against terrorism may last for decades.

Against an overwhelming technology, insurgents recourse to irregular ways of fighting, such as attacking civilian areas, avoiding front warfare, etc. In a way, they fight through hiding. When drones arrived at the scene, they are forced to hide with different techniques:

The Taliban had shown great resourcefulness in figuring out our rules of engagement. They stayed close to women and children and tried to move with civilians if possible. Some wore women's clothing to avoid detection. They knew we'd honor the rules of civility and used them against us to maintain the advantage. (McCurley, 2015: 161).

When we add the military strategy of sorting out individual networks to this way of insurgent fighting, the effect is a conflict that lasts longer and longer:

Sometimes it didn't make a lot of sense, fighting the Global War by killing one or two guys at a time. Still, I supposed if we kept at it long enough and killed enough of them, the violence would eventually subside to the point that our rebuilding efforts could gain traction and we'd be on our way to bringing some sort of stability, if not prosperity, to the country. (Martin, 2010: 291).

Keeping the fight long enough means transforming the war effort into a stable, bureaucratic task that can be remotely controlled. Such a strategy combined with the liberal-democratic values of the developed countries causes unending local conflicts. Day by day, western countries abandon the idea of dispatching ground forces into the disputed areas. Instead, they choose to confine these areas by employing proxies and using developed military technologies like drones. During a proxy fight, drone support contributes immensely to one side. Supporter within this picture finds a way to intervene when necessary, thanks to the constant watching. When Obama stated that the Syrian war was his "one of the hardest issues," his implication was precisely this way of fighting (Mccaskill, 2016). During his presidency, he authorized different missile strikes to deter the Syrian government and other insurgent groups. Yet, US forces did not make land operations as they did in Iraq, but still, with air support to different groups and constant surveillance of the ground, the USA managed to become a part of the ongoing clashes. In this way, they protected US interests in the relevant geography. With the airstrike capabilities, they can intervene with other groups and send a "message" to different countries if they sense a threat to their interests (Adams, 2021). The result is a civil war that has lasted for more than a decade (BBC, 2021).

Besides the strategic implication of drone technology, we also have to mention how they produce an endless targeting cycle. In the memoirs, we repeatedly come up with

hunting of important insurgent figures. Maybe the most important ones led by Velicovich's (2017: 269) team. They killed Abu Omar al-Baghdadi and Abu Ayyub al-Masri, who were leaders of the Islamic State of Iraq. The process of finding them lasted years. After their deaths, Velicovich (2017: 293) told us how his commander ordered them to take down every target being followed. They had to prevent this leaderless organization from re-establishing its power. Still, they could not capture one of the emirs who would turn ISI into ISIS. They followed the Abu Bakr al-Baghdadi's brothers, but local police –who had tribal ties with the brothers according to Velicovich (2017)- informed brothers about the operation, and one of them escaped. The other one gave no helpful information. After that, the US military tried to capture Baghdadi until 2019. Trump's statement revealed that special operation teams conducted a raid with the support of drones to capture him (Newburger, 2019). Therefore, it is obvious that the raid was a result of a similar intelligence process done by Velivocich's (2017) team. One may ask, at this point, if it is possible for this hunting of different persons to end in the near future. Drones will be likely to continue to gather intelligence on the successors of Baghdadi or about any other insurgent group. With a bureaucratized, risk-free intelligence gathering, it seems there is always some group that can be followed.

As countries can intervene when necessary, the length of such war seems does not disturb any one of them. They unburden democratic countries on convincing the public about military operations. On the other hand, they raise the possibility of effective military existence in foreign countries. The result is warfare freed from temporal and spatial limits.

Drone technology combined with developed military technologies creates a working environment where warfare can be conducted without risking soldiers. Such bureaucratization contributes to the maintaining of warfare with fewer costs. By reducing costs, it brings the risk of ignoring political solutions to deep-seated conflicts. Within this bureaucracy, killing a person may be seen as "rational," yet the same bureaucracy excludes reciprocity. Persons being haunted silenced without they can react. Such silencing may harm any political resolution. Therefore, one is right to fear for a future where bureaucratic war machine shapes international relations.

## **CHAPTER 5**

### **CONCLUSION**

Drones are marvelous vehicles that cause transformation in different fields. From entertainment to delivery, their usage is expanding day by day. In this thesis, I tried to show their implications for modern warfare and military organization. Yet, we did not fully cover drones' effect on military affairs. It is difficult to achieve such analysis in a single thesis. But it is possible to make a connection between our analysis and other topics. For that reason, in this concluding chapter, I will try to illuminate readers on the tendencies created by drone technology which signal remarkable alteration in the future on different aspects of military affairs. While doing this, we also need to touch upon unmentioned topics. In other words, this chapter aims to spark a debate on drone technology. In this way, it will also be possible to see how the topics we addressed in the thesis are connected and how they are essential to understand the transformation of military and warfare.

Most of the time, speaking about the future is speculation. Yet, one may find tendencies within organizations that enable us to draw specific scenarios. When Moskos (1977) proposed the I/O thesis, his analysis was exactly focused on such tendencies. He ideally constructed a point in the future, and through that point, he tried to explain today's realities (Moskos, 1977: 41). Similarly, I believe we can ascertain possible outcomes of technology through thinking about the future. Such thinking is important, especially in the field of the military. During the Second World War, the world witnessed the catastrophe done by nuclear weapons. When multiple nations acquired nuclear capabilities, military actions are interpreted to prevent a global nuclear war. Although this global war never took place, an analysis of military capabilities and possible outcomes of military activities enabled us to estimate what

would be the consequences of a nuclear battle. This exact estimation is the reason behind the concept of deterrence. In a similar vein, I argue that we have to be cautious about every military technology. We have to think about their full effects on each social sphere to develop policies or different measures to prevent further pain inflicted by war machines.

While analyzing the relationship between drone technology and the I/O thesis, we had identified an organizational strain. Although drone technology means occupational regulations at the level of organization, its capabilities burdened soldiers with institutional concerns. The result is the difficulties faced by soldiers during their shiftings from workplace to home. Their lives are segmented into two spheres; one filled with atrocities, action, and constant engagement; the other is an ordinary civilian life. On the one hand, drone technology implies humanless warfare in which machines inflict violence; on the other hand, it gives the chance of witnessing everything on the battlefield to the soldiers. In this way, although soldiers are isolated from the risks of war, they can still maintain their institutional roles. They can take responsibility and develop concerns toward their institutions. Besides this witnessing, they also can control the mentioned machines, which makes them still an integral part of the battlefield.

Such incompatibility between the levels of individual and organization causes specific problems for military organizations. The first and foremost effect can be seen on the mental health of operators. They reported high levels of stress caused by their job (Chapelle et al., 2011). Working incessantly and participating in events that contain atrocious acts harms the mentality of operators. Drone labor means a constant mental engagement which is more consuming for analysts who use drone feeds to produce helpful knowledge. Velicovich (2017) repeatedly mentioned how his tasks consumed him and how he decided to retire after a short time compared with other soldiers. But also, it may cause them to question the moral values they hold, which is framed earlier as “moral injury” (Enemark, 2017). Secondly, strain can cause organizational problems in terms of authority. Singer’s (2009: 359) identification of “tactical generals” draws our attention to a similar case. With developed communication technologies, commanders can intervene more effectively with their subordinates. However, in the lower ranks, the same technology implies more information. In other

words, subordinates get more knowledge on warfare thanks to the new military technologies. We have seen how this information can cause soldiers to take the initiative, as Martin (2010) did. Another effect of the organizational strain is undermining the tasks done by operators. Benjamin (2012: 79) showed how drone task is seen as lacking valor by the old generation of fighters and how operators are labeled as “cubicle warriors.” Such thinking is stemmed from the risk-free nature of drone labor, while other soldiers are exposed to risk on the ground. There is discontent among operators caused by this labeling as they think what they do is important for the course of the war. We saw this when Bryant backlashed another soldier mocking the operator’s tasks (Power, 2013). Therefore, comprehension of drone labor is also framed differently by different military groups. Lastly, each day drones attain new capabilities. This creates a need for new training techniques for the military. In some cases, it becomes difficult for soldiers to catch up with the new abilities of the aircraft. Considering the expanding personnel shortage, it becomes harder for the militaries to train new personnel and maintain their skill level (United States Air Force Scientific Advisory Board, 2011). When we add the institutional necessities of drone labor at the level of individual, such difficulty may be deepened. McCurley (2015: 154) complained about the sloppiness in the RPA community as a result of soldiers’ unwillingness to learn new techniques and exhaustion. As a result, militaries are facing the difficulty of standardizing personnel recruitment processes and maintaining a skill level among the RPA community.

Each problem given above can be discussed from different perspectives. I briefly mentioned each of them as I argue these problems show how drone technology affects the military in general and how future militaries adopt new organizational techniques by adding new capabilities to the drones. In 2009, United States Air Force published a document on the flight plan of unmanned systems. The document is about how existing capabilities of unmanned systems are further developed and how Air Force can increase their effectiveness. In a way, it draws a path for the decision-makers to follow. Yet, I have to underline that this document may be updated in the future according to new contingencies. But, I argue that there are two critical points - connected to each other- in the document that signal a remarkable transformation on military affairs, which I think will be objectives for the US Military and other

countries. These are; autonomous military technologies and the concept of swarm drones.

Before getting into the concept of autonomy, we have to mention the OODA (Observe, Orient, Decide, and Act) loop. In the current practices of drone technology, soldiers participate each phase of the loop. In other words, they are “in the loop” (United States Air Force, 2009: 41). Although drones can do some autonomous action –like safely returning to base if the signal is lost-, still their activities in battle necessitate human intervention. With the technological development, the military aims to decrease such intervention by increasing the autonomy of the aircraft:

Advances in computing speeds and capacity will change how technology affects the OODA loop. Today the role of technology is changing from supporting to fully participating with humans in each step of the process. In 2047 technology will be able to reduce the time to complete the OODA loop to micro or nanoseconds. Much like a chess master can outperform proficient chess players, UAS will be able to react at these speeds and therefore this loop moves toward becoming a “perceive and act” vector. Increasingly humans will no longer be “in the loop” but rather “on the loop” – monitoring the execution of certain decisions. Simultaneously, advances in AI will enable systems to make combat decisions and act within legal and policy constraints without necessarily requiring human input. (United States Air Force, 2009: 41).

Currently, the completion of the OODA loop takes significant time. In the memoirs, we witnessed how soldiers have waited before a strike for a bureaucratic confirmation. The document aims to decrease this waiting time into nanoseconds by enabling machines to decide on their own. Soldiers within this picture will be tasked only with supervising the machines. Their role will be much more limited as machines will calculate complex variables, then decide on the “right” action. Thus, the bureaucratic confirmation will no longer be necessary:

Assuming legal and policy decisions allow, technological advances in artificial intelligence will enable UAS to make and execute complex decisions required in this phase of autonomy. (United States Air Force, 2009: 50).

Such autonomy will not be limited to combat capabilities and covers automated landing and take-off, repairing, and refueling, which means maintaining the aircraft will also be done by the autonomous machines (United States Air Force, 2009: 50). Autonomy also implies a new concept which is “swarming.” With autonomous capabilities, soldiers will be responsible for multiple aircraft. A single soldier will be able to control a swarm of drones:

Fewer operators will be “flying” the sorties but directing swarms of aircraft. There will be cascading DOTMLPF-P (Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy) implications on facilities, organization, training, and force structure. Skills to prepare, launch, and perform combat air operations will no longer be required only on the flight line but in the technology development offices as well. New tactics can be either programmed in at any time from Distributed Network Support locations, or the system will learn from the experience of others in the swarm. (United States Air Force, 2009: 51).

With both swarming and autonomy, soldiers’ roles will decrease significantly. In each phase, personnel numbers will fall, and soldiers will be responsible for the development and supervising:

Personnel costs will shift from operations, maintenance, and training to design and development. (United States Air Force, 2009: 50).

With the decreased personnel cost on operations, maintenance, and training, soldiers’ tasks within these fields will also decrease. This transformation signals two processes; on the one hand, drones will acquire autonomy which presents new machine actors; on the other hand, soldiers will move further away from the battlefield. These processes seem to provide a solution to the mentioned organizational strains. What made soldiers hold institutional values was their connection to the battlefield over drone feeds. They controlled the drones and witnessed every event happening on the ground. When drones fire a missile, operators would know that they are the ones who gave the command to the aircraft. In each phase of the OODA loop, they actively control machines. However, such participation will no longer be the case if the aimed autonomy will be achieved. The soldier who stands on the “loop” will not witness

everything on the ground. Instead, we are informed that his/her role will be limited to supervising multiple aircraft and intervening on rare, critical occasions. The workload of such work would be similar to the current practices, yet it is evident that soldiers will no longer be first-hand witnesses of warfare. This fact also means the eroding of the institutional values that we framed as feeling responsibility towards the institution, fellows, and warfare. Although certain institutional values will probably be maintained within the army, autonomy will likely deepen the military's occupationalization. This organizational tendency also indicates an alteration in the topics we reviewed.

Autonomous-swarm drones signify an autonomous technological bureaucracy. When machines become capable of making complex decisions, it would be the first step towards unmanned battles. Without humans, warfare might be more effortless in the future. In this way, it would be much easier for countries to convince the public on military actions.

At this point, another question would be the role of the soldiers in such warfare. Witnessing everything on the ground seems the essential aspect of operators' task that connects them to battle and enables them to develop heroic characteristics. One may ask what would be the effect of autonomous drones on such characteristics. When operators' role limited to supervising the drones and mostly participating in the planning, it will no longer be the case for them to be an integral part of the battlefield. They will be less exposed to information, they will take less responsibility for the action, but more importantly, they will see less action.

Handling less information also affects authority relations. When machines complete the OODA loop, they will assess a mass amount of information and decide according to variables. Soldiers on the loop, in this way, will be released from reviewing every data. Information flowing that complicates the authority relations will no longer be the case. This new way of organization might create new forms of authority that stem from machine decision-making. Singer (2009) addressed this issue by giving the example of the American Navy that shot down an Iranian Passenger Plane in 1988. The American ship was using the Aegis radar system, which autonomously identified enemy planes. When the system identified the passenger plane as a fighter jet, the crew did not override the information, although they had other data showing important opposite evidence. Therefore, they trusted the decision-making of the computer and

shot down the plane. The result was a disaster; they killed 290 passengers (Singer, 2009).

Soldiers on the ship were not “on the loop.” Rather, they had every means to intervene, and they were the ones who decided to shoot. When we consider the fully autonomous objective in the future, it would not be an overstatement to argue that machines will get specific authority within military affairs. Like the Iranian Plane incident, soldiers might face situations where they must trust machine decision-making or comply with machine calculation. Therefore, soldiers who witness less information indicate whole new authority relations within the military.

On the other hand, autonomous drones also raise questions about the responsibility of the actions. Drones already blurred the responsibility of military actions. As a result of a huge bureaucratic mechanism, a mistake done by a drone cannot be easily ascribed to a certain person or a unit. Each participant within the organization contributes to the process. Still, it is possible to find who plays the major role. For instance, if analyst read the data in the wrong way, operators would be released from responsibility -of course, from a military perspective-. Yet, when drones make their own decision, a similar process of finding the responsible person would not be as easy as current practices. One may ask: “Who will we blame after a misconduct done by a machine?” With this question, we also need to think about the possibility of machine agency.

Holmqvist (2013: 545) argued that drones already acquired a political role. She frames them as “political actors” as they can do actions that stem from imperial and military approaches held by their makers (Holmqvist, 2013: 545). Thus, the ethical concerns about autonomous drones should also bring questions on the effects on political aspects. When autonomous war machines enter the international arena as tools for effortless warfare, they would significantly affect political disputes. Without risking a single soldier and with machines that can decide in nanoseconds, globalizing powers would easily deter any political danger in all parts of the globe (Bauman, 2001). In this way, bureaucratized warfare that is not limited spatially or temporally might be more intensified in the future. Besides, such effortless warfare may affect civil-military relations. Currently, RPA systems are controlled by soldiers in every phase. But they are developed by mostly private, civilian enterprises. For instance, famous drones such as MQ-9A Reaper or Predator are developed by General Atomics, a private enterprise.

New capabilities, thus, are added to the aircraft with the contribution of civilian engineers. When drones work autonomously, the part played by civilians might change. Laswell (1941) proposed the concept of a “garrison state” in which dominated group is soldiers who are experts on violence. With the autonomous weapon systems, it is evident that civilians would also share such expertise. In the future, we may witness more “convergence” between civilian and military areas and continuous violence as a result of this relationship.

All of the mentioned tendencies within the military will alter not just the relations within military organizations but also they will have huge impacts on societies and international power dynamics. As Shaw (2016) argued, drones signal a new way of dominance. Their usage is not limited to military purposes. While removing the soldiers from the ground, they produce other effects on the geographies they operate. Their constant gaze –as we witnessed- does not affect the so-called “targets” but also local people. Cavallaro et al. (2012) showed in their studies how local people who witnessed drone strikes changed their daily habits. Besides causing trauma, these strikes also impose on local people a new way of military power. Even if they are not the targets for drones, they still know that drones gaze at their community. Bauman (2002), while analyzing contemporary warfare, defined this condition of constant reconnaissance as “planetary frontierland.” Within this front, every person can be a target for military strikes or other attacks. Considering the constant gaze of drones and the aim of autonomy, this planetary condition seems to be intensified in the future. Like a police force, the military can confine societies and exert violence within them. The future of drone technology shows that this confinement can be done purely by autonomous technologies. Such transformation also signals that military power that disciplines persons, bodies, and societies will acquire new means. Bröckling (2008) has analyzed the mechanisms used by militaries to discipline society. He showed that the main aim of this discipline is the physical bodies of soldiers. An autonomous military technology alters this relation also. We have seen how it started to aim at mental capabilities rather than physical ones. Therefore, we can also argue that autonomous weapons will also emerge new ways for surveillance of societies and new mechanisms for the operation of power.

Throughout the thesis, I tried to show how drones emerge new organizational tendencies that force us to redefine soldiery's meaning and experience. The idea of risk-free warfare changes the institutional characteristics of the soldiers. They force soldiers to adopt new responsibilities. Soldiers can still affect the course of the war, take the initiative, and give an account of the unique meaning of their jobs. These aspects also provide the containment of some traditional authority and soldiery elements such as domination and heroism. Yet, with new communicational means and "remote intimacy," operators and their organizations diverge from other units. Their position within the organization –being at the crux of information flow- emerges new soldier and authority types. A similar alteration also happens in the battle. War is freed from spatial and temporal limits and can be done within a bureaucratic environment.

These processes can be read as a signal for complication in various fields, which we mentioned above. From politics to ethics, drone warfare will continue to have effects on different spheres. All of these questions above signify that drone technology will most likely continue causing important transformations in the future when combined with other military technologies.

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## APPENDICES

### APPENDIX A: TURKISH SUMMARY / TRKE ZET

ABD'nin Irak'ı 2003 yılında işgal etmesinden beri Orta Doęu'da çatışmalara, zorunlu göçlere ve istikrarsızlığa şahit oluyoruz. İşgalin hemen ardından Amerikan askerleri uzun yıllar boyunca Orta Doęu'da varlıklarını sürdürdüler. Fakat son on yıl içerisinde yavaş yavaş bu askerlerin hem Irak'tan, hem de Afganistan'dan çekildiğini görüyoruz. Gelişmiş ülkelerin, düzenli orduların sahadaki asker sayıları gün geçtikçe azalıyor. Fakat şahit olduğumuz çatışmalar devam ediyor. Amerika ve Rusya gibi ülkeler az sayıda askerle bölgede hala önemli aktörler olmayı sürdürüyorlar. Yine aynı ülkeler tek bir askeri riske atmadan önemli saldırılarda bulunabiliyorlar. Bunlardan belki de önemlisi 2020 yılında Kasım Süleymani'nin öldürölmesiydi. Süleymani Amerikan İnsansız Hava Araçları (İHA) tarafından takip edilmiş ve yine aynı İHA'larla öldürölümüştü. Bu olay, uzun yıllardır direnişçi gruplara karşı kullanılan İHA'ların yetkinliklerinin ne ölçüde arttığının da bir kanıtıydı. Gün geçtikçe gündemimizde daha çok yer işgal ediyorlar ve görölün o ki hem uluslararası ilişkilerde; hem de toplumsal ilişkilerde büyük dönüşömlere neden oluyorlar ve olacaklar.

İHA'ların bahsedilen etkilerine dair birçok sorgulama yapıldı. Farklı disiplinlerden İHA'ların siyasete, askeri stratejilere, uluslararası hukuka vb, konulara olan etkileri üzerine çalışıldı. Nitekim bu önemli teknolojinin askeri örgütlenmeye ve askerliğe etkisine dair literatürde önemli bir boşluk göze çarpmaktadır. Bu tez tam da bu boşluğu doldurmak amacıyla yazılmıştır.

Bauman "Modernite ve Holokost" kitabında, Holokost'un yalnızca modern bürokratik araçlarla gerçekleştirilebileceğini savunur. Bu bürokratik örgütlenme farklı dinamikleri tek tek hesaplayarak rasyonel bir şekilde Holokost'a giden yolu döşemiş

ve milyonlarca insanı yok edebilmenin yolunu bulmuştu. Aynı çerçeveden hareketle, günümüzdeki savaşları anlayabilmenin yolunun askeri örgütlenmeyi ve onun rasyonalitesini anlamaktan geçtiğini savunuyorum. Tam da bu nedenle tezin odağında askeri örgütlenme bulunmaktadır.

İkinci Bölümde bahsi geçen askeri örgütlenmeye dair literatür incelenmiştir. Bu literatürden askeri örgütlenmeye dair önemli kavramlara değinilmiş ve İHA'ların askerliğe etkisini analiz edebilmek için belli başlıklar altında ortak bir kavramsal çerçeve oluşturulmaya çalışılmıştır.

Başlıkların ilki Askeri Sosyoloji alanındaki en önemli tartışmalardan biri olan Moskos'un Kurum/Meslek argümanına dairdir. Moskos, zorunlu askerliğin sona ermesiyle beraber askeri örgütlenmede yeni bir eğilim olduğunu iddia eder. Ona göre askeri teknolojinin karmaşıklaşması, askerliğin gönüllülüğe dayanması gibi faktörler kurumsal değerleri aşındırmaya başlamış ve bu durum gelecekte askerliğin diğer meslekler gibi profesyonel bir "uğraşa" dönüşmesi riskini getirmiştir. Kısaca Moskos, askerliğin dönüşmekte olduğunu vurgulamış ve bu dönüşümün iki ideal tip ışığında incelenebileceğini öne sürmüştür. Bir yanda kurumsal değerlere bağlı, bireylerin uğraşlarını belli ideallerle tanımladığı kurum tipi, diğer yanda ise mesleğin market değeriyle tanımlandığı meslek tipi bulunur. Moskos bu tipleri ordu örgütlenmesindeki eğilimi saptayabilmek için öne sürmüştür. Dolayısıyla gerçekte bu iki tipe tamamen karşılık gelen bir askeri örgütlenme bulunmayabilir. Yine de askerlerin görevlerine olan yaklaşımları, asker ailelerinin kurumla olan ilişkileri, askerlik yetilerinin derecelendirilmesi ve kategorileştirilmesi gibi faktörlere bakılarak bu iki tipin askeri örgütlenmedeki eğilimlerine dair tespitlerde bulunmak mümkündür.

Benzer şekilde otorite başlığında da ordu örgütlenmesinde değişen otorite ilişkileri incelenmiş, yine Askeri Sosyoloji literatüründen faydalanılarak otoriteye dair önemli kavramlara değinilmiştir. Bunlardan en önemlileri Janowitz tarafından öne sürülen dominasyon ve manipülasyon tipleridir. Janowitz için dominasyon geleneksel askeri örgütlenmelerde rastlanan sıkı disipline, tek yönlü hiyerarşiye karşı gelir. Fakat yeni teknolojilerin gelişmesiyle ve askeri örgütlenmenin karmaşıklaşmasıyla otorite ilişkileri de dönüşmeye başlamıştır. Artık üst rütbeliler karmaşık askeri teknolojilere dair teknik bilgilerin tamamına vakıf olamayacağı için eski tip sert otorite yerini grup hedeflerine odaklanan daha esnek ve görüş alışverişine açık bir otorite tipine

bırakmıştır. Janowitz bu tip otoriteyi manipölasyon olarak adlandırır. Burada vurguladığı, üstlerin astlarından her emre koşulsuz ve harfiyen uymalarını bekleme si değil, astların sahip olduđu teknik bilgiye saygı göstererek ikna yetisi geliřtirmeleridir. Tam da bu noktada otoritedeki dönüşümün bilgi dağılımıyla sıkı bir ilişki içerisinde olduğunun altını çizmemiz gerekir. Feld askeri örgütlenmelerde bilgiye sahip olmanın otoriteyi belirlediğini savunmuştur. Özellikle cephe savaşlarında, karargahtaki kurmaylar cephedeki askerlerden topladıkları bilgilerle karar verirlerdi. Cephedeki askerler ise üstlerinin onlardan daha çok bilgiye sahip olduklarının bilinciyle emirlere koşulsuz itaat etmektedir. Dolayısıyla bilginin akışı ve yayılımı otoritenin uygulanış biçimini ve formunu belirlemiştir.

Benzer dönüşüm üçüncü başlıkta da gözlenmektedir. Teknik bilgi ve yeni teknolojilerle değişen savaş pratikleri askerlerden beklenen kişisel yetilerin de farklılaşmasına yol açmıştır. Dominasyon tip otoritenin egemen olduğu askeri örgütlenmelerde disiplinli, cesur, hayatını riske atmaktan çekinmeyen savaşçı tip askerler görürüz. Buna karşılık manipölasyon tip otoriteyi ortaya çıkaran süreçte Janowitz yeni bir askeri tipin de oluşmaya başladığını vurgular. Artık askerlerden sadece fiziksel disipline uymaları ve gerektiğinde savaş alanına atılmaları beklenmez, ayrıca onlardan bilgiyi ve diğer askerleri yönetmeyi, teknolojik sorunları çözebilmeyi, kısaca sivil bir yöneticide bulunacak özelliklere sahip olmaları beklenir. Böylece yönetici (managerial) tip de yeni teknolojilerle birlikte ortaya çıkmıştır. Bu iki tipe ek olarak Soğuk Savaş sonrasında değişen askeri görevler yeni bir tipi daha ortaya çıkarmıştır. Askerler artık barış görevlerinde bulunuyor, farklı kültürler ve hükümetlerle iletişim kuruyor. Bu sebeple onlardan bir devlet adamının ve diplomatın sahip olacağı iletişim yetilerine de vakıf olmaları beklenmektedir. Hajjar bu tipi diplomat, Moskos ise devlet adamı/bilgin(scholar) olarak adlandırmıştır. Tüm bu tipler teknoloji ve değişen savaşın pratikleriyle sıkıca bağlıdır. Bu sebeple son başlıkta savaşın formları anlatılmıştır.

Sanayi ve Fransız devrimleri sonucu teknolojik ve siyasi gelişmeler Ulus Devletleri ortaya çıkarmış ve bu devletler daimi, merkezi ordulara sahip olmuştur. Özellikle barutun etkin bir şekilde kullanımı savaşların daha da ölümcül ve daimi orduların sürdürülmesi için bütün bir ülkenin seferber olmasını sağlamıştır. Cephe savaşları bu süreçte ortaya çıkmış ve en ölümcül şeklini Birinci Dünya Savaşı ile almıştır. Askerler

aylarca cephelerde çatışmış, ordular için ağır top saldırısı altında ilerlemek imkansız hale gelmiştir. Bu sorunu çözebilmek için askeri karar vericiler teknolojiye başvurmuş; kimyasal silahlar, zırhlı araçlar ve hava araçları Birinci Dünya Savaşında denenmiştir. İkinci Dünya Savaşında ise hava gücünün önemi kavranmış, artık kara ordularının kabiliyetlerine havadan tonlarca bomba bırakabilen uçaklar da eklenmişti. Netice Avrupa için koca bir yıkım oldu. Birçok şehir yerle bir olurken milyonlarca insan hayatını kaybetti ve atom bombasının atılmasıyla artık savaşın neden olabileceği yıkım tahayyül edilemez oldu.

Amerika savaştan galip çıktığında nükleer güce sahip tek ülkeydi. Fakat Sovyet Nükleer Programı başarıyla gerçekleşince cephe savaşları ya da topyekun savaşlar yerini önleyici doktrine bıraktı. Artık gelişmiş ülke orduları edindikleri askeri kapasiteleri önleyici bir güç olarak görüyor, diğer ülkelerin farklı coğrafyalardaki etkilerini kırmaya çalışıyordu. Bu süreçte iki süper güç –ABD ve SSCB- silah yarışına girmiş, önemli coğrafyalarda vekalet güçler ortaya çıkmıştı. İki ülke bu vekaletler aracılığıyla dolaylı olarak sürekli bir savaşa girişmişti. Bu savaşta keşif unsurları ciddi önem kazanmıştı. Önleyici savaşta başarılı olabilmenin yegane yolu düşmanın kabiliyetlerini keşfetmek daha doğrusu bilgiyi ele geçirmektir. İnsansız Hava Araçlarının da bu süreçte yavaş yavaş kullanılmaya başlandığını ve günümüz keşif sistemlerinin temelini atıldığını söyleyebiliriz. Soğuk Savaş bittiğinde ise artık Amerika tek güç olarak savaştan çıkmış ve savaş biçimi yeni bir kırılma yaşamıştır. Etnik çatışmalar devam etmiş, Amerika koalisyon güçleri oluşturarak farklı coğrafyalarda operasyonlar düzenlemiştir. Bu yeni görevlerin ortaya çıkması demektir. Artık askerler barış görevlerine katılıyor, farklı ülke ordularıyla müşterek çalışıyor ve gerektiğinde bazı yerel güçlere karşı operasyon düzenliyordu. Neticede gelişmiş ülke orduları farklı coğrafyalarda sürekli bir askeri kontrol düzeni tesis ediyordu. Bu kontrolü sağlamak için Hava Kuvvetleri elzem bir güçtü. İnsansız Hava Araçları tam da bu süreçte önemli hale gelmiş ve birçok farklı coğrafyada aktif olarak kullanılmıştır.

Tüm bu süreçler hem stratejik hem de sosyolojik açıdan irdelenmiştir. Bunlardan belki de en önemlisi Luttwak'ın "Post-Kahramanlık" kavramıdır. Ona göre günümüz savaşları Roma Ordusunun stratejilerini andırmaktadır. Artık ordular kayıp vermekten çekiniyor fakat aynı zamanda kısmi başarılar da elde etmek istiyordu. Neticede sürekli bir kuşatmaya gereksinim duyuyorlardı. Bu aynı zamanda tam seferberlikle yekpare

bir hücumun ve kesin, tek bir zaferin hedeflendiği, kahramanlık dönemi olarak adlandırılan savaş biçiminin de geride bırakılması demekti.

King bu kavramı sosyolojik bir çerçeveye oturtmaya çalıştı. Kahramanlık onun için Dünya Savaşlarında izole olan askerlerin inisiyatif alarak –kahramanlık göstererek- ilerlettiği savaş biçimiydi. Günümüzde ise askerler profesyonel bir şekilde hareket ediyor, görev sırasında inisiyatifi grup olarak alıyordu. Eğitimleri ve koordinasyonları King için bir koreografiyi andırıyordu. Neticede ise post-kahraman asker pratiği ile karşılaşıyorduk.

Bu tarihsel analizden iki önemli savaş formu çıkarabiliriz. Birincisi kahramanlık, ikincisi ise post-kahramanlık. İlki bireysel inisiyatife ikincisi ise profesyonel gruplara dayanan savaş biçimleridir. Günümüz askeri teknolojilerini düşündüğümüzde bunlara ek olarak bürokratik bir savaş biçimini de düşünmemiz gerektiğini savunuyorum. Artık İnsansız Hava Araçları ve diğer sistemler askerlerin şiddeti bürokratik bir ortamdan yönetebilmesini sağlıyor. Dolayısıyla bölümün sonunda üçüncü bir tip olarak Bürokratik Savaş da eklenmiştir.

Üçüncü bölümde yukarıda özetlediğimiz literatürden edinilen kavramların hangi metodolojik çerçeve ile kullanılacağı ve analizin nasıl gerçekleştirileceği anlatılmıştır. Buna ek olarak kullanılan verilere değinilmiş, bu verilerdeki önemli ampirik noktalar açıklanmıştır.

Askeri kurumlar gizliliğe büyük önem verdiği ve toplumun diğer kurumlarına mesafeli durdukları için herhangi bir askeri örgütlenmeye dair veri elde etmek araştırmacılar için zorlayıcı olabiliyor. Dolayısıyla bu araştırmada da kapsayıcı ve derin veri elde etmenin zorlukları göz önünde bulundurularak mevcut literatüre ve kısıtlı verilere uygun bir metodoloji benimsenmiştir. Öncelikle araştırma problemi belli bir teknolojinin askeri örgütlenmeye ve değişen asker pratiklerine etkisine dair olduğu için, Moskos'un önerdiği örgütsel eğilim anlayışı benimsenmiştir. Moskos bu örgütsel eğilimleri tanımlamak için mevcut askeri ilişkileri inceleyip ideal durumlar/tipler oluşturmuştur. Bu tiplerin farklı örgütsel başlıklarda belli ilişkiler ürettiğini öne sürmüş ve kriterler saptamıştır. Örneğin kurum örgüt yapısına uyan bir orduda asker ailelerinin ordunun bir parçası olduğunu öne sürmüş ve asker eşlerinin tıpkı subaylar gibi bir takım cemiyet pratikleri geliştirdiğini savunmuştur. Benzer biçimde subaylara yapılan ödemelerin kurum ve meslek tiplerinde farklılaştığını söylemiştir. Bunlar gibi

kriterler ona mevcut askeri teknolojilerin ve gönüllü askerliğin yarattığı eğilimleri ve bu eğilimlerin ölçüsünü tespit edebilme şansı vermiştir. Eğer bir orduda bahsedilen kriterlere dair farklılaşmalar yaşıyorsa bu belli bir eğilime işaret edecek, ve bu eğilim oluşturulan ideal tipler ışığında tanımlanabilecekti. Bu noktada Moskos askeri örgütlenme içinde tek bir eğilimin söz konusu olmadığını ve farklı alt örgütlenmelerin farklı eğilimlere sahip olabileceğini söylemektedir. Bu sebeple askeri örgütlenmeyi değişik yapılardan oluşan, farklı ilişkiler üreten ve kurum-meslek tipleri arasında bir denge sağlamayı amaçlayan bir kurum olarak ele aldığını söyleyebiliriz. Bu tezde de belli bir askeri teknolojinin askeriye içindeki etkilerini, yarattığı ilişkileri incelediğimiz için benzer bir metot uygulanmıştır. Dört başlıkta örgüte dair belli tipler saptanmış ve tiplerin işaret ettiği ilişkiler açıklanmıştır. Burada amaç İnsansız Hava Aracı teknolojisinin ürettiği, farklılaştırdığı ilişkilerle ideal tipleri karşılaştırmak ve İnsansız Hava Aracı birliklerinin alt örgütlenmelerinin hangi eğilimlere karşılık geldiğinin tespit edilmesidir. Tam da bu noktada analizi sağlayacak verileri açıklamamız gerekiyor.

İnsansız Hava Araçları uzun bir süre gündemden gizlenmeye çalışıldı. Yakın tarihe kadar hangi savaşlarda ne ölçüde kullanıldıklarına dair elimizde yeterli veri yoktu. Örneğin doksanlarda Bosna'da keşif ve hedef saptama amacıyla aktif şekilde kullanılmışlardı. Fakat ateş gücüne sahip olmaları 21. Yüzyıla kalmıştı. İlk defa bir hedefi Hellfire füzesiyle vurduklarında ordu için bir sayfa açılmıştı. Bu süreçten sonra Irak'ta, Afganistan'da, Kuzey Afrika'da aktif olarak kullanıldılar. Bu aynı zamanda ordunun iletişim stratejisinde bir dönüşümü gerektiriyordu. Çünkü bu araçlar yabancı topraklarda ateş gücü kullanıyor, ister istemez uluslararası aktörlerin radarına yakalanıyorlardı. Amerikan ordusu bu noktada kullanımların meşru ve gerekli olduğunu savunabilmek için her geçen gün İnsansız Hava Araçlarını açıklamaya başladı. Aynı zamanda askerlerin de deneyimlerini aktarmasının önü açılmıştı. İnsansız Hava Araçlarının ilk kullanıcıları anılarını yazmaya ve medyaya demeçler vermeye başlamıştı.

Bu tezde de üç emekli askerin anılarından faydalanılmıştır. McCurley ve Martin drone pilotları, Velicovich ise istihbarat analistidir. Droneları uzun yıllar boyunca kullanan McCurley ve Martin, anılarında birliklerine nasıl seçildiklerini, hangi eğitimlerden geçtiklerini ve göreve başladıktan sonra nelerle karşılaştıklarını detaylı olarak

açıklıyorlar. Bu bize İnsansız Hava Aracı kullanıcılarının savaşlarda nasıl roller üstlendiklerini ve İnsansız Hava Aracı örgütlenmesinin arkasındaki insan gücü hakkında önemli bulgular sağlıyor. Velicovich ise farklı bir hikaye anlatıyor. Bir istihbarat analisti olarak, istihbarı dronelarla toplayan Velicovich, dronelerin nasıl bilgi topladığını, hedeflerin nasıl takip edildiğini ve nasıl etkisiz hale getirildiğini detaylıca anlatıyor. Bu aynı zamanda dronelerin farklı askeri örgütlenmelerle nasıl bir ilişki içinde olduğunu gösteriyor ve istihbarat konusunda diğer anılarda karanlık kalan kısımların aydınlanmasını sağlıyor.

Verilerin ilk kısmını bu üç anı oluşturmaktadır, ikinci kısım ise askeri belgelerdir. Bu belgeler Amerikan Ordusu tarafından kamuya açık olarak paylaşılan konsept, eğitim ve uçuş planlarıdır. Konsept belgeleri ana hatlarıyla belli bir askeri örgütlenmenin karakterini ve bu örgütlenmenin belli senaryolarda nasıl hareket edeceğini açıklamaktadır. Eğitim belgeleri ise daha çok İnsansız Hava Aracı için gerekli insan gücünün nasıl sağlanacağı ve askerlerde aranan kriterlere dairdir. Son olarak uçuş planı hava kuvvetlerinin geleceğe dair çizdiği bir yol haritasıdır. Bu belgede gelecekte edinilecek teknolojiler açıklanmış ve bu teknolojilerin nasıl kullanılacağı, hangi kabiliyetleri sunacağı belirtilmiştir.

Bu iki veri setine ek olarak medyadaki demeçler, Amerikan Ordusunun resmi sitesinde paylaşılan veriler de gerekli yerlerde kullanılmıştır. Tüm bu veriler Weberyen ideal tiplerle yorumlayıcı bir bakış açısıyla analiz edilmiştir.

Dördüncü bölümde önceden altını çizdiğimiz başlıklara dair analizler sunulmuştur. Analiz Kurum/Meslek tartışmasıyla başlıyor. Öncelikle bu tartışmanın ana eksenini askerliğin kurumsal değerleri ve bu değerleri etkileyen teknolojik unsurlar olduğunu belirtmemiz gerekir. Moskos için kurum tipinin egemen olduğu ordularda askerler mesleklerine ve kurumlarına karşı özgün bir bağlılık hisseder. Bu egemenlik yerini meslek tipine bıraktığında ise askerlik piyasada ürettiği değerle tanımlanma riskiyle karşı karşıya kalır. İkinci tipin oluşmasındaki etkenlerden biri olarak teknoloji bu tartışmada dönüştürücü bir etkiye sahiptir. Teknoloji sayesinde askeri örgütlenmede şiddet farklı biçimlerde yönetilir. Bunun sonucunda da askerlerin mesleklerine bakış açıları değişebilir. Benzer etkiyi İnsansız Hava Araçlarında da gözlemledik.

İnsansız Hava Aracı teknolojisi sahip olduğu kabiliyetler sayesinde örgüt ve birey seviyelerinde farklı eğilimler ortaya çıkararak, bu iki seviyede gerilimlere neden

oluyor. Askerler drone teknolojisi sayesinde savaşa, diğer askerlere ve düşmanlarına farklı şekillerde bağlanıyorlar. Aynı bağlılık onların özgün bir sorumluluk duygusu geliştirmesine neden oluyor. Günün sonunda ise işlerini kurum tipine yakın tanımlıyorlar. Bu tanımlı anlayabilmek için öncelikle İnsansız Hava Aracı kullanıcılarının savaşa nasıl dahil olduklarını anlayabilmemiz gerekiyor.

İnsansız Hava Araçları kullanıcılarına üç önemli kabiliyet sunuyor. Bunlardan ilki diğer birliktelere destek sağlamaktır. Kullanıcılar farklı askeri grupların ihtiyaçlarına göre sürekli keşif görevleri gerçekleştirebiliyor, sahadaki hedefleri belirleyebiliyor ve gerektiğinde diğer askerlere ateş gücü desteği sağlayabiliyor. Bu aynı zamanda sahada hayatını riske atan askerlere karşı bir bağlılığı beraberinde getiriyor. Başka askerlerin hayatlarını riske attığını ve kullandıkları teknolojinin bu riske etki edebileceğini bilmek drone kullanıcılarını diğer askerlere karşı sorumlu hissetmelerine neden oluyor. Her anıda da buna dair izler görüyoruz. Üç yazar da anılarının farklı noktalarında operasyonlarda karşılaştıklarını kayıpların onları derinden etkilediğini vurguluyor ve bu kayıpları önleyebilmek için daha fazla çaba gösterebileceklerini düşünüyorlar. Benzer bir ilişki düşmanla da kuruluyor. Yine drone teknolojisinin sürekli keşif ve bilgi edinme kabiliyeti düşmanların attığı her adımın takip edilebilmesi anlamına geliyor. Bu noktada drone pilotları bir hedefi aylar boyunca takip edebiliyor. Üstelik bu takip hedefin farkında olmadan, onun günlük yaşamda yaptığı en sıradan eylemlerde bile gerçekleşiyor. Dolayısıyla uzun bir takibin sonunda pilotlar ve operatörler hedef hakkında herkesten çok bilgiye sahip oluyorlar. Hedefin gerçekleştirdiği saldırılar, kabiliyetleri, günlük alışkanlıkları ve hatta akrabaları, aile üyeleri hakkında detaylı veriler elde ediyorlar. Düşmanla kurulan bu ilişki askerlerin düşmanın eylemlerinden de kendilerini sorumlu hissetmelerine neden oluyor. Anılarda bu sorumluluğu hedeflerin kişiliklerine yapılan vurgularda gözlemleyebiliyoruz. Her hedef kendi özgün özellikleriyle aktarılıyor ve pilotlar o hedefin neden etkisiz hale getirilmesi gerektiğini detaylıca anlatıyor. Son olarak, uçuş sırasında sahada olan her detayı görebilen pilotlar, savaşın siviller üzerindeki etkisine de şahit olabiliyorlar. Meskun mahallerde uçan, buradaki çatışmaları yakından takip eden, gerektiğinde ateşgücü sağlayan askerler yine bu mahallerde gerçekleşen sivil kayıplara yakinen şahit oluyorlar. Bunların dışında saldırı sırasında yapılan yanlış hesaplamalar ve beklenmedik olaylar sonucunda bizzat İnsansız Hava Araçları sivil ölümlere neden

olabiliyor. Üç yazar da benzer durumlarla karşılaştıklarını vurguluyor ve bu durumların onların savaşa olan bakış açısını nasıl etkilediğini anlatıyorlar.

Tüm bu hususlardan iki önemli noktayı vurgulamamız gerekir. Öncelikle drone kullanıcıları savaşta önemli bir rol oynadıklarını düşünüyorlar. Hem hedefler hakkında herkesten çok bilgiye sahip olmaları, hem de diğer askerlere sağladıkları destek, savaşın gidişatını etkileyebildiklerini düşünmelerine neden oluyor. Bunun yanı sıra, takip ettikleri hedefi diğer insanlara zarar veren, kötücül bireyler olarak tanımladıkları için de eylemlerini anlamlı buluyorlar. Her iki husus da İnsansız Hava Aracı pilotlarının yaptıkları işi piyasadaki diğer işlerden ayrı görmelerine neden oluyor. Dolayısıyla birey seviyesinde edinilen sorumluluk duygusu Moskos'un Kurum tipine yakın bir uğraşa işaret ediyor. Öte yandan yine Moskos'un kriterlerini incelediğimizde örgütlenme olarak İnsansız Hava Aracı birliklerinin Meslek modeline daha yakın olduğunu görüyoruz. Örneğin pilotlar vardiyalarla çalışıyorlar ve vardiya sonrasında askeri alanlardan çıkıp –diğer siviller gibi- evlerine gidiyorlar. Bu aynı zamanda ailelerinin de kurum modelindeki aileler gibi asker cemiyetinin bir parçası olmadığı anlamına geliyor. Yine pilotlar ödemelerini nakit para şeklinde alıyorlar ve kurum modelindeki gibi parasal olmayan maddi desteklere rastlamıyoruz. Son olarak eğitimleri sırasında edindikleri yetiler kategorize ediliyor, bu da Moskos'un işaret ettiği meslek modelindeki ayrılmış vasıflara karşılık geliyor. Sonuç olarak drone teknolojisinin iki farklı eğilim yarattığını söyleyebiliriz. Birey seviyesinde kurumsal bir yaklaşım üreten drone kabiliyetleri, örgüt seviyesinde mesleki bir örgütlenme oluşturuyor. Bunun sonucunda da bu iki seviyeler arasında gerilimler oluşabiliyor. Bu gerilimleri de askerlerin anılarında vurguladıkları yüksek stres, savaşı arkada bırakamama ve sivil hayatta karşılaşılan psikolojik problemlerle gözlemliyoruz.

Analiz bölümünün ikinci alt başlığını ise otorite ilişkileri oluşturmaktadır. Bu başlıkta İnsansız Hava Aracı teknolojisinin otorite ilişkilerini nasıl dönüştürdüğü, hangi eğilimlere neden olduğu incelenmektedir.

Öncelikle bir askeri örgütlenmeden otoritenin nasıl işlediğini anlayabilmek için o askeri örgütlenmenin yapısını incelememiz gerekiyor. Bu noktada veri kaynağımız Amerikan Ordusu olduğu için, başlıkta öncelikle Amerikan Ordusunun yapısı anlatılıyor. Savunma Bakanlığına bağlı Genelkurmay Başkanlığının altında örgütlenen bu ordu farklı coğrafyalarda bulundan ve farklı fonksiyonlara sahip komuta merkezleri

ile idare ediliyor. Örneğin CENTCOM Orta Doğudaki birlikleri komuta etmek, buradaki operasyonları yürütmek ve bölgedeki müttefik güçlerle müşterek çalışmakla yükümlü. Yine bu komuta merkezlerinin Genelkurmay Başkanlığına bağlı olduğunu vurgulamamız gerekir. Komuta merkezlerinin altında ise farklı muharip güçler belli bir koordinasyonla çalışırlar. İnsansız Hava Araçları tüm bu yapıda farklı askeri grupları birbirine bağlayan, iletişim kurduran ve birlikler arası desteği sağlayan birlikler olarak karşımıza çıkar. Bu sebeple İnsansız Hava Araçlarının oluşturduğu otorite ilişkilerini iki farklı alanda inceleyebiliriz, birincisi drone birliklerinin diğer askeri birliklerle ve genel ordu örgütlenmesiyle kurduğu ilişki, ikincisi ise drone birliklerinin içindeki otorite ilişkileri.

Drone birliklerinin yapısı, büyüklüğü kullanılan uçakların boyutuna, kabiliyetlerine göre değişiyor. Tezde elde edilen veriler Dördüncü ve Beşinci Grup İnsansız Hava Araçlarına ait. Bir başka deyişle, Hava Kuvvetleri envanterinde bulunan, filolardan oluşan İnsansız Hava Araçları birlikleri analizimin odak noktasını oluşturuyor. Bu birliklerde üç veya daha fazla uçağın yanı sıra bu uçakları kontrolle yetkili pilotlar, sensör operatörleri ve uçakların bakımını gerçekleştiren bakımcılar bulunur. Filonun yapısı klasik askeri hiyerarşiye uymaktadır. Fakat operasyonlar sırasında yine drone kabiliyetleri otoritenin farklı biçimlerde uygulanmasına neden olur. Bunlardan belki de en göze çarpanı pilot ve sensör operatörleri arasındaki ilişkidir. Pilotlar subay, sensör operatörleri ise astsubaylardan seçilir. Bu iki grup arasında diğer birliklerde çizilen net sınır drone görevlerinde muğlaklaşır. Pilotlar her görevde sensör operatörlerinin desteğine ihtiyaç duyar. Bu da takım çalışması demektir. Her iki grup da birbirlerinin görevlerine saygı duymak zorundadır ve görev sırasında oluşacak aksaklıklar konusunda rütbe gözetmeksizin birbirlerini uyarmakla yükümlüdürler. Dolayısıyla diğer birliklerden farklı olarak sert bir otorite ilişkisinden ziyade, takım dayanışmasına dayanan bir otoriteyle karşılaşırız. Bu dayanışmayı gerekli kılan etkenlerden biri drone teknolojisinin yazılı kurallarla işliyor oluşudur. Diğer bir ifadeyle, askerler bu teknolojiyi kullanırken angajman kurallarına harfiyen uymalı ve her eylemlerinde bürokratik süreçlere göre hareket etmelidirler. Otoritenin bir ayağını da, bu sebeple, yazılı kurallar oluşturmaktadır. Özellikle hava saldırılarından önce ve sonra saldırının koşulları, hedefler, angajman kuralları askeri hukuka hakim görevliler

tarafından tetkik ediliyor ve çoğu kez saldırının gerçekleşmesi bu koşulları denetleyen bürokratik otoritenin onayına bağlı oluyor.

İnsansız Hava Araçlarının diğer birliklerle kurduğu ilişkide ise iletişim teknolojileri ve istihbaratın önemli olduğunu görüyoruz. Drone birlikleri diğer birliklerle Tactical Chat adı verilen yazışma programı üzerinden haberleşiyor. “Yaklaşık gerçek zamanda” iletişim sağlayan bu program edinilen bilginin en alt rütbeliden en üst rütbeliye kadar kısa bir şekilde yayılmasına olanak sağlıyor. Bu aynı zamanda yanlış bilginin yayılma riskini de beraberinde getirdiği için yine program içerisinde yazışma odalarını denetleyen, buraları düzenleyen ve bakımını sağlayan farklı askeri grupların oluştuğunu görüyoruz. Artık otorite siber ortama taşınmış oluyor. Programı kullanan herkese bu otorite ilişkilerinin siber ortamda nasıl sürdüreceğine dair kurallar Tactical Chat adlı askeri dökümanda belirtiliyor. Yine programın savaş senaryolarında nasıl bir fayda sağlayacağı detaylı bir şekilde anlatılıyor. Buradaki en önemli husus, programın bilginin yayılımındaki etkisidir. Bölümün sonunda bu yayılımın otoriteyi nasıl etkilediği anlatılmıştır. Fakat öncesinde istihbarat birliklerinden de bahsetmemiz gerekiyor. İnsansız Hava Araçlarını kullanarak istihbarat edinen bu birlikler, Velicovich’in anılarında belirttiği gibi, diğer birliklerden bağımsız bir şekilde çalışıyorlar. İnsansız Hava Araçları onlara sürekli keşif imkanı sağladığı için, kesintisiz olarak istihbarat topluyor ve aynı anda bu istihbaratı işliyorlar. Bu süreç birçok teknik bilgiyi gerektirdiği için bu birliklerin tamamen otonom bir şekilde çalıştıklarını görüyoruz. Sadece kritik hedeflere yapılacak operasyonlar öncesi bürokrasiden onay bekleyen bu birlikler drone teknolojisinin istihbarat konusunda yarattığı önemli dönüşümleri açıkça gösteriyor.

Literatür kısmında Feld’in otorite ve bilgi arasında kurduğu ilişkiye değinmiştik. İnsansız Hava Araçlarının da otoriteye olan etkisini bu ilişki üzerinden okumamız mümkün. Gelişmiş iletişim araçları, sürekli keşif kabiliyetiyle birleştiğinde alt rütbelilerin belki de tarihte hiç olmadığı kadar bilgiye sahip olmalarını sağlıyor. Üstelik burada bilgi sadece yukarı yönlü bir yol izlemiyor, aynı anda yatay olarak da yayılıyor. Bu da Martin’in belirttiği gibi alt rütbedekilerin savaşın gidişatı konusunda bir fikir edinmelerine neden oluyor. Yine Martin’in anılarında gördüğümüz gibi, askerler emirleri sorgulayabilir hatta Martin’in yaptığı gibi inisiyatif alabiliyorlar. Öte yandan gelişmiş iletişim teknolojileri üst rütbelilere de daha çok müdahale olanağı

sağlıyor. Birliklerin konumundan, çatışma sırasında nasıl hareket edeceklerine kadar her unsura müdahale edebilmeleri drone teknolojisinin sağladığı yüksek çözünürlüklü görüntüler ve iletişim teknolojileri sayesinde mümkün oluyor. Dolayısıyla bir diğer gerilimin de bu otorite ilişkilerinde oluştuğunu söyleyebiliriz. Bu gerilimlere drone teknolojisinin hukuki boyutunu eklediğimizde, bürokratik bir savaş örgütlenmesiyle karşılaştığımızı söyleyebiliriz ki bu çıkarım savaş başlığı altında önemli çıkarımlara ulaşmamızı sağlıyor.

Otorite ilişkilerini farklılaştıran süreçler aynı zamanda asker tiplerini de önemli ölçüde etkiliyor. Literatür incelememizde üç tip askerliğe değinmiştik. Bunlar sırasıyla Kahraman-Savaşçı, Yönetici ve Bilgin/Devlet Adamı tipleridir. Üç tipi de birbirinden ayıran hususlar şiddetin yönetimine dair geliştirdikleri farklı yöntemlerden oluşur. Bu yöntemleri de belirleyen teknolojik ilerlemeler ve askeri örgütlenmedeki dönüşümlerdir. İnsansız Hava Aracı teknolojisini incelediğimizde her tipe dair farklı elementlerin bulunduğunu görebiliyoruz. Fakat bu elementlerin yeni teknolojilerle yeniden tanımlandığını vurgulamamız gerekir.

Öncelikle savaş alanını sürekli inceleyebilen ve gerektiğinde şiddet uygulayabilen drone operatörleri sanılanın aksine riskten azade değiller. Hem anılarda hem de farklı Psikoloji çalışmalarında gördüğümüz üzere drone askerleri savaş alanında gördükleriyle ve yüklendikleri sorumlulukla psikolojik ve ahlaki risklerle karşı karşıya kalıyorlar. Dolayısıyla riskin tanımı yeni teknolojilerle beraber tekrardan tanımlanabilir. Bu da drone teknolojisinin kahraman tipiyle olan ilişkisinin mevcudiyetini kanıtladığı gibi bu tipin sınırlarını da farklılaştırdığını gösteriyor. Yine benzer şekilde yönetici tipiyle ilişkili olarak da drone teknoloji askerlerin bilgiyi ve bilginin işlenmesi süreçlerini yönetme vasfına sahip olmasını gerektiriyor. Son olarak da görevlerin tamamı yabancı ülkelerde gerçekleştirildiği için askerlerin belli bir diplomatik yetkinliğe, Uluslararası İlişkilere sahip olması bekleniyor. Bize göre tüm bunlar drone teknolojisi ile beraber yeni bir tip askerliğin mevcudiyetine işaretir.

Siber-araştırmacı (Cyber-Surveyor) olarak tanımladığımız bu tipi öncekilerden ayırtıran nokta savaşa teknoloji aracılığıyla bürokratik bir ortamdan dahil olmalarıdır. Bu askerlerden beklenen artık bilgiyi süratle işlemeleri, aynı anda birçok görevi gerçekleştirebilmeleri, teknolojiye hakim olmaları ve gerektiğinde hesaplamalar yapıp

şiddeti yönetebilmeleridir. Bu tip aynı zamanda drone teknolojisinin savaşa nasıl etki ettiğine dair de ipuçları veriyor.

Savaşın değişen formlarından bahsederken vurguladığımız noktalardan biri savaşta askerlerin değişen konumlarıydı. Teknolojinin gelişmesiyle beraber askerler takım halinde hareket etmeye başlamış, eski savaşların izole, yalnız askerleri yerlerini iyi eğitilmiş, koordinasyona önem veren askerlere bırakmıştı. Bu sürecin drone teknolojisi ile devam ettiğini görmekteyiz. Drone birlikleri ile diğer birlikler operasyonları müşterek çalışarak yürütüyor, bu noktada savaş birçok askerin katılımı ve koordinasyonu ile gerçekleşiyor. Fakat sahada gerçekleşen çatışmalardan ayrı olarak drone teknolojisi kullanıcılarını fiziksel olarak savaş alanından ayırıyor, onların fiziksel açıdan risksiz, bürokratik bir ortamda çalışmalarını sağlıyor. Askerler savaş alanındaki bütün değişkenleri hesaplayabiliyor ve günün sonunda uygulayacakları şiddetin nasıl sonuçlanacağını kestirebiliyorlar. Tüm bu süreç yazılı angajman kurallarına, rasyonel hesaplamalara; kısaca bürokrasiye dayandığı için drone teknolojisinin bürokratik bir savaş pratiği ortaya çıkardığını görmekteyiz. Artık savaş siber bir alanda, fiziksel risklerden muaf, zamansal ve mekansal sınırlardan azade bir şekilde gerçekleşebiliyor. Bu sayede birçok coğrafyada İnsansız Hava Araçları sürekli bir şekilde uçuyor, toplumları inceleyip düşmanlara dair algoritmalar üretebiliyor.

Yine de bu yeni savaş pratiğinde askerlerin önemli roller üstlendiğini kabullenmemiz gerekir. İnsansız Hava Araçları tamamen askerlerin kontrolünde uçuyorlar ve henüz tam anlamıyla bir otonomiye sahip değiller. Yine de Hava Kuvvetlerinin yayınladığı uçuş planında görmekteyiz ki, gelecekte Amerikan ordusunun edinmek istediği en önemli teknolojilerden biri otonomi. Dolayısıyla gelecekte askerlerin denklemden yavaş yavaş çekildiği, makine-aktörlerin öne çıktığı savaş biçimlerine şahit olabiliriz. Siyasetten sivil-asker ilişkilerine, birçok farklı toplumsal alanda böyle bir savaşın sonuçları irdelenmesi gereken hususlar olarak karşımıza çıkıyor. Ayrıca otonom teknolojilerin yukarıda bahsettiğimiz örgütsel gerilimlere de bir cevap olacağını söyleyebiliriz. Bu durumda otonom karar alabilen araçları, sadece kritik kararlarda denetleyecek askerlerin bahsettiğimiz kurumsal bağlılığa ve sorumluluklara sahip olup olmayacağı araştırılması gereken önemli sorulardan bir tanesidir. Son olarak, şiddet yönetiminin tamamen makine otonomisine terkediliği bir dünyada barışçıl siyasi

özömler üretmek için elimizde hangi teşviklerin kalacağını bugün­den sorgulamamız gerekiyor.



## APPENDIX B: SAMPLE TEZ İZİN FORMU / THESIS PERMISSION FORM

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Adı / Name : Burak Yakup  
Bölümü / Department : Sosyoloji / Sociology

TEZİN ADI / TITLE OF THE THESIS (İngilizce / English): The Effect of Drone Technology on Military Organization and Forms of Soldiery

TEZİN TÜRÜ / DEGREE: Yüksek Lisans / Master ☒ Doktora / PhD ☐

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