

# The Intersection between Military Leadership and Bioethics

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To deliver the future force the Nation needs, we must develop leaders who can out-manuever, out-think, and out-innovate our adversaries, while building trust, understanding, and cooperation with our partners... Our leaders must also be able to successfully navigate ethical gray zones where absolutes are elusive.

—General Martin Dempsey

## Introduction

In the exercise of their roles and responsibilities, military forces face exceptional challenges and risks. These challenges often transcend the mere act of risking their lives in the defense of national interests, encompassing a broader spectrum that tests not only their bravery but also their ethical integrity and leadership. In the context of prolonged armed conflicts, military personnel are often immersed in extreme situations. These situations, in some cases, have led to their involvement in unacceptable incidents: human rights violations, cooperation with illegal armed groups, acts of corruption, abuses of authority, and, on many occasions, accusations of sexual violence. This complex reality highlights the critical importance of a military leadership strongly grounded in ethical principles. Although these incidents do not represent the general conduct of military forces and cannot be classified as systemic, their occurrence causes concern and negatively affects the public perception of military institutions. These challenges underline the complexity of military endeavors and the importance of maintaining high ethical standards and conduct in high-pressure situations.

Numerous historical examples illustrate the gravity of certain conduct in contexts of conflict and authoritarianism. Among these cases were the My Lai massacre during the Vietnam War in which American soldiers murdered hundreds of unarmed Vietnamese civilians;<sup>1</sup> the Abu Ghraib prison scandal, where acts of torture perpetrated by US military personnel against Iraqi prisoners were documented;<sup>2</sup> as well as the atrocities committed by Russia in Ukraine.<sup>3</sup>

In Latin America, recent history also mirrors similar problems. During the military dictatorship in Argentina (1976–1983) and the dictatorship in Chile (1964–1990), numerous cases of forced disappearances and torture were

reported.<sup>4</sup> In the context of the internal armed conflict in Peru, there was evidence of incidents of sexual violence and forced sterilizations.<sup>5</sup> Furthermore, in Colombia, the events known as “false positives” (described in more detail later) highlight the gravity of these human rights violations.<sup>6</sup>

These atrocities have impelled the same military forces, academics, and investigators to reflect on their causes. In this regard, different hypotheses have been raised ranging from shortcomings of the recruitment process, lack of comprehensive military education, and the absence of empathy to the questioning of military leadership at all levels. This article will focus on the role of military leadership and bioethics to explain what has happened and propose ideas to improve existing processes. To do this, the relationship between bioethics and complex thinking within military leadership at a global scale will be explored to propose a model that reduces the likelihood that unfortunate events such as those mentioned above will occur again.

### **Bioethics, Complex Thinking, and Military Leadership at a Global Scale**

Bioethics is not just a moral issue and is not limited exclusively to the scope of medical and health sciences. Rather, bioethics demands decisive actions to address fundamental and emerging problems concerning mankind and the ecological systems upon which it depends.<sup>7</sup> In a more general sense, global bioethics explores ethical issues related to science and technology surrounding their use and impact on society as well as to human rights and justice.<sup>8</sup> Additionally, bioethics addresses other issues related to the complexity of decision-making in an interconnected world and how culture, politics, and social norms influence bioethical perspectives and how these perspectives may vary in different communities and regions.<sup>9</sup>

Military leadership, meanwhile, is directly correlated with character, trust, professionalism, decision-making, and the idea of highly efficient teams—a *leader has the skill to inspire and influence to increase the productivity of their unit, fulfill a mission, or pursue a vision*.<sup>10</sup> Therein is the definition of military leadership: the ability to influence, inspire, and propel to achieve an objective even at the expense of their own lives. Military leadership can be considered a means to achieve an end, but it is essentially a noble means that requires of those who exercise it training rooted in values, well-defined individual characteristics, and rigorous education throughout the military career.

From the military perspective, global bioethics and complex thinking raise the specific issue of leadership and the implicit obedience expected of military

personnel.<sup>11</sup> This is especially important in light of how the application of new military technologies during military operations impacts not only warring parties but entire communities and the environment as well.<sup>12</sup> Although global bioethics has a legal component, it also requires, from a military perspective, a different and more extensive approach than that required by international humanitarian and armed conflicts laws, starting with military education. The table below shows the main components of global bioethics and their relation to military leadership.

Component of Global Bioethics	Description	Relation to Military Leadership
Complex systems	<p>It recognizes the interconnection of various systems.</p> <p>It expands the approach from individual ethics to the implications on global health.</p> <p>It emphasizes the importance of the broader human context.</p>	<p>Military leaders must navigate the complex dynamics in conflicts and maintaining peace.</p> <p>Leadership requires a holistic understanding of the impact of military actions.</p>
Expansion of bio-ethical considerations	<p>It addresses transnational and transcultural problems.</p> <p>The concerns include global health disparities and environmental sustainability.</p> <p>It implicates ethical management of technologies with global impacts.</p>	<p>Military decisions must consider international relations and global security.</p> <p>Actions have wide-ranging consequences beyond the immediate military objectives.</p>
Addressing ethical challenges on a global scale	<p>It addresses problems such as climate change, pandemics, and the loss of biodiversity.</p> <p>It incorporates diverse knowledge systems for a sustainable life.</p> <p>It advocates for an ethics that includes non-human entities and the earth.</p>	<p>Military operations may respond to conflicts induced by the climate or provide humanitarian aid during pandemics.</p> <p>It reflects a broader ethical responsibility similar to global bioethics.</p>
Decision-making in complex situations	<p>It implies making decisions that consider the well-being of all stakeholders.</p> <p>It requires understanding and respecting diverse perspectives.</p> <p>It balances the needs and rights of others with the mission's objectives.</p>	<p>Military leaders make decisions that can have a profound impact on others, including civilians, enemy combatants, and their own troops.</p> <p>Respect for others, including those outside their own group, is a fundamental principle of military ethics.</p> <p>Leaders must balance the mission's objectives with the rights and well-being of others.</p>

**Table. Components of global bioethics and their relation to military leadership**

Source: Authors

It is evident that military leadership and bioethics are complex, intertwining fields. For example, military leaders face unique challenges related to use of force, protection of non-belligerent populations, and the treatment of prisoners of war.<sup>13</sup> These challenges require an agile *decision-making* process that harmonizes the actions inherent to the *fulfillment of the mission with the main bioethical principle* of justice, beneficence, and nonmaleficence.<sup>14</sup>

Therefore, military leadership education must incorporate bioethics training from a military perspective to provide its members with the ability to know themselves, self-regulate, and be empathetic to others, cultivating their emotional intelligence by strengthening their *logos*, i.e., “the extent the speaker’s argument is logical and compelling.”<sup>15</sup> Furthermore, military education should provide members with the tools and theoretical bases to strengthen their character, so that their beliefs, principles, and values always guide their actions, cultivating their *ethos*, i.e., “trustworthiness of the speaker’s character—their credibility,” and lastly, military education should enable members to become aware of their *pathos*, i.e., “the extent the speaker is able to arouse emotion in the audience,” thus providing them the charisma to influence others.<sup>16</sup> Figure 1 represents a bioethical approach to the military leadership model.

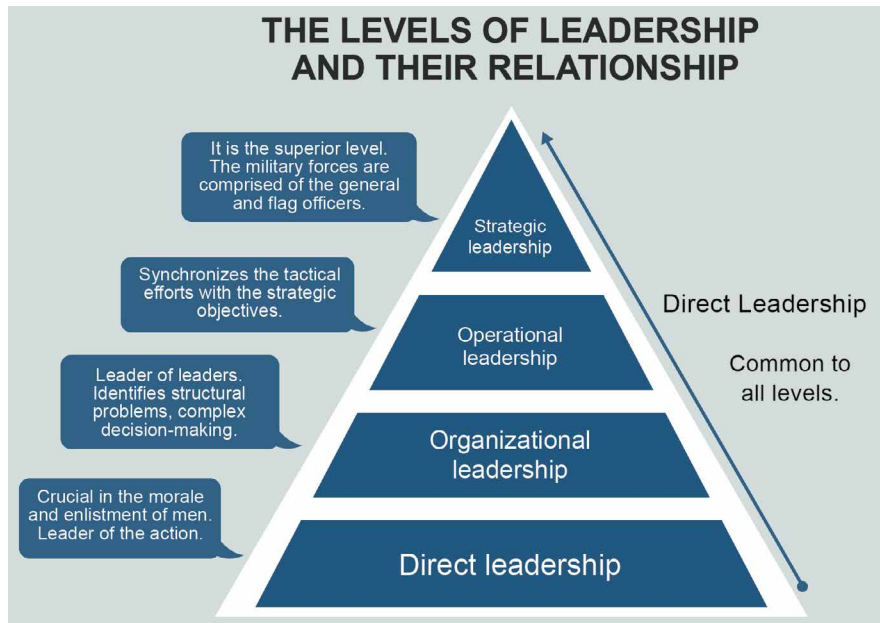


**Figure 1. A bioethical approach to the military leadership model**

Source: Authors

## Training for Military Leadership

A training process is needed to integrate bioethics into the military leadership paradigm. Studies by John Adair demonstrate that leadership qualities can be developed or learned through continuous comprehensive education and specialized training, processes that largely include autonomous learning and continuous evaluation.<sup>17</sup> Adair asserted that establishing a leadership education program requires an appropriate strategy that encompasses clear selection processes, development of customized programs providing practical training under strict supervision, implementation of a mentoring program, and a long-term commitment from senior management, given that the results will not be seen in the short term. Thus, this article proposes an integrated system that lies in a symbiotic relationship between education, training, and experience.<sup>18</sup>



**Figure 2. The levels of leadership**

Source Authors

The specific levels of education, training, and experience should correspond to the echelons of responsibility that are acquired throughout a military career. These levels are described very clearly in US Army doctrine publication ADP 6-22, *Army Leadership and the Profession*, as direct, executive, and strategic leadership.<sup>19</sup> Each of these levels requires certain attributes and competencies that are developed throughout a career, based on the relationship between leaders and their subordinates, scope of responsibility, and nature of the task or mission. Direct

leaders focus on a specific task, executive leaders focus on both the task and the fulfillment of a mission through subordinate units led by subordinate leaders, while strategic leaders apply a global, regional, national, and social perspective to the organizations that they lead. However, the differences between executive and strategic leaders are not necessarily determined by levels but rather by roles. Thus, military leadership education programs must begin with the characteristics, attributes, and competencies that are needed in direct leadership and advance to what is needed for executive and strategic leadership.

Military leadership is inherent to the action of command, and whoever exercises command is expected to have, in addition to legitimacy (i.e., being legally vested with the authority to command), the training and qualities of a military leader. In other words, commanders are much more than the people responsible to the chain of command for the performance of their unit and the fulfillment of the mission; they are the moral barrier that prevents their unit from going astray or being corrupted.

### ***Direct Leadership***

Direct leaders are a vital piece in the morale and enlistment of their units. They generate direct actions, assign tasks, solve problems, encourage, give guidance, and galvanize their forces to give their best to successfully fulfill the mission. Direct leadership is first-line leadership, and its main characteristic is that it occurs face to face (virtually or in person), which suggests that no matter the level a leader occupies, they will always exercise this type of leadership in one way or another.

The training of the direct leader must have a basic conceptual approach where the definitions, models, values, and duties are discussed. But it must place an emphasis on structural topics such as character, emotional intelligence, effective communication, teamwork, and decision-making. The action of leading is a process that entails competencies of self-management and technical capabilities as well as specific knowledge capabilities.<sup>20</sup> This long journey to military leadership begins from entering training schools and, according to Robert Wray, is based on four principles: study, mentoring, practice, and observation of other leaders; with self-knowledge and resilience needing to be added as well.<sup>21</sup>

### ***Executive Leadership***

The executive leader acts on the organization and operational plane. The organizational leader focuses their training on organizational theory and the exercise of military leadership. This allows them to have sufficient tools to identify and solve structural problems, make complex decisions, manage relationships with others,

and motivate and influence both their peers and subordinate leaders. Thus, they can generate necessary organizational changes, improve the environment, and strengthen an organizational culture that adapts to the new challenges that frame the present and future of the institution.<sup>22</sup>

Meanwhile, the operational leader, as Milan Vego states in his article *On Operational Leadership*, synchronizes tactical efforts with strategic objectives.<sup>23</sup> Therefore, it is vitally important that operational commanders are selected solely based on their potential, skills, and combat experience and not on their political connections or managerial skills. The ultimate point, according to Vego, is that commanders are not managers; they must be, above all, combatants. Their main area of expertise is in operational art, which gives meaning to actions at the tactical and operational level. This indicates that the operational leader fully knows the strategic approach and intention of their commander, and with this they prepare, instruct, influence, and stimulate their subordinate units; manage the necessary resources; and communicate their orders in a timely fashion to strictly fulfill the assigned mission.<sup>24</sup>

Operational leadership complements organizational leadership and is geared toward officers who are assuming unit commands and becoming members of a general staff. The operational leader must fully comprehend joint and inter-agency operations, given the complexity of contemporary conflicts.<sup>25</sup>

### ***Strategic Leadership***

Strategic leadership is the higher level. In military forces it essentially engages general and flag officers, their advisors, and members of their general staff. The scope of strategic leadership entails a mentality that understands global and local trends as well as the norms, policies, and social movements that shape the environment in which leadership is carried out and decisions are made.<sup>26</sup> In other words, it points out the shortest or least burdensome path to achieve the sought objectives.<sup>27</sup>

In the military, strategic leadership guides and integrates multiple organizational level units that perform a wide range of roles. It influences several thousand or hundreds of thousands of people. These leaders assign resources, communicate the strategic vision, and prepare their commands and all military forces for future missions. Strategic leaders give shape to the institutional culture by ensuring that their directives, policies, programs, and systems are ethical, effective, and efficient.<sup>28</sup>

Strategic leaders apply all the basic competencies of the direct and executive leader, adapting them to complex realities and strategic conditions.<sup>29</sup> In other words, they adjust to the political guidelines, the budgetary limitations, and the domestic and international context. Strategic leaders are the builders of change

and transformation as they have a long-term approach to plan, prepare, execute, and evaluate. At this level of leadership the vision is created, internalized, shared, and driven persistently until achieved.

## Discussion

Though isolated events, the reprehensible actions of some members of the military forces have blurred the professionalism and honor of the majority. There is agreement that their origin is multicausal and due to an erroneous understanding of the concept of due obedience, but everything indicates that one of the most prominent failures was in the leadership and that probably the most significant responsibility is at the level of direct military leadership.

Direct leadership is that which a superior exercises over their subordinates and is the person responsible for the action. *A direct leader influences, motivates, and inculcates in their members a moral conduct that is in line with their principles and values.* Neither the My Lai massacre, nor the Abu Ghraib scandal, nor the abuses committed by military bodies in Latin America during dictatorships or the so-called false positives reflect values or military ethics. These cases illustrate dysfunctional personality traits in those who held command and leadership, gravely deviating from what is expected of a military leader. What can be said is that the firmness of the direct leader, understood as fortitude, consistency, and moral strength, faltered: *That the moral wall that should have been formed by the commander of the implicated units never existed or was easily collapsed* and that the members engaged in those abominable actions; if there was anything they lacked, it was principles and values.

Direct leadership is exercised at all levels and echelons of the command chain. At the strategic level, the general or the admiral exercises it with their team of advisors and with their general staff. Likewise, the commander of a force or a task force exercises it with subordinate commanders; therefore, their level of leadership is executive. In any case, the levels of leadership have a hierarchical flow, which starts with the direct, continues with the executive, and reaches the top with the strategic. Each level has the duty and obligation to supervise and control the lower levels. What the My Lai and other cases above denote is that this control was not enough.

At the strategic level, the interpretation of public security and defense policies can lead to weighing operational successes strictly by their results, which in turn can promote the type of leadership that leads to ethical failures. Military leadership often faces ethical dilemmas, especially in the tension between fulfilling the mission and the moral implications of the actions needed for it. This situation may lead to *loyalty syndrome*, where loyalty prevails over ethical discernment. Historical



examples such as the My Lai massacre and the Abu Ghraib scandal demonstrate the grave consequences of this tension, highlighting failures in leadership, values, and cohesion as well as abuses derived from erroneous interpretations of the law or policies.

In Latin America, military leadership has faced significant ethical dilemmas and challenges in human rights, especially during periods of dictatorship and internal conflicts. Among these challenges are enforced disappearances, torture, and extrajudicial executions, reflecting a deterioration in ethical standards. A clear example of this is the case of the false positives in Colombia, which highlight the gravity of the human rights violations. Said scandal involved the armed forces killing civilians, who were subsequently falsely identified as enemy combatants, thus inflating the statistics of military success.

The last point is that of military forces operating in their own national territory against terrorist and criminal organizations made up of fellow nationals. For this, bioethics education must be paramount, not only for the legal implications but also for the ethical ones. It is for this reason that bioethics for military education is so important. Examining the issues of military leadership and due obedience, the use of new military technologies, and the consequences of military operations on warring parties, communities, and the environment is a fundamental part of military education and training.<sup>30</sup>

## **Conclusions**

Although they have been isolated cases, some members of the military forces have committed grave abuses and transgressions of the fundamental rights of the population and noncombatants. These violations have multiple causes but can be mostly traced back to insufficient military leadership training as a root cause.

The commander-leader, especially at the direct leadership level, inspires, persuades, motivates, and influences their troops to fulfill a mission; but, in addition—and no less importantly—*they serve as a moral barrier that brings discipline and maintains order*. Direct leadership is also exercised by the strategic and executive leaders who have a clear responsibility of supervision over subordinate levels.

The intersection of bioethics with military education is fundamental. Service members need training to reflect on the meaning of being a public servant in arms, capable of sacrificing their own life for the well-being of their fellow citizens. These ethical reflections of moral conduct should in turn influence their actions as they operate with the understanding that their actions dynamically affect the earth's fragile ecosystems, and that life is sacred.

The bioethics training of military leaders and future commanders is essential to ensure they are prepared to make ethical decisions in complex situations.<sup>31</sup> It could be an interesting proposition to design a program to educate the future officers on bioethics as part of their comprehensive training.

Lastly, it is worth highlighting that leadership in the military forces, beyond a mere management of resources or execution of strategies, must be exercised with an unwavering commitment to ethical and moral principles. The historical cases of human rights violations mentioned in here were not simply operational failures, but rather they reflect a profound crisis of military leadership.

This crisis requires a paradigm shift in military education and training, where ethics and global bioethics become fundamental pillars, ensuring that all military actions align with the highest standards of morality and respect for human dignity. □

## Notes

1. Claude Cookman, "An American Atrocity: The My Lai Massacre Concretized in a Victim's Face," *Journal of American History*, Vol. 94, No. 1., (United Kingdom: Oxford University Press, 2007), 154–162; Douglas Linder, "An Introduction to the My Lai Courts-Martial," *SSRN Electronic Journal*, (2007), <https://famous-trials.com/mylaicourts>.

2. The Center for Public Integrity, "Abu Ghraib prison scandal," The Center for Public Integrity, (10 December 2008), <https://publicintegrity.org/politics/abu-ghraib-prison-scandal-2/>; "U.S. Abuse of Iraqi Detainees at Abu Ghraib Prison," *American Journal of International Law*, Vol. 98, No. 3, (United Kingdom: Cambridge University Press, 2004), 591–596, doi:10.2307/3181656.

3. Pjotr Sauer, "UN finds further evidence of Russian war crimes in Ukraine," *The Guardian*, (21 Oct 2023), <https://www.theguardian.com/world/2023/oct/21/un-finds-further-evidence-of-russian-war-crimes-in-ukraine>.

4. Diana Kordon, et al., "Forced Disappearance: A Particular Form of Torture," In *Caring for Victims of Torture*, American Psychiatric Association, (1998), 203–227; Karinna Fernández, et al., *Chile and the Inter-American Human Rights System*, (United Kingdom: University College London, 2016), <https://ssrn.com/abstract=3062556>.

5. Nusta P. Carranza Ko, "Making the Case for Genocide, the Forced Sterilization of Indigenous Peoples of Peru," *Genocide Studies and Prevention, An International Journal*, Vol. 14, No. 2, (2020), 90–103; Isabella Martin, "Alcance Jurídico de Los Falsos Positivos Frente al Derecho Internacional Humanitario," (Legal Scope of False Positives in Light of International Humanitarian Law) (Colombia: Universidad Militar Nueva Granada, 2015), <http://hdl.handle.net/10654/7068>.

6. Isabella Martin, "Alcance Jurídico de Los Falsos Positivos Frente al Derecho Internacional Humanitario." (Legal Scope of False Positives in Light of International Humanitarian Law)

7. Giovane Mendieta Izquierdo & Juan María Cuevas Silva, "Bioética de La Salud Pública," (Bioethics of Public Health) *Revista Latinoamericana de Bioética*, (Colombia: Universidad Militar Nueva Granada, 2017), <https://revistas.unimilitar.edu.co/index.php/rlbi/article/view/2929>.

8. Sergio Néstor Osorio-García & Nelson Fernando Roberto-Alba, "Bioética global: entre normatividad biológica y normalización social," (Global bioethics: between biological regulations

and social normalization) *Trilogía*, (Colombia: Universidad Militar Nueva Granada, 2022); Renzo Pegoraro, “Priorities in the Teaching of Ethics in a Globalized World,” In *Global Education in Bioethics*, (New York: Springer, 2018), 57–67.

9. Garzón Diaz, “New Analysis Categories of Global Bioethics,” *Rev Latinoam Bioet*, Vol. 21, (2021), 7-10.

10. Milan Vego, “On Operational Leadership,” *JPME Today*, Vol. 77, No. 2, (Washington DC: National Defense University Press, 2023), [https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-77/jfq-77\\_60-69\\_Vego.pdf](https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-77/jfq-77_60-69_Vego.pdf); British Army, *Army Leadership Doctrine AC72029*, (United Kingdom: Army Leadership Publications, 2023), [https://www.army.mod.uk/media/24335/20210923\\_army-leadership-doctrine-web\\_final.pdf](https://www.army.mod.uk/media/24335/20210923_army-leadership-doctrine-web_final.pdf); Karel Montor, *Fundamentals of Naval Leadership* (Maryland: Naval Institute Press, 1984).

11. Steven Coleman & Nikki Coleman, “Military Ethics.” In *Encyclopedia of Global Bioethics, 1915–1923*, (New York: Springer, 2016).

12. Ángel Gómez de Ágreda, “Ethics of autonomous weapons systems and its applicability to any AI systems,” *Telecomm Policy*, Vol. 44, No. 3, (2020).

13. Grant Broussard, et al., “Challenges to ethical obligations and humanitarian principles in conflict settings: a systematic review,” *Journal of International Humanitarian Action*, Vol. 4, No. 15, (2019), <https://doi.org/10.1186/s41018-019-0063-x>.

14. Nancy W. Dickey, M.D., *Ethical Guidelines and Practices for U.S. Military Medical Professionals*, Defense Health Board, (2015), <https://health.mil/Reference-Center/Reports/2015/03/03/Ethical-Guidelines-and-Practices-for-US-Military-Medical-Professionals>.

15. Sean Hannah & Peter Jennings, “Leader Ethos and Big-C Character,” *Organizational Dynamics*, Vol. 4., No. 1, (2013), 8-16, <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1266&context=usarmyresearch>.

16. Sean Hannah & Peter Jennings, “Leader Ethos and Big-C Character.”

17. John Adair, *How to Grow Leaders: The Seven Key Principles of Effective Leadership Development* (London: Kogan Page Publishers, 2005).

18. Christopher Hayes, “Developing the Navy’s Operational Leaders: a critical look,” *Naval War College Review*, Vol. 61, No. 3, (2008), 77–108, <https://digital-commons.usnwc.edu/>.

19. General James C. McConville, *ADP 6-22 Army Leadership and The Profession, Department of Army*, (2019), <https://armypubs.army.mil/>.

20. Capitán de Navío (CG) Daniel Héctor Nuñez, “La Formación en Liderazgo,” (Leadership Training) *Revista Naval*, No. 62, (2009), <https://revistanaval.com.uy/revista/172/numero-62> .

21. Robert Wray, *Saltwater Leadership: A Primer on Leadership for the Junior Sea-Service Officer* (Maryland: Naval Institute Press, 2013).

22. Thomas G. Cummings, *BUAD 304: Organizational Behavior and Leadership* (South Carolina: USC Marshall School of Business, 2020), <https://web-app.usc.edu/soc/syllabus/20203/14721.pdf>.

23. Milan Vego, “On Operational Leadership.”

24. Christopher Hayes, “Developing the Navy’s Operational Leaders: a critical look.”

25. Christopher Hayes, “Developing the Navy’s Operational Leaders: a critical look.”

26. Dr. John O. Burdett, “Tomorrow’s Leadership Will Be Different,” *Orchestra*, (2018), <https://www.transearch.com/Downloads/top-talent-1.pdf>.

27. Federico Aznar Fernández-Montesinos, “Reflexiones Sobre El Liderazgo Estratégico Militar Del Siglo XXI,” (Reflections On The Strategic Military Leadership of the 21st Century)

ieee.es, (2017), [https://www.ieee.es/Galerias/fichero/docs\\_analisis/2017/DIEEEA07-2017\\_Reflexiones\\_LiderazgoIIx\\_FAFM.pdf](https://www.ieee.es/Galerias/fichero/docs_analisis/2017/DIEEEA07-2017_Reflexiones_LiderazgoIIx_FAFM.pdf).

28. General James C. McConville, *ADP 6-22 Army Leadership and The Profession*.

29. General James C. McConville, *ADP 6-22 Army Leadership and The Profession*.

30. Edgar F. Puryear, *American Admiralship : The Moral Imperatives of Naval Command* (Maryland: Naval Institute Press, 2005).

31. Grant Broussard, et al., "Challenges to ethical obligations and humanitarian principles in conflict settings: a systematic review."

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