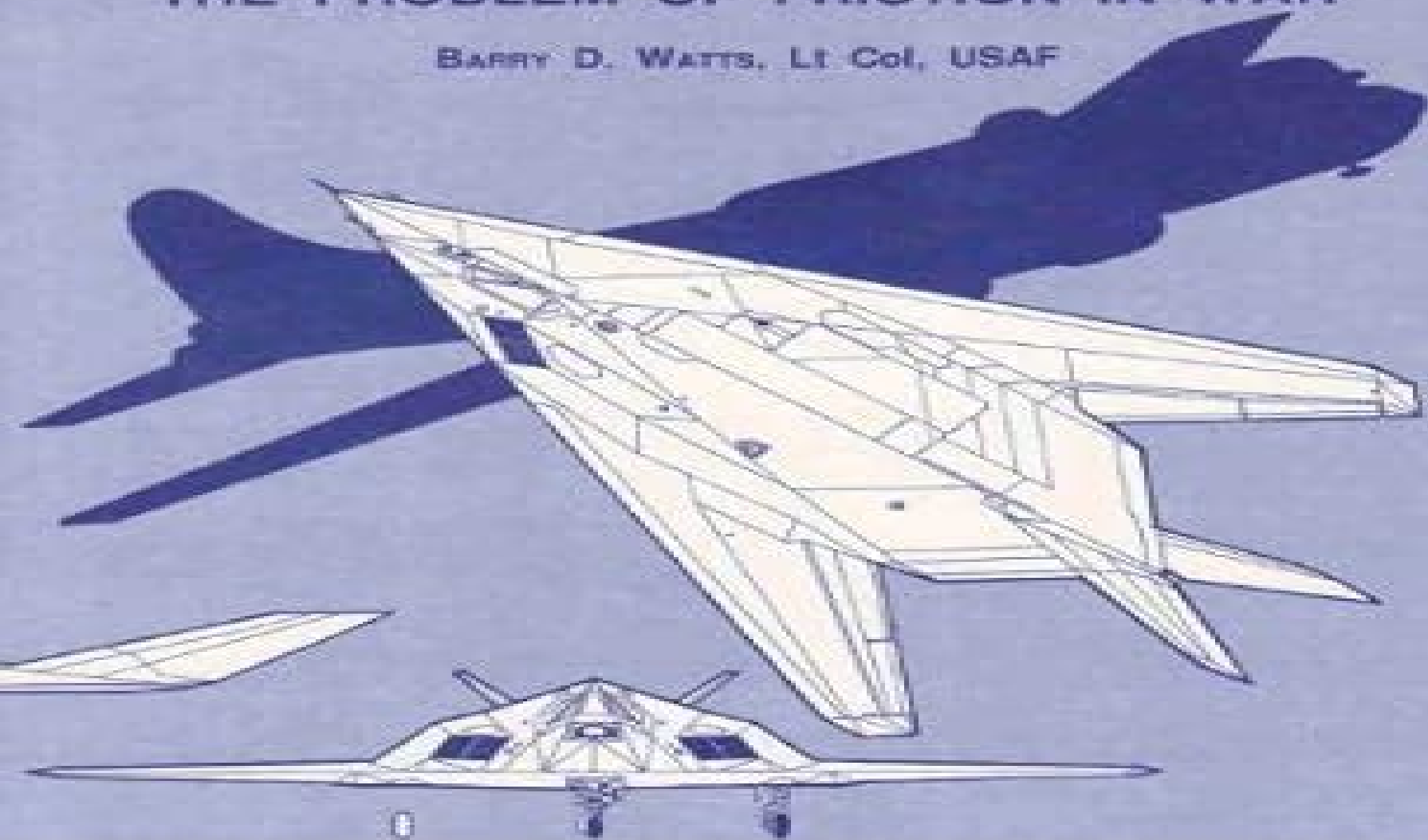


THE FOUNDATIONS OF U.S. AIR DOCTRINE

THE PROBLEM OF FRICTION IN WAR

BARRY D. WATTS, Lt Col, USAF



The Foundations Of Us Air Doctrine

**Air University Press,U. S.
Military,Department of Defense
(DoD),Barry D. Watts,U. S. Air Force
(USAF)**

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The Foundations of U. S. Air Doctrine - the Problem of Friction in War Barry Watts, Ltd Barry D Watts, 2012-08-01 FROM THE AUTHOR This study revolves around friction meaning the ubiquitous uncertainties and inescapable difficulties that form the atmosphere of real war More specifically it attempts to utilize the Clausewitzian concept of general friction as a basis for assessing and if necessary reshaping the foundations of US air doctrine This critical application of friction gives rise to four primary conclusions 1 The key assumptions underlying mainstream US doctrine for conventional air warfare have not evolved appreciably since Air Corps Tactical School ACTS theorists elaborated their theory of precision industrial bombardment during the 1930s 2 Judged by their essential premises and logic post Hiroshima theories of deterrence are little more than an updating for the nuclear age of ACTS bombardment doctrine 3 Both ACTS bombardment doctrine and deterrence theory appear fundamentally flawed insofar as they omit the frictional considerations that distinguish real war from war on paper 4 Reflection upon the extent to which friction pervades the elemental processes of actual combat suggests that the range of situations in which greater numbers or superior weapons guarantee victory is relatively limited even in the age of thermonuclear weapons the outcomes of battles still turn more often than not on the character and intelligence of a few brave individuals The first step in giving substance to these claims is to explain what the central beliefs of US airmen traditionally have been The reader should be warned however that I have approached the writings on war of airmen like Major General Haywood S Hansell Jr and nuclear strategists like Bernard Brodie as well as those of Carl von Clausewitz himself from the perspective of two interrelated questions What overriding assumptions about war did these individuals embrace And what image of war as a total phenomenon is bound up in their assumptions In large part answering these questions is a matter of historical inquiry and to be candid I have been far less concerned with writing history for its own sake than with using the past to illuminate the problems of the present I therefore leave it to the reader to judge whether I have managed to do so without injuring the historical record Air University Press

The Foundations of US Air Doctrine

Barry D. Watts, 1984 This study analyzes airpower doctrine from the viewpoint of Clausewitzian friction The study concludes that American airpower doctrine has changed very little since the 1930s and that it is fundamentally flawed

The Foundations of U.S. Air Doctrine Air University Press, U. S. Military, Department of Defense (DoD), Barry D. Watts, U. S. Air Force (USAF), 2017-12-10 This study revolves around friction meaning the ubiquitous uncertainties and inescapable difficulties that form the atmosphere of real war More specifically it attempts to utilize the Clausewitzian concept of general friction as a basis for assessing and if necessary reshaping the foundations of US air doctrine This critical application of friction gives rise to four primary conclusions 1 The key assumptions underlying mainstream US doctrine for conventional air warfare have not evolved appreciably since Air Corps Tactical School ACTS theorists elaborated their theory of precision industrial bombardment during the 1930s 2 Judged by their essential premises and logic post Hiroshima theories of

deterrence are little more than an updating for the nuclear age of ACTS bombardment doctrine 3 Both ACTS bombardment doctrine and deterrence theory appear fundamentally flawed insofar as they omit the frictional considerations that distinguish real war from war on paper 4 Reflection upon the extent to which friction pervades the elemental processes of actual combat suggests that the range of situations in which greater numbers or superior weapons guarantee victory is relatively limited even in the age of thermonuclear weapons the outcomes of battles still turn more often than not on the character and intelligence of a few brave individuals The first step in giving substance to these claims is to explain what the central beliefs of US airmen traditionally have been The reader should be warned however that I have approached the writings on war of airmen like Major General Haywood S Hansell Jr and nuclear strategists like Bernard Brodie as well as those of Carl von Clausewitz himself from the perspective of two interrelated questions What overriding assumptions about war did these individuals embrace And what image of war as a total phenomenon is bound up in their assumptions In large part answering these questions is a matter of historical inquiry and to be candid I have been far less concerned with writing history for its own sake than with using the past to illuminate the problems of the present I therefore leave it to the reader to judge whether I have managed to do so without injuring the historical record Contents 1 INTRODUCTION Notes 2 DOUHET AND MITCHELL Douhet s Image of War Unrestrained Offense Mitchell s Aerial Knights Notes 3 THE FIRST US STRATEGIC AIR WAR PLAN Daylight High Altitude Precision Bombardment Doctrine AWPDP 1 The Image of War in AWPDP 1 Notes 4 THE POLICY AND STRATEGY OF DETERRENCE Brodie s Assumptions Brodie s Image of All Out War in the Missile Age A Paradox of Deterrence Theory Notes 5 A CLAUSEWITZIAN CRITIQUE The Core Beliefs of Mainstream US Air Doctrine Some Ramifications Friction Collective Risk Notes 6 FRICTION IN 20TH CENTURY WARFARE Part 1 Friction in the Combined Bomber Offensive World War II Weather October 1943 Information Doctrinal Rigidity Enemy Countermeasures Big Week and the Problem of Industrial Impact Assessments March and April 1944 Friction as a Weapon Epilogue in Korea Railway Interdiction August 1951 May 1952 Part 2 Friction in the Missile Age The Not So Delicate Balance of Terror The Emergence of Friction in Brodie s Thought The Cuban Missile Crisis Notes 7 TOWARD A LESS MECHANISTIC IMAGE OF WAR US Air Doctrine and Laplacian Determinism Cartesian Hypotheses Uncertainty Undecidability The Human Cost of War Combat Psychology as Context Some Consequences of Embracing a More Organic Image of War Learning from History Nurturing Military Genius Exemplars for Future Wars Friction as a Weapon and Entropy Summing Up Notes APPENDIX General Eaker s Presentation of the Combined Bomber Offensive Plan to the Joint Chiefs of Staff SELECTED BIBLIOGRAPHY *The Dynamics of Military Revolution, 1300-2050* MacGregor Knox, Williamson Murray, 2001-08-27 The Dynamics of Military Revolution aims to bridge a major gap in the emerging literature on revolutions in military affairs suggesting that there have been two very different phenomena at work over the past centuries military revolutions which are driven by vast social and political changes and revolutions in military affairs which military institutions have directed although usually with great

difficulty and ambiguous results By providing both a conceptual framework and a historical context for thinking about revolutionary changes in military affairs the work establishes a baseline for understanding the patterns of change innovation and adaptation that have marked war in the Western World since the thirteenth century beginning with Edward III s revolutionary changes in medieval warfare through the development of modern Western military institutions in seventeenth century France to the cataclysmic changes of the First World War and the German Blitzkrieg victories of 1940 This history provides a guide for thinking about military revolutions in the coming century which are as inevitable as they are difficult to predict AU Press, Your Air and Space Power Publisher, 2003 ,2003 **Air University Review** ,1986-03 **Airpower**

Pioneers John Andreas Olsen,2023-01-15 Airpower Pioneers studies twelve especially influential airmen detailing their impact on the evolution of the United States Air Force USAF Rather than focus on command in a series of air campaigns this book describes the personal qualities and careers of people who distinguished themselves first and foremost by advancing airpower theory doctrine and strategy and in certain cases by implementing significant organizational changes in the USAF structure Some held important positions during wartime but except for a few who excelled in both combat and peace those selected for inclusion in this volume made their main contributions to advancing aerospace power away from the front line as planners organizers educators and strategists The future of aerospace power requires airmen not only to push the limits in combat but also to emphasize publicly and frequently what is special and vital about airpower The distinctive characteristics of airpower speed range flexibility precision and lethality have improved with every new generation of aircraft and weapon systems The history of modern warfare is full of empirical evidence of airpower s relevance Looking ahead the main challenge for air forces all over the world is to match advances in technology with new ideas All air forces need visionary men and women whose reach exceeds their grasp who are determined to adapt to new security and defense realities rather than adhere to romanticized ideas of yesteryear and whose organizational skills ensure successful implementation of new ideas despite inevitable resistance to change **Marshall's Great Captain** Kathy Wilson,2024-04-23 On May 3 1943

dozens of airplanes could be seen flying in and out of Royal Air Force Bovingdon Airfield near London England Among the aircraft seen that day was a B 24D bomber named Hot Stuff which carried the Commanding General of US Forces in Europe Lieutenant General Frank M Andrews the officer charged with formulating a plan to invade the European continent Speculation was that General George C Marshall had called Andrews back to Washington DC leading many to believe that Marshall had another promotion in store for Andrews Tragically Andrews would never arrive While attempting to land in Iceland the bomber crashed into the side of a mountain with no survivors other than the tail gunner Andrews s personal papers were also destroyed In Marshall s Great Captain Lieutenant General Frank M Andrews author Kathy Wilson details Andrews s extraordinary life and career The first biography dedicated to the namesake of Joint Base Andrews this book sheds a light on Andrews s crucial role in orchestrating US involvement in World War II as well as the professional relationship and

rapport that Andrews and Marshall shared Drawing on extensive research Wilson raises Andrews s legacy to its legitimate place within the annals of both air power and World War II history and posits that there is a high probability that Andrews rather than Dwight D Eisenhower was Marshall s first choice for the office of Supreme Allied Commander Marshall recounted that Andrews was the only one he had a chance to prepare for such a command How Wars Are Won and Lost John A. Gentry,2011-11-10 This provocative book seeks to answer a most crucial and embarrassing question concerning the U S military why the United States is so often stymied in military confrontations with seemingly weaker opponents despite its superpower status This fascinating book examines a question that continues to puzzle soldiers statesmen and scholars why do major powers including the ostensible superpower United States repeatedly perform poorly against seemingly overmatched adversaries And what can they and the United States do to better achieve their military objectives How Wars are Won and Lost Vulnerability and Military Power argues that beyond relying solely on overwhelming military might the United States needs to focus more on exploiting weaknesses in their adversaries such as national will resource mobilization and strategic miscues just as opposing forces have done to gain advantage over our military efforts The author tests the vulnerability theory by revisiting six conflicts from the Philippine War of 1899 1902 to the ongoing actions in Iraq and Afghanistan showing again and again that victory often depends more on outthinking the enemy than outmuscling them

Fifty Shades of Friction Mark Clodfelter, Fighting with the Soviets Mark J. Conversino,1997 Conversino s story is as interesting as it is unfamiliar and succeeds in opening up Frantic s many dimensions including the personal as well as the political strategic and operational His revelations regarding the interactions between American servicemen and Ukrainian Russians are especially valuable and underscore the immense difficulties of implementing alliances at the grass roots level Dennis Showalter author of Tannenberg Clash of Empires *Monthly Catalog of United States Government Publications* ,2004-07 Monthly Catalogue, United States Public Documents ,1986 **Courage and Air Warfare** Mark K. Wells,2014-03-05 Colonel Wells investigates the nature of aerial warfare and the men who took part The book analyzes aircrew selection reaction to combat adaptability to stress morale leadership and combat effectiveness and compares the efforts of the US Eighth Air Force and RAF Bomber Command **Defense Policy in the Reagan Administration** William P. Snyder,1997-03 By substantially increasing defense budgets the Reagan Admin RA did more than merely underwrite improvements in military forces it undertook initiatives that changed both the image and reality of America s national defense This book examines the Strategic Defense Initiative the 600 ship Navy and the hefty increase in the Defense budget Critics and supporters of the RA do agree on one point the RA came into office with the intent of strengthening defense policy How well the RA succeeded in that effort and the cost of that success are debated here *Planning for War at Sea* Evan Wilson,Paul M. Kennedy,2025-02-04 How have navies contemplated possible enemies How did they learn or fail to learn once operations began How does this analysis inform today s planning for future conflict These questions guide the noted

historians and naval strategists who contributed to Planning for War at Sea A central theme is the regular failure of navies best laid plans Covering four centuries of naval warfare the chapters illustrate the challenges all navies faced when considering possible enemies Even during the Age of Sail ships were among the most expensive and long term national endeavors Navies therefore planned well in advance for future wars usually without knowing their adversaries or how they would fight them at sea Building a capable navy requires sustained investment in naval infrastructure long before the fighting starts In the final chapters naval strategists expand on this historical analysis to address how effectively or ineffectively today s three leading navies Russia China and the United States have configured themselves during the post Cold War era in preparing for future great power conflict This collection is an important work for strategists scholars and policymakers

The (Real) Revolution in Military Affairs Andrei Martynov, 2019-08-01 The liberal world order a euphemism for American global hegemony is crumbling at an accelerating pace While its collapse is tangible the outcome of such a collapse remains a matter of speculation and public debate The US is desperately seeking to preserve the status quo which rests primarily upon recognition of its military supremacy For millennia warfare has been a driving force behind changes in the geopolitical status of power configurations whether of peoples states or empires and it remains so today Accordingly short of actual warfare the assessment modeling of relative military power plays an inordinate role in the determination of national status Models of emerging changes in military capability range from relatively simple to extremely complex ones Viewing the evolution of the current system of international relations outside the framework of actual rather than propaganda driven military capabilities is not only useless it is dangerous since states mistaken assessment of their own and other states military power can lead to misadventures and catastrophic mistakes The United States efforts to preserve not just its dominance but the perception of its dominance are bound to fail for many important reasons none more important than what is often misidentified in past American military theoretical hypotheses about the future of warfare known generically as the Revolution in Military Affairs RMA This book explains why those hypotheses are failing and will continue to fail and addresses the real RMA In the end technological development in weaponry as a response to tactical operational and strategic requirements defines not only a nation s geopolitical status but determines the global order Assessments of military capacity if reality based serve as good predictors of the level of volatility in international relations and the level of violence globally This book gives an insight into the evolution of weapons and the way they influenced international relations in the 20th and 21st centuries It also defines Revolution in Military Affairs as manifested via policy politics and technology It reviews some models which are useful in assessing the current geopolitical situation This book also tries to give a forecast of the future development of warfare and the ways in which it is going to change the whole system of the international relations hopefully towards a new geopolitical equilibrium

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Shield, Winged Sword 1950-1997 Bernard C. Nalty, 2003-11 Describes and analyzes in the context of national policy and international rivalries the evolution of land based air power since the United States Army in 1907 established an Aeronautical Division Provides a clearer understanding of the central role of the Air Force in current American defense policy

Unveiling the Magic of Words: A Report on "**The Foundations Of Us Air Doctrine**"

In a world defined by information and interconnectivity, the enchanting power of words has acquired unparalleled significance. Their ability to kindle emotions, provoke contemplation, and ignite transformative change is truly awe-inspiring. Enter the realm of "**The Foundations Of Us Air Doctrine**," a mesmerizing literary masterpiece penned with a distinguished author, guiding readers on a profound journey to unravel the secrets and potential hidden within every word. In this critique, we shall delve in to the book is central themes, examine its distinctive writing style, and assess its profound effect on the souls of its readers.

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