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THE HERITAGE OF DOUHET

Bernard Brodie

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The following paper is intended as an early chapter in a book under preparation. It may prove useful to those who have read Douhet either not at all or too long ago to remember the specific points of his philosophy.



## THE HERITAGE OF DOUHET

There is perennial value in recalling both the vision and the limitations of vision in the few incisive minds which have grappled with problems of military strategy. For in our own more limited ways we are all trying to see the future, particularly with respect to war and peace, and we can often absorb lessons from the predictive successes and failures of our predecessors which have little directly to do with the specific ideas they advocated.

General Giulio Douhet certainly possessed the largest and most original mind which has thus far addressed itself to a consideration of air power. At a time when other air enthusiasts (except Mitchell) were timidly venturing the thought that air power might someday be as important an adjunct to the army as the cavalry, Douhet was boldly enunciating those propositions which were to put future air forces forever in his debt as the fountainhead and almost sole source of their governing philosophies.

Douhet fathered only a few basic ideas, almost all of them evident in his first significant publication. His later writings, particularly his polemic ones, did little more than reiterate them -- with some additional clarification but with little

expansion or implementation.<sup>1</sup> He was much too busy pressing home those ideas upon a generally hostile audience -- and paying penalties of varying severity, including a prison sentence, for his heresies -- to have the time or stimulus within his comparatively short lifetime to develop and refine his thoughts, and very likely he lacked the temperament. His demonstrable errors are therefore considerable, and sometimes very crude. But his insights are more impressive than his failures. And since time has rescued him from his first and gravest error -- his gross overestimate of physical effects per ton of bomb dropped -- by introducing the atomic bomb, Douhet's thoughts are actually more valid today than they were during his lifetime.

And if that were not sufficient reason for studying Douhet, there is also the point that he has had enormous and enduring influence on air forces generally but especially on that of the United States. That is not to say that Douhet has been widely read among air force officers, but neither has Karl Marx been read by any large portion of those myriads of people of all political persuasions whose thinking has been deeply influenced

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1. Douhet's principal writings are: Il Dominio dell' Aria: saggio sul' arte della guerra aerea (Rome: Stab. Poligr. per l'Amministrazione della guerra, 1921); (2nd ed. with addition of Part II, Rome: Istituto Nazionale Fascista di Cultura, 1927); "La Guerra del' 19--," Rivista Aeronautica (March 1930), pp. 409-502. The above works, along with a monograph of 1928 and a long polemical article published in the Rivista Aeronautica for November 1929, have been translated into English by Dino Ferrari and published in a single volume with the title of The Command of the Air -- which is actually the original title of only one of the works included (New York: Coward McCann, 1942). All subsequent page references in this paper to Douhet's writings will be to the Ferrari translation.

by his writings. By whatever medium they were introduced the Douhet convictions, as the late General H. H. Arnold admitted, provided the ideology of the U.S.S.S.F. prior to World War II,<sup>2</sup> and since that war his ideas have been not so much modified (let alone rejected) as absorbed in a larger development. Possibly that is only because the basic Douhet ideas are self-evidently reasonable and true, which would account for an independent development of the same or similar ideas among other reasonable men. But the facts remain that military men outside the air forces have not in general accepted these ideas, and that even among military airmen the true home and citadel of the Douhet philosophy appears to be the United States.

Douhet's influence on the United States Air Force has indeed been far greater than that of its own great founder, Brigadier General William Mitchell. Mitchell's fame rests more on his qualities and conduct as a man and officer than on his stature as

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2 A French translation (1932) of a substantial part of the 2nd edition of The Command of the Air was in turn translated into English in 1933 and put into mimeographed form for officers of the United States Army Air Corps. General Arnold has the following to say about Douhet's influence in the U.S.A.A.C. in the 'thirties': "As regards strategic bombardment, the doctrines were still Douhet's ideas modified by our own thinking in regard to pure defense. We felt, out in the 1st Wing, that we were doing much to furnish the practical tests for, and proofs of, the Maxwell Field theories. A different attitude from Douhet's toward bomber escort and a very different view of percision bombing resulted." Global Mission (New York: Harpers, 1949), p. 149. Incidentally, it is difficult to see how the views of American airmen could have been significantly different from Douhet's on either of the issues mentioned. Douhet straddled the fighter-escort-of-bombers question by assuming somewhat different positions at different times and generally settling with the idea that it was desirable but not necessary. On the question of bombing accuracy, he has almost nothing to say except that aerial bombing can never be as accurate as naval gunfire -- a conclusion which has certainly not yet been disproved.

a military philosopher. He certainly saw the future much more clearly than did those senior officers in the Army and Navy whom he fought and who finally broke him. He was full of ideas, many of them brilliant and original, but they were largely dedicated to the proposition that the airplane is a far better missile carrier than any other vehicle, especially the battleship. He was capable of developing as early as 1918 the idea of creating an airborne parachute division, for which he actually obtained General Pershing's approval. He also inspired the development of very large bombs. But his thinking was tactical rather than strategic, and events have so fully confirmed and vindicated him that his writing is today completely dated in a way that Douhet's is not. In the book which comes closest to presenting Mitchell's military thought, there are only a very few pages on what might be called the strategic use of air power, and those pages are pure Douhet.<sup>2a</sup>

The popular idea of Douhet as "the Mahan of air power" stimulates a comparison of these two distinguished figures in 20th century military thinking. Apart from the fact that Douhet

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<sup>2a</sup> See his Winged Defense (New York: Putnam's, 1925), especially pp. 126-128. It must be acknowledged that although Mitchell published several books and many articles and left some unpublished manuscripts, writing was decidedly not his forte. He is better portrayed by his biographers than by himself. An excellent biography of him is that by Isaac Don Levine, Mitchell, Pioneer of Air Power (New York: Duell, Sloan & Pearce, 1943).



and Mahan were both gifted with incisive and logical minds which they applied to the use of military power, they could hardly have been more unlike in temperament and in their approaches to their respective fields of interest. Admiral Mahan was essentially a scholar and historian. His gaze was fixed firmly on the past, and those aspects of naval strategy which interested him most were those which had remained relatively unaffected by the transition from sail to steam and those other colossal technological changes which had occurred during his lifetime. His treatise entitled Naval Strategy, published in 1911, was only a summarization of the points he had made and developed in the voluminous histories which had brought him fame.<sup>3</sup> He quite ignored the submarine, which was already a highly perfected instrument at the time of his death in December 1914, and in fact his dictum that "the guerre de course [commerce raiding] can never be by itself alone decisive of great issues" -- a view which he derived mainly from his study of the War of 1812 -- contributed, because of his great prestige, to the general underestimation on the eve of World War I of what the submarine could do. Mahan significantly

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3. The ubiquitous references to A. T. Mahan's most famous work almost invariably -- and significantly -- omit the dates which are an essential part of the title: The Influence of Sea Power Upon History, 1660-1783 (Boston, Little Brown, 1890). The other of his major historical works are The Influence of Sea Power upon the French Revolution and Empire, 1793-1812, 2 vols., 1892; The Life of Nelson, 2 vols., 1897; Sea Power in its Relations to the War of 1812, 2 vols., 1905; and The Major Operations of the Navies in the War of American Independence, 1913, -- all published by Little Brown. And of course his very first published work, in 1883, was the little-noticed The Gulf and Inland Waters, one volume of a three-volume history (the other two by different authors) of the naval aspects of the American Civil War.



acknowledged as "my best military friend" the early 19th century publicist on strategy, Jomini, original codifier of the principles of war and source of the maxim that in war "methods change but principles are unchanging."

To Douhet such a maxim was utter nonsense. The changes which he saw taking place around him in the methods of waging war to his mind changed the basic character of war, and he was simply not interested in the principles which presumably transcended these changes in character. For that reason he was totally uninterested in military history prior to World War I. "It is always dangerous to keep looking backward when marching forward, and still more so now when the path is full of sharp detours."<sup>4</sup> Even with respect to World War I, which he had fought in and which had provided at the time he was writing the only real experience in the military use of aircraft, he was moved in one instance to exclaim: "In the name of charity, let us forget the last war!"

Nevertheless, he wrote an appreciation of that war which in its penetration and its grasp of the larger issues is a model of historical insight and which is eminently worth the reading quite apart from any special interest in air power.

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4. Douhet (Ferrari trans.), p. 205.

5. This appreciation comprises the first two chapters of his monograph, originally published in 1928, which is included in the Ferrari translation under the title "The Probable Aspects of the War of the Future." The relevant chapters comprise pp. 148-177. Douhet actually began in 1915 to keep a war diary, subsequently published, and it was his outspoken criticism of his seniors during World War I which resulted in his conviction and imprisonment. He completed his one-year sentence before the disaster of Caproette, which was later officially construed as confirming his charges. In 1920 a military court formally reversed the original conviction.

To Douhet one of the essential lessons to be derived from the first World War was an awareness of the degree to which general staffs comprised of technically proficient and industrious men could be isolated from the realities of battle and of national interest, not only before the war but even while they were waging it. On these and related matters he wrote with an eloquence and a passion to which the more sedate Mahan (who probably would have shared his views) would never have succumbed. Incidentally, his observations on the naval aspects of the war would have been applauded by Mahan for their penetration and sober balance.<sup>6</sup>

With respect to the military use of aircraft, Douhet was of the simple opinion that World War I provided no guidance whatsoever for the future. Unfortunately, he reached a quite different conclusion about the land campaigns of that war, a conclusion which was proved by the events of World War II to be the second cardinal error in his philosophy. To Douhet the first World War demonstrated that on land the defensive had gained a marked and permanent ascendancy, and he concluded that since this result had inevitably followed from the great increase in fire power in the hands of the infantry, the future, which must continue to improve that fire power, must confirm and expand that ascendancy. One of the things which he overlooked was the efficacy of aircraft when used tactically, a natural result of his preoccupation from first to last with what we now

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6. Douhet, pp. 171 ff.

call strategic bombing. Perhaps also this error (if in the long run it really proves to be such) reflects his shortcomings as a student of military history, including for that matter the history of World War I. He is not the only student of World War I, either lay or professional, who deduced the same lesson from the experience of that war without somehow taking into account such events as the remarkably successful German offensive of March 1918, without benefit of tanks or of any great numerical preponderance, or the quite fluid nature of the Eastern Front during most of the period that that front was active.

Douhet's heavy insistence upon the inevitably static nature of the front in any future war has helped perpetuate the legend that his primary if not exclusive interest in advocating his ideas was the defense of Italy, which after all has all its land frontiers in the Alps. Marshal Petain stressed this point in a friendly preface to the French edition of Douhet's major work, and one of the most intelligent and objective of American interpreters of Douhet to date rests his interpretation predominantly on this view.<sup>7</sup> It is true that Douhet as a patriotic Italian and an officer in his country's armed forces would be especially concerned with the application of his ideas to the case of Italy. It is also true that in one place he protests that his "first thought" is with the situation of Italy and that his theories "therefore should not be considered applicable to

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7. Louis A. Sigaud, Air Power and Unification (Harrisburg: Military Service Publishing Co., 1949), pp. 21f., 44, 47.

all countries." And he adds: "In all probability, if I were specifically considering a conflict between Japan and the United States, I would not arrive at the same conclusions."<sup>8</sup>

The exception he makes is in itself most telling. Apart from the qualifying phrase "in all probability," he is citing the case of two powers on opposite sides of the globe from each other, one of which was also the richest country in the world. With the limited ranges of aircraft in his day (and for that matter in World War II as well), he would have had to be a fool as well as a fanatic to want to apply his ideas without great modification to a war between the United States and Japan. Besides, as he pointedly remarks in more than one place, the United States is the only world power rich enough to be predominant in more than one element of military strength. Finally, when he wrote his imaginative account of a future war which would test his ideas, The War of 19--, the two countries which he postulates to be at war with each other are France and Germany, with Italy playing no part at all. Douhet's mind and ideas were much too big to suffer the confines of a single country's military problems, particularly of a minor power like Italy.

Douhet's position in the history of strategic theory is relatively an extreme one -- more so than Mahan's, who emphasized the influence of sea power on military history without insisting that it was always governing, and who would have been quite

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8. Douhet, p. 252.

ready to admit that that influence had been more often than not felt through its effect on the land battle. But unlike most extremists, including many of his own followers, Douhet both preached and practiced the strict discipline of logical reasoning. He indignantly repudiated all charges, expressed or implied, that he was visionary in his outlook. He described research into the war of the future as something which "cannot be accomplished except by exercise of the imagination within the confines of rigid logic," and insisted that the solutions "must be worked out by logical progression from cause to effect." In another place he says: "The picture I have drawn is naturally an imaginative one. Since it is an attempt to visualize the future, it could not be otherwise. But because I have painted with the colors of present realities and drawn according to logical reasoning, I think the future will be very much like my picture."<sup>9</sup>

And it is true that, especially in his polemical writings, he appears as much sharper and more disciplined a reasoner than his opponents. He is adept at exposing and exploiting the illogicality of the opposing argument. If there are basic errors in the Douhet thesis -- and World War II, which was the "war of the future" of his constant reference certainly revealed such errors -- they are to be discovered not in the deductions he drew from his premises but in the premises themselves, in what he called "present realities." We have already mentioned what

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9. Ibid., pp. 146, 203, 235.

the major ones were: his extreme over-estimate of physical effects per ton of bombs dropped and his utter confidence in the great and permanent ascendancy of the defensive in ground warfare. Curiously, on these premises he was rarely challenged.

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In its broad outline, Douhet's philosophy is of course well known. His argument that in the age of airplanes an adequate national defense requires first of all an air force capable in case of war of winning "command of the air" was novel and controversial at the time he promulgated it but is hardly so any more. The proposition which is distinctively Douhet's is, however, one on which controversy remains very much alive. He went on to argue that because of the very nature of air power, a force capable of winning "command of the air" is thereby capable of ensuring victory all down the line. In other words, command of the air is both necessary and sufficient for an adequate national defense. The bulk of his theory is concerned with what he means by "command of the air" and how it is attained, and with demonstrating its all-conclusive effects.

To Douhet it is not that other things like ground and naval superiority do not matter, it is rather that these other things automatically follow from command of the air. The nation which has lost that command swiftly loses the means of regaining it -- through the destruction by bombing of her aircraft industries --



and immediately thereafter or even concurrently loses the means of mobilizing and maintaining her armies and navies, if indeed she does not previously lose the will to fight of her populace. The ascendancy of the defensive in ground warfare guarantees that there will be no decision prior to that which is won by the air arm, which for that matter comes with incredible swiftness. Thus the maxim of Douhet which he would have govern the allocation of military resources: Resist on the ground (and on the sea) in order to mass for the offensive in the air.

Thus, unlike so many of his followers, Douhet does not deny the utility of armies and navies. Their work is in fact indispensable.<sup>10</sup> But their essential defensive functions do not require superiority over the enemy and can be carried out with relatively modest forces. Any surplus in militarily useful resources should therefore be added onto the air force, which is already required for the performance of its minimum essential function (which is also the minimum essential function of the entire defense establishment) to be superior to the enemy air force, and which can use effectively for exploiting command any extra margin of strength it enjoys. This is a simple application of the old concept of "concentration of force" to the allocation of strength among the services.

Although Douhet himself sincerely and eloquently deplored service parochialism in the armed forces, and was in fact one of the early pleaders for "unification,"<sup>11</sup> it is obvious that his

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10. Ibid., pp. 218, 283 ff.

11. Ibid., pp. 153, 161, 163, 291 ff.

views would be almost instinctively opposed by army and navy officers and as instinctively favored by airmen. So it has been almost from the beginning of Douhet's influence, at least in those countries, like the United States, where military officers are accorded some freedom to entertain and even to express publicly their individual views concerning the military requirements of the state.

Douhet puts himself to considerable pains to explain what he means by "command of the air" -- the phrase which comprises the title of his central published work. It is inevitable that he should have borrowed heavily from the older concept of command of the sea, which is basic to naval strategy, and he several times defines the character and functions of air command in terms which could be used, by changing only a very few words, as an orthodox definition as command of the sea.<sup>12</sup> But of course Douhet was troubled by certain obvious differences between the vehicles of sea and air power which tended to militate against the transferability of the concept of command. Sea command is won by the ability of a superior fleet to intercept and destroy the inferior fleet whenever the latter sorties against a useful target within the area in dispute. But no one protested more vigorously than Douhet himself the very low probabilities for successful interception in the air. The swiftness and tri-dimensional movement of aircraft combined with their relatively

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12. It is intriguing (at least to me) to compare Douhet's elucidation of the four functions of command of the air, with one ancillary function added on, with the four functions (with one ancillary one added on) which I ascribed to command of the sea in my Guide to Naval Strategy, 3rd. ed. (Princeton: Princeton University Press, 1944), pp. 13f.

low endurance or "air-keeping" qualities puts them in marked contrast with naval vessels, and Douhet emphasizes repeatedly that a determined bomber attack will get through to its target even in the face of a much larger defending air force.

Douhet nowhere faces up to this difference, but he nevertheless resolves it by stressing another characteristic distinctive to aircraft which tends to restore the applicability to the air of the idea of "command." A superior fleet can attack the inferior one only when the latter offers itself for battle or at least takes to the sea to effect some militarily useful purpose; it is incapable of attacking with its artillery, save at undue risk, those heavily defended naval bases which even an inferior naval force normally enjoys and to which it may retire at will. An air force, on the other hand, can fly over any ground defenses (and for that matter, through any reasonable air defense as well) and destroy whatever forces, actual or potential, might be lurking behind them. Thus an air force which seizes and holds the initiative does not have to patrol the skies waiting for the enemy to offer himself for battle; it can seek him out on his bases, where he is most vulnerable, and destroy him forthwith.<sup>13</sup> And (though Douhet does not make this point explicitly) since the superior air force can accomplish destruction more rapidly than an inferior one even if the latter adopts the same strategy, its superiority must grow by some geometrical progression, leading swiftly into that position of complete ascendancy which may be justly termed "command of the air."

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13. Douhet, p. 53.

In fact, the inferior force has no alternative but to follow the same strategy, its only hope for ultimate success lying in its being more aggressive than its opponent and, incidently, in striking first.

Douhet's reasoning obviously requires him to place an enormous premium upon hitting first with all one's might, and he does not shrink from the implications of this requirement: "Whatever its aims, the side which decides to go to war will unleash all its aerial forces in mass against the enemy nation the instant the decision is taken, without waiting to declare war formally...."<sup>14</sup>

Douhet makes clear that by "command" he does not mean such totality of control that "even the enemy flies are prevented from flying." He professes to have no particular fondness for the word "command," but is quite willing to adopt some such term as "predominance" or "supremacy." But it is essential to the idea of command that the enemy be put into a position where it finds it impossible "to execute aerial actions of any significance."

Or, in language which again borrows heavily from orthodox naval strategy, "To have command of the air means to be in a position to prevent the enemy from flying while retaining the ability to fly oneself."<sup>15</sup> And to Douhet it requires only common sense to demonstrate that such a degree of mastery is within the capability of any air force which enjoys a superiority in bombers over its opponent and, more important, possesses a properly aggressive spirit.

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14. Ibid., p. 202.

15. Ibid., pp. 24, 96f., 220.

Clearly such a view implies a poor regard for the effectiveness of defenses against aerial attack, and Douhet leaves his readers in no doubt on the matter. For antiaircraft artillery defenses he expresses only a contempt mixed with anger at the prodigal waste which this form of defense entailed in World War I. "How many guns lay waiting month after month, even years, mouths gaping in the sky, on the watch for an attack which never came!" A system which depends upon dispersion for its execution must be inherently bad, besides which the guns were not only largely futile when hostile planes did come into view but actually added by their own fire to the projectiles falling from above.<sup>16</sup>

Nor does he have much greater esteem for the work of fighter aircraft used defensively. The limited range and therefore poor air-keeping capability of fighters effectively prevents their massing to patrol the avenue of threatened attack. The inherent requirement for dispersal of combat units is less extreme and less conspicuous with defensive fighters than with antiaircraft guns, but no less real. And after all, attacking bombers (and their attending fighters, if any) can shoot back if shot at by defending fighters, besides which the latter have to achieve interception. Living in an age which knew nothing of radar, Douhet could hardly assign high probabilities of success to the effort to intercept. These several considerations lead Douhet to propound the paradox that an effective defense by fighter aircraft

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16. Ibid., pp. 17f. 55, 112.

"would require a defensive force equal to the total combat strength of the attacking air force, multiplied by as many times as there are defensive positions to be protected" -- in short, an absurdly wasteful allocation of military resources even if it were possible of achievement.<sup>17</sup>

The only way to destroy an enemy air force is to strike it on the ground at its own bases. This is Douhet's constant refrain. And the only force which can accomplish such destruction is a bomber force. A determined attack in mass will always get through. Therefore, in the use of air power attack is not simply the best defense, it is the only defense. In Douhet's view the attitude of the superior bomber force to the air battle is one almost of indifference; it will neither seek combat nor let itself be deflected from its target in order to evade it. If enemy fighters intercept a bomber mission, some bombers will be lost, perhaps many; but the interceptors will suffer proportionate damage and (for reasons which Douhet does not make clear) even greater disorganization. (p. 376) "The pursuit unit [is] fated by its very nature to lose most of its offensive power in offensive action."<sup>18</sup> And in addition those interceptors which miss or survive battle will suffer heavy losses at their bases between sorties. The scale and effectiveness of the air defense activities are therefore fated, following the first exchange of blows, to go into a rapid and drastic decline.<sup>19</sup>

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17. Ibid., pp. 52-55.

18. Ibid., p. 359.

19. Ibid., pp. 52-55, 60f., 104f., 107, 109, 110f.

The proper function of fighter planes, in so far as they are used at all, is not to defend one's territories against enemy bombers but to support one's own bombers in the attack on enemy targets. "Viewed in its true light, aerial warfare admits of no defense, only offense. We must therefore resign ourselves to the offensives the enemy inflicts upon us, while striving to put all our resources to work to inflict even heavier ones upon him. This is the basic principle which must govern the development of aerial warfare."<sup>20</sup>

It is necessary in fairness to point out that Douhet's total commitment to the aerial offensive does not stem from that mystique of the offensive which has marred the thinking of so many other military officers. We must remember that he considered the only proper attitude for an army (at least at the outset of a war) to be a defensive one, and for the simple reason that he considered an army to be much stronger on the defensive than on the offensive. Exactly the same quality and detachment of reasoning persuaded him that an air force was pitifully weak on the defensive and incomparably powerful on the offense. Some of his most eloquent pages are devoted to an indignant castigation of the Allied generals in World War I, especially the French, for their insisting on the outbreak of war on "plunging in like a bull after a red cloth waved by the enemy" and continuing to plunge thereafter, and for no other reason than that they were "dazzled by the myth of the offensive." He cites with sorrow and contempt the pre-war

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20. The italics are Douhet's, *ibid.*, p. 55. See also pp. 59, 61, 194.

maxim of the French General Staff, unaffected as it was by the enemy's plans and the size of his forces: "'Forward, and trust in victory!'" Douhet has not been alone in his conviction that it was this kind of "thinking" on the part of its General Staff, and not simply the fact of the war itself, which brought France to ruin, certainly a greater degree of ruin than was suffered by the defeated enemy.<sup>21</sup>

It is clear that Douhet's system for the winning and exploitation of command of the air -- from which all other victories flow -- requires one more major component: a very high estimate of the physical, moral, and hence strategic effects produced by each ton of bombs dropped. A bomber force can afford Douhet's sublime disdain for interception and hence attrition only if the bombs getting through are effecting large and immediate results -- on the enemy's air power among other things. Although he does distinguish between winning command and exploiting it, and concedes that the latter might require an extra margin of strength beyond what was sufficient for the former, he does not make too much of this distinction.<sup>22</sup> He in fact emphasizes the modesty of the resources necessary to achieve command, and also the marvelous payoffs which follow such command, at least until his precepts will be so generally followed in practice that the price of command is raised by sheer competition.<sup>23</sup> So long as we refrain from giving him credit for anticipating

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21. Ibid., pp. 10f., 155-165, 263.

22. Ibid., pp. 96, 98, 103.

23. Ibid., pp. 30f.



nuclear weapons, and certainly he deserves no such credit, we can handle his startling estimates of bombing effects with less than awe.

Douhet adduces as his basic "unit of bombardment" a force of ten planes carrying two tons of bombs each. These 20 tons, dropped in a uniform pattern, ought, he concludes -- how or why is never made apparent -- to be able to destroy any targets over a surface which "should be exactly the area of a circle 500 meters in diameter." With a penchant for standardization which is supposed to be more representative of Americans than Italians, Douhet suggests that this area of 500 m. (1540 ft.) diameter be considered a "unit of destruction."

At the time he made these

statements, Douhet had apparently given no thought to what the proper size of the individual bomb ought to be and was presumably talking in terms exclusively of high explosive. However, in his last written work, The War of 19--, he has the belligerent of the future (Germany) who is executing his precepts adopting three types of bombs, identical in weight at 50 kg. (110 lbs.), but varying in content by three categories: high explosive, incendiary materials, or poison gas. These three types are loaded in each squadron in the proportions 1, 3 and 6 respectively! World War II was to show that for the destruction of vital parts of significant industrial systems high explosive bombs of 10 to 20 times the individual weight stipulated by Douhet were often insufficient.

Throughout his work Douhet indulges in recurring fantasies about what his "bombing units" carrying 20 tons of bombs each can accomplish. "An Air Force of 50 bombing units [500 planes] each capable of destroying a surface 500 meters in diameter, could in a single flight completely destroy 50 enemy objectives, such as supply depots, industrial plants, warehouses, railroad centers, population centers, et cetera."<sup>25</sup> Speculations representing roughly the same arithmetic occur again and again, except that in his The War of 19-- he has such things as railroad centers being quite effectively attacked with as little as 10 tons each. In the same place he has 150 railroad centers being simultaneously bombed with an average of 20 tons of bombs each.<sup>26</sup> These figures, incidentally, presumably make full allowance for the limitations

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25. Ibid., p. 50.

26. Ibid., pp. 364, 391.

on accuracy of aerial bombing, which Douhet in one place admits can never be as accurate as artillery fire. And they must be interpreted in the light of a "guiding principle" he had expressed earlier: "the objective must be destroyed completely in one attack, making further attack on the same target unnecessary."<sup>27</sup>

To be sure, accuracy of bombing is of lesser moment when the target is a large population center, but even in such cases the requirements in distribution of bombs sets certain minimum standards of accuracy. Nevertheless, Douhet considers 500 tons of bombs (mostly gas) quite sufficient to "destroy" a large city or its inhabitants.<sup>28</sup> Now if Douhet had carried his own premises and arithmetic just a little further, he would have realized that a circular area "unit of destruction" of 500 meters diameter, for which he allocates 20 tons of bombs, comprises only about 1/12th of a square mile, and that 500 tons is equal to 25 times 20, so that if his assumptions of required bombing density were correct (they are in fact niggardly) he could expect 500 tons to destroy roughly two square miles. And he would not have had to look very long or hard at maps of major metropolitan centers in Europe to realize that two square miles of area in any one of them represents only a very minor portion of the whole. Unfortunately, Douhet never pushed himself so far in his calculations (nor was he induced to do so by the kinds of criticisms he received in his lifetime), so it is not at all remarkable that in his The War of 19-- the conflict he describes is for all practical purposes

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27. Ibid., pp. 19f.

28. Ibid., p. 393.

decided in a single morning.

Related to his exaggerations of the physical effects of bombing is his general vagueness on the subject of target selection. One of his utterances on the importance of target selection leaves nothing at all to be desired on the homiletic side and is deservedly treated as a classic statement on the subject. Immediately following an enthusiastic survey of what an Air Force of 50 bombing units could do he adds this cautionary note:

"All this sounds very simple; but as a matter of fact the selection of objectives, the grouping of zones, and determining the order in which they are to be destroyed is the most difficult and delicate task in aerial warfare, constituting what may be defined as aerial strategy. Objectives vary considerably in war, and the choice of them depends chiefly upon the aim sought, whether the command of the air, paralyzing the enemy's army and navy, or shattering the morale of civilians behind the lines. This choice may therefore be guided by a great many considerations -- military, political, social, and psychological, depending upon the conditions of the moment."<sup>29</sup>

Nothing in Douhet is more profoundly true or better stated. It is only a pity that he gave the matter little further thought.

One must of course give him due credit in this area for avoiding simple conclusions. He properly insisted that "no hard and fast rules can be laid down on this aspect of aerial warfare," and significantly added: "It is just here, in grasping these imponderables, in choosing enemy targets, that future commanders of Independent Air Forces will show their ability." Lesser minds than his have been all too ready to give final answers to the

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29. Ibid., pp. 50f.

terribly difficult problem of selecting targets for the bombers -- that is, when they have thought about the matter at all. Nevertheless, it is disappointing that Douhet contents himself with only the most random observations on the subject.

One would be tempted to add that it is astonishing as well. How could one who had so little idea of what it is necessary to hit be quite so sure of the tremendous results which would inevitably follow from the hitting? What keeps it from being unduly surprising in Douhet's case is simply that most of his more ardent followers, both professional officers and civilians, have shown down to the present day the same unconcern with the problem of knowing what to hit and why, usually without even manifesting his recognition of the importance of the question.

Douhet's whole philosophy would seem to point to his putting the enemy air force and his aircraft production industry at the top of the priority list among target systems to be attacked. And such is unquestionably his conception. But he allows for certain exceptions to the rule, as for example "when the enemy's aerial forces are so weak it would be a waste of time to devote men and materials to so unimportant an objective."<sup>30</sup> Unfortunately, he was so confident of the ascendancy of the defense in ground warfare that he never asked himself what the first objective should be if the enemy had a substantial air force but also a powerful ground force which was already rapidly invading one's own territory -- as the Germans invaded Poland in 1939 and France

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30. Ibid., pp. 51.

and the Low Countries in 1940. And his answer would have been meaningful only if he were not quite so sure that either danger could be effectively eliminated in one day.

In his The War of 19--, which is supposed to depict an imaginary German-French war of the future where the Germans have subscribed to the basic Douhet doctrines while the French have not, he describes a situation in which the French, having few bombers, expend the major part of their fighter forces in air battles with the first waves of the invading German bombers. By thus conveniently offering themselves for destruction in the air they spare the Germans the necessity of attacking them at their bases. Douhet does not even bother to mention the targets of the first German bombers -- though from somewhat indirect evidence the targets appear to be simply cities -- and on the second day of the war he has the German bombers already concentrating on railroad centers with a view to disrupting the mobilization of the French Army. There is apparently no need to trouble further with the French Air Force. Incidentally, the battles of the first day, or rather the first morning, have deprived the Germans of one-third of their original bomber force of 1,500 planes (of which only 100 are comparable to the modern 4-engine type), but apparently this is all in accord with the German plan and the forces which remain are quite sufficient to maintain complete control of the situation and drive toward an immediate decision.<sup>31</sup>

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31. Ibid., pp. 373-391.

But even granting that Douhet would in most cases designate enemy air power in all its forms as the first objective for one's bombers, the question remains: what next? Command of the air is, after all, only a means to an end. On the subject of what targets to choose after the elimination of the enemy air force, Douhet is extremely vague. He appears to favor what is now called strategic bombing rather than tactical, and on the tactical side he clearly favors interdiction rather than front line targets, but he avidly follows his own injunction to avoid hard and fast rules. His preoccupation with poison gas -- which he is utterly certain will be used on a vast scale in the next war -- his insistence on the devastating morale effects of bombing, his conviction that civilians are far less able than soldiers to endure the blows which air power can hurl, and his references to the greater vulnerability of the targets exposed to air attack as compared with those exposed to naval or land artillery fire all confirm the impression, fortified by a few explicit statements, that fundamentally Douhet reposed his faith on the bombing of cities per se, on the attack against population. Certainly there is no evidence of his having given the slightest attention to what is involved in the attack on an industrial system, as for example the aircraft industry, which is almost the only industry which Douhet even mentions in his few allusions to targets.<sup>32</sup>

There is, however, one dictum which Douhet is willing to assert without qualification, and which indeed he offers as a

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32. See ibid., pp. 20, 22, 50, 57, 58, 59f., 61, 126, 128, 140, 201, 362, 363, 391.

compensation for his refusal to commit himself to specific rules on the choice of objectives: "Inflict the greatest damage in the shortest possible time." That he presents as a "basic principle, which is the same one which governs warfare on land and sea." The defensive attitude which he himself advocates for land and sea warfare is in a sense a rejection of this principle, but no matter. He is quite certain it applies to aerial bombardment. His reason is apparent in a sentence which follows almost immediately: "A really strong Independent Air Force...could inflict upon an unprepared enemy such grave damage as to bring about a complete collapse of his forces in a very few days." On this basis he considers the value of the surprise attack (prior to a declaration of war) to be "obvious." In other words, one must quickly annihilate the enemy or be quickly annihilated oneself.<sup>33</sup> Perhaps no other rule laid down by Douhet is as firmly embedded in contemporary thinking as this one, which is possibly unfortunate. We shall have reason later in this book to consider this "principle" again.

Most of the rest of Douhet's thinking is plainly derivative from the general principles we have already reviewed. Nevertheless, it is interesting to recall his ideas on the organization and operation of air forces, if for no other reason than to observe how some of them have persisted into the present, either because of their intrinsic merit or the sheer momentum accorded them by the magic of Douhet's name.

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33. The italics are Douhet's, ibid., pp. 51, 60.



The grand mission which he assigns to air power is obviously of a nature which permits no subservience of the air forces to the demands or requirements of the land and naval arms. The nation's air force must therefore be independent and at least coequal to the other services. But Douhet went further and insisted that all the nation's military aviation must be contained in the Independent Air Force, that "auxiliary" aviation -- that is, aviation integrated with ground and naval forces -- was "worthless, superfluous, harmful." He considered it worthless because it could not contribute to winning command of the air and yet was dependent upon the achievement of command for its own operations. It was superfluous because after the indispensable command was won and its major benefits exploited, the Independent Air Force is in a position to divert a substantial part of its strength to ground and naval support if needed. It was harmful because it represented a diversion of aerial force from the essential purpose of that force, and thus put the achievement of that purpose into needless jeopardy.<sup>34</sup> Thus, Douhet's slogan for the allocation of the national military resources is a dual one: The major national resources must be concentrated in the Independent Air Force, and all air resources must be concentrated in the Independent Air Force.

It must be added that Douhet put himself to no pains to explore how the Independent Air Force, after it had carried out its major mission, would devote itself to direct

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34. Ibid., pp. 94f., 99f., 217.

ground force and naval support. He makes several allusions to the use of aircraft against what would now be known as "interdiction" type targets, but it seems fairly obvious that his conception of air power did not encourage its use in any manner which made it competitive with or supplementary to field artillery. Although he is not explicit on the matter, one would guess that it was less a matter of his considering such a use inappropriate than of its being unnecessary. An air force properly used would bring about first disorganization and then collapse of enemy armies and navies -- if the enemy homeland did not collapse first -- and that was all there was to it.<sup>35</sup>

As might be guessed from his emphasis on the inherently offensive nature of air power, Douhet emphasized the bomber as the unit of value in the air force rather than the fighter or pursuit plane. The latter, which is useful only as an escort to the bomber, need only be proportionate to the enemy's in numbers, whereas the more bombers the better. Certainly if one must lack either type, the lack of pursuit planes was the lesser of the two evils.<sup>36</sup>

In Part II of his Command of the Air, which he added in 1926, Douhet rejected the fighter altogether in favor of what he called the "Battleplane," which was simply a bomber with

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35. For Douhet's few comments on the influence of air power on armies and navies, see especially ibid., pp. 198f. where indeed he speaks not of the utilization of air power by armies and navies but rather of the need of those services to make themselves less vulnerable to enemy air power used against their bases.

36. Ibid., pp. 34f., 106.

sufficient armament and armor to enable it to defend itself against enemy fighters. The battleplane was, as he put it, "the only type of plane which should make up the operating mass of an Independent Air Force -- the only organism necessary, because sufficient in itself, to wage aerial warfare."<sup>37</sup> On the other hand, in his very last written work, The War of 19--, he has the Germans effectively using very fast fighters, not indeed as escorts but in "explorer squadrons" flying separate offensive missions in support of their bombers.<sup>38</sup> Whether this represented a further modification of his views back to something like his original position or was simply a dramatic device to indicate something less than perfect German acceptance of the Douhet doctrine is not clear. Neither is it important. His conception of the bomber as a plane capable of operating independently and of giving an adequate account of itself when attacked by enemy fighters remained to the end, and incidentally played no small part in inspiring American bomber types from the B-10 to the B-36.

Consistently with this development of his views, Douhet first argued that since the superior air force has neither purpose in engaging in air battle nor reason to avoid it, the bomber type

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37. Ibid., pp. 117-120. Readers of Alexander de Seversky's Victory Through Air Power (New York: Simon & Schuster, 1942) will recall that he presented the "battleplane" as his bold new concept, adding to Douhet's original idea the startling insistence that distance was no impediment to bombing operations since a bomber could have all the range designed into it that its user wanted, up to the ultimate round-the-world range of 25,000 miles (which he actually prophesied as becoming "inevitable" five years from the publication of his book).

38. Ibid., p. 383.

must sacrifice speed to firepower; later he decided that the bomber (battleplane) must have a speed equal to fighters.<sup>39</sup> However, he continued to deplore what he conceived to be an over-emphasis on speed in both types of combat aircraft, which acted simply to prevent a stabilization of weapons and hence a buildup in numbers.<sup>40</sup> The only type of plane where he conceded speed to be important was the reconnaissance type, and this type he felt should have maximum speed and no armament.<sup>41</sup> So far as the bomber was concerned, it would depend for its security not only on its own armament and armor but also on the tactic of flying in dense formations and on operating always in large mass.<sup>42</sup> An air force so equipped in material and doctrine, Douhet held, could and should operate in daylight.<sup>43</sup>

Although the distinguished aeronautical engineer, Mr. Edward Warner, considers Douhet's depreciation of the importance of speed in combat aircraft to be "the worst of all of Douhet's failures in dealing with technical development"<sup>44</sup>-- and to be sure the

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39. Ibid., pp. 38, 44, 116, 345.

40. Ibid., p. 47.

41. Ibid., p. 120.

42. Ibid., pp. 45, 49f., 60, 197, 345f., 360.

43. Ibid., p. 133.

44. Edward Warner, "Douhet, Mitchell, Seversky: Theories of Air Warfare," ch. 20 of Makers of Modern Strategy, ed. by E. M. Earle (Princeton: Princeton University Press, 1943), p. 494. Mr. Warner is perhaps too harsh with respect to Douhet's insights into technological advances. Douhet's ability in 1923 to foresee the need not only of armor in combat aircraft (which Warner acknowledges) but also of all-metal construction and of the use of superchargers and pressurized cabins argues a vision in this regard which is more than a little exceptional. See Douhet, pp. 45, 65f.

minimum acceptable speed in bombers today would be several times greater than it was in Douhet's time -- it is significant that the question of how much speed to design into bombers is still a live one, speed being after all very costly in terms not only of other performance characteristics, especially range, but also in the number of aircraft obtained for a given expenditure of money. One contemporary school holds that within limits there is more security in numbers than in speed. On the other hand, it is hard to see what role an interceptor could play which did not have a considerable margin of speed over the enemy bomber, or a fighter which was materially slower than enemy fighters.

With respect to the wider problems of war, the consideration of the national aspirations and objectives which should give not only meaning but direction to any issue of arms, it must be acknowledged that Douhet was no Clausewitz or Mahan.<sup>45</sup> Yet neither does he wholly belong to that more numerous genre of strategic thinkers and writers who are content to leave politics to the politicians, who disdainfully dismiss as "philosophic" if not "idealistic" a concern with making the means fit the ends.

The very opening sentences of Douhet's second major work, the Probable Aspects of the War of the Future, published in 1928, contain an observation which is exceptional only because it

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45. Mahan's stature as a political scientist has not been generally appreciated. The academicians who officially bore that title generally followed in the inter-war period the fashion set by Charles A. Beard of denouncing him as a simple reactionary in international politics. Those essays of Mahan gathered together in the volume Armaments and Arbitration: The Place of Force in International Relations (Boston: Little, Brown, 1912) show a thoughtfulness about international politics that would have done credit to his critics, had the latter been capable of emulation.

expresses the kind of sentiment which modern military men normally steel themselves against:

"The study of war, particularly the war of the future, presents some very interesting features. First is the vastness of the phenomenon which makes whole peoples hurl themselves against one another, forgetting for a time that they all wear the aspect of human beings, that they belong to the same family of humanity striving toward the same goal of ideal perfection, to become wolves and throw themselves into torment and a bloody work of destruction as though possessed by blind folly." 46

Now this is a statement which Clausewitz could never have written -- not because of any difference in national temperament or culture between the Prussian and the Italian nor yet because Douhet had lived through and seen near-total war while Clausewitz had not, but simply because to Clausewitz the notion of fighting a war in any such compulsive manner as is reflected in the last clause quoted above was totally inadmissible. It represents the negation of all that is timeless in the Clausewitzian philosophy -- the idea that war is an act designed to further a political objective or group of objectives and therefore must be governed from first to last by those objectives.

Douhet's attitude was not merely one of expressing regret and shrugging his shoulders. His severe criticism of the French General Staff for its handling of World War I was based, at least implicitly, on the very point that the terrible bloodletting which attended the futile offensives could not but sacrifice the essential long-term political and social interests of France,

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46. Douhet, p. 145.

besides being militarily stupid and dangerous. But apparently he saw no comparable problem in the conduct of air operations, or rather he felt that the very nature of air war was such as to leave no alternative to a simple paroxysm of unrestrained violence as the proper means of fighting it. Judgment and choice were to be exercised only in determining the order of things destroyed, but not the rate of destruction.

Douhet was not driven to this conclusion by any undue respect for the traditional "principles of war" with their emphasis on concentration in time and space. On the contrary, he goes out of his way to express something like contempt for those principles.<sup>47</sup> (In the latter place he replies to a critic's expostulation that Douhet's views conflict with the established principles of war with the comment: "the worth of a doctrine is not measured by its similarity to established doctrines but by the way it conforms to reality." The present writer would nominate this statement as a principle to govern all other principles of war.) But he was impressed with the gigantic potency of the offensive as compared with the impotence of the defensive in his own image of air warfare. He therefore concluded that air war was a race against annihilation, in which the only way to escape that end is to be swifter in heaping destruction on the enemy than he is upon oneself -- about like the old-time Western gun-fighter whose life depended on the quickness of his draw. To be sure, a few points in the scoring were left to the nation best able to sustain the initial blows:

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47. Ibid., p. 149.

"Tragic, too, to think that the decision in this kind of war must depend upon smashing the material and moral resources of a people caught up in a frightful cataclysm which haunts them everywhere without cease until the final collapse of all social organization. Mercifully, the decision will be quick in this kind of war, since the decisive blows will be directed at civilians, that element of the countries at war least able to sustain them. These future wars may yet prove to be more humane than wars in the past in spite of all, because they may in the long run shed less blood. But there is no doubt that nations who find themselves unprepared to sustain them will be lost." 48

This is all so simple, so straight-forward, so inexorable. Every war must be a total war, regardless of the character of the powers waging it, the causes of the conflict, or the original objectives of the statesmen who have let themselves be drawn into it. In fact, there can be no meaningful objectives other than survival through the elimination of the threat-posing rival. It must be total because the decision "must depend upon smashing the material and moral resources of a people...until the final collapse of all social organization." We are a long way indeed from Clausewitz, and the distance we have moved reflects in this instance not so much the profound changes since his time in the political and social structure of the world as it does the development of a mechanical instrument, the airplane. Douhet regrets it, but he has to "accept realities." Like the poet Housman, he lives "in a world I never made." Perhaps so, but one senses here the final and frightening abandonment by the soldier of any sense of responsibility for the political and social consequences of his military acts, not only abroad but at home as well.

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48. Ibid., p. 61.



"It is useless to delude ourselves. All the restrictions, all the international agreements made during peacetime are fated to be swept away like dried leaves on the winds of war.... The purpose of war is to harm the enemy as much as possible; and all means which contribute to this end will be employed, no matter what they are.... The limitations applied to the so-called inhuman and atrocious means of war are nothing but international demagogic hyprocrises." 49

This is different in character from the glorification of total war of a Ludendorf, but the results are the same. It might be noted that in the latter two of the sentences above quoted, Douhet is clearly wrong. Whatever the purpose of a war (as distinct from the means employed in it), it must surely be something other than "to harm the enemy as much as possible." And while the historical efforts to apply limitations to the means of waging war may have been illusory and possibly naive, they have nevertheless in the main reflected the earnest aspirations of responsible statesmen. They have very rarely been merely "demagogic hyprocrises."

Anyway, subject as he was to such convictions, Douhet was scarcely free to attempt any consideration of how the strategy of air power could be adjusted to different political and geographical situations. He gave no thought to the use of air power as an instrument of national policy both in war and in peace, rather than merely an instrument of limitless destruction.

Yet strangely when in The War of 19-- he projected into the future the application of his principles to a specific though imaginary war, he made a significant departure from his own previous axioms. He has the German air force deliberately holding back its

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49. Ibid., p. 181.

attacks and permitting the French bombers to strike at Germany first, in order that the Germans should have a better position before "world public opinion" for their own planned "reprisals." Indeed, the Germans go so far as to warn the French of the day and hour at which they will begin "the disintegration of the enemy's national resistance." It is the civilian foreign minister who remonstrates that such warning means giving up the advantage of surprise, and the military commander who replies that it is "the Independent Air Force which would constitute the real surprise, and not the hour at which it would go into action."<sup>50</sup> If this seems like a small concession for Douhet to be making to the utility of a good propaganda position, one must remember the enormous importance he had previously attached (and presumably still attached) to hitting first. With each attack (in his mind) counting for so much, the kind of surprise which he has his hero cast away is no trifle. Had he not decided that the course of the war was not worth describing once the command of the air had been indisputably won, had he therefore not terminated his account after describing the second morning of the imaginary conflict, his mature insights might well have continued to play tricks on his own dogmas.

So much for the Douhet theory. What has been presented above is not so much an outline of this theory as a brief re-statement of a theory which is itself an outline. Douhet's own writing is not voluminous, and what there is of it is enormously repetitive. Perhaps because he did not live long enough, probably also because

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50. Ibid., pp. 353, 365f., 372.

he was too deeply immersed in controversy over his basic postulates, and certainly because he was so far in advance of his field in a completely new area of thought, Douhet did not attempt to develop or amplify thoughts which seem to the modern student of air power to cry for such development.

And how have Douhet's dicta fared in the one great test they have received thus far? Other chapters in this book will provide the answers in somewhat greater detail, but a few general comments here will not be amiss. The answer to the question depends on the level of generality on which one seeks confirmation. If we disregard the overall vision and consider only specific assertions, it is clear that in World War II Douhet was proved wrong on almost every important point he made.

Let us be clear that World War II was a fair test. It began a full sixteen years after the publication of his Command of the Air. And while none of the belligerent governments was anything like fully committed to his ideas and therefore ready to apply them in unadulterated fashion -- as it turned out they were wise not to be so committed -- it is nevertheless true that the bomber fleets which ultimately took to the air at least on the Allied side were vastly larger, by several orders of magnitude, than those which Douhet thought would be sufficient to win a decision in a single day. And the tonnage of bombs they dropped on Germany alone, and on specific targets within Germany, were in wholly different realms of figures from those which populated Douhet's fantasies.

Yet today there are intelligent and relatively unbiased

persons who have made a close study of the data and have concluded that there is no incontrovertible evidence to prove that the Allied bombing of Germany made a really significant contribution to the winning of the war.<sup>51</sup> Although the present writer does not share that view, it is startling enough that there can be a difference of opinion among serious people on that question. Certainly it is clear that whatever military results did follow from the bombing did not come quickly.

On more specific issues, the tally of findings against Douhet is impressive. First, land fronts proved to be anything but static, as demonstrated most conspicuously by the quick German invasions of Poland and especially of France. The dilemma of the NATO security system today lies precisely in the question: what happens on the ground while the war is being fought in the air? Secondly, the fact that bombing could not bring anything like the swift returns that Douhet dreamed of and that vastly greater tonnages than he called for were necessary to bring any returns at all meant inevitably that defenses against air attack were to prove far more effective than he expected. Douhet did not deny that fighters could shoot down invading bombers. But he was able to postulate a situation where an attacking force could lose one-third of its strength on the first day of a war and then go on to win. In World War II, where the bombing campaigns were really trucking operations requiring repeated hauls by any one aircraft, attrition rate of 5 to 10 per cent could be very serious to the attacker.

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51. I have in mind a number of persons who worked on the United States Strategic Bombing Survey.

The Battle of Britain resulted in an outright victory for the defense -- and the attacking Germans were quite literally following Douhet's precepts.<sup>52</sup> The Allied assault on Germany resulted in a complete Allied victory in the air, but it was touch and go during more than one phase of the operation, and there are grounds for believing that if the Germans had played their hand better they could have turned us back in the air by making our losses prohibitive.<sup>53</sup> Even the antiaircraft gun, which Douhet so much despised, enjoyed the considerable respect of bomber crews. It turned out that the military worth of a target could be appreciated by the defender as well as the attacker, and that antiaircraft guns could be distributed accordingly. There was point as well as poignance in the comment of a R.A.F. officer writing during the war: "If it is true that 'the bomber will always get through,' as it is popularly stated, it is equally true

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52. This assertion will startle some readers, who are accustomed to hearing that the Germans demonstrated in the Battle of Britain that they did not "understand air power." The fact is that when the German Air Force was released from direct support of the army after the conquest of France, Goering was left relatively free to apply, and did in fact apply, the concepts of Douhet almost undiluted. British airmen have criticized him for shifting his targets too rapidly in the opening stages of the campaign, but if he had fully believed Douhet with respect to the destructive effects of a given weight of bombs he would have shifted them even more rapidly. His German Army and Navy colleagues, on the other hand, have criticized him for disregarding what they considered to be his main mission -- preparing the way for the German amphibious invasion of England. Thus in effect both sides have criticized him for following Douhet's precepts. The fact that his bombing planes were inadequately armed for self-defense is another matter, and did reflect the primarily tactical conception under which the G.A.F. was designed and built (and in which role it was remarkably successful prior to the Battle of Britain).

53. As for example if they had pushed the use of the jet engine on fighters rather than diverting it for a time, at Hitler's orders, to bombers -- which again might legitimately be construed as a rigid adherence to the Douhet doctrine. Douhet, after all, had no use for defensive fighters.

that 'not all the bombers will get through' against adequate defenses....."<sup>54</sup>

The assault on Japan was another kind of case, and will be reviewed elsewhere. As a test of Douhet's ideas it was vitiated in several ways, particularly by the fact that Japan was a defeated power -- and recognized to be such by her military chiefs, especially of the Navy -- before our strategic bombing campaign was well begun. The bombing attack exerted great and unremitting pressure on the Japanese leaders to acknowledge their defeat by surrender -- a pressure which was finally and decisively augmented by the introduction of atomic bombs -- but the origin of defeat lay in other realms of action. And in both the German and the Japanese campaigns, the effects of bombing on civilian morale and the effects of depressed morale on the strategic decisions of the leaders turned out to be far less than Douhet predicted.

Nevertheless, when all this is said, the acuity and insight of Douhet's vision stand supreme. It may be true that the atomic bomb gives his theories a support that would be very much missed without it, and that Douhet deserves no credit for anticipating the atomic bomb. But it is also true that he was able to create a framework of strategic thought which was ready-made for the atomic age and which is considered by many responsible airmen to fit that age astonishingly well.

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54. Flight-Lieut. V. E. R. Blunt, The Use of Air Power (Harrisburg: The Military Service Publishing Co., 1943), p. 39.



