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## **AVIATION, HERBERT HOOVER AND HIS "AMERICAN PLAN"**

Randy Johnson

### **An American Success Story**

He was an orphan. Herbert Hoover, along with his older brother Theodore and younger sister May were alone after their mother died of pneumonia in 1883. Their father had passed away three years earlier, and when the Hoover children lost their mother, they were split up among relatives. At age ten, young Herbert Hoover went to live with an uncle and aunt in Newberg, Oregon.

Hoover's upbringing had been Quaker, teaching him the values of honesty and hard work. He attended night school to complete his secondary education and entered Stanford University to study engineering at the age of seventeen. After graduation, he sought work as a mining engineer. Eventually, he secured work in a British firm, Bewick, Moreing and Company in Australia. His abilities impressed his employers, and he was offered a position in China, a large salary increase and \$250,000 in company stocks. By 1910, he and his wife Lou had become millionaires with an estimated worth between \$3 million and \$5 million. He began his own consulting firm in 1908, traveling mainly in Europe establishing a residence in London<sup>1</sup>.

But his life would soon change and he would leave engineering and business forever. Others would take note of Hoover's organizational skills, work ethic and sense of service. He would soon enter politics, and, by way of a cabinet post, occupy the White House.<sup>2</sup>

#### **Secretary of Commerce**

This paper will examine Hoover's tenure as Secretary of Commerce from 1921 until 1927 when he resigned his secretariat to run for the Presidency. It was during his years as Secretary that the aviation industry was first regulated and oversight of that industry placed in the Department of Commerce.

When Herbert Hoover became Secretary of Commerce in 1921 he began a crusade to transform the Department of Commerce into a consequential force for economic growth and technological leadership in the United States. The commercial aviation industry sought Hoover's assistance in crafting and supporting legislation that would regulate the aviation industry. Hoover employed his concept of "associationalism" and worked with manufacturers, operators and other industry stakeholders to fashion a regulatory system that fostered aviation's growth in the United States. The Secretary understood the positive economic impact that a well-established aviation industry would have on commerce. Hoover also realized that safety of flight and all-weather capabilities depended upon a modern navigation and communication infrastructure and that the Federal government should provide such an infrastructure. When the Air Commerce Act was signed

into law in May 1926, a new industry, commercial aviation, was born. It resided in the Department of Commerce and was imprinted with Hoover's political philosophy. His influence on this industry born during his secretariat would be felt for years to come.

#### **Hoover's Entrance Into Politics**

The assassination of Archduke Ferdinand in Sarajevo in 1914 drew Austria, Hungary and Germany into war. Americans in Europe soon discovered that banks would not accept U.S. currency. They had no way to get home, nor were they able to buy food. The American Consul General, Robert Skinner asked his old friend Herbert Hoover for help. Hoover exchanged his company's British currency for American dollars and began organizing a relief effort for more than 1,000,000 Americans stranded in Europe and England<sup>3</sup>.

President Woodrow Wilson appointed Hoover head of the United States Food Administration in 1917. His job was to make sure that soldiers and sailors were well-fed and that food was distributed fairly in the United States. He served in that position through World War I, without pay, as he had done in Europe, and sought volunteers to assist him in the task. He completed the work with efficiency and fairness. Groups that fell under his direct supervision such

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as the American Grocer's Association praised his work. After the war, Wilson appointed him head of the American Relief Association tasked to distribute food to 370 million Europeans. Hoover accomplished this task as he had the others, with great success. The nation was taking note and his popularity was rising. Both parties were calling for him to run for the presidency in 1920, but Hoover, a Republican, was never active in politics (fig. 1). "I had been so nonpartisan during the war, both in word and in deed, that I had no standing in either political party,"<sup>4</sup> Hoover wrote.

Hoover had intended to settle down in California where he "hoped to renew association with a great lady and two highly satisfactory boys."<sup>5</sup> His plans were to turn out differently.

The Republican victory of 1920 sent Warren Harding to

the White House. Harding offered Hoover his choice of being either Secretary of Interior or Commerce. Hoover requested he be nominated for the then-less-significant Department of Commerce. Hoover understood the potential Commerce possessed for fulfilling an important role in what he termed the "reconstruction and development" of the nation, despite the Department's "inbred bureaucracy." His purpose became one of establishing the efficacy of what had become the administrative home for nine fragmented bureaus lacking common goals and direction. Former Secretary of Commerce Oscar Straus told him that the work of the Department required but two hours a day. "Putting the fish to bed at night and turning on the lights around the coast were possibly the major concepts of the office," he was told.<sup>6</sup>

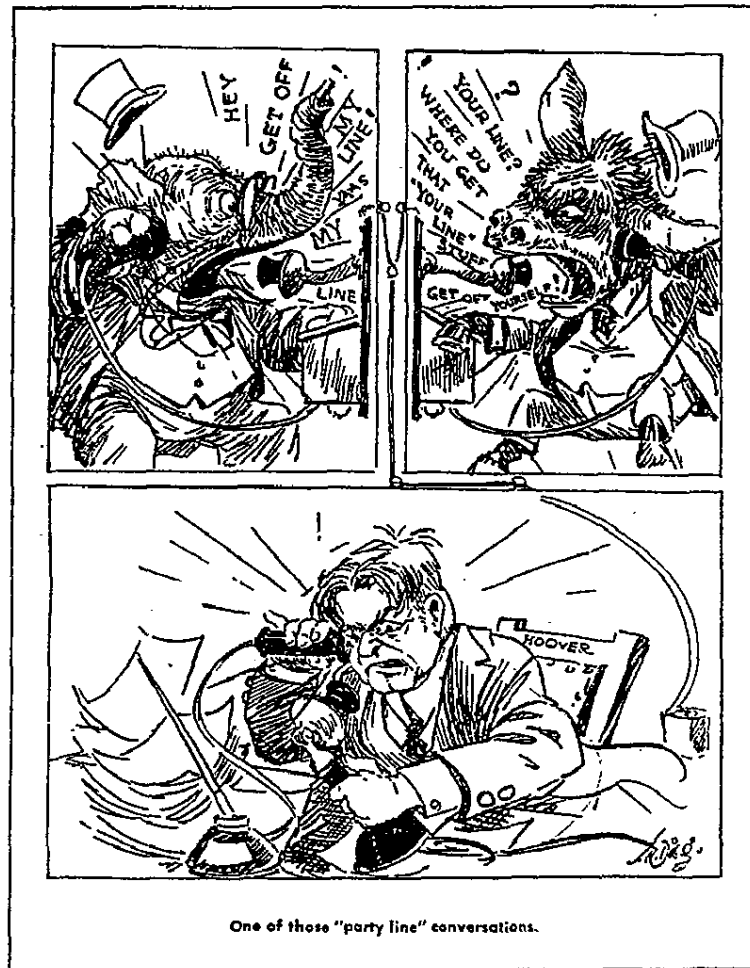


Figure 1—Political Cartoon by "Ding"<sup>7</sup>

Economic conditions following World War I had created unemployment, housing shortages, and wasted production capacity. Hoover believed government had the ability, in cooperation with its citizenry, to expedite and promote economic recovery; he also believed Commerce was the proper administrative department for such a task.<sup>8</sup>

Hoover accepted the post only on the condition that he would be given a "voice on all important economic policies of the administration,"<sup>9</sup> even those involving other departments within the cabinet. Hoover critic Walter Liggett<sup>10</sup> noted during the first year of his secretariat that "Hoover is Secretary of Commerce and assistant secretary of everything else."<sup>11</sup> Secretary Hoover began his new job, as National Bureau of Standards (NBS) historian Rexmond Cochrane described him, "determined to recover the Nation, singlehandedly [sic] if necessary, from its wartime splurge, its consequent depletion of resources, and the general economic demoralization into which it had plunged."<sup>12</sup>

#### The Role of Government in Business

The new Secretary moved quickly, implementing reforms based on his concept of an "American System," or what Ellis Hawley termed Hoover's philosophy of an "Associative State."<sup>13</sup> His "American System" favored a small government that worked with groups of associations, or "associationalism," to bring about economic efficiency through cooperation and national planning. Hoover's political thinking during his term of office would redefine the relationship between government, American business and foreign trade. At its core lay "American Individualism," a Hooverian philosophical viewpoint that perceived the United States to be unique among nations.

It springs from something infinitely more enduring; it springs from the one source of human progress—that each individual shall be given the chance and stimulation for development of the best with which he has been endowed in heart and mind; it is the sole source of progress; it is American individualism.<sup>14</sup>

Hoover believed that the United States had begun a transition toward a monopolistic and autocratic economic state during the late nineteenth century. Unrestrained individualism, coupled with Adam Smith's theory of capitalism, and the laissez faire policies of the Federal government had created this climate. Autocracy, to Hoover, implied that only a few in society were endowed with the

wisdom and ability to decide the economic fate of the many, thereby creating social classes such as those found in Europe. Hoover disdained the notion that labor and management should be considered social classes and that labor was no more than a "commodity." Instead he viewed both labor and management as "producers," believing that both management and labor should work together for the benefit of all. His work included a crusade to ban child labor and the twelve-hour workday as well as to ensure labor was guaranteed the right to collective bargaining. American Individualism embodied cooperation, self-regulation, a mutual purpose of responsibility and "service to our fellows."<sup>15</sup>

Correcting the movement toward autocracy required governmental restraint of industry in the form of law and regulation. Hoover sought balance. The individual must be given opportunity to rise to his potential, but business must be regulated to insure fair competition and obviate market domination<sup>16</sup>. "Regulation to prevent domination and unfair practices, yet preserving rightful initiative, are in keeping with our social foundations."<sup>17</sup>

An essential component of the associative state required a synthesis of "institutional" self-regulation, national oversight and planning. Hoover believed in the importance of individual creativity and private initiative, and it was this individualism that stimulated new industries. Historically, as industries founded in individualism began to mature, they affected the national economy in a "haphazard" way. Haphazard development created waste and disrupted the economy. Waste contributed to the "booms and slumps" inherent in the business cycle and, with it, unemployment and bankruptcies. At the point where such industries interfered with free competition on a national scale, regulation was required. Government, through oversight, conferences and industrial self-regulation, would maintain a climate of competition, effect an increase in efficiency, reduce waste and conserve limited resources. It would also mitigate the effects of the business cycle. Hoover preached the proper place for this coordination rested within the Federal Government, but not a government whose sole purpose was purely regulatory. Instead, it would also be one of coordination and cooperation—cooperation between trade associations, industries and labor. In other words, it should be a government that recognizes the superiority of individualism while cooperating with and regulating business and industry. The results of this synergistic relationship would

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produce an ever-higher standard of living for its citizens<sup>18</sup>. "There, however, arises a time when this haphazard development must be coordinated in order secure its best results to the nation as a whole,"<sup>19</sup> he told an audience of mining engineers in 1920.

Nationalizing industry was not his goal, nor did he believe that direct control or operation of business should be placed in the hands of bureaucrats. Even though the railroads had been nationalized during the war, he advocated oversight be speedily returned to the owners. Under his secretariat he was able to report to the President in 1926 that the railroads had increased in efficiency, profits and rolling stock. Later he wrote that the benefit enjoyed by the nation, which resulted from this "elimination of waste," was attributable, in part, to his policy of cooperation.<sup>20</sup>

**The Purpose of Bureaucracy**

Hoover visualized a responsive bureaucracy, working with and not against business. Its role was to be one of orchestrating teamwork and becoming the focal point for planning and problem solving. Government should work with industry, trade associations and labor to establish national policy and promote cooperation and volunteerism among competitors and even between labor and management. To accomplish these goals during his term of office, Hoover expanded the regulatory role of the Department of Commerce along with its sphere of influence and bureaucracy<sup>21</sup>. The new Hooverian bureaucracy, as Hawley points out, was to be unique.

Its whole purpose differed. By building industrial self-government and thus reducing the need for governmental controls, it was actually checking the whole movement toward big government; and by fostering and nourishing the grassroots activities of private groups and local communities, it was promoting democratic decentralization rather than bureaucratic centralism<sup>22</sup>.

The number of Hoover's converts to associationalism grew, and after assuming the secretariat, he practiced what he preached. Within days of taking office, he formed an advisory committee consisting of leaders from agriculture, business and labor. From this initial meeting came the blueprints for further Commerce policy and direction. During his secretariat he called over 3,000 such

conferences. The purpose, according to historian Joan Hoff Wilson, was more than problem-solving, it was also "a publicity tool, designed to dramatize cooperative individualism and associationalism."<sup>23</sup> Hoover, the consummate engineer, with the aid of his advisory committees, analyzed the causes of problems and sought solutions.<sup>24</sup>

Hoover accomplished his stated objective of transforming the Department of Commerce from an ineffective, disjointed mix of bureaus into a consequential force for economic growth and technological leadership in the United States. Associationalism and American Individualism guided his policy decisions, and total immersion in the work of Commerce secured their implementation. Even Hoover critic Liggett was forced to admit that the Secretary was not only creative, but also remarkably capable in elevating the Department's stature, fostering trade, increasing economic expansion and taking the lead in research and standardization. Wilson described him as a "domestic dynamo," actively involved, as he wanted to be, in the economic decisions of the White House. The popular perception of Hoover, his work ethic and political influence is best illustrated by Ding's (Jay Darling's) political cartoon published in 1927 (fig. 2)<sup>25</sup>.

**Reorganization and Redirection**

Reorganizing the Department of Commerce began almost immediately. Without a well-organized bureaucracy to implement his plans, economic solutions would be slow in coming. The bureaus that called Commerce their home in 1921 included the Bureaus of Foreign and Domestic Commerce, Census, Fisheries, Steamboat Inspection Service, Navigation, Coast and Geodetic Survey, Lighthouses and, one that played a central role in the development of aeronautical telecommunications, the Bureau of Standards. Hoover divided management of the bureaus between the Department's Solicitor, Stephen Davis, and the Assistant Secretary, Claudius Huston, but retained direct oversight of the Bureau of Foreign and Domestic Commerce and the Bureau of Standards. His second report to the President boasted savings of over \$3,000,000 due to his reorganization efforts in the Department of Commerce. Hoover praised the efforts of his bureau heads for their increased efficiency and "progressive methods," reporting the "great progress in fact and in zeal during the year."<sup>26</sup>

Hoover's grander vision included an expanded role for Commerce within the executive branch. His reorganization designs included the transfer of bureaus and agencies from other administrative departments to his own. Some cabinet

members frustrated his efforts by refusing to relinquish their jurisdictional authority and cooperate with his plan. He did, however, manage



Figure 2—Ding's View of the Hoover Secretariat<sup>27</sup>

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to have transferred a few bureaus from the Interior and Agriculture Departments to Commerce. Through his effort and influence in Congress, the Department in 1926 gained an important bureaucratic organization whose purpose was to regulate an industry that would come to have a profound effect on the nation's economy: the Aeronautics Branch.<sup>28</sup> When Hoover assumed the Secretariat, he discovered five of the bureaus were managed by political appointees whose background had nothing to do with the technical work being accomplished in their departments. He immediately sought their removal, replacing them with technical men from within the ranks. His reform included building "esprit de corps" among the disparate divisions by improving working conditions, increasing salaries and, most importantly, establishing open lines of communication between the Department and among the bureaus through weekly staff meetings where questions could be raised and answered "off the record." He added professional experts and capable young men willing to serve in government to the roster of Commerce<sup>29</sup>. His intent was to fulfil the Department's mandate to "foster, promote, and develop the foreign and domestic commerce, the mining, manufacturing, shipping and fishery industries, the labor interests and the transportation facilities of the United States."<sup>30</sup> He was well on his way.

### Standardization

If associationalism was the standard under which Hoover planned to wage the war for economic recovery, standardization was the weapon and the elimination of waste was the objective. Eliminating industrial waste took on a broader meaning when applied to Hoover's plans. It did not necessarily represent "individual" or "willful" waste; rather, the term referred to industry-wide waste due to lack of coordination, cooperation and unchecked competition. Waste could be mitigated or eliminated by scientific research, analysis and cooperative effort. The vehicle for this vital mission fell to the NBS. It was the logical choice because of its early work in manufacturing standardization and its association with the American Engineering Standards Committee which represented technical societies, trade, professional and business organizations. The added political attention and direct access to the Secretary made the NBS the beneficiary of additional resources and an expanded role within the Department. The functions of the NBS would quickly include increased responsibility for the development of aeronautical telecommunications.

Soon, the label "standardization" was synonymous with "elimination of waste," and Hoover's campaign employed a "three-pronged attack on waste in commerce and industry." The Bureau developed specifications, which brought increased manufacturing quality, simplified products, and standardized materials, machinery and business practices.<sup>31</sup>

### The Leverage of Research

Research was not to be neglected. Hoover observed a relationship between pure and applied science and public policy. Pure scientific research, as he saw it, was the "raw material of applied science." Basic research was important, and he was committed to its funding. As chairman of the National Academy of Sciences, Hoover sought between \$10,000,000 and \$20,000,000 in 1926 for the purpose of funding American research universities over a ten-year period. The NBS was to conduct "industrial" research that included investigations into radio interference, propagation of radio waves and radio direction finding for navigation. During his administration, the Bureau made significant progress in scientific research that positively impacted industry<sup>32</sup>.

### The Results

Leaders of industry and labor applauded the new Department of Commerce that emerged during Hoover's secretariat. The Chief of the Statistical Research Division, E. Dana Durand, reported great strides in national efficiency in the Department's 1927 report to the President. Industry was becoming more efficient and prosperous. "The progress in efficiency is brought into sharp relief by comparing the increase in the product of agriculture, mining, manufactures, and railways with increase in the number of persons employed in these branches,"<sup>33</sup> he wrote. Concrete proof of Hoover's war on industrial waste could be seen in productivity levels in each of the branches the Department tracked. Commerce measured an 80 percent gain in industrial productivity between 1898 and 1926. Of these gains, 29 percent, according to Durand's statistical analysis, were experienced between 1924 and 1926 (fig 3)<sup>34</sup>. The cause for the United States' new found productivity lay in natural resources and the attitude, intelligence and work ethic of the "producing population."

These basic causes of economic progress translate themselves into a number of more specific and directly working causes. Among these may be mentioned especially the advance in education,

scientific research, and invention; the growing use of mechanical power, machinery, and other forms of capitol; the larger scale of production; the conscious and concerted effort to eliminate waste and reduce costs [and] the high scale of wages.<sup>35</sup>

The Department's reports were not the only publications touting Hoover's accomplishments. In the April 1926 issue of *Industrial Management*, industry leaders joined in the chorus of voices singing the praise of his programs. The editors began with an expression of gratitude for the

escalating prosperity enjoyed by "every man, woman and child in America." Increased prosperity was due in large measure to his program of waste elimination, simplification and standardization. Said John Edgerton, President of the National Association Manufacturers:

American industry owes a debt of gratitude to the Honorable Herbert Hoover for the eminent service he has performed in lifting the Department of Commerce from a position of innocuous desuetude to one of indispensable importance of the country's welfare.

**Increase in production of major branches of industry**

[Manufactures indexes are computed from data for 1899, 1919, and 1925; other data are based on averages of three years, with a few exceptions]

Period and branch	Number of workers		Index for end of period; beginning = 100		
	Beginning of period	End of period	Number of workers	Output, quantity of goods or services	Output per worker
<b>1898-1900 to 1924-1926:</b>					
Agriculture.....	10,700,000	10,700,000	100	147	147
Mining.....	600,000	1,050,000	175	348	199
Manufactures.....	4,300,000	9,900,000	187	278	149
Railways.....	970,000	1,800,000	192	299	156
Total or weighted average.....	17,570,000	23,510,000	134	240	179
<b>1918-1920 to 1924-1926:</b>					
Agriculture.....	11,300,000	10,700,000	95	112½	118
Mining.....	1,050,000	1,050,000	100	127	127
Manufactures.....	10,670,000	9,770,000	91½	128½	140½
Railways.....	2,035,000	1,800,000	91½	100	109
Total or weighted average.....	26,055,000	23,380,000	93	120	129

! The two figures given for the number employed in manufactures in 1925 differ in order to make them comparable with the figures for 1899 and 1919, respectively, which were reported on a slightly different basis.

Figure 3—Economic Efficiency 1898-1926<sup>36</sup>



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Magnus Alexander, President of the National Industrial Conference Board, also gave praise. "Mr. Hoover's effective cooperation with industry in encouraging stability and efficiency and in eliminating waste is too well known to require further emphasis." Walter Chrysler, Chrysler Corporation said, "He is a national benefactor, and American business has reason indeed to be highly indebted to him." G. E. Tripp, Chairman, Westinghouse said, "His great achievement has been to establish a new and better relationship between government and business." C. L. Reiersen, President, Remington Arms Company said, "The Department of Simplified Practice, operating under the able direction of Secretary Hoover, has made long strides in eliminating wasteful duplication manufacture." And so the praise continued. The article contained the testimony of 59 leaders in American industry, all praising Hoover for his programs, insight, ability and accomplishments as Secretary of Commerce<sup>37</sup>. Henry Ford endorsed Hoover for president in 1928 because "Mr. Hoover is expected to be a great and forward-leading President because he is a national engineer who understands the machinery of the national livelihood."<sup>38</sup>

#### Hooverian Culture

Hoover's vision for the Department of Commerce was the efficient, fair administration of the economic and social well-being of the nation. His Department was to become an example of associationalism—not individualism, nor collectivism and neither socialism nor monopolistic capitalism. Instead it was to serve ultimately as the arbiter, "for harmoniously functioning, self-regulating economic units."<sup>39</sup> "Progress," he said during his presidential inaugural address "is born of co-operation in the community—not from governmental restraints. The Government should assist and encourage these movements of collective self-help by itself co-operating with them."<sup>40</sup>

#### Aviation's Legislative Mandate—The Air Commerce Act of 1926

##### The Promise of Regulation.

Commercial aviation existed in the "chaos of laissez faire"<sup>41</sup> when Hoover was sworn in as Secretary of Commerce. William MacCracken<sup>42</sup>, who would become the first Assistant Secretary for Aeronautics, pointed out that for the most part, the public was "still blind to aviation's tremendous potential for transforming our travel customs and enriching our industry," many believing that aviation was "somewhere between a sport and a sideshow."<sup>43</sup>

Colonel Hiram Bingham,<sup>44</sup> who as a Senator from Connecticut would later play a pivotal role in bringing about aviation legislation, argued in 1920 that the high, pre-World War I death rate of well-known aviators had dampened popular support for commercial aviation. The war, he said, had injected new life into aviation's prospects with popular visions of American aircraft overwhelming German Forces.

Delays and lackluster industry performance had discouraged public support, and, by 1918, the "man in the street threw his aviation ideals overboard, shrugged his shoulders, and decided that somebody had sold him a gold brick."<sup>45</sup> But Bingham articulated a concept held by many in government and business, that the development of the industry was important for commerce and its advancement as a commercial entity was vital to the American military and national "aerial defense." He called for a Department of Aeronautics and called for support in the development of aids to navigation, meteorological services and airports. "Whose business is it to do all these things?" The answer, Bingham believed, lay in a Department of Aeronautics that would be tasked with fostering the industry.<sup>46</sup>

#### The Effects of Laissez Faire Capitalism

Bingham's description of the state of aviation in 1920 was a fair account. The government had done nothing to encourage the application of aviation in commerce nor had it established any type of regulatory environment to cultivate its development. The aircraft industry, which had produced an abundance of military aircraft, found itself flooded with surplus airplanes such as "Jennys" and de Havilland DH-4s, as well as discharged military aviators looking for flying work. Military aircraft, designed and built for combat, were ill-suited for commercial applications. Pilots bought the surplus aircraft and began looking for ways to earn a living. About the only work available for a recently discharged aviator with a surplus Army airplane was barnstorming—giving rise to the term "gypsy flyer." Gypsy flyers traveled from town to town performing stunts and offering rides to those willing to risk it. It was laissez faire capitalism at its finest with competition so vigorous that most pilots found it hard to keep body and soul together. The gypsy flyer thrilled audiences with daredevil stunts but did little to advance the cause of commercial aviation. In 1922, as President Harding was dedicating the Lincoln Memorial, an aviator "buzzed" the crowd attending the ceremony. The dangerous stunt, while raising the ire of the spectators and officials,

was not illegal. "Dangerous to the extreme," noted *The Literary Digest*, this incident illustrated the need for "national air laws."<sup>47</sup>

Many Americans began thinking of flying as extremely hazardous, a sport meant for the wealthy or risk-taker, having no real commercial application. Not all saw it that way, however. There were those who believed government regulation would bring about safety and an orderly environment for the development of aviation. These missionaries of commercial aviation began preaching a gospel of regulation. Without safety regulation, the cause of commercial aviation could not advance.<sup>48</sup>

#### Early Attempts

Aerial advertising, photography and crop dusting were a few of the early attempts at commercializing aviation. The Department of Agriculture first experimented with crop dusting in 1919, but the fatality of its only pilot in August forced the Department to discontinue its experiment. Shortly after, the State of Ohio successfully experimented with the concept of aerial spraying and inspired the Agriculture Department to once again take up flying. Some pilots found work by transporting cargo, but by far the most lucrative use of aviation, during prohibition, was the transportation of bootleg liquor from Canada and Mexico. Laissez faire meant governmental non-interference. The government did not provide regulations for the proper maintenance of aircraft, licensing of pilots, or manufacture of aircraft, nor did it fund the development of an infrastructure to support the safe and orderly movement of aircraft. The policy of non-interference impeded the development of the industry, and for many years, it would remain uncoordinated and unsafe, its prospect as a viable transportation mode questionable<sup>49</sup>.

The public and political aviation regulation debate spanned the years between 1918 and 1925 and gave rise to more than 25 investigations. While there had been an "excessive" number of inquiries, "something can yet be accomplished by further investigation" William P. MacCracken remarked during an address to the Law Club in December 1925. He reported that there were five major aeronautical investigations in progress<sup>50</sup>. Of the five he described, one would prove to be propitious, the President's Aircraft Board.

Interestingly, the conclusions of many of the inquiries did not question whether aviation should be regulated, rather, how it should be regulated. Even the industry itself, manufacturers and operators alike, understood the

advantages of Federal oversight. In this the industry was unique. Responding to a letter from Representative Fredrick C. Hicks (R-NY), Hoover replied, "It is interesting to note that this is the only industry that favors having itself regulated by the Government." In the past, other industries and interest groups had sought regulation of one another. Such had been the case when the Interstate Commerce Commission (ICC) was formed in 1887. The creation of the ICC, according to political scientist Deborah Stone, was the result of interest group pressure whose goal was to ensure that the "interests of railroads, manufacturers, and farmers" were "balanced."<sup>51</sup>

How commercial aviation was to be regulated was a source of debate that not only slowed legislative action, but also ultimately defined it. Commercial aviation was to be advanced for two important reasons—commercial transportation and national security. The wedding of commercial and military aviation was never questioned. The argument was simple. In order to provide an adequate military industrial base with trained pilots and mechanics, the commercial aviation industry must be strong. National defense would benefit by a flourishing commercial aviation industry because of the increased manufacturing capacity, trained pilots and aircraft reserves. "The saving in direct governmental expenditures would be enormous,"<sup>52</sup> said Hoover in a *New York Times* interview. Acting Secretary of War, Dwight Davis, said in testimony before the President's Aircraft Board, that "it is recognized that the transportation facilities of a nation are a vital element in its defense organization."<sup>53</sup>

The major issues surrounding the political controversy did not question the military-civilian connection, rather they had to do with where a newly created bureaucratic structure should reside within an administrative branch and what segments of aviation it should regulate. Should the United States model its administration of aviation after European countries and place all aviation, including the military, under a single regulatory agency? Or should responsibility for the Army and Navy air-arms continue to reside within their respective services, administratively separated from civilian control? Should all military aviation, both Army and Navy be placed under a single military command? To what extent, if at all, should the industry be subsidized, and what form should this subsidy take? Does the Constitution allow Congress to extend aviation safety regulation to commercial operations engaged only in intrastate commerce?<sup>54</sup>

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**The Secretary's Role**

Hoover's involvement in the aviation issue as Secretary of Commerce began shortly after he assumed the secretariat. The Aeronautical Chamber of Commerce<sup>55</sup> had taken note of the President's call for aviation legislation during his inaugural address in 1921. The Chamber of Commerce commented: "Commercial aviation, struggling for nearly three years without the assistance of a national policy, found an intelligent and sympathetic friend in the Harding administration."<sup>56</sup> Action, in the form of a bill, followed quickly. It proposed to place regulatory responsibility for aviation in the Department of Commerce, and those in the industry and in the administration began looking to Hoover for guidance.

On March 23, just 17 days after he assumed the secretariat, Hoover received a letter from Dr. Charles Walcott, Chairman of the National Advisory Committee for Aeronautics (NACA)<sup>57</sup> outlining the NACA's position for the advancement of commercial aviation and a synopsis of two aviation bills before Congress. Under the NACA proposal, the Departments of War and Navy would retain control of their individual air-arms. The NACA would continue its mission as focal point for "aeronautical activities" and "direct continuous prosecution of scientific research in aeronautics" while a Bureau of Aeronautics would be created within the Department of Commerce. The NACA considered commercial aviation to be "the backbone of military preparedness."<sup>58</sup>

On April 1, a special committee of the NACA drafted a letter for the President's signature. The President signed the letter that directed Walcott to form a subcommittee of the NACA to "take up vigorously and fully the question of Federal regulation of air navigation, [and] air routes to cover the whole United States." The subcommittee was to be comprised of representatives from the Departments of War, Navy, Commerce, Post Office and "civil life." Hoover assigned Dr. Samuel Stratton, head of the Bureau of Standards, to the committee. The Department of Commerce was now "officially" involved in defining an American system of regulation, and it was able to make known its position and influence policy outcomes<sup>59</sup>.

Early in his secretariat, Hoover developed seven policy objectives that formed the core of his proposed aviation legislation. The first was a national airway system supported by the Federal government. Second, Hoover understood it was necessary to subsidize the new transportation system by using it to carry the mail. His third

objective was to create a strong commercial industry thereby providing an "auxiliary to defense." Fourth, an increase in safety would result from the licensing and regulation of aircraft and pilots. He believed the government had no business in the "business" of flight; therefore, he called for shifting responsibility for airmail service from Post Office aircraft and pilots to private companies. He also understood the importance of continued aeronautical research and development and the "creation of a governmental agency to conduct these services." While Hoover did not believe government should be directly involved in commercial aviation, he did believe that government had a role to play in its development—that of fostering its growth through indirect subsidy<sup>60</sup>.

The business community wasted no time. In June 1921, Hoover received a letter from *Aviation and Aircraft Journal* publisher L.D. Gardner, who served as spokesman for some influential aeronautical organizations. Gardner had been asked to arrange a meeting with Hoover. The Secretary explained that those interested in the subject should take it up with the appropriate Congressional committee. If the association believed it important, he would "appoint a committee and give the matter further consideration."<sup>61</sup> Gardner replied that if Hoover would call a meeting, the Secretary would have an opportunity to hear the opinions of the various associations. Gardner believed that some form of agreement might be reached as to the most effective way to present recommendations for aviation policy to the Congressional Committee on Foreign and Interstate Commerce. "As these matters are now before Congress, everyone hopes that you will take some definite action as early as possible,"<sup>62</sup> Gardner wrote.

Hoover's reply to Maurice Cleary, Directing Governor of the Aero Club of America, agreed to a prefatory meeting with the aviation interest groups, he wrote, "there is no reason why those interested in civil aviation should not form an association for promotion of their views." Although Hoover was not yet sure that oversight of civil aviation would be ultimately placed in the Commerce Department, he said he would "welcome a committee from such an association."<sup>63</sup> Luther Bell, Director of Information of the Manufacturers Aircraft Association,<sup>64</sup> and Clarence Stetson, Hoover's secretary, arranged the meeting on July 18 between Hoover and an association comprised of the Aero Club of America, the National Aircraft Underwriters Association, the Manufacturers Aircraft Association and the Society of Automotive

Engineers<sup>65</sup>. Hoover's political doctrine of associationalism was being worked out in aviation.

While on a trip to observe a military bombing demonstration, a Hoover aide spoke with Howard Coffin, vice-president of Hudson Motor Car Company, Samuel S. Bradley, manager of Manufacturers Aircraft Association, and C. M. Keys, president of Curtiss Aeroplane and Motor Corp. The aide reported to the Secretary that the purpose of the meeting would be to secure "leadership in mapping out a program of development" for commercial aviation legislation. Additionally, the representatives wanted to see a separate civil aviation branch established in the Department of Commerce.<sup>66</sup>

During the meeting with the industry representatives Hoover was concerned about the issue of safety and protection of "public life and property." The Secretary requested an industry survey be made of the hazards associated with unregulated flight. Second, he supported the industry representatives drafting aviation legislation and submitting it for congressional action. The report Hoover had requested listed the cause of accidents between October 1, 1920, and October 1, 1921, and pointed to the need for Federal oversight. Additionally it listed "Six Requisites for Safe Flying," two of which were "Nation-wide weather forecasts" and "Nation-wide chart of air routes."<sup>67</sup> The organization drafted a bill modeled after NACA recommendations, adding a proposal that would have given the Department of Commerce jurisdiction over both inter and intrastate commerce.

"Report to Hoover Declares Federal Supervision Would Do Away With Most Mishaps," headlined the *New York Times* while the *New York Journal of Commerce* headlined "Airplane Traffic Control Imperative—Gov't Regulation Needed, Says Report to Hoover," and from the *Philadelphia Evening Ledger*: "Hoover Considers Aviation Control."<sup>68</sup> These newspapers as well as others reported the work of the committee and Hoover's support for legislation. The bill was drafted by the association and introduced in December by Senator James Wadsworth (R-NY), chairman of the Committee on Military Affairs, and Representative Fred Hicks (R-NY). Unfortunately, state's rights advocates recoiled at the notion of Federal rule over intrastate commerce, and the bill was effectively dead on arrival.<sup>69</sup>

The debate over intrastate and interstate Federal jurisdiction and political maneuvering had prevented passage of aviation legislation in 1921. Meanwhile in February 1922, the American Bar Association's (ABA)

Committee on Air Law, chaired by MacCracken, was meeting with another aviation committee and Judge Lamb, the Department's solicitor. The group directed MacCracken to meet with the chairman of the House Interstate and Foreign Commerce Committee, Representative Samuel Winslow (R-NY)<sup>70</sup>. His purpose was one of lobbying for aviation legislation. Although Winslow was initially cold to the idea, MacCracken was able warm him up and secure his help. Winslow pressed Assistant Legislative Counsel Fred Lee into service, telling him:

Now you two fellows get together. I think Mr. MacCracken knows something about aviation, and I know you know something about drafting legislation. Whatever you agree upon, I'll introduce and get through Congress.<sup>71</sup>

Lee and MacCracken drafted the Winslow Bill and sent it to Hoover for comment. He delegated it to Judge Lamb who revised it based on the Department's political approach. In August, Judge Lamb received a letter from the Aeronautical Chamber of Commerce's Sam Bradley. "I'm getting anxious for some real information relative to the status of aerial legislation," he wrote. The answer came from Hoover who hoped Congress would debate the Winslow bill when it reconvened. Bradley wrote back, emphasizing the need for quick action. He compared the plight of aviation with the air mail service operated under Post Office regulation. Detailing 18 aviation accidents that had occurred between May 30 and August 21, he compared that accident rate to 12 months of airmail operations without a single fatality. The airmail enjoyed "continuous operation under proper Federal inspection and control," he pointed out. Bradley strongly urged Hoover to impress the urgency of the situation upon the House Committee on Interstate and Foreign Commerce. Continued delay would slow development of commercial aviation and cause "the needless loss of lives."<sup>72</sup> Hoover sent a letter to Winslow suggesting the Congressman "expedite" work on legislation saying "it would appear to me, that the matter is of a pressing order." The Congressman replied: "It seems to me quite unlikely that any legislation will be considered by either committee or Congress before the December session."<sup>73</sup>

The Secretary received correspondence not only from those in the aircraft industry such as A. B. Johnston, president of the Huff Daland Aero Corporation in New York, but also from those within government. The Secretary of the Navy Edwin Denby, his Assistant Secretary Theodore Roosevelt, and Secretary of War John Weeks, expressed support for establishing an aeronautics branch

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within Commerce and offered assistance in pushing the Winslow bill through committee.<sup>74</sup>

Unfortunately, the Winslow Bill was not introduced until the closing days of the Sixty-seventh Congress and got nowhere. Winslow would wait until the Sixty-eighth Congress was seated in December 1923 to reintroduce his legislation. The bill finally reached committee where its members were less than enthusiastic about Federal control over intrastate commerce. The Winslow bill was reported out of committee on January 15, 1925, with only weeks remaining in the Sixty-eighth Congress. The bill died. Winslow retired from Congress.<sup>75</sup>

Throughout 1922 and 1923, Hoover had called aviation conferences and supported legislative action. In his 1922 report to the President, he said: "the conference urgently recommended regulation" because of the high accident rate due to inexperienced aviators and "faulty machines."<sup>76</sup> The Commerce Department, between November 1922 and June 1923, had sponsored five such conferences. These included drafting navigation and airdrome safety rules and the formulation of safety codes for aircraft power plants and airframes<sup>77</sup>. Hoover continued his call for action in 1923, writing that commercial aviation in the United States was falling behind other nations and that "this method of transportation means much to our economic and social progress and every encouragement, legislative and otherwise, should be given to its development."<sup>78</sup>

The period between 1923 and 1925 saw little new legislative interest. Hoover claimed that "we carried the matter to the country as best we could; but the subject, being highly technical, had little emotional appeal." In an interview with the *Boston American* in October 1924, he again linked safety to the general acceptance of aviation. Assistant Secretary of Commerce, J. Walter Drake, touted the Department's policy position during a radio address broadcast on November 10, 1925, from station WRC in Washington, D.C. Drake explained the importance of transportation in the daily lives of all Americans and noted that aviation was a significant element in commerce and defense. While commercial aviation should not be subsidized directly it should receive assistance in the form of navigation facilities. "We must provide for lighting airways, for signal stations, for radio facilities, and for adequate weather services," he said. *The American Review of Reviews* articulated the issues surrounding the debate in October 1925, editorializing that the Department of Commerce could better promote aviation by providing air routes, radio stations and the "directional use of radio in air navigation."<sup>79</sup>

Although advocates for commercial aviation were vocal, the "problem" of aeronautical regulation had not yet reached a point by 1925 that it had attracted enough

political attention to require congressional action. Hoover explained the lack of interest was due to the fact that "Congress is always overburdened with legislative demands, and only those having large public support can get attention." Komons would agree. Aviation as an industry had been declining, and the subject of civil aviation had become, as political scientist John Kingdon would describe it, a "condition" and not a problem<sup>80</sup>.

There was an abundance of indicators such as the high accident rate among barnstormers and the general decline in the state of the aviation industry. Doing something about it, however, was a different issue. Kingdon points out: "Problems are often not self-evident by the indicators. They need a little push to get the attention of people in and around government."<sup>81</sup>

The "little push" to get things moving turned out to be General Billy Mitchell, a strong and vocal proponent of a unified air service for many years, and highly critical of the General Staff who, he believed, were "deliberately obstructing aerial development."<sup>82</sup> His criticism had become an irritant to policy makers in the Army and Navy Departments as well as the administration. In September, Putnam released Mitchell's book *Winged Defense*. The book pointed out that the United States lacked an aviation policy. Mitchell was convinced the lack of such a policy was the cause of "our inefficient national military aeronautics, our underdeveloped civil and commercial aeronautics."<sup>83</sup> Until the conditions were corrected "the air power of the United States will continue to flounder in the slough of aeronautical despond."<sup>84</sup> *The New York Times* reported the book's impending release commenting that Mitchell "has struck out again at the air policies of the Government."<sup>85</sup>

As Mitchell continued his assault on a policy that had placed aviation on the political back burner, the House of Representatives appointed a committee to review the status of aviation. Its chair, Florian Lampert (R-WI), was not necessarily "friendly" towards the Coolidge administration and planned to give Mitchell a forum in which he could express his views. Mitchell favored a "Department of Air," under which all military and civilian aviation would be placed—a concept not supported by the President. Early in September 1925, the Navy airship *Shenandoah*, commanded by Mitchell's friend Zachary Lansdowne crashed. Lansdowne and thirteen others were killed. The accident occurred only days after disappearance of three Navy aircraft that had attempted to fly from San Francisco to Hawaii. Mitchell could take no more. *Aviation* published his comments in full. The editor noted that Mitchell's statements would "undoubtedly form the basis" of a Congressional investigation—they would. The article, "Col. Mitchell's Statements of Govt. Aviation," was prophetically

subtitled: "These Contain the Assertions on Which He Expects to be Court Martialed."<sup>86</sup> The most serious accusation was one that could not be ignored by the Army and Navy Departments or, more importantly, the President. "My opinion is as follows," he wrote, "these accidents are the direct result of the incompetency, criminal negligence and almost treasonable administration of the national defense by the Navy and War departments."<sup>87</sup> The *New York Times* editorialized that Mitchell had "come pretty near breaking the back of what reputation he had left." As to Mitchell's expectation of being ordered before court martial, "he certainly ought to." As far as the *Times* was concerned, his words were "not only subordinate but incredibly foolish."<sup>88</sup>

The looming political threat of the Lampert Committee and Mitchell's public accusations compelled the President to focus the attention of his administration on the plight of aviation and push for legislation that reflected his aviation policy. Hoover recommended the President appoint a board "to consider not only the military but also all the commercial phases" of the aviation question. Coolidge lost no time and within days appointed his friend Dwight D. Morrow as chairman of an administrative board "to make a study of the best means of developing and applying aircraft in national defense."<sup>89</sup> Komons points out Coolidge was "determined to court-martial Billy Mitchell."<sup>90</sup>

The President's Aircraft Board, or The Morrow Board, worked quickly, calling representatives from the Departments of War, Navy, Post Office and Commerce. Members from the NACA also testified.

Speaking for the Secretary of War, Dwight Davis, the Assistant Secretary underscored the point that military aviation was dependant upon a strong commercial aviation industry, and that commercial aviation could be developed through Federal subsidy by establishing airways, navigation facilities and meteorological services. Paul Henderson, former Second Assistant Postmaster General, who had been in charge of developing the Air Mail Service, explained that government should continue the important work of research and development in "directional radio, and other aids to navigation."<sup>91</sup>

Secretary Hoover appeared before the board on September 23, reporting to its members that commercial air transportation was reaching a point of self-sufficiency and could exist without subsidy with "certain minor services" provided by the government. The government was already providing navigation aids in the form of lighting and marking channels for commercial marine navigation. It maintained waterways, published charts and provided weather and navigation information.

We have to this, I believe, a complete

analogy in aviation. Before we can expect to develop commercial aviation we must determine the air routes from the point of view of the best channels through the air in their relation to atmospheric conditions. We must develop a service for warnings of weather disturbance such as we have in navigation. We must prepare charts of these airways. We must secure the provision of landing fields and air ports and for marking the route.<sup>92</sup>

Regulations and provisions for licensing both pilot and aircraft must be developed, as well as inspection of aircraft. "Without such services my belief is that aviation can only develop in a primitive way."<sup>93</sup>

Hoover's philosophy of efficiency was brought to bear when he proposed that the additional cost of providing and maintaining the required infrastructure and regulatory environment could be mitigated by expanding the duties of the Coast and Geodetic Survey, the Lighthouse Service, Weather Bureau and the Bureau of Standards. The creation of a new aviation bureau would be necessary but the cost would be minimal if the other bureaus worked together to provide the required regulatory and support structures. Government maintenance of infrastructure should not be considered a direct subsidy, Hoover argued, it was no more than had been provided for marine transportation.<sup>94</sup>

The Morrow Board adopted Hoover's proposals "in full" and released its report to the President on December 2, with its recommendations in keeping with the administration's policy as well as Hoover's concept of the administrative organization. Of particular interest to Coolidge was that the Board believed that military aviation should be left under the cognizance of each branch's air arm. The President sent the Morrow Board recommendations to Congress where Senator Hiram Bingham (R-CT) and Representative James Parker (R-NY), members of the Morrow Board, championed legislation in support of the board's recommendations. Many in Congress understood the nexus that existed between the success of commercial aviation and the government's role in providing an airway and communication system. In arguing for the bill, Representative Clarence Lea (D-CA) pointed to the fact that the Federal government had rendered such support in the encouragement of other industries. If passed, the bill would allocate funds for establishing airways by constructing ground-based navigation aids. Congressman Jonathan Wainwright (R-NY) added his support for the bill's passage, arguing that it had not gone far enough in aiding commercial aviation. The United States would never

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enjoy the benefits of aviation until "we courageously face the situation and the needs of commercial aviation." He added that the statute would lend encouragement by providing navigation facilities, airways and weather information. Not all were happy with the bill however. In what was probably one of the more humorous debates in Congress, Representative George Huddleston (D-AL)<sup>95</sup> opposed the bill.

Mr. Hoover, who is already been made dictator of the radio, now with the bill becomes lord of the air. He is already lord of the waters. He is the Pooh-Bah of this administration. He is the factotum of the executive branch of our Government—its man of all work.

He will be lord of the air if this bill should pass. Nothing, unless it falls strictly within the province of the Almighty, can be done in all the region lying above a man's head that Mr. Hoover will not undertake to regulate and deal with. Perhaps even a disembodied spirit will not be permitted to wing its way upward into a better world without petitioning Mr. Hoover and getting a pilot's license before he starts.<sup>96</sup>

Over Huddleston's objection, the final bill emerged from the Sixty-ninth Congress, tasked the Secretary of Commerce "to foster air commerce," and provided for an Assistant Secretary of Commerce for Aeronautics. The act settled issues of joint military and civilian control. The Department of Commerce would oversee commercial aviation and the War and Navy Departments would manage their own aeronautical interests. The debate over licensing aircraft engaged in inter- or intrastate commerce was settled in conference. The final version required only the registration of aircraft employed in interstate commerce. President Coolidge signed the bill on May 20, 1926, and the Air Commerce Act became law. *The New York Times* predicted that the "historian of commercial aviation will make a red-letter day" of the events and noted that the airways were now under the administration of the Secretary of Commerce. In the article, Hoover was quoted as predicting that the U.S. would lead the rest of the world in aviation service within three years. Those who entered the commercial aviation business were pioneers and would be "powerfully assisted by the Government under the Air Commerce Act."<sup>97</sup>

Among other things, the new law empowered the

Secretary of Commerce to "advise with the Bureau of Standards and other agencies in the executive branch" to conduct research and development in the establishment of "improved air navigation facilities." Section 5 authorized the Post Office to transfer to the Commerce Department all the airways and navigation facilities that had been built during its supervision of the airmails. The Act also directed the Weather Bureau (under the Department of Agriculture) to support the newly created Aeronautics Branch with forecasts, weather reports and weather warnings. Military aviation was to be regulated separately, but for now, the commercial aviation had what it wanted and needed: Federal oversight, safety regulation, legal recognition, weather reports, and an indirect subsidy in the form of government research, development and application of new communication and navigation technologies.<sup>98</sup>

Hoover chose William MacCracken to fill the newly-created position of Assistant Secretary of Commerce for Aeronautics. MacCracken began serving in August and immediately organized the new bureau as Hoover had envisioned. The Bureau of Lighthouses assumed responsibility for airway maintenance and development, and a new Airways Mapping Section fell to the Coast and Geodetic Survey. Radio research conducted under the Bureau of Standards continued with a radio section moving to the Aeronautics Research Division. Under Hoover and MacCracken's organizational plan, only two units had to be created "from scratch": the Information and Air Regulation Divisions<sup>99</sup>.

The new aeronautical regulations that were to be promulgated by the Bureau of Aeronautics had to be written. The law vested this authority in Secretary Hoover, and MacCracken could easily have written appropriate regulations and had Hoover sign them. However, the Department of Commerce under Hoover had stressed the notion of industry associationalism and consultations with those it regulated. This plan was to be followed by MacCracken in drafting new regulations. MacCracken sought the help of Ira Grimshaw, an assistant to the Department's Solicitor. By October the first draft of the regulations was complete. The draft was circulated for comment among the Post Office, Navy and Army Departments, aircraft manufacturers and others engaged in commercial aviation. Meetings were held at the Commerce Department to get feedback. Insurance companies, "fixed base operators, and little fellows all over the country, . . . gave us their ideas and feelings," said MacCracken. He described the meetings as "stimulating and helpful," engendering a spirit of cooperation. Comments and suggestions were incorporated in the regulations, and the final product represented the philosophy and concerns of both the Department and the industry. As to the thornier



issue of barnstormers, MacCracken realized the new Bureau would have to "ride herd" on the gypsy flyers because "the time had come for a new kind of aviation to emerge in this country, perhaps less colorful, but certainly more responsible."<sup>100</sup>

Hoover understood the significance of a strong commercial aviation industry and the far-reaching implications it would have on both commerce and national defense. He saw government's role as one of creating a regulatory climate that would foster and advance the industry. Hoover also understood that without advanced communication and navigation aids, commercial aviation could not be conducted in a safe and orderly environment, and its utility as a mode of transportation would be limited. He believed that government should provide these aids and conduct research and development to continually improve them. His philosophy of associationalism and desire for an efficient regulatory structure within government fostered aviation's growth and provided the necessary structure to keep it strong. It would not be without mistakes and growing pains, but it would prove to be an effective model of regulation. When Hoover left office to run for the Presidency in 1928, the Department of Commerce had developed 25,000 miles of airways, and licensed over 6,400 aircraft flying over 25,000,000 miles annually<sup>101</sup>. Writing in *The Magazine of Business* in 1928, Hoover predicted that within twelve months commercial aviation activity would outpace all of Europe combined. He boasted that its development was based "upon a distinctly American plan, differing wholly from those of other countries and this plan has, I believe, now been demonstrated to have a sound basis."<sup>102</sup>

#### Conclusion

Hoover was not the sole participant in this political process spanning his secretariat, nor was he the only one lobbying aviation regulation. However, his influence was consequential and his political philosophies were mirrored in their structure and administration. Once he was empowered to regulate, his management ability and belief in efficiency, associationalism and technology ensured that the bureaucratic structure within the newly formed Aeronautics Branch and Bureau of Standards would engender a culture that promoted this new industry and

produced a technologically advanced aeronautical communication and navigation system that would support all-weather flight. MacCracken called these services "essential" and, in a press release shortly after he had been sworn in as Assistant Secretary, he said:

Little commercial aviation could be organized until the fundamental services [airways] were assured, as no commercial concern could undertake to provide these aids to navigation at its individual expense, not only because of the large preliminary out lay but because such facilities would be equally available to competitors<sup>103</sup>.

Now that bureaucratic structure and support was in place, advances in navigation and communication technologies would progress at a faster pace and in a more coordinated fashion. The work carried out during Hoover's tenure as Secretary would soon produce an industry supported by an airways system that enabled the growth of commercial aviation in the United States and surpassed all of Europe combined.

"We transformed the [aviation] industry from purely mail carriers into an actual transportation industry,"<sup>104</sup> Herbert Hoover wrote in 1934 to his former Postmaster General, Walter Brown. At the time, Brown was being investigated by the Roosevelt administration for his part in what Democratic Senator Hugo Black (D-AL) and others believed was the criminal mismanagement of the airmail contracts under the Air Mail Act of 1930. Hoover wanted the record set straight. His own administration, Hoover believed, had corrected fundamental problems in commercial aviation and had done it "in such a fashion as to make it a great industry."<sup>105</sup>

This new industry, commercial aviation, was born during his secretariat. It resided in his agency and was imprinted with his political philosophy. His influence on the industry would be felt for years to come. Even though the aviation industry would eventually be regulated by other agencies, its political policies and procedures would bear the likeness of Hoover's American Plan. □

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Notes

<sup>1</sup>Louis W. Liebovich, *Bylines in Despair: Herbert Hoover, The Great Depression, and the U.S. News Media* (Westport, CT: Praeger, 1994), 6.

<sup>2</sup> Ibid., 7.

<sup>3</sup> Ibid.

<sup>4</sup> Herbert Hoover, *The Memoirs of Herbert Hoover: The Cabinet and the Presidency 1920-1933* (New York: The MacMillan Company, 1952), 33.

<sup>5</sup> Ibid., 2.

<sup>6</sup>

Ibid., 42.

<sup>7</sup> Jay N. Darling, *As Ding Saw Herbert Hoover* (Ames: Iowa State University Press, 1996), 41.

<sup>8</sup> Ibid., 41; and Joseph Brandes, *Herbert Hoover and Economic Diplomacy, Department of Commerce Policy 1921-1928* (Pittsburgh: University of Pittsburgh Press, 1962), 4.

<sup>9</sup> Hoover, *The Memoirs of Herbert Hoover*, 39.

<sup>10</sup> Walter Liggett's book, *The Rise of Herbert Hoover*, was a rancorous Hoover biography containing false claims of impropriety as head of the Belgian Relief program. See Louis W. Liebovich, *Bylines in Despair: Herbert Hoover, the Great Depression, and the U.S. News Media* (Westport, CT: Praeger Publishers, 1994), 187.

<sup>11</sup> Walter W. Liggett, *The Rise of Herbert Hoover* (New York: The H. K. Fly Company, 1932), 311.

<sup>12</sup> Rexmond C. Cochrane, *Measures For Progress: A History of the National Bureau of Standards*, Daniel Boorstin, ed. (New York: Arno Press, 1976), 249.

<sup>13</sup> Hoover viewed the American economy as consisting of associations such as banking, labor, law, engineering and farming. "We have trade associations and trade institutes embracing particular industries and occupations. Associational activities are, I believe, driving upon a new road where the objectives can be made wholly and vitally of public interest." See Ray L. Wilbur and Arthur M. Hyde, *The Hoover Policies*, (New York: Charles Scribner's Sons, 1937), 300-303; Ellis W. Hawley, "Herbert Hoover, the Commerce Secretariat, and the Vision of an 'Associative State,' 1921-1928," *The Journal of American History* 61 (1), (1974), 118; and Joan Hoff Wilson, *Herbert Hoover: Forgotten Progressive*, Oscar Handlin, ed. (Boston: Little, Brown and Company, 1975), 87.

<sup>14</sup> Herbert Hoover, *American Individualism and The Challenge to Liberty* (West Branch Iowa: Herbert Hoover Presidential Library Association, 1989), 36.

<sup>15</sup> *Ibid.*, 59; See Hoover, *The Memoirs of Herbert Hoover*, 101-102; and Ronald Radosh, "How Had the American Economy Changed Before the Great Depression?: The Corporate Ideology of American Labor Leaders," in *The Twenties: The Critical Issues*, Joan Hoff Wilson, ed. (Boston: Little, Brown and Company, 1972), 77.

<sup>16</sup> Hoover, *American Individualism*, 35-54.

<sup>17</sup> *Ibid.*, 54.

<sup>18</sup> Ellis W. Hawley, "Herbert Hoover, the Commerce Secretariat," 117; and Herbert Hoover, "Nationalized Power," *The Nation*, September 16, 1920, 318.

<sup>19</sup> Hoover, "Nationalized Power," 318.

<sup>20</sup> See Hoover, *The Memoirs of Herbert Hoover*, 64; "How The Papers Size Up the Hoover Boom," *The Literary Digest*, March 6, 1920, 4; and *Fourteenth Annual Report of the Secretary of Commerce For the Fiscal Year Ended June 30, 1926* (Washington, D.C.: Government Printing Office, 1926), 5-6.

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- <sup>21</sup> See "An Independent Progressive," *The Nation*, March 20, 1920, 355; "Nationalized Power," *The Nation*, September 18, 1920, 213; Herbert Hoover, "We Can Cooperate and Yet Compete," *Nation's Business*, June 5, 1926, 11-14; and Ellis W. Hawley, "Herbert Hoover, the Commerce Secretariat," 126.
- <sup>22</sup> Hawley, "Herbert Hoover, the Commerce Secretariat," 126-127.
- <sup>23</sup> Wilson, *Herbert Hoover*, 82.
- <sup>24</sup> Hoover, *The Memoirs of Herbert Hoover*, 41-42, 60-65.
- <sup>25</sup> Wilson, *Herbert Hoover*, 79; and Walter Liggett, *The Rise of Herbert Hoover*, 311.
- <sup>26</sup> See Hoover, *The Memoirs of Herbert Hoover*, 42; and *Tenth Annual Report of the Secretary of Commerce For the Fiscal Year Ended June 30, 1922* (Washington, D.C.: Government Printing Office, 1922), 3.
- <sup>27</sup> Jay N. Darling, *As Ding Saw Herbert Hoover*, John M. Henry, ed. (Ames: Iowa State University Press, 1996), 51.
- <sup>28</sup> Wilson, *Herbert Hoover*, 82-85.
- <sup>29</sup> See Hoover, *The Memoirs of Herbert Hoover*, 38-44; and Wilson, *Herbert Hoover*, 80.
- <sup>30</sup> Hoover, *The Memoirs of Herbert Hoover*, 40.
- <sup>31</sup> See *Thirteenth Annual Report of the Secretary of Commerce For the Fiscal Year Ended June 30, 1925* (Washington, D.C.: Government Printing Office, 1925), 2-3; Hoover, *The Memoirs of Herbert Hoover*, 61-73; and Cochrane, *Measures for Progress*, 253-255, 510.
- <sup>32</sup> Hoover, *The Memoirs of Herbert Hoover*, 74-76.
- <sup>33</sup> *Fifteenth Annual Report of the Secretary of Commerce For the Fiscal Year Ended June 30, 1927* (Washington, D.C.: Government Printing Office, 1927), xxviii.

<sup>34</sup> Ibid., xxix.

<sup>35</sup> Ibid., xxx.

<sup>36</sup> Ibid.

<sup>37</sup> "American Industry Acknowledges Its Debt to Herbert Hoover: A Symposium of Appreciation of His Work, by Leaders of Industry," *Industrial Management*, April, 1926, 199-212.

<sup>38</sup> "Smith, Hoover, and Prosperity: Forecasts by Nationally Known Business Men," *The Forum*, November, 1928, 748.

<sup>39</sup> Wilson, *Herbert Hoover*, 86-87.

<sup>40</sup> *Public Papers of the Presidents of the United States: Herbert Hoover, 1929-1933*, vol. 1 (Washington, D.C.: Government Printing Office, 1974), 5.

41. Notes

Nick A. Komons, *Bonfires to Beacons: Federal Civil Aviation Policy Under The Air Commerce Act 1926-1938* (Washington, D.C.: Government Printing Office, 1978), 7.

<sup>42</sup> William P. MacCraken was born in Chicago, in 1888 where his parents both practiced medicine. He attended law school and shortly after entered the service where he became an aviator. After World War I, he returned to law and began working with the ABA. He soon became chairman of the American Bar Association's Committee on Aeronautics and was an advocate for aviation. He helped draft the Air Commerce Act and became the first Assistant Secretary of Commerce for Aeronautics. He holds pilots license number 1. He left the department in 1928 to enter industry. Michael Osborn and Joseph Riggs, "Mr. Mac," (Memphis: Southern College of Optometry, 1970) 10-98.

<sup>43</sup> Komons, *Bonfires to Beacons*, 35.

<sup>44</sup> Hiram Bingham, Republican from Connecticut, was born in Honolulu, Hawaii in 1875. Educated at Yale, the University of California and Harvard University, he became a professor of history and politics at Harvard and Princeton. He was known for his discovery of the Incan ruins at Machu Picchu. As a captain in the Connecticut National Guard, he became an aviator in 1917

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and rose to the rank of lieutenant colonel before becoming lieutenant governor of Connecticut in 1922. He became a Senator in 1924 and served in the Senate until he failed reelection in 1933. See *Biographical Directory of the United States Congress 1774—1989*, 1989, S. Doc. 100—34, 98.

<sup>45</sup> Hiram Bingham, "The Future of Aviation," *The Outlook*, April 7, 1920, 590.

<sup>46</sup> *Ibid.*, 592.

<sup>47</sup> See Komons, *Bonfires to Beacons*, 7-33; "To Curb Reckless Aviators," *The Literary Digest*, December 9, 1922, 33; and Manufacturers Aircraft Association, *Aircraft Yearbook: 1921* (New York: Small, Maynard & Co., 1921), 6-7, 139-141.

<sup>48</sup> See Komons, *Bonfires to Beacons*, 12; and Aeronautical Chamber of Commerce of America, *Aircraft Yearbook: 1922* (New York: Aeronautical Chamber of Commerce, 1922), 33.

<sup>49</sup> Komons, *Bonfires to Beacons*, 7-16.

<sup>50</sup> Hoover Papers, "Aviation by Investigation," December 11, 1925 (Speeches by W.P. MacCracken 1925-1926).

<sup>51</sup> See Komons, *Bonfires to Beacons*, 22, 35; Herbert Hoover to Frederick C. Hicks, December 30, 1921, Hoover Papers (Commerce Files "Aviation"); and Deborah Stone, *Policy Paradox: The Art of Political Decision Making* (New York: W.W. Norton, 1997), 158.

<sup>52</sup> L. C. Spears, "Hoover Foresees a Greater Air Service," *The New York Times*, June 26, 1927.

<sup>53</sup> *Hearings Before The President's Aircraft Board: September 21, 22, 23 and 28, 1925* vol. 1 (Washington, D.C: Government Printing Office, 1925), 5.

<sup>54</sup> Komons, *Bonfires to Beacons*, 31-64.

<sup>55</sup> The Aeronautical Chamber of Commerce was formed in December 1921 to further aviation's interests. Many felt the Manufacturers' Aircraft Association, other trade associations and aircraft clubs were not quite up to the task of effectively promoting and lobbying for the industry. See Komons, *Bonfires to Beacons*, 53; and Aeronautical Chamber of Commerce,

*Aircraft Year Book: 1922* (New York: Aeronautical Chamber of Commerce, 1922), 2.

<sup>56</sup> Aeronautical Chamber of Commerce, *Aircraft Year Book: 1922*, 1.

<sup>57</sup> The National Advisory Committee for Aeronautics was established in 1915 due to the efforts of its first chairman, Dr. Charles Walcott. Other members included Army and Navy officers, Dr. Stratton of the NBS, and other academics such as Joseph Ames. Its purpose, according to the enabling legislation was to "direct" and "supervise" scientific aeronautical research. The NACA continued for 43 years until President Eisenhower signed into law the National Aeronautics and Space Act of 1958, which transformed the NACA into the National Aeronautics and Space Administration (NASA). See Roger E. Bilstein, *Orders of Magnitude: A History of the NACA and NASA, 1915-1990* (Washington, D.C: Government Printing Office, 1989), 3, 48.

<sup>58</sup> In a speech given at Ft. Humphrey, February 19, 1927, MacCracken explained that commercial aviation in the United States had developed differently than those airlines in Europe. "In the United States we have taken an entirely different view of the question. We figure that if commercial aviation is going to develop on a sound basis it has got to earn its own way, that it should perform an economic service that is worth what it costs, and we believe we can get better aviation, even from the defense point of view, on that policy than by way of subsidies." See Hoover Papers, NACA Letter to Hoover, March 23, 1921 (Commerce Files, Aviation); and Hoover Papers, W.P. MacCracken, "Government Regulation of Commercial Aircraft," February 19, 1927 (MacCracken, Speeches 1927-1929).

<sup>59</sup> See Hoover Papers, NACA Letter to Hoover, March 23, 1921; and Hoover Files, "Draft of Letter For Signature of the President" (Commerce Files, NACA 1921-1926).

<sup>60</sup> Ray Wilbur and Arthur Hyde, *The Hoover Policies* (New York: Charles Scribner's Sons, 1937), 216.

<sup>61</sup> Hoover Papers, Hoover to Gardner, June 14, 1921 (Commerce Files, Aviation).

<sup>62</sup> Hoover Papers, Gardner to Hoover, June 18, 1921 (Commerce Files, Aviation).

<sup>63</sup> Hoover Papers, Hoover to Cleary, June 25, 1921 (Commerce Files, Aviation).

<sup>64</sup> The Aircraft Manufacturers' Association was formed in February 1917 for the purpose of advancing the cause of aviation which included educating the public to the "value and future"

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of the aeroplane. Harry Mingle, President of Standard Aircraft Corporation, invited other manufacturers to form the Association during the 1917 Aeroplane Show in New York where eight manufacturing companies took him up on his offer. Charter members included: Aeromarine Plane and Motor, The Burgess Company, Curtiss Aeroplane and Motor, L. W. F. Engineering, Wright-Martin Aircraft, Sturtevant Aeroplane, Thomas-Morse Aircraft and Standard Aircraft. See Manufacturers Aircraft Association, *Aircraft Year Book: 1919* (New York: Manufacturers Aircraft Association, 1919), 31-33, 39.

<sup>65</sup> See Hoover Papers, Bell to Stetson, July 11, 1921 (Commerce Files, Aviation); and Hoover Papers "Aviation—Conference in office of Secretary of Commerce, July 18, 1921" (Commerce Files, Aviation).

<sup>66</sup> See Hoover Papers, "Notes for Meeting of the Air Craft Men Monday", July 16, 1921 (Commerce Files, Aviation); and Komons, *Bonfires to Beacons*, 26.

<sup>67</sup> Aeronautical Chamber of Commerce, *Aircraft Year Book: 1922*, 33-44.

<sup>68</sup> See "Urges Government Control of Flying," *The New York Times*, Sep 20, 1921; "Airplane Traffic Control Imperative," *New York Journal of Commerce*, Sept 20, 1921; and "Hoover Considers Aviation Control," *Philadelphia Evening Ledger*, Sep 3, 1921.

<sup>69</sup> Komons, *Bonfires to Beacons*, 46.

<sup>70</sup> Samuel Ellsworth Winslow. The bill he introduced, drafted by MacCracken and Lee, incorporated flight rules in the bill itself. This would have had the effect of requiring Congress to amend the act for required changes in aircraft operating rules. This was clearly unworkable and when coupled with the issue of Federal regulatory control of intrastate commerce made the bill less appealing. See *Biographical Directory of the United States Congress 1774—1989*, 1989, S. Doc. 100—34, 2074; and Komons, *Bonfires to Beacons*, 54.

<sup>71</sup> Osborn and Riggs, "Mr. Mac," 41.

<sup>72</sup> See Hoover Papers, Bradley to Lamb, August 3, 1922 (Commerce Files, Legislation 1922, 02162); Hoover to Bradley, August 10, 1922 (Commerce Files, Legislation 1922, 02162); and Bradley to Hoover, August 24, 1922 (Commerce Files, Legislation 1922 02162).

<sup>73</sup> Hoover Papers, Winslow to Hoover, September 15, 1922 (Commerce Files, Legislation 1922, 02162).

<sup>74</sup> See Hoover Papers, Weeks to Hoover, April 11, 1922 (Commerce Files, Legislation 1922, 02162); Hoover Papers, Denby to Hoover, April 18, 1922 (Commerce Files, Legislation 1922, 02162); and Hoover Papers, Roosevelt to Hoover, April 8, 1922 (Commerce Files, Legislation 1922, 02162).

<sup>75</sup> Osborn and Riggs, "Mr. Mac," 40-41.

<sup>76</sup> *Tenth Annual Report of the Secretary of Commerce: 1922* (Washington, D.C.: Government Printing Office, 1922), 14.

<sup>77</sup> Hoover Papers, "Annual Report [of conferences]" (Commerce Files, 02173).

<sup>78</sup> *Eleventh Annual Report of the Secretary of Commerce: 1923* (Washington, D.C.: Government Printing Office, 1923), 39.

<sup>79</sup> See Herbert Hoover, *The Memoirs of Herbert Hoover: The Cabinet and the Presidency 1920-1933* (New York: The MacMillian Company, 1952), 132-3; Hoover Papers, J. Walter Drake, "Civil Aviation in the United States: Radio Address, November 10, 1925 (Commerce Files, Aviation 1925); Hoover Papers, "Interview Published in *Boston American*, October 13, 1924" (Commerce Files, Aviation); and "A New Air Policy for America," *The American Review of Reviews*, October 1925, 421-2.

<sup>80</sup> See Herbert Hoover, *The Memoirs of Herbert Hoover*, 132-3; Komons, *Bonfires to Beacons*, 64; and John W. Kingdon, *Agendas, Alternatives, and Public Policies* (Boston: Little, Brown and Company, 1984), 115-119.

<sup>81</sup> John W. Kingdon, *Agendas, Alternatives, and Public Policies*, 99.

<sup>82</sup> Komons, *Bonfires to Beacons*, 73.

<sup>83</sup> William Mitchell, *Winged Defense: The Development and Possibilities of Modern Air Power—Economic and Military* (Port Washington, NY: Kennikat Press, 1925), 222-223.

<sup>84</sup> *Ibid.*, 223.



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<sup>85</sup>. "Col. Mitchell Hits Air Service Again in Book; Insists on Unified Control for Able Defense," *The New York Times*, August 29, 1925.

<sup>86</sup>. William Mitchell, "Col. Mitchell's Statement on Govt. Aviation," *Aviation*, September 14, 1925, 318.

<sup>87</sup>. Ibid.

<sup>88</sup>. "Both Insubordination and Folly," *The New York Times*, September 7, 1925.

<sup>89</sup>. *Hearings Before the President's Aircraft Board: September 21, 22, 23 and 28, 1925* (Washington, D.C.: Government Printing Office, 1925), 1.

<sup>90</sup>.  
Komons, *Bonfires to Beacons*, 73-75.

<sup>91</sup>. *Hearings Before The President's Aircraft Board: September 21, 22, 23 and 28, 1925*, vol. 1 (Washington, D.C: Government Printing Office, 1925), 51-54, 305.

<sup>92</sup>. *Hearings Before The President's Aircraft Board*, 319.

<sup>93</sup>. Ibid.

<sup>94</sup>. Ibid., 322-3.

<sup>95</sup>. George Huddleston disliked much of the bill, warning from the floor of the House: "I feel that there are certain features of this bill that should be brought to the attention of the House. In future years, when the evils which will flow out of it will have become obvious to everyone, perhaps somebody will go back and look in the *Record* and ask why nobody called attention to them. I do not want that individual who may look back in the *Record* to find that nobody said anything; that nobody warned against the bill." Huddleston died in 1960, shortly after the introduction of commercial jets and in a regulatory system born over his objections. See *Biographical Directory of the United States Congress 1774—1989*, 1989, S. Doc. 100—34, 1225; and *Congressional Record*, 67<sup>th</sup> Cong., 1<sup>st</sup> sess., 1926, pt 7:7317.

<sup>96</sup>. *Congressional Record*, 67<sup>th</sup> Cong., 1<sup>st</sup> sess., 1926, pt 7:7316, 7318-19, 7321.

<sup>97</sup>. See *Air Commerce Act of 1926* (New York: Aeronautical Chamber of Commerce of America, 1926), 1-4, 9. Note: This is a reprint of the Act and contains the statement prepared by the Managers of the House Conferees interpreting and amplifying certain provisions of the Act; "Opening the National Airways," *The New York Times*, August 16, 1926; and Hoover, *The Memoirs of Herbert Hoover*, 133.

<sup>98</sup>. See Aeronautical Chamber of Commerce, *Air Commerce Act of 1926*, 1, 4-5; and Komons, *Bonfires to Beacons*, 131-133.

<sup>99</sup>. Komons, *Bonfires to Beacons*, 92-3.

<sup>100</sup>. Osborn and Riggs, "Mr. Mac," 63-4; and Komons, *Bonfires to Beacons*, 95.

<sup>101</sup>. Herbert Hoover, *The Memoirs of Herbert Hoover*, 134.

<sup>102</sup>. Harry New et al., "Air Pioneering: The Government's Contribution to the Future of Commercial Aviation," *The Magazine of Business*, August 1928, 138.

<sup>103</sup>. Hoover Papers, "Aeronautics," November 19, 1926 (Commerce Files, CDA 1926-1928).

104.

Hoover Files, Hoover to Brown, May 3, 1934 (Brown, Walter F., Correspondence).

<sup>105</sup>. Ibid.

