West Coast Aircraft Labor
and an American Military-Industrial Complex, 1935-1941*

Jacob Vander Meulen

In 1935 Reuben Fleet went west. His Consolidated Aircraft Company had built warplanes in Buffalo for thirteen years—trainers at first, then big Navy flying boats after 1929. But like other labor-intensive industries during the Depression, the aircraft business was bad. The market was stagnant, investment scarce, competition and losses ruinous. Worse, Fleet's workers, now with New Deal backing, organized to fight his wage cuts. In Buffalo, 1,000 aircraft workers struck Consolidated and the nearby Curtiss Aeroplane plant. Curtiss opted to defend its arbitrary workplace rule through endless anti-union litigation. Fleet took the capital-flight approach, though in his case the term had a more literal meaning than usual as seaplanes from Lake Erie and the Niagara River now alighted upon San Diego Bay.1

1 Records of Federal Labor Union #18286 [Buffalo], "Strikes and Agreement File, 1898-1953," P86-1659, Records of the American Federation of Labor, University Publications of America. Fleet's tiny firm became the Consolidated-Vultee Corporation (Convair) during the war and later evolved into a building block of General Dynamics, the Cold War military conglomerate.

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Fleet’s strategy, the labor policies of other West Coast aircraft builders, and the experiences of their workers in the years before Pearl Harbor offer a study in the politics and dynamics of industrial unionism in the late New Deal and Defense periods. They also illuminate the structural, locational, and technological evolution of aircraft manufacture during a key phase in the industry’s formation and contribution to West Coast regional development. Paradoxically, experiences of industrialists and workers in this dynamic new industry point as well to the conservative nature of the nation’s new military-industrial complex for warplanes. Traditional values and patterns of limited governance survived, even as the American state vastly extended its social reach through massive spending on warplanes. Key to this conservative political framework was the weakness of aircraft labor, especially on the West Coast.

By the Fall of France in 1940, demand for military aircraft had become unlimited. More than half the U.S. munitions dollar went to military aircraft and over half the warplanes came from the West Coast. Fleet’s westward move was part of the aircraft industry’s tilt to Southern California. In 1935, North American Aviation also moved to the “Southland,” joining Douglas, Lockheed, Northrop, and Vultee in Los Angeles. These firms, along with Boeing in Seattle, came to dominate warplane manufacture as big Army and Navy contracts transformed them from a scattered group of minor companies to an industry employing nearly half a million people in 1941, and one-and-a-half million by 1944.

West Coast aircraft firms, and the vendors, subcontractors, and workers who served them, formed the heart of America’s vast supply base for air power. This new, military dimension of political economy remained a critical, ongoing link in the state-society relationship.
Generating air power has since been a main activity of the federal government. Yet its social, political, and institutional history remains obscure, especially in comparison to the literature on welfare and regulatory systems and the other ways the state intervenes in the nation's social and economic life.2

The socioeconomics of military supply are key to the development of modern states and economies. The particular patterns they assume within various societies suggest how a nation's military institutions and activities, at home and abroad, are as much the products of its social base and political culture as they are of changing technologies, bureaucratic imperatives, and confrontations with other nations and peoples.3 The West Coast aircraft industry's location and structure; its transformation into a wartime mass-production complex; the types of warplanes it produced; the federal agencies and policies for aircraft production; the evolution of air power doctrine—all reflected the values, practices, and tensions of American social and political life.

Reuben Fleet always claimed that California sunshine and San Diego's tax concessions...
and access to tidewater prompted his move. Actually, class conflict in Buffalo and the wage and union consciousness of his workers drove him west. "A 50-day strike in Buffalo sent me to Southern California," he privately explained. Extreme price competition and labor intensity defined the young aircraft industry. In 1935, wages as a share of value added by manufacture stood at 50.1 per cent—a wage component comparable to textiles, the classic labor-intensive industry.

In aircraft, labor costs determined financial health and Fleet saw his best hope for limiting these in the Southland, widely-known as "the white spot of the open shop." Aircraft firms already there paid wages 20 to 40 per cent less than the industry's national average and were largely spared New Deal challenges to managerial prerogative on labor matters. These challenges were only implicit in New Deal labor policy and depended on the ability of workers to organize and act. Across the United States, obstacles to effective unions were formidable enough, but in Southern California they were unique. Under the leadership of Harry Chandler, publisher of the Los Angeles Times, a regional business culture of belligerent anti-unionism flourished. Employer groups were well-funded and unusually cohesive. They utilized anti-union tactics both sophisticated and ruthless and were aided by the police and the courts. Such power, in combination with a rich supply of transient and conservative workers from the depressed

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4 Fleet recorded by J.C. Ward, president of Fairchild Aircraft, in "Notes of Meeting" with Sidney Hillman, co-director of the Office of Production Management, July 15, 1941, Reel 32.3.0, records of the Aeronautical Chamber of Commerce (ACC), the industry's trade association, in the library of the Aerospace Industries Association, Washington, D.C.

5 The value added figure includes aircraft engine manufacture, which was far more mechanized than airframes and remained on the East Coast. To wages must be added salaries for non-production employees, engineers and supervisors, whose numbers were very high in aircraft, making up about 35 per cent of the workforce. See J. Vander Meulen Politics of Aircraft: Building an American Military Industry, (Lawrence, Kan: 1992) 48.
Southern California’s right-wing anti-labor political culture faced a range of new challenges and had weakened significantly by the late 1930s. But by then, aircraft manufacturers, led by Donald Douglas, had established their firms as active beneficiaries in the Southland’s open-shop movement. Douglas had gone west from Cleveland in 1920 with Harry Chandler’s assurances and financial aid. Reuben Fleet wanted his share of Southern California’s competitive advantages. By spring 1936, he had a workforce of 1,600, wage bills 45 percent below the industry’s average, and spies among local members of the International Association of Machinists and the American Federation of Labor. 7

The open shop also prompted the move in 1934 of North American Aviation (NAA) from Baltimore to Los Angeles. NAA’s president, James Kindleberger, listed L.A.’s attractions for the directors of this General Motors-controlled company, which eventually became the Rockwell Corporation. Kindleberger cited the bright, warm sunshine against Baltimore’s chilly winters and humid summers; the virtual free land offered by L.A.’s Mayor; and the proximity of Army and Navy airbases and advanced testing centers at the Guggenheim and Caltech labs. But he stressed


the open shop and low cost of labor. "Los Angeles is by tradition an open shop town," he wrote, pointing to the smashing of the San Pedro dockyard strike by the Los Angeles Police Department (LAPD) and to a Los Angeles Times article heralding the defeat of the aircraft labor movement in 1934. These "showed decidedly that the unions have no foothold in Los Angeles." Moreover, "almost all the workmen in this district are American-born [which] eliminates a source of labor disturbance that frequently originates in the foreign element." 8

Stiff cost competition and primitive labor relations seem out of place in a high-technology industry so reliant on so much special expertise, self-starting worker initiative, and so many craft skills. For most aircraft manufacturers and air power advocates, they seemed unnatural as well. To them, the industry's "natural drift" seemed toward an integrated cartel. 9 They cited rapidly rising research and development (R&D) costs, the market's overwhelming dominance by a single military client, the patent rights that would accrue to a small group of leading firms, and the desirability for national security reasons of stable, advanced and reliable aircraft makers.

But the aircraft industry's "natural drift" depended on the political process and Congressmen who would have to abdicate their control over all aspects of the government's dealings with military suppliers and give up an old ideal of how capitalism should and should not be organized that was far from the ideal of managed cartels. Anti-trust populists on Congress's  

9 The term comes from an NRA Research and Planning Division study, "Aircraft Manufacturing Industry," Apr. 4, 1934, box 6045, Records of the National Recovery Administration, Record Group 9, National Archives.
military committees had no such intention. Reps. Carl Vinson and John McSwain, and Senators Huey Long, William Borah, Gerald Nye, Robert LaFollette, Jr., and Homer Bone, among others, said “no” to the industry’s “natural drift.” They imposed their own version of state capitalism on it, one more attuned to an earlier era of republican proprietary capitalism. They controlled and regulated the industry’s structural development by setting military contracting rules. They wanted this “industry of the future” to be a preserve for the waning ideals of economic individualism, price competition, the limited state, and “democratic technology.”

The aircraft industry’s structural development underscores political and ideological factors in institutional and technological change. Congress’s military and naval committees insisted that the industry not degenerate into an “Aircraft Trust” beholden to “Wall and Pine” which would surely plunder taxpayers and foment war. Congressmen wanted to avoid what many Americans later decried as the “military-industrial complex.” They assumed that the nearly half billion dollars wasted on the World War I aircraft program had been due to corruption and fraud, rather than a disastrously misguided effort to mass-produce aircraft according to Henry Ford’s factory methods. Congressmen wanted to punish the industry, keep it competitive, and make “collusion” between businessmen and military officers as difficult as possible. They forbade cost-plus contracts and advance payments and dismissed clear evidence of the industry’s financial hardship. They obliged Army and Navy business officers to enforce open bidding in military contracts which amounted to 75 per cent of the market for aircraft design and production. Congress would not allow contracting officers to recognize “intellectual property” in warplanes. By denying patent claims to aircraft designs, which the companies financed themselves hoping to win military contracts, Congress canceled the only leverage the companies
might have had over their market, thus thwarting the industry’s “natural drift” toward concentration. Congress’s regulation of a price-competitive aircraft industry during the interwar years was a victory for the antitrust ideological current, with long-lasting results for American military political economy.

For the stream of independently wealthy “air minded” newcomers attracted to a life in the glamorous new “industry of powered flight,” few barriers to entry existed beyond basic expertise and a level of R&D investment still within the reach of small firms. The results were over-capacity and over-competition, losses on military contracts, secretiveness and suspicion among firms, hostile military-industrial relations, and the primitive labor policies that made the open-shop business culture of Southern California so attractive. Congress’s business environment and the industry’s labor-intensity made low wages and complete managerial prerogative over working conditions critical to the survival of aircraft firms. Reuben Fleet went to San Diego with a fixed-price contract for Navy seaplanes which he had won in a hard competition with Sikorsky in Connecticut and Martin in Baltimore. Even with the Southland’s lower wage bills, he would be hard pressed to cover production costs, let alone what he had put into the flying boat’s design.

Other California aircraft firms were also firmly fixed within Congress’s contracting rules, even if their distance from New Deal Washington helped them avoid its far more ephemeral terms on labor policy. Donald Douglas lost money through most of the 1930s, due to bad deals with airlines, but mainly because of contracting rules which made recovery of development costs on warplanes impossible. Such business pressures reinforced Douglas’s deep-seeded animus toward organized labor, a feeling also prevailing among the Southland’s elite, who worked through a local network of shrilly reactionary business and booster groups, such as the
Merchants & Manufacturers Association (M&M), Southern Californians, Inc., and The Neutral Thousands (T.N.T.).

These groups counted on subsidies from Chandler’s newspaper empire and the L.A. Chamber of Commerce as well as support from judges, district attorneys, the L.A.P.D. and L.A. County sheriffs. Douglas relied on such unified class power. His Santa Monica plant wasn’t organized until 1944. In 1933-34, he had brief trouble with his men, who, encouraged by the National Industrial Recovery Act of 1933 (NIRA), demanded wage increases from subsistence levels and the right to negotiate the time they spent building the sleek new Douglas Commercial 3. They averaged 65 hours a week with no overtime. Even if jurisdictional disputes among the Carpenters and Machinists had not short-circuited the Douglas-men’s appeals to the American Federation of Labor (AFL), a union at Douglas would have been about as likely as one among the pressmen at Chandler’s Los Angeles Times. Douglas simply fired the “ringleaders,” federal law (NIRA Section 7a) notwithstanding.10

In early 1937, Douglas and his Northrop subsidiary found themselves in a deep bind. Returns on the DC-3 project finally materialized, only to be absorbed by Douglas’s onerous military contracts. In that period, Douglas spent $730,000 on naval designs but recovered only $259,000 from the Navy Department. A $3.7 million contract for 118 torpedo bombers was going to cost the company $275,000, not counting R&D. Northrop’s A-17 army attack project was in the red, and Douglas had just begun production of the B-18 medium bomber after signing

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10 To deny the uniform desire among aircraft workers for organization along industrial lines and to defend its old craft ideology and jurisdictional claims, the IAM prevailed upon the AFL Executive Board to stamp out every spark of militancy in aircraft during the early New Deal. For the IAM’s sorry history in the early aircraft industry and for details on the Douglas workers, see IAM Reels 330,334,341,355; Records of FLU #18286; and boxes 6045-6047, NRA Records.
a fixed-price Army contract that had been based on 12-month-old cost estimates, permitted no advance payments, and included significant penalties for late delivery. For local and Wall Street investors, nothing could have been worse for the firm than its status as the nation’s leading warplane contractor, with a $29 million backlog. Yet Douglas needed their financing for expansions that had already increased his workforce to 5,600 at Santa Monica and 1,100 at Northrop in El Segundo.¹¹

The last thing Douglas needed was labor trouble. Fortunately for him, the labor movement’s renewed ferment, spurred by the Wagner Act (1935) and the rise of the Congress of Industrial Organizations (CIO), was easily neutralized at his plants, which had been targeted by the weak but hopeful Central Labor Council of Los Angeles. Some men claiming to be itinerant CIO organizers suddenly found jobs at Douglas. They sought out a small group of mechanics who had just received a charter from the new United Auto Workers (UAW). Pointing to the current model at Flint, Michigan, where General Motors workers successfully waged their famous sit-down strike for union recognition, these “organizers” persuaded 400 Douglas-men to sit down for a raise, time-and-a-half, and seniority rights. They occupied the plant for three days, but became frightened as police massed around it. They were promised special attention from the National Labor Relations Board and no handcuffs if they gave up. On the way out, all were arrested and cuffed by police carrying tommy-guns. The “professional agitators” and “industrial termites,” as Douglas described them, were released, except for twenty of the original UAW-men

who endured a five-week stay at the L.A. County Jail.12

Into the 1940s, labor organizers cited memories of this debacle as the main obstacle to renewed efforts at Douglas. The best among them was Wyndham Mortimer, former UAW vice-president and director of the Flint sit-down, who had been banished to L.A. by the UAW executive for his vigorous defense of grassroots union democracy and his communist links. He had no doubt that Douglas had fomented the sit-down, sending in agents provocateurs to stir up the workers and expose unionists. The strike's leaders turned out to be on the payroll of the Bodell Detective Agency, which Senator LaFollette's committee on civil liberties had shown to be financed by the M&M to help firms "obtain guard or spy services at a reduced rate."13

Mortimer also understood that such revelations only compounded the intimidation of worker militancy. They simply underscored the social power of the Douglas-Times-M&M-LAPD axis. The links were well known. Bill Henry and Al Rochlen, Harry Chandler's aides who had wooed Douglas from Cleveland in 1920, now served him as directors and executives; and LAPD Chief James E. Davis, who established the notorious LAPD Red Squad in the 1920s, and whose brutal and sadistic ways finally cost him his job in 1938, found immediate new employment in charge of "plant protection" at Douglas (see Figure 1).14

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12 See the account in Perry & Perry, Los Angeles Labor, 447-450; "500,000 Workers," 164; C.F. Grow, IAM Grand Lodge vice-president, to A.O. Wharton, Feb. 27, 1937, IAM Reel 330; Douglas quoted in Los Angeles Times, Sept. 8, 1937.


14 On the sit-down leader, see Perry & Perry, Los Angeles Labor, 503,512; Rose Pesotta, Bread Upon the Waters (New York: 1944) 347-349; See also "The Industrial Unionist, Southern California Division," July 14, 1939, Box 2, Walter Reuther Collection and the Oral History of Richard Coleman, Reuther Library; Gottlieb and Wolf, Thinking Big, 185,225.
Dreams

Do You Earn Enough for This?

Will Your Budget Stand It?

Couldn't You Use a New Model?

Must She Always Drudge Like This?

Do You Need New Clothes?

HOW THEY CAN COME TRUE
These Dreams Are Realities for 4,000,000 CIO Families!
Why Shouldn't They Be More Than Dreams to Yours?
They Can! The Choice Lies With You!

Vote C.I.O.!

Figure 1. Handbill distributed at aircraft plants in Los Angeles, 1940-1941 (Box 4, Ashby C. McGraw Collection, Reuther Library).
Fighting organized labor and maintaining low wages were essential business tactics in aircraft because of Congress's contracting rules, even if, as in the case of Douglas, such tactics could mean firing skilled metal workers--among the nation's very best. Suppressed labor translated into savings for taxpayers who acquired military aircraft below real cost. Low wages were key to the viability of the price-competitive warplane business demanded by populist legislators on behalf, ironically, of the "little man." Pressure for unrestricted management rights to cut costs had basic results in the way production evolved, the types of planes produced, and in how their uses in warfare came to be understood.

Through the interwar years, the only hope for profits in this business was in production work. In design work Congress insisted that firms be paid no more than prices set before they built actual prototypes, despite inevitable cost over-runs that averaged 40 per cent. Firms hoped these losses might be covered in production work. But production costs too were unpredictable and the Army and Navy maintained downward pressure on unit prices by their right to seek bids on production from firms which had not invested in the designs. Thus, the imperatives for aircraft firms were to minimize development cost, design aircraft that could be easily reproduced, and reorganize the shop floor to resemble unskilled auto assembly. These were elusive goals as modest funding for warplanes and the dynamism of aeronautics kept small-batch orders inevitable, while building airframes and high-performance engines involved complications fundamentally different from those of autos, appliances, and the like.

The equation began changing after 1936 as international tensions mounted. Congress appropriated more funds for larger orders. More importantly, warplane exports soared, providing a profitable safety valve for the industry, especially when the British and French shopped for all
they could buy beginning in 1938. These new bulk markets for obsolescent warplanes meant that
the manufacturers could act more effectively upon the managerial imperatives of their industry
imposed by Congress.

They shaved as many costs as possible from design, management, and production. R&D
fell significantly behind German, Japanese, and British fighters while America's lead in strategic
bombers froze for five years around the 1935 Boeing B-17 Flying Fortress design. The building
up of a supply network for innumerable sub-contracted parts began and corresponded with major
developments in cost-control and accounting. Shop floor mechanization and rationalization
proceeded apace as the industry took new steps in the speed-up and management of metal-
working tasks. Jobs in aluminum manipulation and installation were broken down so that they
could be easily monitored and filled by the unskilled. During these years the industry shed much
of its craft-basis and built an infrastructure for mass-produced warplanes.15

Workers were passive participants in these developments, which were much facilitated
by their political marginalization. In aircraft plants across the land, they toiled for minimal wages
and without representation. Aircraft manufacture, so reliant on a wide range of craft skills, bore
few marks of a culture of worker solidarity or point-of-production job control that shaped other
metal-working industries.16 The limits to managerial prerogative seemed only to be the natural

15 In late 1938, Douglas managed the remarkable feat of reducing its need for skilled workers
to ten per cent. Ninety per cent "do not require special skill or experience," wrote Major A.J.
Lyon to Harry Hopkins, FDR's White House aide, Nov. 3, 1938, Box 34, Louis Johnson Papers,
University of Virginia Library. The majority of workers could now be of the "semi-moronic
type," as James Kindleberger of NAA put it to the Fair Labor Standards Board in Dec. 1938. See
"Statement..." in Box 22, Thomas McNett Papers, Reuther Library.

16 A striking contrast to the American situation is H. Chapman, State Capitalism and Working
point at which workers could not feed, house, clothe and transport themselves, and thus stand up in the plants.

This was equally so even at West Coast plants—Lockheed, Boeing, and Reuben Fleet’s Consolidated—where the old craft union, the International Association of Machinists (IAM-AFL), got contracts. These firms pursued a co-opt strategy toward unionism in contrast to Douglas who truly relished the battle, ordering his reluctant executives to fight unions “until they are whipped.” After the 1937 Douglas sit down and the appearance of UAW-CIO organizers in the Southland, Fleet and Robert Gross, president of Lockheed in Burbank, suddenly signed agreements with the Machinists despite their weak presence in the plants.¹⁷

Fleet and Gross feared “CIO-ism” which for them meant Bolshevism. But they worried about perceptions in Washington of Douglas’s obstinate and illegal style. Still, they needed sway on the shop floor—Consolidated for a new Navy seaplane contract, and Lockheed for its Electra airliner and its plan to penetrate the military market with new medium bombers and interceptors (P-38 Lightning). The Machinists cooperated. The rise of John L. Lewis’ CIO meant that the vision of industrial unionism and its challenges to the traditions of craft elitism could no longer be throttled through the AFL Executive Board. The stale and hide-bound IAM Grand Lodge in Washington, D.C. grudgingly condoned contracts for the unskilled in aircraft, less on behalf of workers than “on account of the CIO,” that “rotten organization,” as the IAM’s president put it. The Machinists accepted the companies’ bids for “protection agreements,” one week vacation,

¹⁷ See the 1937 correspondence among Wharton, IAM agents in Southern California, and the new IAM lodges at Lockheed and Consolidated in IAM Reels, 46,330,338,341; quotation from G.C. Castleman to Wharton, Mar. 6, 1937, Reel 338.
and a wage hike of a full six cents!18

Even if these were not sweetheart deals with virtual company unions, the outcome for workers would have been much the same, given the patterning of the Southland’s aircraft labor market by Congress’s price-competitive rules; the cyclic nature of military contracts; California’s endless draw as the “Mecca for transients”; and Douglas’s domination of standards. As early as Summer 1937, with losses on his Navy work looming, Reuben Fleet was backsliding, laying off and rehiring to cut wages. He scrapped the contract the next year.19

At Lockheed, while IAM officials praised them as “modern and far seeing,” executives participated in an illegal blacklist managed by the secretive Southern California Aircraft Industry Association (SCAIA). Personnel managers monitored workers flowing in and out of the plants by numerical codes on clearance papers that measured the worker’s ability, past union involvement, and last wage. If deemed worthy, workers got a take-it-or-leave-it job at ten to twenty cents less. The SCAIA generated other cost-cutting tactics, such as parts subcontracting to “sweat shops” in the barrios; and “gyp schools” where young men and teenagers paid, in effect, to work in the plants. Recruited with the promise of “aeronautical training,” their “tuition” ran as high as $600. They were shown riveting, taught the “communistic” and “un-American” fundamentals of trade unionism, put to work in the plants at a “learner’s rate” for a few months,

18 Grow to H. Brown, Sept. 19, 1937, IAM Reel 330; E. Dowell to Wharton, July 7, 1937, Reel 46. Even Fortune magazine raised an eyebrow over the Lockheed IAM lodge’s business agent, a former detective named Charles Tigar. “500,000 Workers,” 164.
Boeing in Seattle wasn't party to such schemes. But as a warplane competitor its prospects were directly determined by them. Under the wealthy William E. Boeing, the firm had been the nation's best managed and financed aircraft firm. But as the Depression wore on two misfortunes caught up with the Boeing company: the eclipse in the air transport market of its revolutionary Model 247 by the even better Douglas DC-3; and the relative strength of the Seattle labor movement. Boeing compounded these costs by being truly innovative in military aircraft—a basic business error under Congress's contracting terms. In 1934-36, it spent large sums developing the B-17 with no guarantee of recovery and with the assurance that the design could not be patented. Yet Boeing forged ahead, infatuated with the military implications of the new “multi-engine” and confident that this startling new craft had won it the market for heavy bombers. In 1936, its executives hoped to avoid the labor movement's turbulence and secure and expand its workforce of 1,100 for the expected flow of B-17 orders. They turned to Seattle Machinists, dealing an 81-cent average wage—20 cents above the national norm—the closed shop, time and a half, grievance provisions, etc., in exchange for no-strike pledges, no splits of workers along craft lines, and most important, IAM commitments to organize firms that could compete to build B-17s, especially Douglas and Consolidated in California.

Few doubted that the Army would find some way to let B-17 production to Boeing, given

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the Flying Fortress’s natural home on the rain-soaked Duwamish Waterway among the jigs, dies, designers, and craftsmen who built its prototypes. But few Air Corps officers misunderstood either the thrust of Congress’s rules, and the threat of possible time in Leavenworth, if they didn’t adhere to the spirit of advertised bidding and extract price reductions. The Southland’s low wages formed the backdrop for constant haggling between Boeing and the War Department, as well as steady losses for the firm, the freezing of the B-17 design into the war years, and Boeing’s unwillingness seriously to pursue R&D for an “ultra long range” pressurized bomber (B-29). The Army’s lack of commitment to the heavy bomber, its meager orders for the B-17, as well as its continued large investment in obsolete, but easily reproduced, two-engine bombers like Douglas’s B-18, are best explained by the competitive pressure from the Southland rather than by bureaucratic and doctrinal conflict over the value of strategic bombing. The weapons, force structure, and doctrines of American air power reflected low-cost business rules for military aircraft and the willingness and ability of the industry to operate under them.22

In 1934, Boeing hoped that the National Recovery Administration would approve a “code of fair competition” for aircraft and eliminate the competitive space in wage differentials that sustained Congress’s contract rules. But anti-trust attacks on the aircraft industry from Capitol Hill were too shrill and the industry’s trade/lobby group much too weak. Boeing’s new hope that the IAM might do the job was similarly dashed. IAM officials at Boeing regularly complained

about the Grand Lodge's "complete lack of true cooperation," and failure to send organizers and money to L.A. "We are stalemated with Boeing until other plants are organized and a basic scale set for the industry... we have to make a much greater effort before the industry gets too big for us." For them, the way to move Boeing workers beyond pay scales still on par with unskilled lumber workers was through an aggressive single aircraft union for the entire West Coast. But for the Grand Lodge, this approach smacked too much of CIO-style industrial unionism and would lead to yet another national union.23

Only the specter of aircraft workers organized by the CIO prompted the IAM to greater activism. In early 1938, "to overcome and offset the unwarranted efforts of the CIO," the Grand Lodge finally authorized two Boeing Machinists to campaign in California. Through these years, the war years and beyond, workers' interests were casualties of the desultory effort in aircraft by both the IAM and UAW, and by ongoing "fratricidal war" between and within them too. Workers were "kept dizzy by affiliation disputes," and made cynical by the constant sniping among labor officials. IAM organizers knew how counterproductive was the "same old AFL blah," the endless red-baiting of CIO-men, but felt compelled to meet charges that they themselves were "diamond-wearing, Buick-driving, apple-polishing, company stooges."24

Such futile strife only compounded the basic problem faced by organizers in Southern


24 Perry & Perry, Los Angeles Labor, 442; Lynch to Wharton, June 24, 1938, IAM Reel 329; McNett to Sandvigen, May 16, 1938, Box 1, McNett Collection; Mortimer, "Report on Aircraft Situation"; Mortimer to John L. Lewis, Nov. 24, 1939, Box 1, Mortimer Collection; L. Michenor, "Report for Region 6, April -July, 1939," Box 2, Bill Williams Collection, Reuther Library.
California, "the essential thing," as one Machinist put it, "the complete lack of interest of the workmen in the aircraft industry here." While total employment in the Southland's aircraft industry grew to nearly 25,000 by mid-1939, those who turned up at union meetings and paid dues could be measured in the handfuls. Organizers complained about the transience of aircraft workers, the dispersion of their homes throughout the vast L.A. region, their youth and inexperience with unionism, and the endless distractions of the "Golden West."25

There was the Southland's mesmerizing climate and beaches; Hollywood's dream factories and personality cults; the hours in the car in this "drive-in, parking-lot civilization," as one Machinist put it. There were bizarre local movements like Moral Rearmament, Ham and Eggs, and Technocracy—a general state of bewilderment that seemed especially to absorb young rural migrants who had come West thinking of "possible fame" in Hollywood, but instead wound up "building dive bombers in the Land of Oz," as Fortune magazine put it. Frustrated IAM organizers sneered at the "rank and filth," the "dumb workers," "these sun worshipers," "a spineless lot...celery pickers...satisfied with starvation wages. We must wait for the increase in food prices, clothing, and rent to starve them out of their holes."26

Organizers marveled at how class consciousness and militancy, even appeals to the

25 Michenor, "Report for Region 6..."
26 "City of Angels," Fortune, (March 1941) 98,163,179. Lynch and McNett to Wharton, Mar. 14, 1938; McNett to H. Lundquist, Sept. 29, 1939; Lynch to Lundquist, May 22, 1939; IAM Reel 329. In mid-1941, California aircraft workers were 99 per cent white males (WASP) at a median age of 24. The freedom from division among the workers along race, ethnic, and gender lines, however, did not translate into union solidarity; "Wage Rates in the California Airframe Industry, 1941." Monthly Labor Review, 54 (March 1942) 560. L.A. firms were prejudiced against female, Black, Latino, and "hyphenated-Americans," as well as Jewish workers, the latter for "naturally being intellectually infatuated with communism." "City of Angels," 98, 163, 179.
consumer ethic (see Figure 2), were countered by workers' identification with the new technology, the firms, and the particular aircraft they built. "The aircraftsman has a pride in his industry not found in any other line," even though average wages were 30 cents more in local auto plants. "A machinist working in our industry, when asked his occupation, does not answer 'I am a machinist,' but rather, 'I am with Douglas Aircraft.'" Workers proudly considered themselves "the ultimate in skilled craftsmanship." They snubbed "grey-beard unionists," and seemed more interested in the thrills, status, and patriotic contributions of their jobs building warplanes than in the amount of "filthy lucre in their Friday envelopes." In these attitudes, they resembled their employers, and those who, despite Congress's onerous terms, invested in the aircraft industry.27

Traditional individualist and patriotic values, along with their youth, industrial inexperience, and the unique thrills and distractions of building aircraft and living in the Southland, explain much of the workers' apathy, despite broader national currents toward industrial unionism. They also help explain the failure to generate effective unions and worker representation within the emerging military-industrial complex for warplanes. Also important were cyclical work patterns in aircraft and ongoing high-unemployment depression conditions in Southern California into the Defense Period, as well as the imperatives toward order and managerial control inherent in an evolving large-scale mass-production industry. And badly divided local and national labor leaders—often corrupt, unimaginative, and/or incompetent—

Figure 2. From CIO handbill distributed at aircraft plants in Los Angeles, 1938-1939 (Box 2, Walter Reuther Collection, Reuther Library).
posed obstacles too, especially as national leaders increasingly suppressed labor militancy as the war emergency mounted and as a hardening atmosphere under the 76th Congress seemed to mandate submission to the political needs of FDR and the Democratic Party. Nevertheless, employer repression at the grassroots was critical. Organizers attributed worker apathy mainly to it—the anti-union belligerency of employers led by Douglas, Fleet, the M & M, and the Los Angeles Times. Illegal spies, yellow-dog contracts, discriminatory layoffs, company unions, propaganda, memories of the Douglas “sit down,” “goon tactics” and burly armed guards led by the likes of ex-LAPD Chief Davis, “cowed and intimidated” workers, keeping them “scared to death,” as two committed Machinists put it in 1938.28

In Los Angeles and San Diego, the National Labor Relations Board, Public Contracts Board of the Labor Department, and the LaFollette Senate Committee barely deterred such illegal practices. Nor were they checked by the Civilian Conservation Corps and National Youth Administration, which sought to intervene in aircraft labor after Munich and FDR’s commitment to large-scale air power in Fall 1938. Manufacturers grumbled about the free market in aircraft contracts that minimized their profits; but as they contemplated booming war sales and involvement in their labor relations by liberal “New Dealers,” they hailed free market forces and persuaded government officials of their ability to draw adequate low-cost labor. The Army and Navy agreed on the need to keep New Deal social agencies at bay, and were generally satisfied

with the industry's capacity and progress in streamlining production and exploiting the labor supply, especially in the Southland.\textsuperscript{29}

Meanwhile in Seattle, California labor standards took their toll on Boeing's warm relation with IAM Lodge #751. With a mere $2 million in sales, 1938 proved disastrous for Boeing. Only 13 B-17s had been built and paid for well below cost by the War Department which continued to dither on whether it would take any more. FDR's urgent call for heavy bombers in early 1939 broke policy deadlock on strategic bombing, but also had the effect of hardening attitudes toward military contracting in the isolationist 76th Congress. The Air Corps was obliged to engage in the "usual competitions." Months of delays and haggling followed as it tried to shave the unit cost of the Flying Fortress.

The Air Corps challenged Boeing with California costs, which struck with considerable force in the shape of Consolidated's B-24 heavy-bomber prototype (Liberator) and its estimate of unit prices 30-40 per cent below the B-17. The Air Corps soon committed enormous resources to the inferior B-24, mainly because of the Southland's low wages, which its design reflected. In September 1939, a contract for 38 B-17s was finally signed but Boeing found it impossible "to produce the aircraft without a loss." Only a Reconstruction Finance Corporation loan sustained cash flow and kept Boeing solvent. Still, in Spring 1940, the banks holding Boeing's loans vetoed as unprofitable another contract for 42 B-17s.\textsuperscript{30}


\textsuperscript{30} For details on B-17 and B-24 contracting, see Brett to Arnold, Mar. 25, 1939; "Airplane
Inevitably, Boeing restrained its powerful inclinations for R&D. It also contained its labor bills through deskillings and pay cuts, at least to the extent that capital for new equipment could be generated and that such moves did not provoke the Boeing workers to "pull the pin" and strike. IAM negotiators bowed to Boeing's plight, but discontent with their conciliatory approach grew among the workers. Suspicions rose as rumors spread of the IAM's sweetheart deals in the Southland and of its plans to split Boeing along craft lines and exclude the semi- and unskilled. Encouraged by the CIO, the UAW, Harry Bridges of the Longshoremen, as well as Pacific Northwest pacifist, socialist, and communist groups, a "Progressive Caucus" for Boeing Lodge #751 emerged in late 1938 to compete for local offices. From that point, the lodge's affairs and the energies of activists degenerated into factional turmoil until the IAM Grand Lodge purged the Boeing militants in Spring 1941.31

The three-year conflict left a textured record of trade union politics, radical movements in the Northwest, and paranoia on the right and left during the late New Deal and Defense periods. There were the election victories in Lodge #751 of "known commie rats" and "pro-Soviets;" the hopes of aspirants to the IAM's international presidency that they might ride the militants' coattails in what had become the IAM's biggest single lodge; the intrigues by UAW-men Mortimer and Richard Frankensteen who hoped to jump-start their stalled careers and the UAW's campaign for a national aircraft union by ousting the Boeing lodge for the CIO. There was the

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Cost Data," Apr. 15, 1939, box 793; P.G. Johnson, Boeing president, to Arnold, Mar. 28, 1940, box 745, 452.1, series II, class., AAG 1939-42; Arnold to Johnson, Apr. 2, 1940, Box 3C, Secret, Secretary of War Records. See also C.L. Bentley to H. Brown, acting IAM president, Aug. 23, 1939, IAM Reel 341. 31 See IAM correspondence on negotiations with Boeing from fall 1938 to spring 1939, IAM Reels 329,355,32,33.
inevitable snow-ball into “witch hunts,” and reams of testimony from IAM “trials” of suspected communists. There was the crucial aid in ferreting out and discrediting militants provided by the Seattle Police Department and City Council, the Seattle Post-Intelligencer, the FBI, War Department, and White House.32

The records of this sordid story are leavened somewhat by workingmen’s competing vitriol: the claims that opponents were “stool pigeons,” “company whores,” “flannel mouths,” “Jews of unknown origins,” “rattlesnakes,” “sex perverts,” “enemies of the working class,” everyone furthering “the most colossal abortion ever perpetrated on the body and mind of the workingman.” “How long, oh Lord, how long, will clean American workers allow themselves to be infested with vermin? DELOUSE NOW!” All shared a sense of a better life for Boeing workers if only opponents would somehow “go fuck themselves.”33

The records richly preserve a story of aircraft labor militancy under repression, but one that by 1941 seems incidental to the emerging military-industrial complex. Whether radicals or conservatives led Lodge #751, the “market” had determined working conditions at Boeing. It expressed populist political economy applied through military contracting law. Its competitiveness and cost-minimizing dynamics pushed the industry toward a mass-output posture, well before large orders materialized and visions of overwhelming air power congealed


33 E.V. Dennett, of the Washington State Industrial Union Council--CIO, to Mortimer, Nov. 24, 1939, Box 1, Mortimer Collection; “Communist Leaders Exposed,” The Aero Mechanic, IAM Lodge #751, Oct. 23, 1940; Lundquist, “Dear Brother Members,” Nov. 19, 1940; J. Duncan to Brown, Nov 17, 23, 1940, IAM Reel 32; “Unearthed at Last! The CIO Master Sell-Out,” no date 1941, Reel 33; See also documents in Box 29, Roy M. Brown Collection, Reuther Library.
into doctrine during the late 1930s. Big orders only supplemented the industry’s dynamics. They also ended efforts by some New Deal agencies to intervene in the ballooning but unstable aircraft industry. By the late 1930s, such intervention was increasingly frowned upon by Congress and by business leaders, who had grown deeply wary of politics and the state and now worried if an independent business system would survive war mobilization. In this context, such corporatist schemes as Walter Reuther’s 1940 plan for joint direction of the auto and aircraft industries by labor, management, and government were easily curbed in Washington.34

Spending on warplanes and other military goods had happy results in the defeat of the Axis, but also for conservative public policy in America. After the election of the anti-New Deal 76th Congress and the sharp economic contraction of 1937-1938, policy deadlocked between the clear need for ongoing and much more aggressive efforts by the state to stimulate demand and a voluntarist political culture for which such intervention was anathema.35 Massive military spending meant Americans could have their Big State through the back door. It meant no new federal agencies or powers to aggravate Congress and the separate states and minimal interference in fields of established commerce.36 And the aircraft industry was ready—poised for


35 On the political and ideological deadlock of the late New Deal, see S. Fraser, Labor Will Rule: Sidney Hillman and the Rise of American Labor (New York: 1991) 399-416 and Brinkley, End of Reform, passim.

mass production—by Congress's contracting rules.

The industry expanded exponentially but its basic structure remained intact as "dollar-a-year" businessmen appointed to key military and civilian wartime posts kept their administrative distance through the duration, even on labor matters where the industry's worst crises developed. Annual turnover nearing 100 per cent, low worker morale, high absenteeism—all stemmed from the pre-war primitivism of industrial relations, especially low wages. To overcome "wage drag" for a group of workers numbering nearly three million in 1943 threatened inflation and would leave too strong a precedent for violating business voluntarism. The government's response was to wait for turmoil to build in particular plants, for unions finally to win recognition from the National War Labor Board, and then to appoint committees, hold lengthy hearings, write reports, and then possibly institute in ad hoc ways local schemes for relief.37

These wartime patterns emerged in the Southland already during the Defense Period, especially in the events surrounding the great strike at North American Aviation in Los Angeles, the most dramatic episode of labor disturbances in 1941, and their repression. In Spring 1940, it seemed the aircraft industry had found its bonanza when FDR called for 50,000 warplanes and when Congress made huge appropriations and revised contracting law to allow negotiated prices, cost-plus contracts, and advance payments. But manufacturers remained skeptical of the new


37 During the first half of 1943, the L.A. plants hired 150,000 direct workers, but payrolls increased by only 12,000. Only 15 per cent of labor losses were due to the draft. At Boeing during the same period, a staggering turnover rate of 120 per cent prevailed. The main culprit was a minimum wage of 67 cents compared to 95 at the shipyards. "Manpower as a Limiting Factor on Airplane Production," by the Aircraft War Production Council, Aug. 1, 1943, 004, classified, bulky, Box 15, AAG 1942-44.
shift in their fortunes. The staggering expansion of their firms and workforces; the scale of their new contracts in relation to their meager capital; the dilution of management; the struggle for supplies; the welter of federal agencies involved—all produced new anxieties especially when added to the broad imponderables of their industry’s fate at war’s end.

Then too, “left wingers and radical agitators and writers,” in Douglas’s words, continued to attack the manufacturers as “merchants of death.” And basic financial uncertainties persisted despite the new contracting rules. The War and Navy departments, wary of Congress and tradition, used cost-plus rarely and with reluctance until after Pearl Harbor. And profit caps reduced returns to an actual two per cent—little for the R&D the firms’ futures relied on.38 Firms mainly worried about an “escalator” tying aircraft prices to inflation. The Army and Navy wanted to take advantage of the “wage drag” cultivated by aircraft firms over the years and insisted that the escalator be based on an index for labor in the durable goods sector. But the firms needed an index specific to aircraft to relieve pent-up wage pressure and competition for workers from better-paying industries. In late 1940, the average wage in auto was 96 cents, 84 in steel, and only 74 in airframe.39

An aircraft index was “admittedly more accurate,” wrote one high official, but Donald Nelson of the National Defense Advisory Committee, formerly of Sears Roebuck, argued that it would encourage labor disputes and “a skyrocketing of wages [and] inflation which all of us are seeking to avoid.” But for the manufacturers, labor disputes seemed inevitable. Led by Donald

38 Douglas to T.A. Morgan, president of Sperry Corp., Apr. 3, 1941, ACC Reel 33.12.17; Treasury Department Bulletin 5000, (1940); Brett to Lovett, June 5, 1941, Box 80, Lovett Records.
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Even the meager five-cent wage increase accepted by Thomas caused consternation among Southland aircraft firms which had signed huge fixed-price contracts. The strike also spurred "anti-strike" sentiment in Congress and the news media and prompted the War Department and the new Office of Production Management (OPM) to pay more attention to aircraft labor. At the OPM, co-director Hillman insisted that the UAW take greater control over aircraft locals. He met with the manufacturers, but little came of it because they feared "domination by Mr. Hillman and the labor group" and misunderstood Hillman's wage-repressive goals. At any rate, for Kindleberger, president of North American Aviation (NAA), "Hillman's schemes are not worth a damn," unless Washington relented on an aircraft escalator. Without this relief, the UAW's attempts to centralize control would have little effect, too, because "it is well known that local unions do not pay much attention to national organizations on the question of strike," particularly when basic workplace pressures rose the way they were at his sprawling new plant in Inglewood, near the L.A. airport.\footnote{42 

Efforts by Mortimer and UAW-activists at NAA to channel these pressures finally overcame L.A.'s unique working-class inertia to force a March 1941 NLRB election. UAW Local #683 won and demanded grievance procedures, the closed shop, control over training, and a "living wage." Its rallying cry became "75 and 10," a new minimum with ten cent increases after monthly periods until workers reached parity with other industries. To Kindleberger this platform was both impractical managerially and wholly distasteful ideologically; it was also
financially untenable unless costs could be passed on. In Spring 1941, its average wage hovered at 75 cents. NAA had fallen behind schedule on fixed-price Army and Lend Lease contracts for AT-6 Texan trainers (Harvard), B-25 bombers (Mitchell), and the earliest models of the P-51 fighter (Mustang). The firm could only stonewall. On May 23, members of #683 voted 5,810 against 210 to strike.43

The conundrum at NAA offered no obvious way out, as the National Defense Mediation Board discovered while pondering it in Washington. It prevaricated, postponing meetings and hearings. A top level scheme seemed afoot to force the issue at NAA and make a high-profile example on the national wave of “defense strikes,” which by Summer 1941 had cost 2 million man-days. “The next two weeks,” according to historian Nelson Lichtenstein, “were among the most decisive in 20th-century labor history.” On June 5, impatient workers struck, blocking NAA’s gates with 4,000 pickets. Company guards and the LAPD nervously minded the perimeter of chain-link fences clouded in tear-gas. The White House, OPM, and War Department then deployed their main weapons—red-baiting and the 15th Infantry. From Washington through the national media flowed claims that the strike was in fact a Kremlin-sponsored insurrection. On the 6th, Colonel Dwight David Eisenhower of the IX Army Corps received orders to divert troops destined for the Philippines and position them at March Field and Fort MacArthur.44

The appearance at dawn on June 9 of troops with bayonets broke the strike. The Army trucked local UAW leaders to Fort MacArthur where they were stripped and interrogated. But red-baiting and arresting their leaders had minimal effect on the workers, whose hardships and numbers made alleged communist plots abstract and irrelevant. They were fortunate to have leaders skilled in the art of worker mobilization. "The only subversive element in the whole strike situation," Mortimer wrote, "is the 50 cents per hour paid in aircraft." Workers continued massing outside the plant and 5,000 voted to continue the strike despite their leaders' ouster by the UAW executive.45

Under FDR's executive order, Army officers oversaw plant management. They opened negotiations between NAA and newly appointed UAW-men, but soon found that chaotic shop-floor conditions and labor strife, communist leaders or not, would persist until the worker's demands, at least on wages, were substantially met. In Washington, the pushing and hauling continued. Hillman called for wage stabilization in aircraft, but Robert Patterson, Undersecretary of War and former Wall Street associate of Secretary of War Henry Stimson, rejected a national aircraft cost escalator in military contracts. Inflation was always the main threat, but so too were the implications of such a broad, integrative approach by the government. Both seemed unnecessary now that presidential orders and bayonets at NAA had intimidated organized labor into a virtual no-strike pledge nationwide, and since the U.S. aircraft industry remained 70 per cent unorganized. Also, giant "green field" aircraft plants were sprouting in traditionally fallow

45 "Historic Strike On!" North American News, June 1941; Mortimer to P. Murray, June 30, 1941, Box 11, Reuther Collection.
ground for organized labor, such as Texas, Georgia, Kansas, Oklahoma, and Nebraska. Patterson told the manufacturers that wage increases would be considered in final audits, but only on a case-by-case basis. With such assurances, NAA reluctantly relented and agreed to a 60 cent minimum, rising to the still sub-par 75 cents after three months.46

On July 9, 1941, the manufacturers, federal officials, but no aircraft workers, met in Washington to discuss developments. Extending the NAA “yardstick” to other Southland firms seemed inevitable and they received the same informal assurances of case-by-case consideration on extra costs. Sidney Hillman, widely hailed as “Labor’s Statesman,” told the firms “not to be too generous with labor--keep everything in secret.” Reuben Fleet, building fixed-price B-24s, asked “Can we do less than NAA?” “Yes,” replied Labor’s ‘Statesman’, “if you can get away with it.”47 Fleet did his best to “get away with it” through 1941. But his frustrations with turnover at his plant and the managerial challenges connected with opening a giant new complex in Fort Worth, Texas, led him to complain continually and publicly to the War Department. Top officials there, led by Robert Lovett, resolved to oust him from control of Consolidated Aircraft and replace him in 1942 by Thomas Mercer Girdler, the notoriously anti-union Little Steel executive.

Aircraft firms in the East, Mid-West, and South balked at proposals to extend an NAA-

46 Patterson to Hillman, June 20, 1941, Box 4; Undersec. of War Records, class., entry 254, RG 107; Patterson to Jouett, June 16, 1941, ACC Reel 30.82.5; R.J. Purcell, “Labor Policies of the NDAC and the OPM,” Special Study no. 23, (Civilian Production Administration, Washington, D.C.: 1946) 232-235.
47 Douglas to Stimson, July 19, 1941, Box 94; “Labor Agreement Between War and Navy Departments,” July 9, 1941, Box 92, Lovett Records; Los Angeles Times, Aug. 7, 1941; Fleet and Hillman quoted by J.C. Ward, president of Fairchild Aircraft, “notes of a meeting,” July 9, 1941; J.E. Schaefer of Boeing-Wichita to Jouett, July 22, Aug. 8, 1941; ACC Reel 32.3.0. Phone transcript, Fleet to Lovett, Oct. 18, 1941, Box 91, Lovett Records.
increase to their plants. Long experience made them suspect the military’s assurances of cost consideration, and many continued to imagine a conspiracy among Washington’s war agencies and the “Hillman group.” Wrongly sensing “ulterior motives,” firms even resisted attempts by the Bureau of Labor Statistics to gather data on which to base national policy. Each firm struggled separately to minimize wage levels and collective bargaining.

Backing them in Washington were the National War Labor Board (NWLB) and the Office of Price Administration. These offices maintained the hard line on aircraft wages and prices and stalled union recognition and the bargaining process year after year at aircraft plants, even when the military protested that this threatened vital projects—such as the B-29 Superfortress. The NWLB even resisted extending to other firms the scheme for job classifications prepared by the Southern California Aircraft Industry Association and implemented across the Southland in 1941. Rigid job descriptions, shop-floor rules, and futile grievance procedures were set by firms hoping to streamline management and work flows. Executives formulated the plan with the complete lack of input from workers. Still, the NWLB deemed its national extension an unnecessarily heavy-handed approach to the confusions and complications of aircraft labor.

Pay and worker’s rights were basically frozen for the war’s duration. Aggressive,

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48 G.W. Vaughan, Curtiss-Wright president, to Jouett, Oct. 9, 1941; ACC Reel 32.3.0. “Jouett, J.H.--Teletype Messages,” Sept. 9-30, 1941, ACC Reel 31.91.8. Jouett had a better grasp of the conservative motives of policy-makers in Washington, predicting “that the labor policies of our administration will remain so apathetic as to preclude any stabilization effort.” Jouett to L.D. Bell of Bell Aircraft, Oct. 8, 1941, ACC Reel 32.3.0.

integrated approaches to aircraft labor problems never seemed to be called for. The labor supply was turbulent, but manageable. Large pools of unemployed migratory workers and womanpower were tapped and provided competent and generally content workers. Pressure from below was practically absent as workers limited their protests to quitting and as plants remained largely unorganized by the UAW or IAM, which continued flailing away at one another.

Inertia defined federal policy in the military-industrial complex for aircraft, the outcome of clashing, yet mutually supportive, anti-state anxieties among manufacturers, “dollar-a-year men,” and congressmen. Aircraft supply could be organized in ways that did not undermine the traditions and practices of business prerogative and voluntarism because of the industry’s pre-war dynamics and deep social base, especially on the West Coast. These meshed ideally with the vision of large-scale air power. Indeed, the industry’s prewar nature—geared toward output rather than the sophistication of aircraft—encouraged that overblown and destructive doctrine.50

Such was the industry’s potential, the thrust of the wartime program, and the extent of American material resources that workers built some 300,000 warplanes, supplemented by the equivalent in spare parts of about 80,000. By mid-1943, a time of multi-faceted crisis for U.S. aircraft production and new calls for comprehensive statist reorganization, Los Angeles aircraft plants alone were turning out more warplanes than the Axis war economies combined. One aircraft worker nicely captured the conservative implications of this tremendous output when he complained in a letter to Senator Harry S. Truman about waste at the plant where he worked: “It is very fortunate that this country can produce more goods, war or otherwise, by accident than

Inertia in Washington’s approach to the aircraft industry stemmed from the labor supply’s depth, competence, and tranquility. Millions of workers made possible the top-to-bottom transformation of U.S. manufacturing for American airpower. They underwrote the military-industrial complex’s conservative ideological and institutional framework, which helped keep viable a political culture of voluntarism and the limited state.

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51 M.E. Blake to Truman, 21 August 1943, Box 671, Records of the Senate National Defense Committee (Truman Committee), RG 46, National Archives.