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What We Need is a
Good Three-Cent Air Line

By C. R. SMITH

The Provocative
New Senator From Oregon

By MARGARET THOMPSON



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An outspoken transport executive challenges his industry to get out of the plush class and bring air travel within the pocketbook reach of the millions. And he cites chapter and verse to show how it can be done.

FUTURE air travel presents a glossy picture of air liners with built-in cocktail lounges, jet-assisted take-offs and 400-mile-per-hour cruising speeds. These innovations will be real and magnificent, but they won't revolutionize civil air transportation. The real revolution will be made by planes somewhat slower and a lot less gaudy.

They'll have extra seats in place of lounging room. Cheaper to operate, they will permit a slash in fares. The de luxe extra-fare 400-mile-an-hour Goliaths will serve hundreds of thousands. But millions will use economical 200-mile-an-hour transports—plain people who have always yearned to fly, but couldn't afford it.

What the country needs is good three-cent air lines—a fast ride to anywhere at three cents a mile. I've come to this conclusion since returning to the American Airlines System after three years with the Army Air Transport Command. My first assignment has been to discover what is expected of air lines in the peacetime years ahead. I've pored over a stack of charts, statistics and public-opinion polls. I've interviewed air-line operators and employees, aircraft manufacturers, military airmen, businessmen, editors, legislators and Government officials.

These are serious, practical men. They waste no time with world-of-the-future dreams, but reason soberly from known facts. Their views add up like this:

"First, we need an air-line fleet so big that it constitutes an adequate reserve for national air power. Thousands of air liners, not hundreds. Second, fares must be cut down to the pocketbook level of the average citizen. Volume business will result. And every plane kept in commission by the air lines is one less that the Air Forces will be obliged to keep, one less for the taxpayer to support."

The war has defined air power as the sum of our military air forces, aircraft-manufacturing capacity and civil-air-transportation capacity. In time of war, commercial-transport planes become military transports. We entered this war with a pitifully small air-line fleet of less than 500 planes. Its inadequacy is evident; more than 4000 transport airplanes have been used by United States armed forces already in this war.

At least 95 per cent of these 4000 transports were built after war began. In any future war we won't be given time to build like that. The fleet must already exist, as an in-being reserve. It must be about ten times as large as the air-line fleet we're used to. Maj. Gen. Harold L. George, head of the Air Transport Command, estimated in a recent speech that 4500 transport planes should be on tap.

"The cost would be prohibitive if the Army must maintain the air-transport reserve," he added. "The planes must be provided by the civil air lines. Can this be done? Not if their only customers are those who can afford the present rate per mile for air travel."

The air lines are used to selling tickets to movie stars and big-business executives. Many air travelers ride on expense accounts. We should

be selling seats to the millions who have to pay for their own tickets out of middle-class incomes—the housewives, small businessmen, farmers and mechanics.

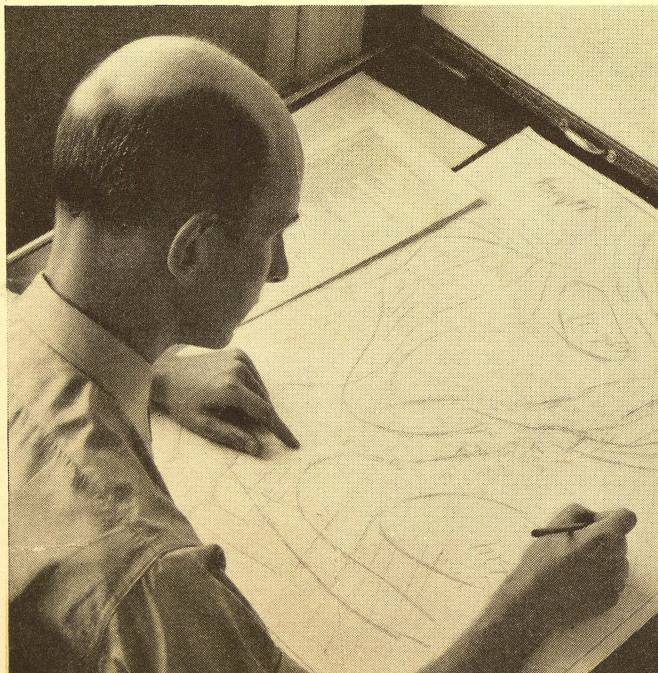
We're in danger of becoming snobs, like the salesmen at the plush end of Automobile Row with a sixteen-cylinder limousine in the window. Limousine salesmen meet a nice class of people who don't cuss or chew tobacco, but they don't meet many people, and they don't sell many automobiles. The salesman pushing a line of cheap sedans meets the common man in swarms, and his cash register jumps. The parallel with the three-cent air line is obvious.

The hurricane that struck New England in 1938 knocked out railroads and bus lines. For a while there were only two ways to get in or out of Boston, you flew or you walked. American operated the only air service between New York and Boston and the boom in business was temporarily more than we could handle. We appealed to TWA, United and Eastern, who operated into New York on other routes. "Put some planes on the Boston run. Sell tickets. Take care of the emergency." They all responded promptly and the bottleneck was broken.

Significantly, Boston air traffic has never fallen back to its pre-hurricane level. The year before the big wind we sold 67,030 Boston-New York tickets. Last year we sold 186,797, almost three times as many.

Most people are ready to travel and ship by air, if they can afford it. Millions of young men have flown with the Air Transport Command, Naval Air

PHOTOGRAPHY BY BOB GARLAND



This meteorologist plots the weather for one air line, but could just as well plot the same weather for many.

ABOUT THE AUTHOR

C. R. Smith speaks with a special authority on the future of commercial aviation because his past in it is eloquent. It was Smith, an accountant with an eye to costs, who originally tied together a clumsy, uneconomic network of routes into American Airlines and went on to make his system one of the country's largest. When the United States entered the war, Smith resigned his presidency and went into the Army Air Transport Command. In three years of service he had a good deal to do with ATC's successful development and operation, and attained the rank of major general. Recently, he resigned from the Army and returned to American Airlines as chairman of the board. He is one of aviation's most provocative spokesmen and he convincingly employs both logic and mathematics to back up his assertions. —The Editors.

Transport Service and Troop Carrier Command, men who had never been off the ground before. Fifty thousand soldiers are being flown home from Europe every month. When the soldier becomes a private citizen again, he'll want to travel via air line, and so will his cousins and his uncles and his aunts. Their only question will be, "What does it cost?"

Economies lowered air-line fares from 12 cents a mile in 1929 to 5.82 cents in 1934. Recent reductions have brought this figure down to approximately 4.5 cents a mile. What a three-cent fare would mean is best shown in a tabulation:

YEAR	FARE	FARE	FARE
	NEW YORK- LOS ANGELES	NEW YORK- CHICAGO	NEW YORK- BOSTON
1934 . . .	\$160.00	\$47.95	\$13.90
1945 . . .	119.10	32.85	8.35
At 3c . . .	79.95	21.72	5.52

The three-cent fare isn't possible next week or next year. It's what the Army would call a "planning objective." One boost along the road will be given by bigger, faster planes with more seats. Slow, small planes are expensive to operate. Remember the old Ford trimotors, with only fourteen seats, cruising 120? You couldn't give them to United States air lines today. We'd go broke operating them. The DC-3, hauling twenty-one passengers at 180 miles per hour nets more profit at a lower fare.

Postwar "economy" transports will cruise 200-300 miles an hour, carrying, say, fifty passengers. Speed will let them make three one-way trips daily, New York to Chicago—150 single rides per plane per day. Today's transport, making one round trip, is good for only forty-two rides. The saving is in plain sight; the three-cent fare comes closer.

When cruising speeds are boosted to 400 miles an hour, however, expenses mount. Ultra-high speed will command a premium. New York to Los Angeles in six and a half hours might be worth \$250 to an overworked executive. But I believe most people would ride the three-cent air line—N.Y. to L.A. in twelve hours, for less than eighty bucks.

It's a legend that airplane travel has to be expensive. I even know air-line people who believe it. Actually, the airplane is competing today with the better-class trains. We should not be afraid to plan that the plane will someday be cheaper to ride for distances over 200 miles than anything on wheels—except, perhaps, busses.

Some cost cutting that would reduce fares is obstructed by excessive corporate pride. Pride in one's company is a spur to better service, but it can be carried to absurd lengths. Consider the ground services at an airport; if eight air lines use the terminal, you will see eight sets of loading steps—each inscribed with a proud air-line name—eight air-conditioning units, eight fleets of automotive equipment and eight separate crews pushing the stuff around.

It doesn't make good sense. The public is paying for duplication of equipment and effort.

Organize a terminal company to take over all this housekeeping, and ground-handling costs would be cut in half. Railroads learned long ago that some things were best done on a joint basis. Air lines are taking steps to make similar savings, hunting the road to the three-cent fare.

There are as many company radio frequencies at La Guardia Field as there are companies; some of them should be consolidated. Weather forecasting is a noncompetitive service, yet each air line has its own meteorologists. They all forecast the same weather. The talents of their men plus more besides will be urgently needed for expansion. They shouldn't be assigned to duplicating each other's work.

Big airports should have one centralized area weather service for use by all air lines and should send weather maps to intermediate airports by facsimile—that's nothing new, the Army has been doing it for years. It's difficult to consolidate now because the air-line offices are scattered on all sides of some airports. New buildings should be designed to foster sharable services.

When air lines are using three or four thousand planes it will pay to consolidate aircraft and engine overhauls and put the work on an assembly-line basis. If we get that far we might sell ourselves the idea of consolidating purely local flights and running planes as if they were busses.

Take the New York-Chicago route. Four air lines on this run total twenty-four round trips daily, besides the cargo flights. Someday soon this route will demand 100 daily flights. Suppose they were on a consolidated schedule round the clock. You wouldn't need a reservation, any more than you need one on a commuter's train. You'd buy a ticket and catch the first plane that came along. One every fifteen minutes. No waiting.

Flight Without Frills

A LOT of baloney has been written about sleeper planes. Let's make it simple. When I went in the Army in 1942 the air lines were sleeping passengers, coast to coast, for around \$150 each. Fourteen sleepers paid a total fare of \$2100 in one airplane. The same plane, sit-up version, accommodates twenty-one passengers. If the object is to take in \$2100, the twenty-one sitters should have paid only \$100 apiece, fifty dollars less than the sleeper. That means that the sleeper passenger was not paying the cost of service rendered, and the man who did not use the sleeper was aiding in making up the deficit. Future policy should be that you pay for what you get, and on that basis there will not be many who will afford air-sleeper service.

We can't have sleeper service at the three-cent fare. High-speed sleepers will be operated and will command a premium, so the average fellow can have his three-cent air line. The luxurious five-to-ten-cent air line will have to pay its own way, carrying sales managers and vice-presidents who must leave New York after office hours and arrive in California—or Europe—before breakfast. You get what you pay for.

Cheap fares are so important that the practice of including "free" meals in the price of tickets is questionable. An air-line meal costs \$1.07 per serving, and you have to transport it in addition. At three cents a mile you'd have to charge for it, just as railroads charge for dining-car service. On very short hops meals will not be served and the traveler will have to lunch or dine at the airport. If not, that will mean postponing a meal just fifty minutes on the New York-Washington flight.

Cost accountants, their pencils sharpened to needle points, can puncture illusions of luxury. For example, the Douglas DC-4, ordinarily seating forty-four persons, can seat fifty-eight without unduly sacrificing leg-room. All that's needed is a change in the floor plan. The fifty-seat DC-6 can carry sixty-nine passengers by rearrangement. The savings translate into cheaper fares, but the luxury-minded complain, "Some seats will be twice removed from the view out the window."

They're right, but the view isn't too good now from an aisle seat, and a fine view isn't worth, say, twelve dollars on a run like Chicago-New York. That sum is the difference between present fares



Smith, shown here greeting a sailor newly arrived at La Guardia Field, would like it better if the interest plainly evidenced by this number of spectators could be translated into ticket sales.

These loading ramps and air-conditioning trucks seem to Smith a needless duplication of effort and equipment. Railroad-style terminals, he contends, would cut ground-handling costs in two.



and a three-cent rate. To sell transportation at reasonable prices, we must use all the airplane's carrying capacity consistent with safety and comfort.

Regulations now fix maximum take-off gross weight for the civil DC-3 at 25,200 pounds. The same airplane, slightly modified, is the Air Forces' C-47, flown for many millions of miles at 29,000 pounds. I don't advocate that civil air carriers and Government regulating agencies should adopt military-load standards. But the spread is too wide. In the DC-3 it's almost 4000 pounds. A mere 1000 pounds added to the DC-3's gross would increase its average pay-load capacity, now 5098 pounds, almost 20 per cent. When we get the more modern airplanes of the future, let's evaluate their transportation ability soundly. When you unduly penalize the carrying capacity of an airplane you restrict the opportunity of reducing charges. You restrict its public usefulness, and the public pays for the restriction.

More effective transports are coming along. If they're fully loaded—not overloaded or underloaded—the public will have safety plus low fares.

Jet boosting may permit take-offs with extra-heavy pay loads. The heavily laden planes get lighter as they fly. A DC-4, for instance, loses 1350 pounds every hour in gas consumption.

There has been too much talk about all-weather air service, and not enough action. Air lines and the regulating agencies of the Government are using now about the same operating procedures they were using years ago. As a result, the air carriers cancel about as many flights today, on account of weather, as they canceled three years ago. We haven't made much progress recently. When millions fly, they'll need dependable service. You cannot tell them, "Nothing doing today. Come back tomorrow."

The Army Shows the Way

The usual excuse for lack of progress in bad-weather flying is that we must wait a couple of years after the war, when radar, television and other mysterious devices will be released by the Army and Navy. Frankly, I think that's bunk. We don't have to wait for Buck Rogers. We could now fly *more dependably* if we'd make full use of lights and radio, the everyday aids to navigation already in hand or available.

Unnoticed by the public, the Air Transport Com-

mand has an all-weather air line operating between La Guardia Field, New York, and Presque Isle, Maine. In the past year it has lost very few days to fog or low ceilings, and it flies safely when commercial air liners are grounded.

The commanding officer is Lt. Col. Ernest A. Cutrell, head of the Navigation Aids Unit, ATC. He learned to fly with the Air Corps in 1918, did some barnstorming and served as air-lines and blind-landing specialist with the Department of Commerce. He has flown about 10,000 hours.

Colonel Cutrell has attended conferences on bad-weather operation for fifteen years, and he has seen the development of ten different instrument-landing systems. Results? Not enough; transport planes still make instrument approaches on about the same radio facilities, under the same ceiling-visibility limits, that they did years ago.

Cutrell isn't waiting any longer for Buck Rogers and his all-seeing radar. He and his pilots guide themselves in to foggy landings with the standard radio equipment of the AAF instrument-approach system, plus two low-powered radio beacons for automatic direction finding, plus an extra-long row of brilliant lights. No television, no radar, no infrared rays. Buck Rogers is too slow getting here; I'll take Cutrell.

Some of the best current thinking on air transportation is being done in the Army Air Forces. They have been required to experiment, to deal in large numbers, to do the big job in a hurry. Their experience may free the air lines of many outmoded practices. For instance, the air carriers, by regulation, must follow every dog-leg twist and turn of the Federal airways.

Air Transport Command pilots are accustomed to fly straight to where they're going. When an ATC pilot is assigned to a new route, his principal job is to ask for maps and find out where the radio stations are located.

The airplane is the only vehicle of transportation which has the ability to travel in a straight line—the shortest distance—irrespective of land and ocean boundaries, rivers, lakes and swamps. Why not utilize to the fullest extent that inherent attribute of the airplane?

If you take off from New York and fly directly to Mexico City, the air distance is 2099 miles. If, however, you have to follow all the airway dog legs

between New York, Texas and Mexico, the distance is increased to 2476. Direct flight here saves 377 miles, a saving which can be translated both into timesaving and into dollars-and-cents savings which will permit lower fares. From New York to Dallas, the direct mileage is 1372 miles, the airways mileage 1483 miles. From New York to Cincinnati, the direct mileage is 566; the airways mileage by Washington is 647 miles. These are but examples; there are many hundred such opportunities of saving time and money by direct flight.

Sure you will have air-traffic problems, and you may have to fly higher on these direct flights, but those problems can be solved, and may not even prove difficult.

Ways to Whittle Costs

It doesn't take a very smart man to figure out that the air lines will do big business at three cents a mile, but it's going to take a lot of smart people to figure out ways to cut flying costs. Some methods are already in sight—carrying more pay load, eliminating frills, flying more directly, and consolidated overhauls and ground-handling services. But a point will be reached where all known schemes for cutting costs have been applied, and the fare may still be three and a half or four cents, instead of three cents.

That will be a time to test the vision of air-line executives and their belief in the future of mass air transportation. Somebody will have to make the break for volume business. Somebody will have to set out and buy a lot of airplanes, if we're going to have our three-cent air line in the next five years, instead of waiting ten.

Everybody will gain when air travel is mass-produced. The military folks will have a strong transport reserve without asking Congress for appropriations to support it. The public will get a cheaper fare. The air lines will hire more employees and raise wages, the Government will collect more taxes and the stockholders will cut up bigger dividends.

A three-cent air line is more glamorous to me than all the glittering promises of jet-propelled cocktail lounges. Maybe it's just a dream; we will know for sure someday when we can get our hands on 1000 airplanes and fly 'em.