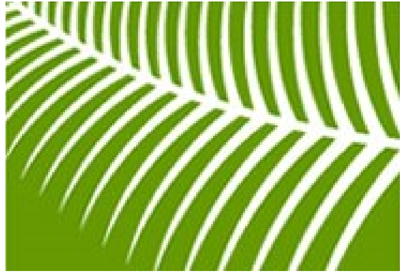

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The National Aviation Commission: What Next for the Airline Industry?[1]

Clinton V. Oster, Jr., Moderator
Professor
Indiana University

We are fortunate to have 4 people on the panel, including a person who was a member of the National Airline Commission.

Our first panelist is Mel Brenner, President of Melvin A. Brenner Associates. Mel is an independent consultant, and he probably has more experience in the airline industry than the rest of the panel combined.

Mel has been in the industry for 40 years, with companies, and with government. He has been with both American and TWA in important management positions. Mel and I served on the Transportation Research Board committee that produced the "Winds of Change" report in 1991.

The second speaker will be Paul Stephen Dempsey, who is Professor of Law at the University of Denver. He has written prolifically on the airline industry, both in articles and in books. He has made some of the most coherent and important criticisms of airline deregulation. His degrees are from the University of Georgia, George Washington, and McGill University, and he has been heavily involved in a variety of things. He was one of the few academics, as Steve's friend Cliff Winston pointed out, that was allowed to testify before the National Aviation Commission. We look forward to his comments.

The third panelist is Dan Kasper. Dan is a partner in Coopers and Lybrand. That firm has now merged with Harbridge House, where he used to work. Dan has been doing transportation work for quite a while. He is older than he looks, so he has more experience than you might think. He has been involved both with the Civil Aeronautics Board as well as with Harbridge House. He has done work on a wide variety of industry issues and is perhaps best noted for work he did on international aviation issues.

Finally, Steve Morrison is the Morrison of Morrison and Winston.

Melvin A. Brenner
Melvin A. Brenner Associates

A troubling statement appears in a recent report of the National Aviation Commission. After listing a series of actions which the airlines are taking to improve their finances, the Commission stated, "These actions by themselves will not solve the airlines' financial problems." Nor did the Commission mention any other actions taken or in prospect which give hope of solving these problems any time soon. Regrettably, I

[1] A grant from the UPS Foundation helped make this session possible.

concur with this unpleasant outlook, but I do so for a reason not even mentioned by the Commission.

While it has been popular in the last few years to blame the heavy airline losses on temporary factors such as the Gulf War, the recession, or management mistakes, the causes are much more basic, ongoing, and structural.

The Commission came close to recognizing this when it observed, "Only once in the past quarter century have the airlines achieved the average profit margin for U.S. industry."

But that is only the tip of the iceberg. Let me round out the Commission's statement. For the same quarter of a century, the airlines' average net margin was only one-third of 1%, and that was less than one-tenth of the U.S. corporate norm. Indeed, airlines, in comparison to the rest of corporate America, has been on a long downward trend.

The airlines didn't compare too badly with manufacturing corporations in the 50's and 60's, but that was in large part due to the explosive growth of airlines coming out of infancy.

In the decade of the 50's, the industry quadrupled in size in 10 years. In the 60's, it tripled in size. But by the 70's, when it was reaching more mature growth, the relationship dropped.

In the 80's, the first full decade of deregulation, it came down almost to zero, and the first 3 years of the 1990's, as you all know, were a disaster.

Nor has this poor financial performance been limited to airlines in this country. The average for the 25-year period, for the world airline industry, was an anemic 1 percent. That includes the U.S. carriers. It is the world aviation industry. It is a bit implausible to blame the Gulf War, recession, or management mistakes when a record this poor has persisted so long and on such a worldwide scope. If we stop looking for scape goats, the reason for this poor record need pose no great mystery. It shows up over and over again in the airlines' tendency for over-scheduling and under-pricing.

Memories are short and we may forget how often the current crisis is de ja vou all over again.

Just by way of a memory refresher of the constraint refrain about over-capacity, you can go back to the 1960's – too many seats. Skip to the 1970's. Fortune article – the industry has had a chronic problem of over-capacity. Skip to the 80's – Mike Levine, then President of New York Air, said excess capacity is the single-most important threat in existence to airline financial health, and so on.

Let's bring the story up to date with quotes from 1993. The first one is from the Chairman of United Airlines – "enormous overcapacity." The next one is from the Chairman of Delta "too much capacity," but (and this is significant), we find the same complaint from Air France – "overcapacity," Director General Vallarta, "capacity too high," Swedish Airlines – "overcapacity," Mexico "overcapacity," British Airways – "overcapacity."

Worldwide, overcapacity exists everywhere. So, overcapacity has been a chronic problem.

Not surprisingly, overcapacity has been accompanied by endless fare wars during every year since 1981, 1982, 1983, 1984, 1985. In 1987, I'm sure there was one there too, I just didn't have the time to find it.

Every year there were fare wars, constantly. So, I suggest that if we don't look for things like the Gulf War, we find the explanation for the chronic overcapacity and the chronic underpricing through fare wars.

Now, does this endless refrain of overcapacity and fare wars indicate incredibly foolish management? You would have to assume that has continued through several successions of CEO's all over the world, and I suggest that is not plausible.

There is something much more basic.

The explanation for over-capacity can be found in the competitive value in this industry of increasing output. That means more schedule frequency, and that, in turn, is one of the most important advantages an airline can sell.

To get specific, one small example among countless examples, a Continental ad earlier this year featured their Newark to Boston flights 14-times a day, every hour on the hour. The copy says, among other things, that Continental has the most daily flights to Boston of any carrier from Newark.

How often have you heard the claim made by an airline: we have the most non-stops, the most direct flights, and so on. It is not illogical to promote that because in this industry brand loyalty is very soft. Few passengers will stick with the airline they regard as the preferred one if a competitor has a schedule that is closer by an hour or two to when they want to leave.

So, the competitive pressure for frequency is an understandable marketing response to the customer's own buying decisions. On that point, anybody who wants to get a better grasp of why there is overcapacity might just look at an article that appeared about a month ago, September 17th. The article was about the new Chairman of TWA, former head of Piedmont, Mr. Howard. Everybody acknowledges there is excess capacity, and the article states that among the things TWA will do to win back business travellers, is increase the frequency of flights.

That sounds a little irrational with industry-wide excess capacity, but it is not irrational from an air carrier perspective, because convenience and frequency are what customers want.

Compounding the pressure for excess capacity is the impossibility in this industry of fine-tuning the seat supply to changes in demand. For example, Continental has 14 flights a day to Newark and Boston, every hour on the hour. In a year, those 14 daily round trips add up to 10,000 flights. Assume for a moment that Continental has been doing well with a 65% load factor and that there is a softening of the Boston economy, so their load factor slips a little bit to 63%, 2 points less. That would mean 3 passengers less, on average, on each of those 14 flights.

Add up those 3 lost passengers on 14 flights over 365 days. They would lose more than $3.0 million.

What can Continental do to compensate for a sudden loss of $3.0 million? It obviously can not shave 3 seats off every plane. It has to cut whole flights if it is going to cut capacity. It might cut the 11:00 a.m. or 2:00 p.m. If it does, it will break its hourly pattern.

More than that, it is turning over to its competitor, USAir, who also has hourly service on that same route, those who wanted to go at 11:00 a.m or 2:00 p.m. Chances are, more often than not in this business, a carrier will conclude that the

variable cost they save by cancelling those flights will be outweighed by the revenue they will turn over to the competitor. In the end, they will probably stick with that hourly pattern and just absorb the $3.0 million drop in revenue without finding a way to make an offset in capacity reduction.

Multiply this example by thousands of routes and you begin to understand why rational managers seem chronically unable to avoid overcapacity.

What about fare wars? The explanation again is simple. There is nothing more perishable than an empty airline seat. It is valueless when it leaves the gate. The marginal cost of filling an empty seat is small because the major cost is fuel, aircraft rental, crew pay, landing fees and other outlays which are already committed.

The marginal cost of putting a passenger in some of those empty seats is about 20% of the full average cost. In the very nature of the airline business, there will always be plenty of empty seats.

The highest peace-time load factor since 1950 was 66%.

The high proportion of unsold inventory, coupled with its perishability and low marginal cost, comprise all the ingredients for a price war. As price war has followed price war, almost without cause, the end result has been an average fare level insufficient to provide a profit.

For a perspective, look at how the airline fare level has lagged behind all other travel-related prices. In 1990, the most recent year for which I could get some numbers for some other industries, the picture had not changed. Since 1978, hotel prices on average went up more than 200%. Rail prices went up by 140%. Bus prices went up by over 100%. Airlines went up by 54%. By way of comparison, the consumer price index went up roughly 100%.

A consumer advocate might like the cheap fares. Cheap fares would be great if they covered cost, but they do not.

From 1978 there was a 54% increase in yield per passenger mile, but airline costs went up 65%. The gap between the increase in cost and the increase in fares translates into a revenue shortfall of $4.2 billion in a year. Perhaps by coincidence, that was close to the industry loss that year of $4.0 billion.

The low marginal cost of ever-present empty seats causes endless fare wars. Let me link that thought with a little noted statement by Alfred Kahn, written several years before he became involved with airline deregulation.

In 1971, he published a text on the economics of regulation. He asks the circumstances that might cause competition to become excessive, from the standpoint of the consumer.

He describes the condition: long sustained and recurring periods of excess capacity. These circumstances describe a condition in which marginal cost may, for a long period of time, be far below average total cost.

He states that under these conditions, the possibility arises that the industry as a whole or at least the majority of its firms, may find themselves operating at a loss for extended periods of time. Does that sound familiar in the context of an airline discussion?

That is an accurate description of the airline industry with its ever present empty seats, available to be filled at a marginal cost that is 80% below full average cost. This explains its miserable

financial record and it explains fare war after fare war.

Deregulation was a mistake for an industry with these structural characteristics, but that does not mean that the situation could now be corrected by an attempt at re-regulation. The industry structure has so radically changed in the past 14 years that it would be impossible, in my opinion, to rebuild the regulatory framework that was dismantled in 1978.

I have stressed what I refer to as the structural problems of this industry. I do so because I believe that a danger in this industry is the refusal of government policy makers to face up to what really makes this industry tick. So long as they can point to scapegoats like the Gulf War, and duck the implications of a 25-year dismal record, we are likely to see mistakes repeated, and present problems compounded.

The prime example at this time is the continued campaign for "open skies" internationally. Bear in mind that open skies is precisely what we have had domestically for the past 14 years of deregulation with its record of losses, bankruptcies, and pricing chaos.

If we now were to export that regime to all international routes, that would surely kill any prospect of decent airline earnings for years or decades to come.

On the other hand, perhaps those who deal with aviation issues in the administration and Congress will take more fully to heart the lessons of the past half-century of poor airline performance and gear policies to facts rather than buzz words. If so, in time the industry could work its way out of its present difficulties and achieve a degree of financial stability that has too long been lacking.

Paul Stephen Dempsey, Professor
University of Denver

I give about 20 or 30 speeches a year on this subject. Frequently I debate this issue around the country. I generally take what is a politically incorrect view on the appropriate relationship between government and this essential infrastructure industry. But, I would really rather be right than be popular.

The United States airline industry was deregulated in 1978. Since then, the cumulative net losses for major United States airlines totalled $7.7 billion. These carriers are projected to lose another $1.0 billion in 1993 and to break even at best in 1994. U.S. airlines carry a debt burden of $35 billion. That is more than 8 times the total accumulated profit from the beginning of commercial aviation in the 1920's until today.

The U.S. airline industry has now lost all their accumulated profits since the Wright brothers at Kitty Hawk. The National Commission seems to have placed the blame on the Persian Gulf crisis, the spike in fuel cost that it produced, and recession. The Persian Gulf crisis and recession exacerbated but did not create inadequate profitability. The average profit margin in the U.S. airline industry was 2.4% from 1960-1977, and then collapsed to three-quarters of one percent in the decade following deregulation. If you add in the last 3 years, the profit margin drops to a negative 2.3%.

The world airline industry needs operating margins of 4 percent just to service debt, and 6 percent if they are to generate sufficient profit to pay for fleet modernization. It could cost about $130 billion to buy new aircraft in this decade. The profit margin was not robust during regulation, but at least it was adequate for a regulated industry.

All manufacturers earn between 4% and 8%. Airlines earn 2.4%. Now, we have an industry that is not earning a profit margin at all. The question is why?

I agree with Mel Brenner. The inherent structural characteristics of this industry propel it in this direction. The airlines are capital intensive, they are labor intensive, and they are fuel intensive. Airlines inevitably produce excessive capacity because consumers prefer the frequency.

Investment decisions for highly sophisticated and expensive equipment have to be made years ahead of delivery, and competing companies have built highly duplicate hub networks. That capacity has absolutely no shelf life.

Seeking to sell as much of that perishable inventory as possible, carriers offer the price of the lowest price provider, so long as it covers marginal costs, in an attempt to grasp an ascending and illusive break-even load factor, and preserve market share. Excessive capacity and perishable inventory leads to marginal cost pricing. But, most of the industry's costs are fixed.

In the long run, carriers have to recover their fixed cost or face bankruptcy, as scores of airlines have learned the hard way. But the collectively irrational behavior exhibited by the airline industry before regulation in 1938, and after deregulation in 1978, causes cost and price to fail to achieve equilibrium at a level which allows inadequate profit. Hence, in the absence of government oversight, the inherent economic characteristics of the airline industry propel it to engage in below-cost pricing.

Let's talk about demand. Many experts predict that global passenger demand will average 5-6% a year over the next 2 decades, although it is going to be spread unevenly with intra- and inter-Asian markets growing at about 8-9% and North American trans-Atlantic and European markets growing only about 4% a year. Some analysts predict that traffic will have to grow about 8% in order for the United States industry to achieve profitability – something it is not likely to do.

United States domestic traffic growth has been virtually flat since 1987, which is remarkable in light of the unrealistic and destructive price wars of that era, and the fact that the recession did not begin to set in until 1989-1990. This raises the very frightening possibility that the passenger market may have matured.

Foreign markets, while growing steadily, are increasingly protectionist and militant. Foreign governments view U.S. firms as dumping excess capacity abroad and endangering national flag carriers. I care very much that Pan Am did not survive; the government of France cares a great deal about the survival of Air France. That is the reason I think the Commission's proposal that we have multi-lateral open skies negotiations is terribly unrealistic.

Airlines moreover have conditioned consumers to hold unrealistic expectations of what a ticket should cost. So, consumers withhold discretionary spending until price wars erupt, as they eventually and inevitably do.

All carriers fly essentially the same aircraft, and increasingly, all airlines offer less service. Thus, there is very little service differentiation between them anymore.

Most consumers view air travel differently from hotel rooms. Many

small businesses have been priced out of the market and no longer fly.

With recession constricting the white collar labor force and trimming travel budgets, and communications technologies improving robustly, business travel has now fallen to 37% of total traffic.

In the late 1980's, business traffic accounted for about 60% of domestic traffic and 75% of revenue. If the sharp decline in business traffic is other than a short term aberration, the airline industry is in very serious trouble.

Let's talk about pricing. The airline industry prices in a highly schizophrenic way. We see evidence of monopoly, monopsony, and marginal cost-based destructive competition side-by-side as we would see in any deregulated public utility.

Ninety-three percent of passengers pay an average of only 30% of the full fare. The full fare has risen to such prohibitive levels that only those who absolutely must fly will pay it. Only 7% of passengers do.

Inequitable distortions in the pricing system force tens of thousands of people who would fly at a reasonable price simply to stay home. Pricing at concentrated gates and slot constrained airports is monopolistic, as the GAO has well documented.

But not enough monopolies yet exist to cover the industry's fixed cost and offset steep discounting in competitive markets. Moreover, the Fortune 500 companies exert monopsony power.

They play carriers off against each other for corporate discounts on discretionary travel without the restrictions that apply to other discount airline tickets. The price of these tickets to Fortune 500 companies fail to cover fully allocated costs.

Computer software will enable decoding of the cheapest seats. That computer capability will overcome the efforts of airline field managers to hide the availability of the cheapest seats.

Carriers will continue to follow each other down financially, as price wars erupt to sell excessive inventory because of the factors I described.

Airline balance sheets have been polluted with enormous debts caused by grossly inadequate profitability and in some areas, leveraged buy-outs. Total debt to capital ratios now exceed 70% for virtually all major U.S. airlines. Wall Street downgraded the industry to junk status only because Wall Street has no lower category. If the airlines were savings and loan institutions, the government would put them into receivership and liquidate them.

For the moment, fuel costs and interest expenses are relatively benign, but they will not always be. Even at these low interest rates, when the economy improves, debt service will consume much of potential operating profit.

The Aviation Commission's recommendations for meaningful tax reform will not likely be implemented by a Congress already fearful of its own debt burden.

Carriers will continue to bid up travel agent commissions in an effort to buy traffic.

New equipment has been deferred, although this creates a problem for phasing out Stage 2 aircraft. Scores of aircraft are parked in the desert. But, no airline has yet downsized its way to

long term profitability. Some people contend that the success of Southwest Airlines is proof that good management will harness costs and resolve these problems without the need for governmental intervention. Southwest thrives on a comparative advantage that the other airlines cannot achieve because of existing labor agreements, and their tenacious commitment to hubs, computer reservation systems, travel agents, and other very costly overhead.

The success of 3 percent of the U.S. airline industry, which is what Southwest is, is predicated in part on a series of artificial comparative advantages. Southwest's advantage is created in part by U.S. labor laws. I am told that Southwest's yields between Dallas and Houston are 20¢ per mile. The circumstances surrounding one airline should not dictate national policy for the 97% of the industry which is collapsing and upon which most Americans must rely.

If we could wave a magic wand and give all airlines Southwest's cost structure, the industry would eventually compete away its profit for the reasons I and Mel Brenner have already described. I told Southwest's Herb Kelleher that if every airline had his cost structure, they would still find a way not to make a profit. He did not disagree.

Let's talk about capacity. While some excess capacity will disappear with the collapse of several major airlines and the downsizing of others, many used aircraft and skilled labor will likely be recycled into the new entrants and the carriers that remain.

Moreover, financing is available from equipment manufacturers, both for new entrants, and for carriers emerging from Chapter 11. Public sources of capital in the form of state and local contributions and guarantees are increasingly available. The states of Missouri, Minnesota, Indiana, and North Carolina are pledging hundreds of millions of dollars of assistance.

Foreign carriers have also continued to inject significant capital into U.S. firms, in order to take advantage of the domestic feed these U.S. carriers provide for their lucrative long-haul, wide-bodied international networks. I think of KLM, British Airways, Air Canada, and so forth.

For a growing number of airlines, labor has become the lender of last resort. Moreover, further constriction of the industry is impeded by the bankruptcy laws, not likely to be changed, and the anti-trust laws likely to be more vigorously enforced.

These factors ensure that neither enough marginal carriers, nor sufficient excess capacity, will disappear soon, depriving the remaining airlines of traffic at adequate prices to cover their fully allocated costs, plus a reasonable profit. All the while, the balance sheets of virtually all carriers will continue to deteriorate.

Now, to his credit, Alfred Kahn, in an interview in the Aviation Week and Space Technology, recently conceded that the economic theories upon which deregulation predicated were wrong and that the predictions of deregulation proponents which were based upon those theories were therefore wrong. The industry does indeed exhibit a tendency to engage in destructive competition, something I have been saying for about a decade.

Economic regulation was imperfectly administered, and created some distortions, including excess service competition. It nevertheless created an

environment in which destructive competition was avoided. Profits were by no means robust. But, they were significantly better than they had been during the last 15 years.

In the early 1970's, neither the infusion of tremendous wide-bodied capacity with the introduction of the 747, DC-10 and the L1011, nor the recession which occurred in the early 70's, nor the sharp and unprecedented rise in fuel costs precipitated by the Arab oil embargo of 1973, bankrupted a single airline. We had precisely the same economic circumstances in the last 3 years that we had in the early 1970's.

Regulation was imperfect. The National Commission's report said that real consumer ticket prices are lower than they were 15 years ago. You could say that about any 15 year period from the inception of commercial aviation in the 1920's.

Regulation was important, but some forget that under regulation, real consumer prices were falling. Wages and productivity were rising. Safety was improving. Traffic was growing. Concentration was declining. Profit by no means was robust. The balance sheets were respectable and the equipment was new.

In the mid-1970's, regulatory reformers were well on the way to curing many of the distortions in the system. Enhanced pricing and entry flexibility allowed carriers to: (1) rationalize operations; (2) tap the elasticity of demand and fill seats which otherwise would have flown empty; and (3) enjoy respectable profitability. That is what occurred in the late 1970's, before deregulation unleased the industry's inherent, primordial tendency to engage in destructive competition.

Despite the tens of thousands of employees who lost their jobs and the investors, lenders, and equipment manufacturers who have been stilled, and a growing number of consumers who are disenchanted by an inequitable pricing and deteriorating service, today, the political will for reform is weak. It has become politically incorrect to challenge deregulation or advocate increased government oversight.

In the mid-1980's, I believe history and conservative think-tanks turned on a tremendously effective propaganda machine which convinced much of the public that airline deregulation was a phenomenal success largely because of grossly overstated estimations of consumer benefits.

Airline executives had a marvelous opportunity to request meaningful oversight before the National Commission, but declined, insisting the Commission focus instead on largely peripheral issues rather than on the central causes of the industry's collapse.

The failure by the Commission stems from a distrust of government, and a failure to understand that a model of regulation is possible that does not consist of classic price and entry regulation.

To recommend a taxpayer bail out, i.e., tax relief, and selling off our airlines to foreign citizens as the Commission recommended, seemed like a confession that aviation policy over the last 15 years has been a failure. But, because several of its members were architects of deregulation, the Commission was propelled from addressing the failure of deregulation.

In the end, the government must provide the oversight necessary to enhance

pricing stability and rationalize capacity.

When all the dust settles, we are going to be left with fewer, but horribly injured airlines.

Several major airlines will gradually collapse into liquidation. But, the process will likely be so slow and a few carriers so weak that a Conrail or an Amtrak type solution will not be implausible.

However, the federal government's ability to provide a bail-out will be circumscribed by its own excessive debt burden, and by a reluctance to repeat the catastrophic bail-out of the deregulated savings and loan industry.

If I'm wrong about that, and the survivors are able to reap monopoly rents on a wide-spread basis, the public outcry will be for the imposition of public utility regulation.

Alternatively, the free marketeers will call for surrender of cabotage and will allow foreign airlines to discipline the few surviving U.S. carriers. That outcome would start this cycle all over again.

Government is an imperfect institution, but we must reluctantly concede that it is sometimes a necessary companion, particularly to correct for market failure in industries essential to the vitality of the nation as a whole.

With more competitors, we need less government; with few competitors, we need more government.

Thus, we should inject modest government oversight now, to provide some measure of stability to pricing, and to allow capacity rationalization. That will stem the implosion of this important infrastructure industry so vital to commerce, communications, and national defense. That is one view.

There is another view. It is by Dan Kasper and you are going to hear it, I'm sure. But what he says in his supplemental view to the commission report is that if the administration and Congress will just implement the recommendations here, it will transform commercial aviation and generate benefits to travellers, shippers, airlines and communities well into the next century, long after the current financial problems of the airline industry are but a distant memory.

If I'm right, it won't be a distant memory.

You will have the opportunity over the next few years to judge whether my predictions are accurate or those of the Commission. I hope Mr. Kasper is right.

Daniel Kasper, Director of Transportation Studies Harbridge House Member, National Airline Commission

The Commission was given a very broad charge. The enabling legislation (which is contained in the report) threw in virtually every issue.

We had 90 days to look at issues that covered not only the airline industry but also the aerospace industry.

Under the circumstances, had the Commission done nothing more than bury some old myths, and hold to the Hippocratic Oath to do no harm, the Commission would have been a success. But, the Commission accomplished more than that.

The poor financial condition and performance of the airline industry over

the past several years is certainly a cause for concern, but as the testimony before the Commission made clear, the consumers after all, for whom this industry is to exist, benefitted tremendously during the period since deregulation.

Fares declined significantly, despite the maturation in aircraft and engine technologies that did not characterize previous periods in aviation history.

Meanwhile, service competition and employment in the airline industry increased substantially. The Commission report shows that employment in the aviation industry, and the airline industry in particular, increased substantially over the period of deregulation. It did not decrease.

Now, after a period of industry consolidation, new entrants, and expansion by established low fare carriers such as Southwest Airlines, are again forcing larger airlines to restructure and retreat.

The testimony before the Commission made clear that major airlines are well along in the process of reducing their cost, reviewing their operations, and re-thinking their strategies, to cope with the harsher economic and competitive conditions which have characterized the first 3 years of this decade.

Such industrial transitions, and I stress this is an industrial transition for reasons I will elaborate on in a little bit, are rarely painless, and this one will be no exception.

Under these circumstances, I think it was not at all surprising that constituencies that feel they are going to be adversely impacted by the change they see coming, seek help from their elected representatives and that, I believe, gave rise to the National Commission.

Under these circumstances, I find it heartening that instead of returning to the solutions of the 1930's, which despite some of our differences in other matters, both Mel Brenner and I would agree, is the wrong way to go.

The Commission instead proposed a set of recommendations tailored to meet current and future conditions facing the airline industry.

In this regard, I would stress 3 sets of recommendations the Commission made that stand out. The first is to establish an independent government corporation to operate and update the nation's air traffic control system. This, if adopted, would lead to reduced delays, save airlines and their customers billions of dollars in cost, and improve the system's already strong safety record.

The second recommendation that will have great importance is the adoption of a new multilateral approach to international aviation negotiations.

A new multilateral aviation agreement could provide more U.S. cities, U.S. citizens, and U.S. shippers, with direct access to international air service.

A new multilateral aviation agreement could provide U.S. airlines with expanded access to markets abroad. As Paul Dempsey pointed out, U.S. air carriers have, during the last decade, been the fastest growing, on average.

The third set of recommendations are those dealing with the reduction of costs on airlines, shippers, and passengers by unnecessary regulation. The Commission made a series of recommendations in the area of regulatory reform, including those designed to improve the cost-

benefit analysis supplied to proposed regulations by both the FAA and DOT, and for rationalizing the system of taxes and user fees currently levied on the airline industry.

The Commission should also be commended, I believe, for not fighting the last war on issues of principally historical interest. I would put into this category questions of computerized reservation systems.

The Commission avoided issues which are likely to have, at best, a peripheral impact on the future. In this category are issues including the way in which the U.S. government allocates limited entry route rights.

Less commendable were Commission recommendations aimed at imposing stricter noise standards on new entrants, and the recommendation that a presidential advisory panel be created to advise the Secretary of Transportation on the financial well-being of airlines.

The administration, wisely in my opinion, is not likely to adopt the recommendation for the financial advisory panel. I share a view held by many others, that the Department of Transportation has lacked, from time to time, a sophisticated understanding of airline finances. But, that fact does not answer the far more difficult question of what the Department should or would do with a better understanding of airline finances.

Does anyone seriously believe that any Secretary of Transportation would effectively force the lay-off of thousands of employees because he or she did not like the debt equity ratio on an airline's balance sheet, despite the fact that airline continued to provide safe and reliable air service? I think not. I am not concerned about the recommendation to create a financial advisory panel, because existing legislation is clear that the purpose of DOT fitness standards is not to protect airlines from themselves. It is to protect the travelling public, and to ensure a continued provision of safe and reliable air transportation service.

The Commission made clear it did not favor any increased regulatory power for the Department of Transportation. Under those circumstances, any advisory panel, even it were to be created, would be an empty shell.

Finally, the combined effect of the Freedom of Information Act requirements and federal conflict of interest rules would make the composition and working of a financial advisory panel so convoluted that, as a practical matter, a financial advisory panel is simply not a realistic alternative. So, I think that recommendation is likely to go away.

What really bothers some critics is the fact that the Commission rejected suggestions to recommend that the government manage the airline industry.

Some observers criticized the Commission for failing to do something "concrete" to help the aircraft manufacturers – a subsidy perhaps – despite the fact that none of the commercial aircraft manufacturers that appeared before the Commission requested such help. Indeed, all pointed out that far from needing help to maintain production capacity in the air frame and engine business, that business is plagued by excess capacity.

Having government come in and try to do something to "help" them would only prolong the adjustment to a market reality that says that there is excess capacity in the production of civil aircraft and civil aircraft engines. Some observers criticized the Commission for

failing to support expanded government intervention to limit price and other forms of competition.

But, how can prices be regulated in a market where Southwest Airline costs would be used to set fare floors.

Southwest Airlines has costs that are only a small fraction of the costs of the major carriers. Southwest can operate profitably at fares that other carriers can not match.

There is nothing in labor law or labor agreements that allow Southwest to succeed. Southwest is the most unionized airline in the country. It has a higher proportion of its employees who are unionized than any airline in the country. It also is the most productive airline in the country, because it figured out how to utilize its workers in a way that substantially increases their productivity. They are not paid significantly lower levels than other airline employees.

Take pilots for example, Southwest Airline pilots are within a few thousand dollars of pilots flying comparable aircraft for United or American.

What is different is that their pilots put in 50% more hard time. That is, they fly 50% more for the money they make than do the pilots for American or United. Let me hasten to point out I am not criticizing pilot unions at those airlines. Part of the problem is union contracts and work rules.

Part of the higher cost structure of some airlines is inherent in the organization of an airline to fly hub and spoke, which automatically makes it exceedingly difficult to use the same kinds of highly productive turn-around service patterns that permit Southwest to be so productive. Low cost carriers like Southwest and Reno prevent price regulation. The first thing that happens when governments start regulating prices is they start regulating the minimum price. That tends to push up the bottom price and take away the competitive advantage of the most efficient providers. That is a mistake that we do not want to repeat.

Finally, some observers characterize as "bail-outs" Commission recommendations to institute improved regulatory procedures, including cost-benefit analysis of FAA regulations.

In some instances, the FAA estimates that reducing its regulation could save the industry more money than the FAA initially estimated the regulation would cost carriers. Such regulation imposes tremendous costs on the industry, reduces their profitability, and may ultimately raise fares.

It is inaccurate to characterize as a bail-out recommendations that would reduce excessive user fees and taxes levied on airlines, passengers and shippers.

For example, when the ticket tax was passed, the full understanding was these tax revenues were to be dedicated funds for the use in improving the capacity of the airways system. These tax revenues have not been used for that. The system capacity has not been adequately added, and it is imposing a severe penalty on the airlines.

The President himself urged us to continue to press, in particular, on the question of alternative minimum taxation. Such a tax is considered by some people as a tax that is anti-investment, anti-job creation. That is another rule the Commission recommended changing. It is not a bail-out or a cop-out to recommend changes in the bankruptcy process which would

tend to reduce the cost, and speed the process of airline bankruptcies.

Observers who criticized the Commission for not recommending economic regulation of airlines are inconsistent if they criticize the recommendation to shift air traffic control to a private government corporation.

Privatizing the air traffic control system was a position subsequently adopted by the President and Vice President in the national performance review.

Bob Kutner's reason for opposing a privatized air traffic control system is that "it would insulate the agency from political accountability."

The FAA is an agency, and the air traffic control system is a system, that have been plagued by political micro-management by the Executive Branch and by Congress, according to testimony before the Commission, and according to testimony before 3 previous commissions and study groups.

The Commission grasped 2 important principles. The first is that while government has an important role to play, government can be most effective by concentrating on those things that only government can accomplish, such as reforming the air traffic control system, conducting international aviation negotiations, and by doing a better job of regulating and taxing.

Second, that substituting regulatory micro-management for marketplace competition is unlikely to led to renewed airline profitability, increased consumer welfare, or a more efficient national transportation system.

What then are we likely to see over the next decade or in the airline industry? I think the description presented today provides the basis for what the industry is likely to look like.

I believe the industry is in the midst of a fundamental transformation at 2 levels.

At one level is a shift, starting in 1977 and 1978, from an industry that was truly balkanized by government fiat into the routes could be served and the service that could be provided. From that the base, the industry has shifted into a network industry; that is, large networks, interconnected hubs and spokes.

The implications for this are quite clear. The effectiveness of competition in the airline industry has increased even as the number of carriers has decreased, because one of the characteristics of a network is that the network providers compete with each other in a broader array.

Previously, there were perhaps 20 airlines, each of whom had a divided and relatively well-protected set of markets made possible by government regulation. When those markets are opened to entry and increased price and service competition, there are network advantages. Carriers that capture network advantages, although there are fewer carries, compete with the other carriers in more and more places.

Network strategy is not a sure-fire ticket to success anymore. Today there are too many airlines pursuing the same strategy. Airlines are being squeezed from the top by carriers that have been better at developing networks, and from the bottom increasingly by a rapidly expanding Southwest Airlines and by other new entrants such as Reno Air, Kiwi Air, and others. These carriers have discovered something else about the marketplace — that a huge

proportion of the traffic in the U.S. domestic market can be served within a time window for jet aircraft operations of 2 hours, which is about the maximum turn time that a carrier like Southwest will use. In other words, there are a number of passengers out there who do not need, and may be unwilling to pay for, the kind of network characteristics that many air carriers are providing.

So, we likely will see a reduction in the number of network carriers, expansion in the number of carriers at the lower tier, and a real squeeze in the middle.

Continental has figured this out. That is what Continental Lite is about. Northwest and KLM seem to be trying very hard to expand on the upper end. British Airways and USAir seem to be trying very hard to get into that game as well.

So, the squeeze is on, and the result will be fewer network carriers. An econometric model analysis of this trend is contained in a paper by Betsy Bailey and one of her graduate students at Wharton. The study examines air carrier network economic characteristics. The study suggests why this kind of transition takes a long time. The study makes some hypotheses about how many network carriers are likely to survive.

The result is that competitive pressure is on network carriers and their labor force. That pressure come for a marketplace with the low cost carriers. Excess capacity will provide services at low prices.

What excess capacity really means is at existing capacity and cost levels, it is not possible for most airlines to operate profitably. It does not tell you that airlines who are configured at lower cost levels to serve the markets in different ways could not, in fact, operate the equivalent level of capacity profitably. I think what we are seeing in Southwest Airlines, for example, is rapid growth because Southwest is convinced some of the major airlines as a result of very substantial over-investment in aircraft over the last several years are now vulnerable on the cost side.

The international airline industry is a network business. It is important to understand that the international alliances being built are an attempt by carriers pursuing network strategies to be able to access traffic wherever the traffic is located.

Think about the similarities between the international airline industry and telecommunications. Could MCI compete well with AT&T, if at the outset of deregulation of telecommunications, the federal government had said to MCI, you can serve the whole market except Boston, Washington, and New York? I submit to you that it would be almost impossible to compete in a viable telecommunications network without those 3 major points. You are finding airlines doing the same thing.

The Commission did not recommend an open door policy. It recommended a negotiation that would open the U.S. market to increased investment and increased entry by foreign carriers, in exchange for reciprocal and equivalent rights for U.S. carriers abroad.

The fact that the airline industry has problems is irrefutable. Mel Brenner has consistently criticized deregulation, but he doesn't have an alternative. He has clearly made the null case that he does not favor a return to regulation because he thinks that would only make matters worse. On that, I agree with him. The real question is not whether things are bad, but whether conditions could get worse. I think conditions will

get better. The likely reason is that if United, American, and Delta went out of business, within a very short period of time, other airline entrepreneurs would be in those markets carrying the traffic and providing the service. I have no doubt about that.

Steven A. Morrison, Professor
Northeastern University

I testified before the Commission. Paul and I were the lone academics that the Commission heard from.

It is interesting that 15 years after airline deregulation, the debate is still going on, and it probably will still be going on for another 5 or 10 years. I wonder if any other regulatory change has been debated so hotly for so long.

Through 1991, because of the merger wave in 1986, the U.S. airline industry, as measured by the 8-firm concentration ratio, and based on domestic passenger miles, is more concentrated than it was at the time of deregulation, although initially we saw reduced concentration.

But, as Dan Kasper pointed out, the 8-firm concentration ratio is a crude and inappropriate measure of concentration in a network industry.

Let's look at competition at the level of carrier routes. This is the notion of an effective competitor, and it is just the inverted Herfindahl index. At the route level, the number of competitors has increased from around one-and-a-half to 2. Now it seems to be cycling around 1.9. So, today there are fewer carriers but greater head-to-head competition on individual routes.

Another manifestation of that way of measuring competition, which might be easier to interpret, is the percentage of passengers flying on routes where one carrier has a monopoly – 100% market share. It has gone from 10% in 1978, to about 3% today.

Similarly, passengers flying on carriers with 90% or greater market share has been cut about in half. At the other end of the spectrum, the percentage of passengers flying on carriers that have a less than 20% market share on the route has more than doubled from 6-7% to in the order of 18%.

This is based on research I have been doing for a while. When I started this research, critics of deregulation were saying there is not enough competition. Now critics are saying there is too much competition. But, indeed, there is more competition than there used to be, even among fewer players.

The bottom line from a passenger's perspective is "What has that meant for fares?." Cliff Winston and I used the DOT's standard industry fare level formula and applied it, with some massaging that I can talk about later, if you want.

The study by Cliff Winston and me concludes that the regulated yield is higher than the actual yield over all periods. The spread between the regulated yield and the actual yield is higher during recessions, which is caused by spikes in fuel prices. This is because, in a regulated system, as costs rise, the standard industry fare level raises.

What does this amount to? It amounts to an average savings of about 20%, averaged over the whole course of deregulation. Real air fares have declined factually by 30%, so implicit in my argument is that two-thirds of the observed decline in air fares is due to deregulation; one-third of the observed

decline is due to things that would have happened anyway.

But not everybody has gained, and I don't think anybody claims that. Clearly there are winners and losers from deregulation, and my focus here is on fares only.

Short haul fares are up and long haul fares are down. This is what would have been predicted. So, short haul trips are more expensive than they used to be. Long haul trips are cheaper than they used to be.

Cliff Winston and I used that same standard industry fare level methodology to estimate what regulated fares would have been today, in the absence of airline deregulation.

We used the second quarter of 1991, which at the time we did it was the latest available data. We compared the fares people actually paid with what fares our model says they would have paid. About 70% of passengers pay fares less than or equal to what they would have paid under regulation.

So, 70% of us are better off; obviously 30% of us, in terms of fares, are worse off. Short haul flights are more expensive, but account for fewer passenger miles. Nearly 80% of passenger miles are flown at fares less than, or equal to, what they would have been.

About 12% of passengers are paying fares twice or more higher than they would have paid under regulation. This includes full coach fare travellers. So, there are some winners and some losers. There is no question about that, vis-a-vis fares. Also, scheduling frequency should be considered as well. Consider fare premiums at hubs. I did an independent analysis. Comparing yields at 15 hub airports having few air carriers with yields at 38 airports that have more airline competition, yields at the concentrated hub airports are 30% higher than at airports that are not concentrated.

But, adjusting for distance, number of coupons, frequent flyers, and carrier identity, an important factor is that Delta charges high fares in Atlanta because Delta charges high fares everywhere.

So, some of what looks like a hub premium is either a carrier premium or simply reflects the mix of travellers that a simple raw comparison of yields across airports does not show.

The first report by the U.S. General Accounting Office (GAO), made a raw comparison of yields, but they recently came out with another study with more or less similar conclusions, using more sound methods.

I presented to the Commission some work I had just finished on bankruptcy. I studied the effect of competing against bankrupt carriers. I guess the Commission accepted my results. Or, alternatively, perhaps I put enough doubt in their minds so that they recommended a 1-year maximum stay in bankruptcy, rather than making a stronger recommendation.

Let me give you a flavor of the analysis that we did. We wanted to see the effect of competing against a bankrupt carrier.

We ran a whole series of regressions. In one regression, we tried to explain fares by United Airlines. We explained fares on United Airlines based on some route characteristic variables: distance, passengers, and number of competitors. The purpose of the route characteristic variables was to explain fares on United

Airlines on the basis of who they are competing against.

We did a whole series of regressions, trying to separate out the effect of competing against a carrier in general, compared to competing against a bankrupt carrier. Beginning with the Continental 1983 bankruptcy, the effect on carriers' profits was on the order of minus a half-billion dollars.

So, competing against bankrupt carriers is not responsible for much of the $10 billion loss the U.S. air carrier industry had in the past few years. Incidentally, half of that the $10 billion industry loss was the $5 billion loss by Eastern.

Retained earnings of the airline industry were higher in 1992 than they were in 1991. Why? Because the minus retained earnings of Eastern were no longer included. So, a large fraction of industry losses belonged to one carrier.

The total effect of bankruptcies on carriers has been small for American. This is a positive sign. Delta benefitted from competing against bankrupt Eastern. United was indeed hurt, but primarily from the first Continental bankruptcy. The first Continental bankruptcy in our analysis was unambiguous. It effected negatively the profits of all carriers that it competed against. The general result is that the effects of bankruptcy on competing airlines are sometimes positive, sometimes negative.

But, the bottom line for the whole industry for all bankruptcies including Continental, is minus half a billion dollars. So, this is not responsible for the industry's financial difficulties.

Another issue that comes up in discussion about concentration of the airline industry is, if competitors are in all markets, and start a price war in one market, will the competition start a price war in another market to retaliate?

An illustration of the increase in multi-market contact is the percentage of American Airline revenue earned in the top 1,000 markets, where American competes with United. The number rose from more than 40% to more than 60%. So, there is more multi-market contact.

What effect does multi-market contact have on carrier pricing?. We did an analysis similar to the bankruptcy analysis. We looked at the effect of multi-market contact on fares. We discovered that bankruptcy has little effect on carrier pricing.

We found that multi-market contact in the mid-80's increased fares, as might be expected from a cartel. But, when times got tough, in 1990 and beyond, multi-contact fares were smashing each other.

It is important to look at the industry over time, because what is going on today and looks very bad just 3 or 4 years ago looked a lot different.

The issue that perhaps fostered formation of the Commission was the low profitability of the airline industry. Low profitability results from too many seats chasing too few passengers — nearly everybody agrees with that. The question is, why?

Mel Brenner says there is a chronic problem, and in some sense I agree. It is a chronic problem. Where does that problem come from? Some excess capacity could come from carriers making their capacity decisions in ordering planes years in advance, and the demand for their product is very sensitive to income per capita. If the economy fails to perform as expected, then carriers will be stuck with too

many planes or too few planes. I did a time series regression of gross margin of the industry from post-World War II to now, and I played around with various definitions of this forecast era.

What I came up with that fit the data best was a model where the airlines base a forecast of economic activity 2 years from now on the basis of economic activity over the past 8 years.

I tried every other possible combination. Here is what you get in terms of forecast eras using that definition of the forecast. We are forecasting 2 years ago using 8 years of past GDP data.

A huge jump in gross margins occurred in 1952, precisely when the economy was performing much better than an 8 year extrapolation would have predicted. The airlines had insufficient capacity because they thought there wouldn't be anybody wanting to fly, the economy boomed relative to its past performance, and the airlines made a bunch of money.

The deregulation era in the early 80's was a time of bad forecasts, and so were 1990 and 1991. The Air Transport Association predicts basically about break-even in 1993, and a modest profit in 1994. That is consistent with the idea that excess capacity will work itself out because there will be little or no forecast error.

I presented this idea to the Commission. My bottom line is much the same as Dan Kasper's — we need to look at a broader time frame than just the current problems, and we also need to come up with something better than what we have.

But, I think where the industrial organization and regulatory economists are coming from these days is that regulation isn't any good and deregulation isn't any good either, but deregulation is the lesser of the two evils.

Question - Excess capacity has occurred 5 times since the second World War. I have an article on that in 1989 and 1992 in the Air Finance Journal. Excess capacity occurred under regulation, during a transition to deregulation, and now most recently under deregulation.

The point is, we have problems with excess capacity under regulation and deregulation. Neither situation has solved that particular problem. I think we should be aware of that. We will not solve the problem by going back to regulation. We had regulation.

I want to make a second point while I have the floor. Paul Dempsey mentioned that the airlines have had losses over the entire history from the Wright brothers. I went back to the profit and loss in the airlines for as far as I could using DOT records, which is to the late 40's. After adjusting for inflation, profits have been positive during this era, not negative.

In other words, a small profit 30 years ago, after adjusting for inflation, is as large as a larger loss today. So, it is desirable to adjust for inflation.

Comment - Before taxes, net profit was $10 billion. After-tax new profit was about $2 billion.

Comment - Excess capacity has existed under both regulation and deregulation. Having worked for 2 airlines during a period of regulation, I can testify.

Comment - And I have too.

Comment - So, I agree with that. I do submit, however, that deregulation has intensified excess capacity.

But another point, assume regulation did not change excess capacity. Deregulation took away any control over fares, and we see fare war after fare war.

The chronic condition of excess capacity, coupled with a low marginal cost for empty seats and the perishability of utility from empty seats, produces constant fare wars.

One other point, to clarify what I said — I did not mean to say that I thought deregulation was better than regulation. I did not say that. I said deregulation, in my opinion, was a mistake.

I said I think it is impracticable to put back regulation partly for the reason you said — the enormous difference in cost levels, and other factors. I think it is impractical. But, from my perspective, if this is an industry subject to destructive competition, subject to excess capacity, we cannot go back domestically to where we were.

My main point was to not make conditions in the domestic airline industry worse by now throwing open the door completely, internationally, with open skies, as some would have us do. I am not quite sure whether the Commission recommended that. I think maybe it did not. But as you well know, there are many who do, and that is a major problem.

Customers have benefitted from lower fares since deregulation, but those fares do not cover costs, so they are destructive to the airline industry.

Brenner - Historical airline profits, after adjustment for inflation, were very good.

There are some very specific factors that affect the profit comparisons of recent experience compared to the whole history of the industry. For example, $2 billion to $3 billion of the loss was purely a change in accounting standards for health and pension benefits.

These adjustments needed to be made. They were made, and it is an unrealistic and unfair comparison to include that adjustment in comparisons with profit figures over a long period of time.

I want to come back to something Mel and Paul discussed: destructive competition. Fred Kahn does not need me to defend him, as any of you who have heard Fred can attest.

I was on a program with Fred about 10 days ago, and Fred specifically did not say this industry is an industry that is plagued by destructive competition. He did say that is a legitimate question to be asked and answered, and his answer at the present time is that the industry is not plagued by destructive competition. We have in this country the most efficient capital markets in the world.

The problem of the airline industry is not a lack of capital. The existence of excess capacity in the airline industry is irrefutable evidence to the contrary.

We have had too much capital in the airline industry. Capital markets are doing exactly what they should be doing: raise the cost of capital, lower the ratings, and discourage capital from coming into the airline industry market.

As long as investors are willing to put capital into the airline industry, and as long as the airline industry is willing to safely and productively fly passengers, then we can argue and quibble all we want about whether regulation is better than deregulation.

People are flying more cheaply, goods are being transported more cheaply and

more effectively, and more services are being provided. If producers can not make a profit, then eventually enough capital will be driven out of the business and the returns will rise.

There is absolutely no evidence that we have to worry about the productive output of this industry.

Dempsey - The industry is prone to excess capacity, and the cost of that excess capacity is exacerbated under deregulation.

Yield figures presented earlier did not account for an increase in load factors between 1978 and 1990.

Dempsey - If costs of seat miles double but you keep fares constant and load factors double, that affects revenue.

Comment - The load factor did not double.

Comment - Did the Commission look at barriers to entry, especially on the ground, and also barriers to exit out of the industry?

Kasper - Yes, the Commission did look at the standard barriers to entry on the ground. The most frequently cited example is access to gates. Even the new entrants testified that they could get gates. It may be sticky, but, airports are getting more astute. As airports become financially successful, they don't need to rely on the airlines for the bonding commitments the airports needed in the past. As a consequence, airports have more freedom to control gates than they had in the past.

Barriers to entry have not been a problem.

There is no doubt that if an airline wanted to come in on a large scale at an airport, there might be a gate problem. But that really is not the same problem you face in another industry just trying to get into the facilities you need.

If they are not there, you are going to have to build them, as carriers have seen done.

In testimony before the Commission, barriers to entry were not considered to be a serious issue. The Commission examined whether bankruptcy law and proceedings are a barrier to exit from the industry.