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**The Vulnerability of *Quasi-Professional Experts*:
A Study of the Changing Character of US Airline Pilots' Work**

By Amy L Fraher

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ABSTRACT

This paper contributes to 'sociology of professions' theory through the study of changes that occurred in US airline pilots' work. Findings reveal that airline pilots are *quasi-professional experts* who developed specialized skills based on talent and experience which allowed them to work autonomously and enjoy a correspondingly high sense of trust and prestige for which they were often well compensated. However, results of this study suggest high labour costs and weak professional communities leave *quasi-professional experts* vulnerable to managerial cost-cutting and work intensification agendas, particularly during periods of merger, downsizing, and other forms of industry restructuring. Findings signal a deprofessionalisation of some elite fields in which experts' specialized skills become devalued and the industry specific nature of their expertise reduces career options and job mobility. Although the present study identifies this trend in aviation, recent changes in a wide range of industries from healthcare to high-tech portend applicability in a variety of domains.

Keywords: work intensification, deprofessionalisation, sociology of professions, airline pilots

INTRODUCTION

Much has changed in corporate America in the troubling first decade of the 21st century, challenging workers to adjust. One area of intense transformation has been in US commercial piloting where airline bankruptcy, merger, and industry restructuring after September 11th 2001 (9/11) led to employee layoffs called *furloughs*, an average 56% pay cut with corresponding 20% increase in hours worked, and the loss of billions of dollars of employee retirement benefits due to pension plan default (Fraher, 2014). Of the 50,167 pilots employed by the major US airlines in 2000, almost 11,000 (21%) saw their jobs disappear by 2010 and over 20,000 pilots were forced to change uniforms and adopted new work rules in a wave of corporate mergers (Bureau of Transportation Statistics, 2011) (See Table 1). In light of these extensive industry changes, the research question adopted here is how, if at all, has the character of commercial airline pilots' work been affected by this industry restructuring.

Adams (2015: 155) notes there is a need for new research on work “to improve theorizing and to develop a more accurate empirical picture of the changing nature of professions in Western societies”. Therefore, a secondary aim of the paper is to follow Braverman (1974: 3) and provide a “substantial historical description and analysis of the process of occupational change” in the US airline industry. By introducing evidence that airline pilots are a distinct kind of employment category called *quasi-professional expert* and investigating their particular vulnerabilities during times of intense industry restructuring such as that encountered in the post-9/11 period, this paper contributes to our understanding of the deprofessionalisation of expert knowledge and advances theory about the changing nature of elite fields in Western society.

There have been other recent studies of airlines in the post-9/11 period. For example, Harvey (2007) notes that prior to 2001 the global aviation industry was already experiencing

revenue decline and in need of restructuring. Similarly, many pilots in the present US aviation industry study reported that managers used the events of 9/11 opportunistically to drive work intensification agendas airlines sought prior to 2001, just as Taylor and Moore (2015) discovered in their British Airways study. As a result, 92 percent of the pilots surveyed here would not “recommend an airline career to a young person today”. Therefore, a tertiary aim of this study is to investigate what accounts for this radical decline in the prestige of an airline pilot career. Several recent aviation studies investigated the implications of aggressive managerial strategies at European airlines such as Ryanair and British Airways (see for example Blyton et al, 2001; Curley and Royle, 2013; Gittell and Bamber, 2010; Harvey and Turnbull, 2010). Yet, few studies examine either the emergence of ‘low-road’ managerialism at American air carriers or its repercussions for US airline pilots.

SOCIOLOGY OF PROFESSIONS

Occupation or profession?

Although studying the ways that occupations transform has been a central theme in the ‘sociology of professions’ literature for decades (Klegon, 1978; Wilensky, 1974), more recent research such as Aldridge and Evetts’ (2003) journalism study and Muzio et al’s (2008) management consultant study noted how the discourse of professionalism is changing.

Historically, sociology of professions research typically focused on two subgroups: blue-collar ‘occupations’, such as craftsmen and manual workers, and white-collar ‘professions’, such as doctors and lawyers, whose practice is highly specialized through advanced education and enforced by professional communities with ethical norms such as physicians’ Hippocratic Oath and lawyers’ bar association (Crompton and Jones, 1984; Braverman, 1974). As such, professions are defined as a form of work which is accomplished by extensively educated,

highly-skilled people in a defined area of study based on an established theoretical foundation who typically belong to membership organizations and work autonomously within the standards established by an accrediting agency or regulatory body. To achieve professional status, Millerson (1964) notes, there must be recognition of the field's competence by both its members and the general public.

However, findings in the present study reveal that post-9/11 pilots do not fit neatly into previous sociology of professions definitions of occupation or profession, but rather encompass some aspects of both categories. For instance, similar to many occupations, pilots are skilled in the operation of machines and working with their hands, are paid hourly based on employer established work schedules, and do not typically aspire to white-collar managerial roles (Armstrong, 1983). Since pilots' salaries are a large percentage of an airline's labour costs which itself accounts for about 30 percent of airline overhead, managers are motivated to increase control and enhance productivity (Harvey, 2007; Gittell and Bamber, 2010). Yet, pilots are often unionized and not afraid to resist by resorting to job action, work-to-rule slowdowns, and strikes, like blue-collar workers. However, similar to white-collar professions, pilots' specialized flying skills enable them to work autonomously and enjoy a correspondingly high-sense of trust and prestige for which they are well rewarded.

In contrast to professions though, pilots' skills are typically a combination of talent and experience acquired via on-the-job training, military service, and operational exposure, not through university programs such as medical or law school. The expert mantle is conferred informally by peers and reputation, not enforced via oath like doctors. Pilot associations do exist but, unlike medical boards or lawyers' bar association, their representation is often fragmented and their power is limited particularly during times of merger and restructuring when competing

union leadership fight over seniority list integration and work rule changes. Several aviation studies cite a litany of problems with the US airline industry's labor relations system, which remains governed by the antiquated Railway Labor Act of 1926 (Gittell, 2008; Gittell and Bamber, 2010; Gittell et al., 2006; Gittell et al., 2004). Researchers note, for instance, deteriorating labor-management relationships have increased the time required to reach labor agreements which increases employees' frustrations causing slowdowns and other job action. This, in turn, prompts federal interventions to avoid disruption of the nation's air transportation system as authorized by the Railway Act, and this further antagonizes workers and prompts more job action, further diminishing already low levels of customer trust and satisfaction. Thus when the 9/11 terrorist attacks led to a dramatic decline in air travel and loss of billions of dollars in potential airline revenue, managers quickly targeted employees and labor unions—particularly the costly pilot group—seeking to undermine their power and rein in costs, thereby weakening unions' influence further (Gittell et al., 2004; Von Nordenflycht and Kochan, 2003).

Like doctors and lawyers, the unique nature of pilots' expert skills makes them extremely valuable to employers and difficult to quickly replace. Yet, this expertise is not readily transferrable to jobs outside of the aviation industry and labour unions' strict seniority lists keeps pilots beholden to one employer, reducing their job mobility. As a result, rather than pilots' expert skills increasing their marketability, as Gorman and Sandefur (2011) report for expert knowledge workers, pilots' career autonomy is restricted. This makes pilots' expertise a paradoxical mixture of in-flight autonomy onboard their aircraft yet ground-based dependency on their airline; a scale that tipped in the post-9/11 period due to managerial control efforts, and the resultant deprofessionalisation and work intensification.

As areas of expert work have become more diverse, Leicht and Fennell (1997) observe, the means of managing them appear to be converging across work settings as large employers attempt to exert managerial pressure over employees' work in increasingly insidious ways. For instance, an extensive body of literature documents the ways work has become more intense, requiring longer hours in increasingly stressful environments with a decrease in task discretion and autonomy (Green, 2004; Boxall and Macky, 2014; Chesley, 2014; Bhattacharya and Tang, 2013). Healthcare (Smith et al., 2008; Hart and Warren, 2015), and to a lesser extent law firms (Harris, 2002; Devine et al., 2000) and academia (Collinson, 2006) have been the focus of several recent work intensification studies. However, few studies have examined the intensification of airline pilots' work from a 'sociology of professions' perspective. Instead, airline studies typically focus on the emotional labour of airline flight attendants and customer service agents (Taylor and Moore, 2015; Bolton and Boyd, 2003; Harvey and Turnbull, 2010; Harvey and Turnbull, 2006) or workplace gender disparities (Ng et al., 2002; Taylor and Tyler, 2000).

Deprofessionalisation of experts

Gorman and Sandefur (2011) stepped outside this occupation-profession debate to introduce a new framework for 'experts', which includes autonomous work based on specialized knowledge within a normative regulating community that enjoys a high sense of prestige, lucrative financial compensation and other rewards. This expert definition is helpful in the current debate because it identifies four ways that employees' work can change: restricted autonomy, disrespected expertise, loss of community, and declining prestige and associated rewards.

Examining how occupations move towards professionalization has been a popular sociological research topic (Wilensky, 1974; McCann et al., 2013). However within the last

decade of rapid industry restructuring, examining how elite jobs in Western societies can quickly lose their 'expert' status in a process akin to deprofessionalisation has been less frequently investigated. By 'deprofessionalisation of experts' I mean a process during which an elite field, such as airline pilots, suddenly loses work autonomy through increased managerial control and work intensification during industry restructuring, and suffers a corresponding drop in prestige with reduction in financial compensation and loss of other rewards. In light of these distinctions, a new 'sociology of professions' definition is required which positions pilots in a category between occupation and profession that reflects both the particular characteristics surrounding their expert knowledge and their unique employment vulnerability. As such, I propose a more nuanced category called *quasi-professional expert*.

INSERT Figure 1: Comparison of Occupation, Profession and Quasi-Professional Expert Criteria

Quasi-professional experts are defined as employees who have a unique skill developed through talent and experience which allows them to work autonomously within an organisational structure, and for that they are trusted and well compensated. However, the high cost and weak professional community of *quasi-professional experts* leave workers vulnerable to managerial cost-cutting agendas during industry restructuring, and new policies and innovations can make their expertise obsolete with little opportunity for employment in other industries.

BACKGROUND: AVIATION HISTORY

Deregulation and the decline of unions

The roots of the post-9/11 US airline industry instability can be traced back to 1978 and passage of the Airline Deregulation Act. This legislation was designed to broaden consumer choice and make airfare more affordable by removing government control and opening the market up to competitive forces. Yet, rather than increasing competition, the deregulated environment created an oligopoly still thriving today. In the 1980s, eight air carriers dominated in America, controlling 92 percent of the market share with monopolies on many routes (Sheth et al., 2007). In 2015, about 80 percent of US markets remain dominated by just four air carriers enabling airlines to charge high airfares uncontested (Drew, July 1 2015).

As airlines gained power in the deregulated environment, aviation labour unions began to lose influence. One of the most notorious labour setbacks occurred in 1981 when about 13,000 federal air traffic controllers walked off the job in labour strike, demanding wage increases and safer work rules. President Ronald Reagan ordered strikers back to work, and when they refused, he fired them and hired permanent replacements (McCartin, 2006). Some labour scholars consider Reagan's union busting one of the most significant causes of organized labour decline in the US in the late 20th century (McCartin, 2011). By strong arming unions and legitimizing use of replacement workers, Reagan authorized companies to adopt managerial practices once considered extreme and destructive (Albrecht, 2004). Although these strategies emerged before 2001, they became widely accepted as the norm at many US airlines in the post-9/11 period.

Changing managerial ethos

Prior to deregulation, airlines were run by committed industry leaders such as United's Pat Patterson, Delta's C. E. Woolman, and American's C. R. Smith. These CEOs had respect for aviation as a unique business enterprise and a long term vision of building a safe airline industry for America. Some were once pilots themselves and spent their entire 30 or 40 year career at one air carrier, taking pride in fostering a family-like community environment, even knowing employees by name, which generated deep seated loyalties. It was not uncommon to find generations of airline employees throughout their airlines' ranks (Ott and Neidl, 1995; Petzinger, 1995; Heppenheimer, 1995).

Yet, the deregulated environment attracted a different breed of manager, motivated by different ambitions, who did not share the same commitment to aviation. Many new managers, such as Frank Lorenzo, were not shy about articulating their belief that airline employees were "overpaid and underworked" (Hopkins, 2000: 11). In contrast to early CEOs' lengthy tenure at one airline, Lorenzo managed five different airlines over an 18 year career, driving Continental into bankruptcy and Eastern out of business before being banned from the industry (Cohen, 1990). Similarly, ValuJet Airlines' chairman Lawrence Priddy described his low cost airline's aspirations: "Every other start-up wants to be another United or Delta or American. We just want to get rich" (Schiavo, 1997: 8).

The trend for air carriers to attract professional managers as CEOs with little airline experience or respect for aviation as a unique business enterprise became even more acute in the post-9/11 period. For instance, United's CEO Glen Tilton was a Texaco oil executive before he took United's helm in 2002 and then left for Wall Street just 3 years later. American's CEO Tom

Horton came from telecommunications giant AT&T and joined wireless manufacturer Qualcomm after his airline merged with US Airways in 2002. Northwest's CEO John Dasburg left aviation to run Burger King and his replacement, Richard Anderson, joined health insurer United Health Group after three years. All earned lucrative compensation packages whether their airlines' prospered under their leadership or not (Popper, June 17, 2012; Sorkin, July 9, 2012).

Shifting expert knowledge

Predictably, post-deregulation airline executives clashed with employees and labour unions over their extreme cost-cutting and inadequate attention to safety (du Gay, 1996; du Gay, 1994). In the 1990s, intense competition fueled by CEO's expansion aspirations and 'economies of scale' theories led to the extensive purchase of new airplanes and record hiring of employees (Petzinger, 1995; Fraher and Gabriel, 2014). Between 1990 and 2000, over 25,000 commercial pilots were hired by major US airlines (See Figure 2). This rapid industry expansion exhausted the supply of military trained and college educated pilots and put younger, less experienced pilots in the cockpit of nearly every US air carrier. Airport flight schools sprang up and 90-day commercial pilot training programs thrived, changing the background and demographics of the professional pilot. It was now possible for someone with no college degree, little aviation experience or proven aptitude, to 'buy' accelerated flight training leading to employment as a regional airline copilot (Fraher, 2012; Fraher, 2014).

Insert Figure 2 about here: US Commercial Pilot Employment 1990-2010

The Air Line Pilots Association (ALPA), the world's largest pilots' union, notes that after 9/11 major air carriers adopted a new business model that cut costs by parking larger jets and

laying off experienced pilots, shifting flying to regional affiliates (ALPA, 2009). For years labour unions like ALPA controlled this practice but after 9/11, with contracts voided by bankruptcy judges, airline management was free to outsource and unions were powerless to intervene. Blyton et al. (2001) observe that it is particularly difficult for aviation unions to protect their members' interests when faced with the threat of outsourcing. As a result, well-paid major airline pilot jobs disappeared post-9/11 and low-paid regional pilot jobs expanded. Perhaps Captain Chesley 'Sully' Sullenberger (2009) said it best when he spoke to Congress after his dramatic Hudson River landing: "While I love my profession, I do not like what has happened to it." Blaming "revolving door management teams who have used airline employees as an ATM", Captain Sully concluded, "I do not know a single professional airline pilot who wants his or her children to follow in their footsteps."

RESEARCH METHODS

The present qualitative study is based on empirical materials collected between September 2010 and July 2011 for research investigating the US airline industry. Study participants (N=127), all captains and copilots at US airlines, responded to an online labour union forum inviting them to complete a web-based questionnaire. The survey asked ten aviation work-related questions, ten Likert scaled safety-related questions, and five open-ended questions. During this early research stage, the aim was not to investigate the deprofessionalisation and intensification of pilot work, per se, but rather to surface context-specific changes airline pilots' experienced during post-9/11 industry restructuring.

The last survey question asked respondents to provide an email address if they were willing to participate in a follow-on interview. Seventy two pilots (57%) volunteered to be interviewed, of those volunteers, thirty three pilots were available during the designated

timeframe and completed a semi-structured interview. Ten pilots were interviewed a second time for a total of forty three interviews. Informed consent was obtained and interviews were recorded, ranging from 41 minutes to two hours and three minutes, creating over 268,000 words of empirical material. An interview guide was used, however interviews were non-directive and informants were encouraged to talk about their careers, families, aspirations, disappointments, and other feelings and experiences.

Participants

All study participants were employed in 2001 as captains and first officers at six different US airlines with a high percentage flying for one of the nation's largest. At the time of the study in 2010-11, 35 percent of these pilots remained actively employed at their airline, 46 percent were involuntarily laid-off, and the remaining 19 percent had resigned, retired, or elected military leave (See Table 1). Informants, referred to here by their pseudonym, ranged in age from 32 to 63 years old, were predominately male (96%), civilian trained (70%), and averaged 23 years of total aviation experience with 13.5 years flying at commercial airlines and an average of 10,271 flight hours. In sum, they all had significant civilian aviation experience and many years invested in their commercial airline career.

Insert Table 1 about here: Total Number of Pilots Per US Airline 2000-2010

As a former commercial airline pilot and Naval Aviator, I was able to engage with pilots as a peer, eliciting responses of an honesty and depth that might have been difficult for another researcher. Informants were candid, emotional, and reflective in their responses. Feeling conflicted about how their profession had changed, pilots wavered from anger and resentment to sadness and desperation. These were emotions many informants seemed uncomfortable navigating and, at times, our conversation seemed almost cathartic as informants worked through

unsettled feelings about workplace changes and, in some cases, their derailed and devalued aviation careers.

Data Analysis

I conducted all interviews and transcribed the conversations myself, listening to each audio track several times, which allowed me to become intimate with the empirical material. In addition to facilitating access to this hard-to-reach informant group, my aviation background also helped me delay the rich qualitative data the one-on-one semi-structured interviews produced. All transcripts were manually coded in Nvivo, a computer software program. To maintain the integrity of the original texts, several readings of the data were undertaken and the codes and sub-codes developed inductively in a process akin to Turner's (1981) *seven stages of analysis* which allowed themes to emerge organically from the informant narratives.

My focus became directed toward understanding meaning from the point of view of the informant and the emotion behind their responses helped guide me. I began to see what Gioia et al. (2013: 16) describes as emerging social construction processes which require the researcher to focus more on the meaning, construction, and understanding of informants' experience from their perspective and less on the number and frequency of measurable occurrences. Alvesson and Sveningsson (2003) suggest that focusing on surprises and unanticipated responses is a good methodological rule and effective way to uncover findings that can offer new insights. In sum, my research approach was consistent with the emerging reflexive approach in qualitative inquiry, one in which the researcher seeks to question his or her own values and assumptions, their active role in the field work and the stake they have in the findings and interpretations (Cunliffe, 2003; Alvesson and Skoldberg, 2009; Alvesson and Karreman, 2013; Buchanan and Bryman, 2007; Denzin et al., 2006).

Gradually, themes emerged as important topics to investigate, partly as a result of an encounter with unexpected phenomenon. In contrast to established images of pilots as calm, unemotional, and fearless individuals as Ashcraft (2005) reported, I found informants' responses were often emotional, irrational, and paradoxical. However, instead of seeking to harmonize these inconsistencies, I adopted Alvesson's (2010: 195) recommendation to widen the imagination and consider connections that may not initially be obvious. Gradually, common subthemes emerged in the rhetoric in nearly every pilots' interview and, cumulatively, these images signaled the overarching themes of deprofessionalisation and work intensification as pilots struggled to cope with post-9/11 workplace changes, creating a nearly unanimous sense that the character of their once elite profession had suffered a drastic decline (See figure 3).

Insert Figure 3: Overview of Data Structure

Limitations of the Study

There are several limitations of this study. First, the informant group is small and pilots self-selected to participate. Therefore, the study group is not random. Second, although my airline experience was helpful in gaining access to a difficult to reach informant group, gathering the empirical materials and analyzing its meaning, it is possible my interpretations were influenced by an industry-insider bias. Third, although participants were employed at six US air carriers, a large percentage once worked for one major airline and only 35 percent remained actively employed at that airline ten years later. This experience undoubtedly influenced participants' feelings about this employer and potentially their interview responses. That said, increasing parallels among managerial strategies used by US airlines indicate that the findings reported here are not anomalous to one particular air carrier but, in fact, indicative of industry-wide trends.

Increasing evidence of these trends continues to emerge. For example, in 2015, federal prosecutors began examining the possibility of collusion among US airlines to limit seating capacity and drive up profits (Drew, July 1 2015).

DEPROFESSIONALISATION AND WORK INTENSIFICATION

The following section represents the key findings reflected in the empirical data and identifies four areas that US airline pilots experienced deprofessionalisation and work intensification after the 2001 industry restructuring, providing examples of the vulnerability of *quasi-professional experts*.

Pilot-Pushing

Nearly all pilots interviewed described a post-9/11 “mood change” as airline managers became “more of big brother,” intensifying work by monitoring them in ways that felt demeaning to them as *quasi-professional experts* and pressuring them to do things that they felt were unsafe; a process called ‘pilot-pushing’. For instance, Jose observed, “When you’re being pushed to not call in sick, or being questioned when you call in sick, that’s not being safe”. Other pilots’ provided operational examples of ‘pilot-pushing’ as well. Aaron explained:

You had to actually refuse to fly the airplane in order for them to get maintenance out to the plane [to fix it]. They wouldn’t come out. They wouldn’t let you do anything about it unless you said ‘I refuse the airplane’. Basically, it felt like ‘pilot-pushing’.

Informants reported resisting ‘pilot-pushing’ by knowing company work rules, federal aviation regulations, labour union contracts, and even labour laws. Yet the distinction between legal and illegal was not always clear, as Christopher explained: “There was greater pressure on the pilots

to accept aircraft that were not in a good condition to fly: Legal to fly?—yes; But, safe to fly?—no”.

Anthony described another way airline managers intensified work after 9/11 by pushing pilots to cut-costs, challenging their *quasi-professional expert* knowledge. He said, airline managers “convinced quite a few captains to not take enough fuel, in my opinion... You know things can change in a moment’s notice... Now you’re down to minimum fuel and to me that’s not very safe... There’s just no room for error”.

In addition, interpretations of how strictly to adhere to managerial cost-cutting strategies created conflict amongst the crew. Anthony provided a compelling example:

We were going to go to Chicago, and from LA to Chicago a lot of things can happen... I said “Well, Captain are you going to take a little extra gas?” He said “Nope, we’re taking what’s planned”. I said, “Well, I think we should take a little bit more”. He just looked at me and he said “I’ve heard what you had to say, and I’ve considered it. If you don’t like it, you can get out of the cockpit. Get out of the seat and get out of here”. That’s what he said to me!

What is important to note in the previous examples is how managerial cost-cutting strategies adopted after 2001 intensified pilots’ work, creating conflicts between copilots and captains that distracted them from their tasks and undermined their authority and decision-making capacities as experts.

Dan described another cost-saving measure that concerned pilots because of the ways it intensified their work: taxiing the airplane on just one engine to save fuel. Dan said:

After 9/11 we were doing all these ‘single-engine taxi outs’. So you have a distracted captain and the copilot was starting the other engine, looking inside [running checklists],

and the next thing you know it, you are on an active runway. I remember that's happened a couple of times...I was always concerned that sooner or later there was going to be an accident.

The repercussions of fighting back against pilot pushing were also problematic. Captain Jimmy was fired after refusing to fly an unsafe airplane and has not found another flying job; another example of the vulnerability of *quasi-professional experts*:

[Pilots] were leaving [my airline] left and right, saying they'd just 'sold their soul'. They were doing things I'd never seen them do. I found out real quickly what they were talking about. If you didn't violate an FAR [Federal Aviation Regulation] for [managers] it was like you became a pariah immediately...Once you've done something that's illegal, and they have it on record that you did, now they hold it over your head.

In addition to managerial policies that challenged pilots' decision making and undermined their authority, many pilots voiced concerns about post-9/11 training short-cuts designed to save airlines money. Aaron had not flown an airliner in years and was uncomfortable with the training he received:

When we returned [from lay-off] post-9/11, training was very compressed. Before I had done the 737 course and it was 6 weeks, when I went back it was 4 weeks. It was very compressed. You really didn't feel that you were getting a deep knowledge. They just wanted to give you enough to pass the test and get out and go fly.

Karen received abbreviated training too: "Everything in training has been done on the cheap" and "The testing was a joke, which I just found shocking—that the FAA would buy off on that?" Kevin even asked for more training, but it was not provided: "I was a safe pilot but I was by no means well prepared for my job...It's stunning to me we don't have more safety incidents".

Fatigue, stress, and distraction

In addition to a feeling that, as *quasi-professional experts*, pilots were being pushed to accept dangerous working conditions, Karen, described how work intensification impacted workers' health:

When I came back [from lay-off] I was, to be quite honest, *shocked* at how different the [working] conditions were....It was the most tired I had been in my professional life...I was sick a lot, I'd have bronchitis. I was just kind of always under the weather.

Examples of the repercussions of this fatigue were readily available. Ninety-eight percent of pilots surveyed witnessed mistakes or distractions on the flight deck because of post-9/11 cost-cutting; 60 percent saw this on a weekly basis. In response, Doug observed, "I think it's almost a miracle that there wasn't bent metal and dead people at [my airline]". Similarly, Henry offered:

Stress was certainly an issue. Between people getting furloughed, people having trouble paying their bills, there's financial stress. It put a lot of stress on pilots from a lot of different angles...I went through a divorce. I knew other people who did as well. Personal lives took a real beating.

Stress was not just a factor for the laid-off employees. For both downsized pilots and the remaining survivors, financial unpredictability and working with soon to be unemployed pilots were frequently mentioned as causes of stress and distraction. Captain Jasper recalled nearly every flight "I was flying with a copilot that was being furloughed either that month or the next month. The stress" was "unbelievable." And "when there's stress on one pilot, there's definitely stress on both...It was really obvious to me that at least half of the guys I was flying with were clinically depressed...They really shouldn't have been flying."

Karen observed how post-9/11 managerial changes had wide ranging implications even for the senior captains unaffected by the lay-offs junior pilots endured:

When I came back from furlough, I'd say at least 50% of all the captain's I flew with had gone into some type of side business to supplement their income... They were trying to conduct business while we were on trips, their phone's ringing as soon as we hit the ground... It was like everybody was burning the candle at both ends.

Dan provided another example of ways airline pilots' work intensified: "I flew with one guy who had four or five sandwich franchises in Chicago. The whole trip he was on the cell phone, every little opportunity". Supporting Karen and Dan's observation, sixty nine percent of surveyed pilots reported that they had pursued supplemental sources of income because of post-9/11 pay cuts.

In response to these post-911 industry changes and the resultant work intensification, nearly all informants confessed that the passion they once felt for their airline career was gone. Jose initially decided not to return to his airline after layoff, then added: "The only reason I would go back is for financial reasons—not for the love of flying". Rather than acquiesce to work intensification, or risk being fired for resisting like Captain Jimmy, some pilots left on their own accord as Henry described:

I decided to take a voluntary furlough because I didn't like the way things were going. I didn't have confidence that the airline was going to survive. Based on the things they were doing and the people who were running the place, it looked to me like [my airline] was in a death spiral.

Exploitation

Pilots uniformly blamed these industry changes on airline executives who treated their *quasi-*

professional expert knowledge as just another resource to exploit in order to increase shareholder value. As one pilot explained managers “are in a completely different world” from rank-and-file employees. “Managers just care about themselves, not the airlines.” Similarly, Charles recalled:

I don't know what business [airline] executives have been in the last five years but I don't think it was the airline business. ...I don't think these people care. They are only interested in making money—more, more, more money—for themselves and that's all they care about. They really didn't care about the success or failure of the company.

Anthony provided another common observation, “I blame management, bad management, greedy management ...Rather than looking at what's going to make this a great company in the long run, they say what's going to make us a buck today?” Similarly, Captain Gilles emphasized the change in managerial ethos:

I'm afraid for some [managers, air safety] is just a distant connection, and if we should have an accident it's just ‘Oh my goodness, that's why we have insurance. That's really unfortunate. Don't take it personally. Let's put a flower on their grave and move on’.

This increase in managerialism created an environment of mistrust and suspicion, and in response, 83 percent of pilots' surveyed reported decision makers leading their airline were ‘incompetent’.

Yet, pilots also frequently reported disappointment with their labour union. Aaron explained: “I felt like I'd been burned by the company, burned by the union. I just wanted to do my job and go home”. Similarly, Karen observed: “People are way less engaged with the union...They say ‘Why even bother calling my union rep about this? Nothing will come of it’—a real level of apathy”. Doug noted how for many pilots, union leaders seemed suspiciously “cut

from the same cloth as the CEOs. All these guys are greedy and power hungry...I certainly don't think anybody there has got my best interest at heart". Tom similarly described his loss of faith in union leadership:

Union leaders will sell out their junior members in a heartbeat...The company's there to make a buck [not] to care for you and your career. They are going to do what they can to lower costs...That's what they're there to do—is to make money. I have a bigger problem with the way ALPA has handled things because they are the ones that are supposed to be on our side.

A Loss of Prestige

Pilots readily described how their work environment—and their attitude towards it—changed between 2000 and 2010 challenging their status as *quasi-professional experts*. Kevin recalled:

When I was first at [my airline in 1997] I didn't feel like I was at odds with management. I knew there was a labour versus management perspective, but there always appeared to be an ability to work that out. In the last decade, that doesn't seem to be the case....[Airline executives] are just ruthless. They don't care about their employees. They are sold out to a buck. It has become a 'me-versus-you' industry.

Aaron similarly noted, "Before 9/11, I was always willing to help out the company if they called me and needed a favor. Post-9/11, when I went back [to work from lay-off], I was never willing to help out". Jose explained how his feelings changed, "Before 9/11 being an airline pilot was a career. After 9/11, it was just a job...I don't have that pride anymore."

Karen followed her father into airline piloting but, she emphasized, that was a time when "there was an awful lot of legacy families within aviation...[Now, that's] not happening anymore". Similarly, Raj reported, "[Before 9/11], there was a lot of pride in being an airline

pilot...It was a career that people would aspire to...[Now] you would be hard pressed to find anybody who could with good conscience recommend this career”.

This drop in prestige was often mentioned as a particularly shocking change. Karen recalled how when she went looking for a new job during her lay-off, smaller aviation companies seemed to revel in major airline pilots’ professional decline:

[Other aviation employers] wanted you to be very humble...The idea of all these laid off airline pilots wanting to come work for them...[They] were almost happy to see these major airline pilots be brought down a peg...Some of them were just awful to me, and there's no doubt they delighted in it. They really wanted you to be apologetic for your background: ‘Oh forgive me Father for I have sinned, I swear I'll never be an airline pilot again!’

In contrast to Korczynski’s (2007) observation that adverse workplace experiences can lead to communities of coping that increased solidarity, pilots in this study reported developing coping strategies that led to further isolation. Anthony explained: “[I] only [talk] with fellow pilots who have been furloughed. You can’t talk to anyone else...No one else understands. They don’t. They say things that are so stupid”. Similarly, Greg reported, “If I’m in a social situation, I don’t even tell people what I do...Very few people out there have any clue what has gone on”.

Laid-off pilots were particularly challenged by the lack of marketability for their *quasi-professional expert* skills outside of aviation, as Anthony explained:

The first year [of my lay-off] was very rough...I couldn’t even get hired at Costco. I remember going to Costco and they said ‘Oh, we’ll get you on’. And they would never call me.

Jose shared a similar example of how his skills were devalued:

I've been applying to, you name it, anything—Target, Walmart, any place. I could not get a job...People don't see you as having anything but technical skills. When you go for an interview, they don't see that you have great leadership skills, great communication skills, great decision-making skills, great critical decision-making skills, great teamwork.

DISCUSSION

The research question adopted in this study was to investigate how, if at all, the character of commercial airline pilots' work has been affected by post-9/11 industry restructuring. A secondary aim was to explore why 92 percent of the pilots surveyed would not recommend an airline career to a young person today. Findings reveal that after 2001, a deprofessionalisation process occurred, accelerated by managerial cost-cutting strategies and work intensification agendas, which exploited the particular vulnerabilities of pilots as *quasi-professional experts*.

First, high labour costs, weak professional communities, and managers' ability to make pilots' *quasi-professional expert* skills obsolete through cost-cutting agendas and policy innovations intensified pilots' work. As operational decision-making became increasingly removed from pilots' jurisdiction due to pilot-pushing, a loss of autonomy occurred with a corresponding relocation of power into the realm of managerial work through policymaking, enabling airlines to achieve considerable control over both the worker and the work itself. This process devalued *quasi-professional experts'* knowledge, which was an expertise largely developed through personal talent and experience, and no longer deemed critical by professional managers unfamiliar with the intricacies of industry operations.

Second, pilots sought other employment opportunities to supplement their reduced airline income, outside the realm of their *quasi-professional expert* knowledge. Captains, still employed at airlines, started side businesses and laid-off pilots struggled to gain entry into some of the

most basic retail chains. In comparison to lawyers, who might transition into another profession such as politics, NGOs, or policy development, or doctors who might go into research, academia, or public health, pilots reported limited access to other expert work. Instead, without an airplane to fly or airline to work for, pilots quickly transitioned towards blue-collar occupations such as working construction or driving a taxi. Toren (1975) observes that as once prestigious occupations deprofessionalise the root cause of this transformation can be found in the unique elements of the work itself. To analyse this point further, I revisit Gorman and Sandefur's (2011) definition of 'expert' professions as a framework to explicate further the unique elements of US airline pilots' deprofessionalisation process.

Restricted Autonomy

The theme underpinning nearly all pilots' rhetoric about post-9/11 workplace changes is an increase in managerial scrutiny and pilot-pushing, and corresponding decrease in pilots' work autonomy; a particular vulnerability of *quasi-professional experts*. Although Taylor and Moore (2015: 87) reported ways British Airways management tried to institute similar policies to "gain more control of the aircraft", BA flight attendants reported management "hadn't succeeded" and instead their actions caused crew to "stick together" creating a strong sense of "family" and "community". For pilots in the present US airline industry study, this was not the case.

After 9/11, pilots were pushed to fly fatigued, confronted when calling in sick, and scrutinized for requesting that a mechanic fix an unsafe airplane. At some airlines, if pilots resisted this managerial control too strenuously they were fired. This loss of work autonomy significantly accelerated the deprofessionalisation process. Disagreements between crews about interpretations and enforcement of post-9/11 managerial cost-cutting strategies such as lowering fuel reserves and single-engine taxiing often created an adversarial environment. As managers

pushed pilots to cut-costs, captains and copilots often pushed each other in disputes over enforcement of new managerial policies, fracturing the pilot group, not creating solidarity as Taylor and Moore (2015) reported.

Disrespected Expertise

Expert work requires the creation, communication, and application of specialized knowledge (Gorman and Sandefur, 2011). Pilots flying for major airlines often spend almost a decade developing their *quasi-professional expertise* either through military service or rigorous civilian career paths. In contrast, regional airlines typically employ entry level pilots with limited training and experience. As ALPA noted, major airlines outsourced flying to regional air carriers post-9/11, replacing more expensive major airline pilots and their specialized knowledge with inexperienced, less costly regional pilots as a way to reduce labour costs as well as achieve greater control over workers. Although the trend to hire less experienced pilots began in the 1990s as airlines expanded quickly in the deregulated environment, pilot labour unions contained the practice to some extent. After 9/11, with all labour contracts voided by bankruptcy judges, pilot unions lost influence, unable to control the outsourcing and corresponding devaluing of major airline pilots' expertise. Therefore, a central feature in pilots' deprofessionalisation process is a lack of respect for their expert knowledge.

Loss of Community

There has been a progressive change in the image of the airline as a community ever since early pioneers were replaced by profit-seekers such as Frank Lorenzo. Although this change in managerial ethos was becoming evident prior to 2001, it was exacerbated by the hyper-competitive post-9/11 environment. Today, airline executives are more often professional managers, not experienced aviation industry leaders, viewing airline employees as one more cost

to manage and resource to exploit; particularly pilots as expensive *quasi-professional experts*. Taylor and Moore (2015) found that although British Airways cabin crews became increasingly disillusioned with management in the post-9/11 period their allegiance to the labour union nonetheless remained strong, and in some cases intensified. Yet, few US pilots in this study responded to workplace changes in this manner. Most US pilots blamed greedy airline managers as well as cannibalistic union leaders for destroying their profession. Similarly, Harvey (2007) notes UK pilots' were more likely to commit to both their airline and union when managers and labour leaders pursued cooperative collectivism, and often blamed both when their partnership broke down. Yet in this US study pilots criticized labour leaders even more than airline executives for post-9/11 workplace concessions. In response, a general apathy about union involvement took over at US airlines. Laid-off pilots reported an increasing sense of isolation and inability to find sympathy for their declining *quasi-professional expert* status. Several reported their dream career had become just a job; a passionless, instrumental source of income (Fraher and Gabriel, 2014). Therefore, a third central feature in major airline pilots' sense of deprofessionalisation is their loss of community.

Declining status and diminishing rewards

After enduring an average 56 percent pay cut, loss of pension plans, and, for some, long term lay-off in the post-9/11 period, the high status job many pilots expected to find as *quasi-professional experts* remained elusive. Images of their industry in a dangerous death spiral were particularly disconcerting for pilots because most expected relatively stable employment and a predictable career path up the seniority ladder to captain. In addition to a lack of stability and financial reward, the daily stress and fatigue of intensified airline flying schedules in the post-9/11 period took a severe toll on pilots' health and family life. The physiological repercussions

of this stress and distraction were frequently reported with many pilots' voicing surprise that there have not been more accidents at their airline.

CONCLUSION

The findings of this research suggest that US airline pilots experienced work intensification and deprofessionalisation in the decade following 9/11 because of an increase in opportunistic managerial cost-cutting strategies that contributed to a loss of autonomy and discretion over their work, lack of respect for their unique professional knowledge, fragmentation of community and sense of abandonment by their labour union, coupled with a drop in professional prestige and anticipated rewards. Other aviation studies identified similar post-9/11 managerial strategies. For example Curley and Royle (2013), Gittell and Bamber (2010), and Harvey and Turnbull (2010), note ways that some European airlines embrace 'low-road' managerialism with aggressive managerial controls that risked alienating staff and jeopardizing safety. Similarly, Blyton et al. (2001) suggest in their study of British Airways that a deterioration in labour relations may be a price airline executives are willing to pay to cut costs and drive up productivity. Yet, few studies have documented the emergence of this 'low-road' managerialism at major US airlines to the extent found here. In addition, although these studies find cabin crew experienced work intensification, job dissatisfaction, and declining job security post-9/11, few investigated whether this was prevalent with airline pilots as well.

The fact that nearly every pilot studied would not recommend an airline career to a young person today signals that the examples of work intensification reported here are not atypical of one airline nor just temporary responses to post-9/11 managerialism. Rather, they are examples of the deprofessionalisation of airline piloting as an elite career; a process that started with industry deregulation in 1978 and reached fruition in the post-9/11 period. By developing and

applying the category of *quasi-professional expert*, it becomes clear how high cost employees who have a unique skill can become particularly vulnerable to managerial controls. Adopting new policies, work rules, and other cost-cutting agendas during industry restructuring, employers can quickly and easily intensify work and devalue *quasi-professional experts'* specialized knowledge and the unique nature of their skills may leave these experts with little career alternatives or job mobility.

IMPLICATIONS AND NEW RESEARCH TERRITORY

The challenges identified in this study of US airline pilots have application to other industries that employ workers with specialized skills, opening up new territory for future sociology of professions research. To review, the *Quasi-professional expert* conceptual framework comprises five dimensions: 1) a unique skill developed through talent and experience that cannot be taught easily; 2) this skill allows employees to work autonomously within their organization; and 3) for this, they are trusted and well compensated. However, *quasi-professional experts'* 4) high labour cost and weak professional communities leave them vulnerable to cost-cutting agendas; and 5) the unique nature of their expertise is not easily transferrable to other industries, therefore career options and job mobility are limited.

Several industries outside of aviation could prove promising in terms of potential new areas of *quasi-professional expert* research. For instance, a study of professional athletes or orchestra musicians investigating the presence and character of the five dimensions, described above, would prove fruitful. In both examples, the value of athletes or musicians' skills is often temporal and easily influenced by a fickle audience and the predilections of the media and a coach, conductor, owner, or general manager. This year's starting quarterback is next season's free agent. In addition, the rapid pace and unpredictable direction of healthcare and high-tech

industry developments presents unique workplace challenges in which today's renaissance is tomorrow's obsolescence. Through these examples it becomes clear how influential the context is as a source of expert's vulnerability; an area worth further examination. In addition, future studies might find that new technologies increasingly require that employees narrow their skill sets, restricting the transferability of their expertise to other industries and limiting career options.

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Occupation	Profession	<i>Quasi-Professional Expert</i>
<ul style="list-style-type: none"> • Blue-collar employees such as craftsmen and manual workers who often work with their hands and/or machines • Paid hourly • Work fixed schedules established by management • Closely supervised • Often highly unionized and do not aspire to managerial/white-collar roles • May be highly trained but often through apprenticeship/ on-the-job experience not advanced higher education degree awarding programs • Technological innovations can make skills obsolete • Industry specific skills provide little transferability or opportunity for employment in other fields. 	<ul style="list-style-type: none"> • White-collar employees such as doctors and lawyers • Extensively educated, highly-skilled people who work autonomously within standards established by regulatory body • Paid via salary • Not likely to be unionized • Specialization gained via advanced education university programs such as medical school or law school • Professional standards established and enforced via ethical norms such as physicians' Hippocratic Oath or lawyers' bar association • Skills have some transferability 	<ul style="list-style-type: none"> • Expert employees with unique skill developed through combination of talent and experience, formal education and on-the-job-training • Expertise earns trust and allows employees to work autonomously, and for that they are well compensated. • May be paid hourly • May work fixed schedules established by management • May be unionized • High labor costs and weak professional community leaves workers vulnerable to managerial cost-cutting and work intensification agendas, particularly during industry restructuring • New policies and technological innovations can make value of expertise quickly obsolete • Industry specific skills provide little transferability or opportunity for employment in other fields.

Figure 1: Comparison of Occupation, Profession and Quasi-Professional Expert Criteria

Table 1-Total Number of Pilots Per US Airline 2000-2010*¹

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% Change
United	11,278	9,968	7,992	7,688	6,374	6,133	6,277	6,338	6,350	5,581	5,515	-51%
Northwest	5,981	6,103	5,534	5,112	4,942	4,995	4,531	4,340	4,345	3,426	0	-100%
Delta	9,123	8,103	8,074	7,155	6,786	6,181	5,706	5,904	6,391	6,581	10,701	17%
US Airways	5,330	4,649	3,743	3,147	2,967	2,599	3,132	4,278	4,234	4,073	3,967	-26%
American	10,408	10,586	12,297	10,857	9,929	9,074	8,572	8,343	8,306	8,092	7,934	-24%
Continental	4,656	4,571	4,209	3,852	3,943	4,184	4,408	4,598	4,578	4,227	4,199	-10%
Southwest	3,316	3,725	3,966	4,022	4,197	4,535	4,845	5,317	5,588	5,626	5,564	68%
JetBlue	75	236	371	591	809	1,059	1,451	1,707	1,794	1,795	1,828	2337%
Total	50,167	47,941	46,186	42,424	39,947	38,760	38,922	40,825	41,586	39,401	39,708	-21%

Created by the author. Source: US Bureau of Transportation Statistics, P-10

* US Airways merged with America West in 2005, Delta acquired Northwest in 2008, United and Continental merged in 2010, Southwest acquired AirTran in 2011. Numbers reflect these changes.

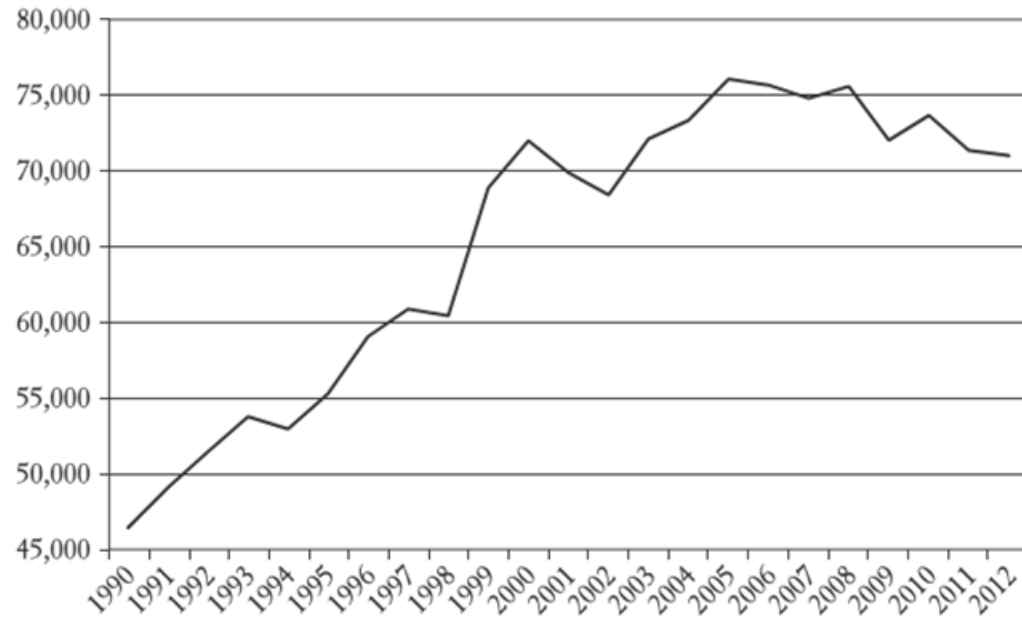


Figure 2: US Commercial Pilot Employment 1990-2010ⁱⁱ

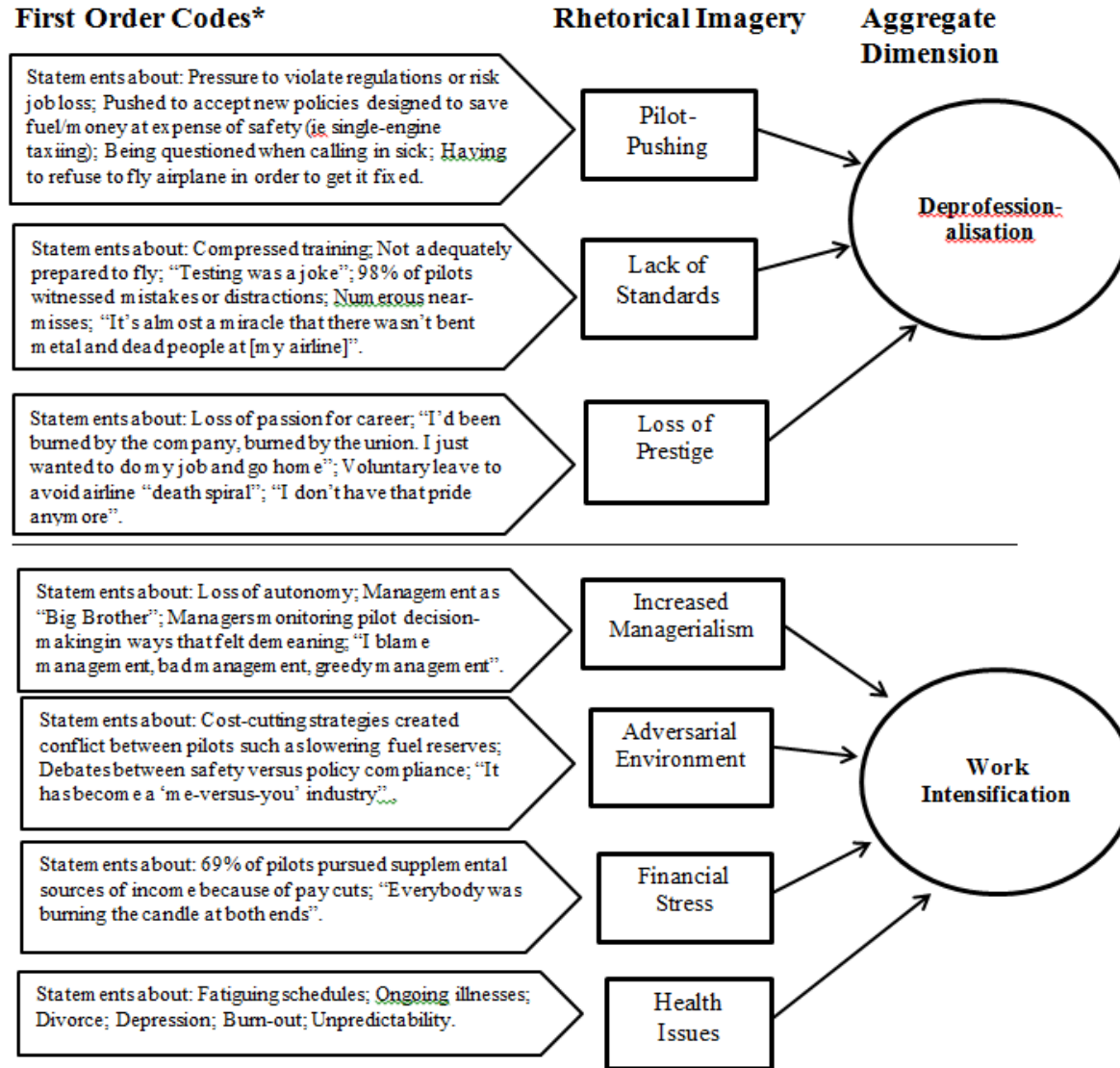


Figure 3: Overview of Data Structure

*Data derived from semi-structured interviews

ⁱ Chart compiled by author using *Research and Innovative Technology Administration* (RITA) data, US Bureau of Transportation Statistics, accessed July 10, 2013: http://www.bts.gov/programs/airline_information/

ⁱⁱ Chart compiled by author using *Research and Innovative Technology Administration* (RITA) data, US Bureau of Transportation Statistics, accessed July 10, 2013: http://www.bts.gov/programs/airline_information/