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ABSTRACT

This study identified and compared the environmental pressures and work-related stresses that impact the chairs of academic departments at universities in Australia and the United States. Surveys were mailed to every department chair at all 40 Australian universities (1680 chairs) with a 51 percent response rate. Surveys were also mailed to a sample of 800 chairs in the United States with a 66 percent response rate. Chair stress was examined within each group and compared across the groups. Factor analysis identified five stress variables common to both groups: (1) administrative relationship stress; (2) administrative tasks stress; (3) human relations stress; (4) academic role stress; and (5) external time stress. Among findings were that the same underlying variables defined stress constructs in both countries, but the administrative relationship dimension was significantly more stressful for Australian chairs while Americans suffered greater pressures from administrative task stress. However, Australian department heads were almost twice as productive in producing books, articles, professional papers, and meeting attendance than were American chairs. Data tables are appended. (Contains 36 references.) (Author/JLS)

Opening A Conversation Between Department Chairs: Possibilities for The U.S. and Australia

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Abstract

In today's environment of limited resources, one potentially limitless resource—the experience of Australian and American department chairs—remains virtually untapped. Whether the opportunities and challenges faced by department chairs revolve around meeting the needs of a diverse student population, dealing with funding shortages, responding to demands for greater quality, finding the upside to downsizing, or figuring out how to balance academic and administrative roles, department chairs in Australia and the United States must cope with stress that results from such tasks. Finding role balance is a perennial test for all department chairs, but the strategies employed to mitigate any accompanying stress seem to vary by country. This paper examines the environmental pressures that impact academic departments and the work-related stress experienced by chairs whose departments are impacted by these environmental pressures. It then suggests ways in which American and Australian chairs might learn from each other. A first step is to engage in open dialogue across countries.

Opening A Conversation Between Department Chairs:
Possibilities for The U.S. and Australia

Nearly 80% of all administrative decisions in higher education are made at the departmental level. In the U.S. alone, some 80,000 academic department chairs wind their way through academic days, academic years and administrative terms (Gmelch, 1993). In a dynamic environment subject to rapid demographic shifts, financial uncertainty and increased calls for accountability, these mid-level managers play a crucial role in ensuring program and institutional viability. Some are more successful than others. And, although Australia's higher education system comprises fewer colleges and universities than America's,[1] department heads (chairs) serve in pivotal decision making positions, and the institutions in which they function face many of the same challenges (Gmelch, Wolverton, Wolverton, Sarros & Tanewski, 1996).

For instance, America's move from a relatively elite system to mass education after WWII is mirrored by a comparable thrust in Australia. The first influx of new students in the U.S. came when 2.3 million students (predominately white and male), many aided by the Servicemen's Readjustment Act of 1944—the G.I. Bill, enrolled in the country's 1,800 two- and four-year colleges. A second wave of students during the 1960s and early 1970s, and the expansion of primarily the community college portion of the system to accommodate increased numbers and to guarantee access, completed the transition. The U. S. higher education system at this point constituted roughly 3,300 institutions with enrollments in excess of 12 million (Trow, 1988). For the U.S., more students also meant greater diversity. Today, more than one-half of its students are women. One-third of all undergraduates and two-thirds of all masters students attend part-time; 50% of these new enrollees are over 21 years in age (Kerr with Gade & Kawaoka, 1994). In addition, a growing proportion of higher education students come from minority population sectors. In fact, general census projections indicate that early in the next century, 30% of the U.S. population will carry minority status (double the proportion in the 1960s), a reality already changing the demographics of the country's higher education system and the composition of its student constituency (Ottinger, 1992).

For Australian higher education, similar shifts in the number of students and the number of universities occurred over a shorter period of time. Enrollments grew 64% from 1983 to 1993, and the conversion of technical schools to university status raised the number of universities from 19 to 39 (only two of which are privately funded) (O'Neil, 1994). Today, enrollment stands at about 600,000 students, 29% of whom attend part-time. Another 12% gain access through distance education off-campus programs. Forty percent of Australian college goers are 25 years or older; 54% are female. Recent immigration trends have increased the number of Asian students attending college, and foreign student attendance is on the rise. Sixty thousand internationals currently attend Australian universities (Aitkin, 1996).

Similarly, both systems have experienced fiscal constraints that threaten business as usual. In recent years, public funding earmarked for colleges and universities in the U.S. has eroded significantly. From 1980 to 1990, federal appropriations for postsecondary education, excluding funds for university research, declined 25% (Ottinger, 1992). Across the nation in the five years between 1988 and 1993, state spending on higher education fell from 14.6% to 12.2% (Layzell, Lovell & Gill, 1996). The combination of state and federal reductions bears a striking resemblance to the 1996 proposed 12% budget cuts that Australia's federally funded system is currently protesting (Maslen, 1996a). Over the next three years, operating budgets are likely to

decrease by at least 5% per annum. This represents the first outright reduction in federal support for Australian higher education in 15 years (Maslen, 1996c). As stipulated by the government, faculty salaries in Australia will remain stagnant at 1993 level unless universities themselves can generate funding for pay increases through productivity improvement and greater efficiency (Maslen, 1996b). In addition, tuition for science, technology and engineering programs jumped 80% in 1996 bringing substantial decreases in applications to these programs. To meet federal enrollment quotas, admission standards have softened and a push to attract more students from overseas has been initiated (Maslen, 1997; Aitkin, 1996).

In addition, Clinton's request for proposals for (and continued debate over) a national assessment system for U.S. higher education sounds quite a bit like Australia's 1993 federally mandated Quality Assurance Program, which has been phased in over the last three years. Prior to 1993, universities engaged in discipline reviews, which dealt with program quality and program demand and duplication, and used academic standards established to ensure grading consistency (Harman, 1994). The current quality review program adds an assessment portfolio that has two parts—a report, which reviews the university's quality assurance processes and levels of outcome excellence within the context of the institution's mission, objectives, governance and management structure; and an appendix that substantiates institutional effectiveness. Universities are publicly compared, and those deemed most effective receive up to 105% of their present operating budget (O'Neil, 1994). While the U. S. has thus far escaped the imposition of national assessment standards, some states have taken on Australian-like initiatives. For instance, Illinois now requires its universities to produce a series of three public reports. A consumer report provides information to students, prospective students, and parents about missions, educational opportunities (programs offered, average class size, ranks of teaching faculty, relative emphasis on research and public service), student characteristics, retention and graduation rate data, student and alumni satisfaction, state and national level comparative statistics of student performance, and price of attendance (tuition, room and board charges, incidental expenses and special fees). A productivity report highlights institutional goals and their relationship to goals of the state, quality improvement and cost effectiveness plans, how resources will be allocated to further institutional goals and priorities, and summarizes the extent to which goals for the preceding year were achieved. The third report, the Condition of Illinois Higher Education, informs the public about the performance of the state system of higher education in relation to state goals and policy objectives (Richardson & Wolverton, 1994).

Finally, Australian universities recently underwent an amalgamation, which resulted in a Unified National System of university education. Today, universities within this new system openly compete for fewer government dollars (Sarros, Gmelch & Tanewski, 1996). Although a national higher education system does not exist in the United States, some states have undergone their own type of state-wide mergers bringing regional and technical universities and colleges under the governance of main state campuses. For instance, Montana now supervises its higher education institutions from its flagship institutions, University of Montana and Montana State University (Gmelch, Wolverton et al, 1996).

Increased access and diversity, decreased public funding, demands for greater accountability, and moves toward consolidation, all test the best colleges and universities,

especially when we try to meet them as individual administrators in isolated institutions. We can, however, sometimes ease the tensions that these challenges bring by drawing on the experience and expertise of others. This paper reports a portion of the findings of the third phase of a study of Australian and American department chair stress in colleges and universities. In it, we examine chair perceptions of the extent to which work-related situations, inventoried in the Chair Stress Inventory, contribute to chair stress in both countries. We then highlight commonalities and differences across countries. Finally, we explore the possibilities that our findings hold for future dialogues between Australian and American chairs as to how they go about their work in what appear to be similar environments.

Methodology and Data Analysis:

The study examines chair[2] stress as a multidimensional construct with links to multiple variables (Koch, Tung, Gmelch & Swent, 1982). It consists of three phases—the American, the Australian and the Cross-Cultural. The first identified the determinants of stress experienced by department chairs in the United States (Gmelch & Gates, 1995). The second replicated the U.S. study in Australia (Sarros, Gmelch & Tanewski, 1995; 1996). In this, the third phase, researchers conducted cross-cultural comparisons of department chair stress factors, perceptions, and consequences using the data sets generated in the study's previous two phases.

Population Selection

The U.S. phase—the UCEA Center for the Study of the Department Chair at Washington State University conducted the 1991 *National Survey of University Department Chairs*. Of the 237 research and doctorate-granting I and II institutions (classified by the Carnegie Commission on Higher Education, 1987), 100 were randomly selected for the sample (Gmelch, Burns, Carroll, Harris & Wentz, 1992). At each institution, eight department chairs were randomly selected from a list of academic disciplines associated with each academic discipline group (e.g., hard versus soft, pure versus applied, life versus nonlife) (Biglan, 1973). In all, 800 department chairs were sampled with a 66% cumulative response rate to initial and follow-up mailings. The Australian phase—Monash University in Melbourne, Australia and the Center for the Study of Department Chairs sponsored the 1995 *Australian National Survey of University Department Heads*. Surveys were mailed to every department chair at all 40 Australian universities, totaling a population of 1680 chairs. Total response rate was 51% to initial plus follow-up mailings. In both phases, the survey packet included a cover letter and a business reply envelope. The major aspects of the Dillman (1978) *Total Design Method* were used in the design and distribution of the survey.

Survey Instrument

The survey used in both phases includes three validated instruments—The Chair Stress Inventory (Burns & Gmelch, 1995), the Role Conflict and Ambiguity Questionnaire (Rizzo, House & Lirtzman, 1970), and the Chair Tasks Inventory (Carroll & Gmelch, 1994)—and three sections comprised of personal, professional, and organizational variables. The instruments and variables are described as follows.

Chair Stress Inventory (CSI), developed and validated by Burns and Gmelch (1995), based on the Administrative Stress Index (Gmelch & Swent, 1984) and the Faculty Stress Index (Gmelch, Wilke & Lovrich, 1984), contains 41 stressors. Using a five-point, Likert-type scale of *rarely or never bothers me* to *frequently bothers me*, respondents indicate their perceived level of work-related stress on each of the 41 items.

Role Conflict and Ambiguity Questionnaire (RCAQ) is a 14 item instrument developed by Rizzo, House and Lirtzman (1970) to determine the level of perceived role ambiguity and role conflict. A psychometric evaluation of this instrument across six samples concluded that its use is warranted (Tracy &Johnson, 1981; Schuler, Aldag & Brief, 1977). Also studies using multiple methods have found agreement between the questionnaire and interview data on role conflict and ambiguity (e.g., Caplan, et. al., 1980).

Chair Tasks Inventory(CTI) Although a great deal of anecdotal literature discussing the chair role exists, surprisingly little empirical data is available to support these suppositions. Chairs in each study were asked to assess the importance of, and their effectiveness in, each of 26 chair duties (Smart & Elton, 1976; Moses & Roe, 1990; Carroll & Gmelch, 1994).

Demographic and Contextual Variables Three complementary questionnaire sections added contextual information and supplemented the information gained from the CSI, RCAQ and CTI instruments. Twenty questions comprised the demographic section to assess variables in the personal area—age, gender, marital status, ethnicity, commitment to the university, professional rank, years in position, professional productivity (e.g., books, journal articles and papers recently published), perceived faculty versus administrative role, motivation to serve as chair, willingness to serve again, and satisfaction with work load. The institutional domain assessed the department's discipline, number of tenured, untenured and adjunct faculty, number of clerical staff, institutional climate (salaries, academic standing, location and quality of administration and instruction), department climate (institutional rating, faculty relationships and student concerns), and opinions regarding the institution. In total 49 demographic and contextual variables were derived from the 20 questions.

Establishing Some Commonalities

In this section, we briefly outline a general profile of Australian and American department chairs and next examine their perceptions of chair stress based on their responses to the Chair Stress Inventory segment of the national survey of chairs for each country.

General Profile

A univariate analysis using the SPSS statistical package revealed that, on average, chairs in both countries were 50.5 years old, had been in their positions for about four years and were tenured when they took the position. Few were women (17% in Australia, 11% in America).

Most were married (83% in Australia, 89% in America) and typically had one child living at home. More than three-fourths of chairs in both countries were internal appointments. The majority serve, at least in part, for their own personal development and growth (57% in Australia, 60% in the U.S.). About 50% of all chairs viewed themselves as an equal balance of faculty member and administrator. Most of the rest (47% in Australia and 43% in the U.S.) thought of themselves as academic faculty members; only 3% in Australia and 4% in the U.S. categorized themselves exclusively as administrators. In both the U.S. and Australia, less than 30% of current chairs indicated that they would seek a higher administrative position. Interestingly, academic productivity seemed to be significantly higher for Australians across all scholarship categories—books published since becoming chair (.9 to .56), articles published since becoming chair (11.6 to 5.9), papers presented during the last year (3 to 2), and professional meetings attended during the last year (5.6 to 2.8). In addition, Australian chairs rated teaching and advising significantly more important than Americans, 4.03 to 3.74 on a 5-point scale (p-value =.000). Finally, Australian chairs experienced significantly higher mean levels of stress than did their American counterparts (Australia $\mu = 2.67$; American $\mu = 2.56$; p-value = .003). (See Table 1).

Factor Analysis of the Chair Stress Inventory

To reduce the dimensionality of the American and Australian survey data generated by the chair stress inventory, we employed principal components factor analysis with Varimax rotation to each data set using the SPSS statistical package. In each analysis, factors carrying Eigenvalues greater than one were initially considered to be significant, with marginal factors (Eigenvalues only slightly greater than one) being dropped where prior research or theory suggested a smaller number of dimensions (Hair, Anderson, Tatham & Black, 1992).[3] Cronbach's Alpha was calculated for variables loading most heavily on each factor within each analysis to determine the reliability of the instrument (Noursis, 1994). In each factor analysis, the first factor to emerge accounts for the greatest amount of the variance in the instrument, and the first variables to load on a specific factor are the most indicative of the underlying construct that the factor represents. The last factor to materialize in the analysis carries the least predictive reliability, as do the last variables to load on a particular factor.

Forty-one chair stress variables listed in the CSI reduced down to five dimensions of chair stress—administrative tasks, administrative relationship, human relations, academic role and external time. This factor pattern of five dimensions is consistent with earlier analyses using the CSI (Burns and Gmelch, 1995). The proportion of the CSI variance explained by the five factors is 46.8% for the Australian data set and 45.2% for the American. The ordering of the five factors, in terms of variance accounted for, differed by country; and certain variables loaded on different factors depending on whether we were dealing with American chair data or Australian, but the variables that characterized and loaded most consistently on each stress dimension remained constant across countries. Within each data set, chairs saw some variables as multi-dimensional. Although these few multi-dimensional variables loaded slightly more heavily on one factor, they tended to load almost as strongly on one or two other factors as well. In all instances, Cronbach's Alphas indicate moderate to strong reliability of the factor loadings. The alpha statistics for the five dimensions in each data set are: Administrative relationship stress factor .83 Australian, .86 American; human relations stress .83 Australian, .68 American;

administrative task stress .87 Australian, .86 American; Academic role stress .79 Australian; .71 American; and external time stress .55 Australian, .68 American. (See Tables 4 and 5.)

The stress variables, which typified *administrative relationship stress* in both countries included not knowing how my dean evaluates my performance, resolving differences with my dean, trying to influence my dean, receiving insufficient recognition, not being able to satisfy conflicting demands of my superiors, having insufficient authority, believing my administrative career progress is not what it should be, receiving an inadequate salary, and having a non-conducive work environment. Day-to-day operational concerns clearly identify *administrative task stress*. The variables common to both factor analyses were writing letters and memos, meeting report deadlines, attending time-consuming meetings, having a heavy work load, trying to gain financial support for the department, preparing budgets and allocating resources, complying with rules and regulations, and seeking compatibility among institutional, department and personal goals. Four variables, common to both the American and Australian factor analyses, set *human relations stress* apart from the other stress dimensions. These include having to make decisions that affect the lives of faculty, staff and students; trying to satisfy concerns of constituent groups; having too much responsibility delegated to me; and feeling inadequately trained to handle the job. Americans and Australians consistently identified insufficient academic career progress, preparing manuscripts for publication, having insufficient time to stay current in academic field, securing funding for personal research, and not receiving enough recognition for research performance as related to *academic role stress*. Finally, three stress variables suggested the category, *external time stress*. These included meeting social obligations expected of chairs, making presentations at professional meetings, and having to travel to fulfill job expectations. (See Table 2.)

For Australians, the most dominant stress dimension appeared to be administrative relationships, which accounted for 29.4% of the variance, followed in order by human relations (5.7%), administrative task (4.7%), academic role (3.6%) and external time (3.3%). For Americans, administrative task stress appeared to be most important and accounted for (27%) of the variance, with administrative relationships, second (5.9%), human relations, third (4.7%), academic role, fourth (4.0%), and external time, fifth (3.6%). (See Tables 3, 4 and 5.)

Australians tended to categorize several individual stressors differently from Americans. For instance, in Australia, the chair stress variable—cannot get all the necessary information to carry out my job—loaded on administrative task stress (.41) and secondarily on administrative relationship stress (.38). Americans viewed this variable as a component of human relations stress (.51). The contrast suggests that lines of communication in American departments between chairs and their deans are better than between chairs and their faculty/staff, and that the opposite may be true in Australia.[4] (See Tables 4 and 5.)

Mean Stress

As a final step in the data reduction process, we combined the Australian and American stress data, factor analyzed the combined data set, and ran cross-country comparisons on the means of the five stress factors. As reported earlier in this paper, Australian department chairs experienced significantly higher mean stress levels than did American department chairs. When

we compared the individual stress factors across countries, there appeared to be no significant differences in administrative task, human relations or external time stress. We did find, however, that Americans endure significantly lower levels of administrative relationship stress (μ = .0935 Australian; μ = -.1435 American; p-value = .000) and less academic role stress (μ = .063 Australian; μ = -.0967 American; p-value = .004).[5] (See Table 6.)

Current external demands for quality assurance in Australia may account for higher administrative relationship stress levels. This relatively new external pressure, more than likely, enters the system at higher administrative levels but filters down to chairs causing tensions between them and their superiors. The ramifications of recent institution consolidations and eroding financial bases may also result in comparable kinds of pressure on department chairs. The difference in academic role stress may derive from seemingly higher scholarly expectations, either institutionally or self-imposed, that are placed on Australian chairs. Recall that Australian chairs were significantly more productive academically than Americans. Australian chairs published more books and articles after assuming the chair position and presented more papers and attended more professional meetings in the year prior to the survey than had American chairs.

Insights and Implications: The Stark Realities of Difference

In this cross-cultural study, each of the department chairs stress dimensions reflects a specific pattern of influence.[6] In each country, the same underlying variables define the five stress constructs—administrative task, administrative relationship, human relations, academic role and external time. For instance, regardless of country, managerial tasks dealing with the day-to-day necessities of a department (doing paper work, attending meetings, preparing budgets, and complying with college rules and regulations) impact administrative task stress. Likewise, relational aspects of interacting with superiors—trying to exert influence, resolving differences with the dean, being evaluated, and attempting to satisfy conflicting demands of those in positions of greater authority—clearly delineate the character of administrative relationship stress in both countries.

Yet, the administrative relationship dimension was significantly more stressful for Australian chairs, and Americans suffered greater pressures from administrative task stress. This suggests that even though Americans and Australians define the stress constructs very similarly, they often respond to them differently. And, this difference implies a certain sensitivity to unique contextual and political influences.

Australian Influences

In Australia, for example, department chairs have found their roles becoming more ambiguous, increasingly political, and demanding in new ways (Sarros, Gmelch & Tanewski, 1996). It, therefore, makes sense that Australian department chairs in the study experienced significantly higher stress levels, on average, than their American counterparts. More specifically, the political consolidation of universities in Australia may help explain why the Australian administrative relationships stress factor (dealing with the dean and political aspects

of the job) explained most of the variance of all stress factors (in contrast to administrative tasks stress in the America), and why no significant differences were found in the mean levels of administrative task, human relations management or external time stress between the two countries. Similarly, in 1995 (when the Australian survey was conducted), the final phases of the federally mandated Quality Assurance requirements were beginning. Much of this work—setting up assessment, monitoring and review systems—falls to department chairs and stress related to understanding and adapting to new expectations may strain even the best relationship between chair and dean.

American Influences

In contrast, when we consider fiscal issues, the U.S. higher education experienced shortfalls in public appropriations earlier than Australian universities. At the time of the U.S. survey (1991), most American colleges and universities were undergoing funding cuts, the end result has been figuring out how to do more (or at least the same) with less. This amounts to a five or six year exercise in creative budgeting, the likes of which Australian chairs may just now be experiencing. In addition, while U.S. colleges and universities experienced enrollment increases and student demographic changes over a relatively long period of time (50 years), Australian universities have had to deal with them more quickly (since 1983). The consequences of such demands (record keeping, paperwork, additional meetings) may initially go unrecognized but ultimately filter down to the department and, in the end, compound administrative task, administrative relationship, and human relations (interactions with faculty and staff) stresses for chairs. In effect, it appears that Americans have been dealing with these administrative tasks long enough for them to have become routinized as add-ons to already complicated and busy schedules. In addition, unlike their American counterparts, many Australian department heads employ department managers or assistants who attend to the majority of day-to-day administrative duties including resource allocation (Sarros & Gmelch, 1996, p. 29). Couple the need to engage in stringent budgeting with the myriad reports that most university efforts to diversify entail and we can easily see why administrative task stress may account for more of the variance in stress for American chairs.

The ominous message we might glean from the current situation in each country is that chair stress is likely to increase. Little evidence exists to suggest that present stress levels will subside nor that many quality-of-work programs are in place to help mitigate its effect. And, as Australians chairs get into the daily regime of fighting the budget and dealing with a changing student population, the paperwork, meetings and an ever increasing work load are likely to contribute to increased levels of administrative task stress. Similarly, as American universities move closer to instituting quality and effectiveness measures, whether voluntarily or governmentally mandated, and consider system consolidation as a cost efficient remedy to budgetary shortfalls, American department chairs may encounter higher levels of administrative relationship stress.

However, it stands to reason that Australian chairs have much to bring to a conversation about stress, especially administrative relationship stress. The fact that assessment, quality assurance and restructuring remain viable topics of debate in the U.S. leads us to the conclusion that Americans can gain valuable insights in this arena from the experiences of chairs and their

departments at Australian universities. By the same token, the hard lessons American chairs have learned about resource management might provide great insight for Australian chairs as they only now begin down that arduous path of financial instability. In a like vein, while 50 years of experience with diversity has not brought us a sense of complete harmony and community, it has afforded American chairs opportunities to grow in their understanding of the possibilities, and the challenges, that surround diversity. Possibilities that only now are manifesting themselves in Australian higher education. As a consequence, an intercontinental dialogue (perhaps over the Internet using e-mail or via listservers for heads and chairs similar to the one that now exists through ACE for American chairs) among American and Australian chairs on best (and worst) practices in serving these new constituencies could be enlightening for both groups. And, in the process, new ways to minimize administrative task stress might be discovered.

Individual Responses

To this point, we have mentioned only externally generated exigencies. But one other, possibly serious, contributor to overall chair stress and to specific stress dimensions is, for the most part, internally induced. When department chairs try to retain their faculty role as scholars and researchers they often suffer a type of academic schizophrenia. Research shows that many take on the departmental administrative tasks, which come with being department chair, without consciously making the decision beforehand to reduce the amount of time they devote to scholarly work (Gmelch, 1991). Socialized in this academic role for, on average, almost 18 years prior to serving as chair (Carroll, 1990), they enjoy and feel most comfortable in their scholar role and express frustration in their inability to spend enough time on personal scholarship interests (Gmelch, 1991; Moses & Roe, 1990). In fact, they retain many of the highest faculty stressors—trying to stay current in one's discipline, securing research grants, preparing manuscripts for publication, and ultimately, receiving insufficient recognition for research performance—all key elements of academic role stress. Both in America and Australia, a stigma of disdain for the administrative role of the chair persists. In America, Dressel points out, "A scholar is not expected to seek or enjoy the position of chair" (1970, p 82); and Moses and Roe in Australia suggest that if, in fact, a chair appears to enjoy the assignment or maintains it for several terms, he/she is suspected of leaving "the discipline" for the comforts of administration in order to justify a lack of scholarly contributions (1990). The result—a dialectic bind in which department chairs try to be both effective department leaders and productive scholars.

Although Australian and American chairs perceived academic role stress similarly in terms of contribution to common variance of department chair stress and overall ranking (fourth of five factors), their actual scholarly productivity differed significantly. Australian department heads were almost twice as productive in producing books, articles and attending professional meetings and produced papers at a three to two ratio compared to American chairs. One could posit that American chairs experienced less stress from their academic role because they reduced their expectations for scholastic productivity while serving as department chairs. Another explanation could be that Australian departments heads have established strategies to keep their scholarship active. Here again, lies a topic ripe for discussion. Sarros & Gmelch, in a companion qualitative study conducted in Australia (1996), found that some Australian department heads balanced their academic agenda and administrative duties by entering the chair

position with a research agenda already established, developing a research team to keep you focused on your research agenda, delegating the more mundane and menial tasks of management, and protecting their time. Others may pursue different avenues. An interchange of ideas and concerns—the exploration of successful attempts at achieving this type of balance as well as failed tries—may prove insightful to Australians and Americans alike.

Institutional Responses

While this article provides a first step—the identification of stress issues—for department heads and chairs in their struggle to get personal stress under control, stress remains a disease endemic to higher education. Based on what emerged from this research study, it appears that the most effective way to deal with this problem is intervention at multiple *levels* through different general *strategies*. For example:

- The chair: Strengthen his/her ability to deal with job-related stress;
- Work Group: Strengthen interpersonal relationships or department dynamics among faculty and between faculty and chairs either to decrease stress or to support an individual's abilities to deal with stress;
- Department: Modify the department's work environment to reduce stress; and
- University: Change university policies, procedures, or structure to deal with organizational factors related to stress and burnout.

Clearly, strategies employed at all four levels—chair, work group, department and university—are not completely distinct. Some interventions at the chair level will impact faculty relations, and changes at the university level should affect departments, faculty and department chairs. For instance, department chairs must learn to effectively clarify their positions and expectations and to efficiently manage their activities and time; doing both affects faculty. Likewise, universities must think about ways to aid chairs in productively resolving conflict with their deans and devise the means by which chairs can maintain and promote their academic productivity. In the end, such interrelated changes may lead to modifications in policy and the reengineering of the department chair's position. At a minimum, a systemic approach to the problem of stress in the academy should provide intervention strategies within four domains—identification, prevention, mediation and remediation.

- Identification: Techniques for analyzing the incidence, prevalence and characteristics of stress in individuals, work groups, departments and the college. (This study has identified five major sources of stress for department chairs as the first step in this process.);
- Prevention: Strategies and actions that provide ways to deal with the role ambiguity of the chair position and help impede stress before it begins;
- Mediation: Procedures for slowing, alleviating or reversing stress; and

- Remediation: Techniques for chairs who are already burned out and need to be rejuvenated or redirected.

In Table 7, we overlap the levels of responsibility with techniques, procedures and strategies that lie within each intervention domain and, in doing so, provide readers with an illustrative overview of actions that universities might take.

Closing Remarks

In today's environment of limited resources, one potentially limitless resource—the experience of Australian and American department chairs—remains virtually untapped. Whether the opportunities and challenges faced by department chairs revolve around meeting the needs of a diverse student population, dealing with funding shortages, responding to demands for greater quality, finding the upside to downsizing, or figuring out how to balance academic and administrative roles, department chairs in Australia and the United States must cope with stress that results from such tasks. Finding role balance is a perennial test for all department chairs, but the strategies employed to mitigate any accompanying stress seem to vary by country. The timing and sequence of external events, which led American chairs toward diversity and fiscal issues first and more recently into the murky waters of accountability and consolidation, forced Australian chairs to consider their options in the opposite order. We need to learn from each other; we need to pick each others' brains. Perhaps, now is the time for open dialogue among department American and Australian chairs about how to meet the high demands of their positions with an optimum, not excessive, amount of stress.

Endnotes

1. Citizens of the United States are often referred to as Americans, especially in Australia and other English-speaking countries. We have chosen to honor this convention in writing this paper because it makes for easier reading. We acknowledge the fact that the findings of this study, which are applicable to department chairs in the United States, may not be representative of Canadians or Latin Americans who hold similar academic positions.

2. Australians and Americans use slightly different terms to refer to this position—head and chair. In this report the term chair will be used for consistency.

3. The RCAQ was designed to measure two latent constructs, and several studies indicate that the CSI factors into five dimensions. Less research that would constrain analysis to a predetermined number of factors has been conducted on the CTI. At least one study, however, suggests five dimensions, but in this particular instance several variables load on multiple factors.

4. Australians, who felt that their deans did not expect enough of them, saw this variable as multi-dimensional but most indicative of administrative relationship stress (loading .40). (This stressor did load, for Australians, almost as highly on human relations stress [.39].) American chairs seemed to think of this variable as a human relations stressor (loading .60). Americans attributed under-utilized paperwork to administrative role (.47) and to administrative task (.46); Australians placed it in administrative task stress (.53). Americans attributed two other stressors—pressure for better job performance (.48) and others not understanding their goals (.44) to administrative relationship stress. Analysis of the Australian data suggests that both stressors contribute to human relations stress. Interestingly, Americans viewed the stress they experienced as a result of evaluating faculty and staff performance, supervising and coordinating the tasks of others, and handling student concerns and conflicts as part of administrative task stress, while Australian chairs clearly thought that these stressors affected human relations stress. Although analysis of both groups suggests that trying to satisfy concerns of constituent groups was a human relations stressor (Australian .38, American .39), Australians considered it almost as importantly as an administrative task stressor (.33), and Americans thought of it as a stress on external time (.34). In Australia, participating in work-related activities outside of regular working hours, which conflict with personal activities, seemed to carry almost equal weight as an administrative task stressor (.40) and as a stressor on external time (.39). For American chairs, this stressor loaded more distinctly on the external time factor (.60). Somewhat surprisingly, the variable—adapting to technical change—failed to load highly on any factor for American chairs. Australians saw it as a external time stressor (.43). And while, American chairs categorized both the imposition of high self-expectations and having adequate time for teaching preparation as components of external time stress, Australians looked at these variables as elements of academic role stress. Strangely, Australian chairs also tended to view high self expectations as a part of human relations stress suggesting that their expectations may be faculty driven or that they sense dissatisfaction among their faculty. In similar fashion, American chairs seemed confused about which dimension of stress 'time to prepare for teaching' impacted most heavily—administrative task stress (.31), academic role (.32) or external time (.34), perhaps pointing to their inclination to function on an equal footing as both administrators and faculty members. (See Tables 4 and 5).

5. The data were pooled and factored on the five dimensions of stress in order to allow for comparison of mean factor scores across the two countries. This process forced the stress response variables from the two countries to conform to the same underlying structure, which differs from the underlying structure obtained by separate analyses of each country's chairs. However, the separate analyses revealed that respondents from both countries were very similar with regard to the most highly loaded variables on each dimension of stress. For this reason, it is beneficial to pool the data and identify significantly different mean responses to the five underlying stress dimensions.

6. In a similar fashion, the study demonstrates that department chair stress is a multifaceted phenomenon that cannot be treated as a one-dimension construct. That, in fact, the generic measure of stress used in previous studies and first developed by Indik, Seashore and Slesinger (1964) has not been sensitive to the specific dimensions of stress influenced by personal, positional and institutional variables. The stress patterns revealed in this particular study are also different from stress factors identified in other educator groups such as faculty members (Gmelch, et al., 1984) and school administrators (Gmelch & Swent, 1984; Koch et al, 1984).

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Table 1: *t*-tests for Equality of Means (Personal Data)

Variable	Aus. Mean (*N*)	Std. Deviation	U.S. Mean (*N*)	Std. Deviation	*t* Statistic	*p* Value
Personal Information						
AGE	50.8 (815)	6.35	50.5 (536)	6.76	0.72	.479
*GENDER****	0.83 (820)	0.38	0.89 (530)	0.31	3.53	.000
*MARRIED****	0.83 (809)	0.38	0.89 (533)	0.31	3.50	.000
*CHILDREN****	1.28 (655)	1.17	0.94 (457)	1.07	5.00	.000
YR_CHAIR	4.29 (821)	4.36	3.96 (537)	3.89	1.42	.156
TENURE	0.91 (824)	0.28	0.93 (536)	0.26	0.76	.442
INSIDE APPOINT	0.77 (825)	0.42	0.76 (537)	0.43	0.68	.494
*BOOKS****	0.90 (817)	2.62	0.56 (530)	1.26	3.23	.001
*ARTICLES****	11.62 (811)	28.35	5.86 (530)	11.59	5.17	.000
*PAPERS****	3.11 (814)	3.56	2.14 (533)	2.28	6.08	.000
*MEETINGS****	5.59 (784)	12.29	2.76 (534)	1.95	6.34	.000
*TEACH/ADVISE****	4.03 (810)	1.06	3.74 (530)	1.19	4.68	.000
CHAIR FOR PERS DEV	0.57 (827)	0.50	0.60 (534)	0.49	1.16	.248
WILL TAKE HIGH POS	0.29 (820)	0.45	0.24 (535)	0.43	1.86	.064
Self Perception of Role of Chair						
ACADEMIC	0.47 (819)	0.50	0.43 (537)	0.50	1.58	.114
ADMIN	0.03 (819)	0.18	0.04 (537)	0.21	1.08	.282
F_AND_AD	0.47 (819)	0.50	0.53 (537)	0.50	1.15	.251
Average Score on 41 Measures of Chair Stress						
*MEAN_STRESS****	2.67 (746)	0.66	2.56 (486)	0.60	2.98	.003

*** Significant at .01 or better

Table 2: Chair Stress Variables Loading on the Same Stress Dimensions (Aus. and Amer. Data)

Variable	Varimax Rotated Factor Loadings Australian	American
Administrative Relationship Stress (AR Stress)		
Not knowing how my dean/supervisor evaluates my performance	.73	.69
Trying to influence the actions and decisions of my dean/supervisor	.69	.65
Resolving differences with my dean supervisor	.65	.57
Having insufficient authority to perform my departmental responsibilities	.63	.60
Believing my administrative career progress is not what it should be	.59	.49
Receiving insufficient recognition for performing administrative responsibilities	.56	.47
Feeling I will not be able to satisfy the conflicting demands of those in positions of authority over me	.53	.60
Receiving inadequate salary	.46	.63
Having a non-conducive work environment (e.g., crowded, noisy, inadequate facilities)	.37	.41
Administrative Tasks Stress (AT Stress)		
Writing letters and memos, and responding to other paperwork	.68	.60
Meeting report and other paperwork deadlines	.66	.68
Attending meetings, which take up too much time	.59	.50
Feeling I have too heavy a work load	.58	.52
Trying to gain financial support for department programs	.54	.62
Preparing budgets and allocating resources	.52	.66
Complying with college and university rules and regulations	.46	.52
Seeking compatibility among institutional, departmental and personal goals	.39	.39
Human Relations Stress (HR Stress)		
Having to make decisions that affect the lives of faculty, staff, and students	.67	.55
Feeling I am not adequately trained to handle my job	.63	.64
Feeling I have too much responsibility delegated to me by my dean/ supervisor	.55	.60
Trying to satisfy concerns of constituent groups (alumni, community, etc.)	.38	.39
Academic Role Stress (AC Stress)		
Believing my academic career progress is not what it should be	.66	.62
Preparing manuscripts for publication	.64	.65
Having insufficient time to stay current in my academic field	.63	.58
Securing financial support for my research	.54	.61
Receiving insufficient recognition for research performance	.49	.57
External Time Stress (ET Stress)		
Meeting social obligations (clubs, parties, volunteer work) expected of chairs	.65	.61
Making presentations at professional meetings	.60	.55
Having to travel to fulfill job expectations	.42	.64

Table 3: Factor Order and % of Variance Explained by Country

Stress Dimension	Australian Order	Australian % Variance	American order	American % Variance
Administrative Task Stress	(3)	4.7%	(1)	27.0%
Administrative Relationship Stress	(1)	29.4%	(2)	5.8%
Human Relations Stress	(2)	5.7%	(3)	4.7%
Academic Role Stress	(4)	3.6%	(4)	4.0%
External Time Stress	(5)	3.3%	(5)	3.6%

Table 4: Chair Stress Inventory Principal Components Factor Analysis (Aus. Data)

Variable	Varimax Rotated Factor Loadings F1	F2	F3	F4	F5
Administrative Relationship Stress (AR Stress)					
Not knowing how my dean/supervisor evaluates my performance	**.73**	.11	.05	.11	.15
Trying to influence the actions and decisions of my dean/supervisor	**.69**	.09	.29	-.01	.19
Resolving differences with my dean supervisor	**.65**	.17	.13	-.04	.15
Having insufficient authority to perform my departmental responsibilities	**.63**	.15	.18	.19	-.07
Believing my administrative career progress is not what it should be	**.59**	.15	.04	.27	.04
Receiving insufficient recognition for performing administrative responsibilities	**.56**	.10	.20	.44	.10
Feeling I will not be able to satisfy the conflicting demands of those in positions of authority over me	**.53**	.37	.25	.14	.02
Receiving inadequate salary	**.46**	-.07	.10	.31	.10
Feeling not enough is expected of me by my dean/supervisor	**.40**	.39	-.17	-.04	.17
Having a non-conducive work environment (e.g., crowded, noisy, inadequate facilities)	**.37**	.13	.21	.07	.06
Cronbach's Alpha	.83				
Human Relations Stress (HR Stress)					
Having to make decisions that affect the lives of faculty, staff, and students	.01	**.67**	.17	.14	.18
Supervising and coordinating the tasks of many people	.05	**.64**	.35	.15	.12
Feeling I am not adequately trained to handle my job	.24	**.63**	.10	.13	-.01
Evaluating faculty and staff performance	.06	**.59**	.23	.17	.11
Handling student concerns and conflicts	.13	**.57**	.14	.11	.26
Feeling I have too much responsibility delegated to me by my dean/ supervisor	.27	**.55**	.14	.04	.04
Feeling others don't understand my goals and expectations	.41	**.49**	.13	.21	.04
Feeling pressure for better job performance above what I feel is reasonable	.37	**.44**	.20	.18	.00
Trying to satisfy concerns of constituent groups (alumni, community, etc.)	.14	**.38**	.33	.13	.24
Cronbach's Alpha		.83			
Administrative Tasks Stress (AT Stress)					
Writing letters and memos, and responding to other paperwork	.13	.24	**.68**	.19	-.01
Meeting report and other paperwork deadlines	.01	.31	**.66**	.22	.07
Attending meetings, which take up too much time	.30	.10	**.59**	.12	.16
Feeling I have too heavy a work load	.16	.20	**.58**	.44	-.02
Trying to gain financial support for department programs	.18	.21	**.54**	.15	.31
Feeling required paperwork is not utilized	.39	.08	**.53**	.14	.10
Preparing budgets and allocating resources	-.01	.45	**.52**	.06	.22
Complying with college and university rules and regulations	.34	.14	**.46**	.05	.21
Believing I can't get all of the information I need to carry out my job	.38	.32	**.41**	.11	-.06
Participating in work-related activities outside of regular working hours, which conflict with personal activities	.14	-.03	**.40**	.31	.39
Seeking compatibility among institutional, departmental and personal goals	.30	.25	**.39**	.30	.17
Cronbach's Alpha			.87		

Table 4 (Continued): Chair Stress Inventory Principal Components Factor Analysis (Aus. Data)

Variable	Varimax Rotated Factor Loadings F1	F2	F3	F4	F5
Academic Role Stress (AC Stress)					
Believing my academic career progress is not what it should be	.28	.20	.13	**.66**	-.06
Preparing manuscripts for publication	.05	.13	.12	**.64**	.21
Having insufficient time to stay current in my academic field	.06	.21	.33	**.63**	.00
Securing financial support for my research	.19	.06	.17	**.54**	.21
Receiving insufficient recognition for research performance	.45	.09	.02	**.49**	.25
Having inadequate time for teaching preparation	.22	.19	.42	**.47**	-.01
Imposing excessively high self-expectations	.04	.36	.13	**.46**	.26
Cronbach's Alpha				.79	
External Time Stress (ET Stress)					
Meeting social obligations (clubs, parties, volunteer work) expected of chairs	.11	.03	.29	.07	**.65**
Making presentations at professional meetings	.11	.29	-.10	.15	**.60**
Adapting to technological changes (e.g., faxes, telephone systems, computers)	.19	.32	.10	.00	**.43**
Having to travel to fulfill job expectations	.08	.13	.15	.26	**.42**
Cronbach's Alpha					.55
Eigenvalue	12.07	2.35	1.92	1.49	1.35
Percent of Variance Accounted For	29.4	5.7	4.7	3.6	3.3
Cumulative Percent of Variance Accounted For					46.8

Table 5: Chair Stress Inventory Principal Components Factor Analysis (U.S. Data)

Variable	Varimax Rotated Factor Loadings F1	F2	F3	F4	F5
Administrative Tasks Stress (AT Stress)					
Meeting report and other paperwork deadlines	**.68**	.19	.09	.25	.10
Preparing budgets and allocating resources	**.66**	.10	.24	.23	-.06
Trying to gain financial support for department programs	**.62**	.22	.02	.32	.09
Writing letters and memos, and responding to other paperwork	**.60**	.18	.05	.18	.20
Evaluating faculty and staff performance	**.55**	.03	.41	.06	.03
Complying with college and university rules and regulations	**.52**	.41	.02	.02	.17
Feeling I have too heavy a work load	**.52**	.21	.01	.28	.35
Supervising and coordinating the tasks of many people	**.50**	.13	.41	.04	.23
Attending meetings, which take up too much time	**.50**	.30	.03	.09	.28
Handling student concerns and conflicts	**.46**	.12	.28	.00	.21
Seeking compatibility among institutional, departmental and personal goals	**.39**	.32	.24	.18	.15
Cronbach's Alpha	.86				
Administrative Relationship Stress (AR Stress)					
Not knowing how my dean/supervisor evaluates my performance	-.02	**.69**	.21	.23	.10
Trying to influence the actions and decisions of my dean/supervisor	.26	**.65**	.11	-.03	.06
Receiving insufficient recognition for performing administrative responsibilities	.16	**.63**	.05	.39	.16
Feeling I will not be able to satisfy the conflicting demands of those in positions of authority over me	.27	**.60**	.38	.07	.01
Having insufficient authority to perform my departmental responsibilities	.13	**.60**	.22	.13	.10
Resolving differences with my dean supervisor	.21	**.57**	.11	-.05	.00
Believing my administrative career progress is not what it should be	.01	**.49**	.30	.16	.18
Feeling pressure for better job performance above what I feel is reasonable	.08	**.48**	.42	.06	.20
Receiving inadequate salary	.10	**.47**	-.07	.29	.08
Feeling required paperwork is not utilized	.46	**.47**	-.03	.24	.03
Feeling others don't understand my goals and expectations	.25	**.44**	.43	.08	.13
Having a non-conducive work environment (e.g., crowded, noisy, inadequate facilities)	.15	**.41**	.04	.10	.28
Cronbach's Alpha		.86			
Human Relations Stress (HR Stress)					
Feeling I am not adequately trained to handle my job	.15	.09	**.64**	.26	-.10
Feeling I have too much responsibility delegated to me by my dean/ supervisor	.09	.21	**.60**	.08	.22
Having to make decisions that affect the lives of faculty, staff, and students	.51	-.13	**.55**	.07	.02
Believing I can't get all of the information I need to carry out my job	.26	.36	**.51**	.07	.01
Feeling not enough is expected of me by my dean/supervisor	-.23	.30	**.50**	.11	.11
Trying to satisfy concerns of constituent groups (alumni, community, etc.)	.19	.19	**.39**	-.01	.34
Adapting to technological changes (e.g., faxes, telephone systems, computers)	.10	.11	**.28**	.05	.22
Cronbach's Alpha			.68		

Table 5 (Continued): Chair Stress Inventory Principal Components Factor Analysis (U.S. Data)

Variable	Varimax Rotated Factor Loadings F1	F2	F3	F4	F5
Academic Role Stress (AC Stress)					
Preparing manuscripts for publication	.21	.08	.07	**.65**	.17
Believing my academic career progress is not what it should be	.22	.14	.18	**.62**	.05
Securing financial support for my research	.13	.13	.04	**.61**	.12
Having insufficient time to stay current in my academic field	.33	.04	.17	**.58**	.07
Receiving insufficient recognition for research performance	-.03	.39	.13	**.57**	.07
Cronbach's Alpha				.71	
External Time Stress (ET Stress)					
Having to travel to fulfill job expectations	-.04	.07	.09	.06	**.64**
Meeting social obligations (clubs, parties, volunteer work) expected of chairs	.11	.20	.04	.02	**.61**
Participating in work-related activities outside of regular working hours, which conflict with personal activities	.31	.16	-.04	.16	**.60**
Making presentations at professional meetings	.11	-.01	.23	.12	**.55**
Imposing excessively high self-expectations	.32	-.02	.15	.26	**.42**
Having inadequate time for teaching preparation	.31	.20	.05	.32	**.34**
Cronbach's Alpha					.68
Eigenvalue	11.08	2.41	1.92	1.64	1.49
Percent of Variance Accounted For	27.0	5.9	4.7	4.0	3.6
Cumulative Percent of Variance Accounted For					45.2

Table 6: Mean Comparisons of the Five Stress Dimensions by Country

Stress Dimension	Australian Mean	American Mean	P-Value Significant *
Administrative Task Stress	-.0171	.0262	.434
Administrative Relationship Stress	.0935	-.1435	.000*
Human Relations Stress	.0027	-.0042	.898
Academic Role Stress	.0630	-.0967	.004*
External Time Stress	.0261	-.0401	.232

Table 7: University Stress Interventions

Intervention Strategies	*Identification*	*Prevention*	*Mediation*	*Remediation*
Levels				
The Chair	Self-Awareness	Role Clarification	Professional Training	Stress Management
Work Unit	Disclosure/ Feedback	Communication & Conflict Resolution Skills	Support Groups & Mentors	Group Counseling
Department	Climate/Formal Survey	Organizational Development	Team Building	Self-Directed Teams
University	Cultural Assessment	Reengineer Management Functions	Total Quality Assurance	Policy & Procedure Review

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