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ABSTRACT

This report seeks to help institutions manage change by examining college faculty use of time for and contributions to the community in Japan. The report combines the results of two surveys conducted in the national universities, one across a number of universities which compared faculties of engineering with other faculties and one which included all faculty in a large university, with a third survey, which focused on a sample of private and public universities. Chapters include: "Introduction," "A Survey of Engineering and Other Faculties in National Universities," "A Survey of All Faculties in a National University," "Uses of Time in National Universities," "A Survey of Use of Time in Private and Public Universities," and "Comparison of the Uses of Time in the National, Private and Public Universities." The study found that, overall, the national universities, with their strong research tradition, play a major role in community service, but it is only through the contributions of public and private universities that a balanced spectrum of community activities is achieved. The strength of the entire system was highlighted by high levels of faculty participation. The questionnaire is appended. (SM)

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UNIVERSITIES AND THE COMMUNITY

Use of Time in Universities in Japan

Keith J. Morgan

No.6, November 1999

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HIROSHIMA UNIVERSITY

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August 1999

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Chapter 1

Introduction

1. Introduction

Universities are important and not just to those who work in them. We are told so by the media, by government, by industry and commerce[1]. Moreover, public opinion generally holds universities in high esteem[2]. Demand for access to universities continues to grow, irrespective of demographic trends. And yet universities attract widespread criticism of their effectiveness and efficiency.

There is a diversity of views about what is expected of universities. The traditional academic view of universities as places for the pursuit of scholarship and learning is no longer universally accepted even in the academic community. Nor is it generally shared by government, industry, taxpayers and students. Each of these constituencies selects its own expectations from a spectrum of benefits which includes creation of wealth, commercial convenience, personal advantage, social development and the advancement of knowledge.

The ability of universities to satisfy such diverse aspirations has proved advantageous. Growth of universities and their facilities over the past century and the accompanying demand for access to them provides clear evidence of this. Modern university systems and institutions have grown in scale and complexity to accommodate the demand and consequent change from provision of education limited to a selected elite group to one of comprehensive mass higher education[3]. The process of providing a huge expansion of access for students has been accompanied by an equivalent opportunity for expansion of academic work - research as well as teaching - and of extension of the role of universities to undertake wider responsibilities in the community.

But there is a cost. A principal consequence of this expansion of universities is that they are now perceived to be substantial national assets. This immediately exposes those who work in universities to explicit social, economic and political imperatives. To sustain levels of support from the community, universities must be seen to be responsive to the aspirations of students, the needs of employers and the requirements of government. Governments, as providers of financial subsidy,

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1 The President of the United States, Mr Clinton, has made education the top priority of his second term of office (1997). The British Prime Minister, Mr Blair, declared that the three priorities of his new government were "Education, education, education" (1997).

2 A.N.O.P., Community Attitudes to Universities in Australia (1989), Australian Vice-Chancellors Committee (Canberra).

3 see A.Arimoto, Massification of Higher Education and Academic Reform in Japan in *Academic Reforms in the World*, R.I.H.E. International Seminar report, 10, 21 (1997).

are fully aware of the scale of university provision and seek increasingly to identify accountability of performance with criteria for funding. In Japan, official policies already exist relating to perception of market forces, life-long education, post-graduate and post-experience courses, co-operative research and equity programmes. Discussion of measures affecting the range and quality of academic programmes and research funding are being actively pursued.

These policies, together with the effects of the initial stages of deregulation of universities have already produced recognisable change. It is arguable that change is inherently good for a university. Institutions committed to advancement of learning might be expected to be responsive to change. In practice this is not always evident. In part perhaps this is because most proposals for change in the past have originated externally, and for reasons that are not perceived as conferring academic or functional benefit. But universities are inherently conservative institutions. This is not necessarily a fault: existing strengths need to be preserved. In implementing change it is assumed that universities will modify current structures and procedures. The purpose is to add new functions and responsibilities but not to the extent of eliminating the ability to discharge their traditional functions. In particular, demand for the traditional products, graduates and research, retaining the qualities of elite education, persists and has still to be met by the total university system even while institutionally it adjusts to the requirements of mass higher education.

It is clear that further and more substantial changes will emerge. What is less clear is any measure of the extent of change that has already occurred or of the priorities that might be attached to future developments. This has been largely due to a lack of information. It is difficult to formulate effective policies if the starting point is vague and the opportunities for implementation are unknown.

Extent of change and capacity for its implementation are both dependent on the existing situation. For universities this operates at two levels. Externally, central advisory agencies seek answers to questions such as "What is it that universities do and how do we know that they do it well?"[4]. Within universities, individual academics ask "How will it affect me and my academic functions?". Neither central agencies, universities, nor individual academics have been well placed to answer such questions. For a university planning institutional change it is useful to have access to factual information about its current situation; equally it

4 Higher Education Council, Achieving Quality, Australian Government Publishing Service, Canberra, 6 (1992).

is desirable for central advisory bodies to be aware of the status of the whole system.

To supply the necessary data, a plethora of performance indicators is now being eagerly applied. Not all are more evidently useful than convenient; and few address central issues. In particular, there is an absence of structured information about the work performed by academic staff who are the ultimate agents of change. Proposals for change imply modifications to their duties. In many cases the nature of change is to extend the responsibilities of academic staff by imposing new or additional duties. If such changes are to be implemented it is desirable to start with knowledge of the current situation.

Accordingly, it was thought useful to seek information on the current levels of activity of academic staff. Such information would provide data relevant to two key issues:

(1) on the assumption that major components of existing academic programmes are to continue, the demands on time of the current university schedules define both the base from which change will occur and the opportunities and priorities for change; and

(2) the extent of existing involvement of members of academic staff in internal and external activities identifies the base level and potential for extension of university services to the whole community.

In an attempt to obtain some basic information on these matters, surveys have been conducted on the use of time and contributions to the community by academic staff in Japanese universities. Two surveys have been conducted in the National universities, one across a number of universities comparing Faculties of Engineering with some other Faculties; and one which included all the Faculties in a large university. A third survey extended the study to a sample of Private and Public universities.

Separate reports of the results from each survey were prepared. It appeared to be useful to collect the three reports together to facilitate comparisons and to identify both the many features common to all three and the characteristic differences that emerge. In the following two Chapters, 2 and 3, the results of the surveys of the National universities are presented followed by some discussion of aspects of these results in Chapter 4. The results of the survey of the Private and Public universities are in Chapter 5 and the final Chapter 6 is devoted to comment and discussion of the results of all three surveys. The individual reports have been edited to remove some unnecessary duplication of data and analysis but the results obtained from each survey are presented in full.

Chapter 2

A survey of engineering and other faculties in national universities

2. A Survey of Engineering and other Faculties in National Universities

The last 50 years has seen substantial change in universities. Most significant has been establishment of mass higher education. The effects are evident in all faculties in all universities. And these evolutionary changes continue. There are additional changes arising from specific policies that, by their nature, might be expected to show differential changes between faculties and universities. Requirements now placed on universities for involvement in community activities appear to fall into this category.

Although there is much encouragement for universities to undertake work in the community, the opportunity to do so may be limited by the available resources. Both the evolving consequences of massification and participation in community activities place demands on resources, and in particular on the most critical resource of academic staff time.

It seemed desirable to attempt to establish how these developments might be affecting the pattern of work of academic staff. The most direct way to seek relevant data was by means of a survey - the major cost of which was to place an additional burden on academic staff time.

It appeared likely that recent changes in government policies and regulations relating to community work might have become evident most rapidly in the "professional" faculties. As a consequence of development of co-operative research centers, it seemed that Faculties of Engineering might be amongst those most affected. Accordingly it was decided to focus a first survey on Faculties of Engineering. In order to establish a general base for comparison, a reference group of other faculties was also sought.

The survey was conducted within a group of National universities. Responses were sought from the academic staff in the Faculties of Engineering in each of the participating universities; and in addition from the staff of an arbitrary group of other Faculties. The group of other Faculties covered most of the academic disciplines found in the National universities but no attempt was made to obtain a statistically representative sample.

The survey was conducted by means of a questionnaire (see Appendix). The questionnaire (in Japanese) comprised two parts seeking information about (a) the current use of time on attributable university duties; and (b) the extent of participation in community activities.

1. Sample. *(1) Response.* Questionnaires were distributed to full-time academic staff in the participating faculties. Responses were received from approximately 25%. This provided a sample constituting about 1% of the total academic staff of the National universities[1]. The sample is biased both by design and by response. By design, half of the sample was drawn from Faculties of Engineering and half from other Faculties. By response, the total sample is biased towards professors at the expense of associate professors and junior staff (Table 2.1); and in faculties other than Engineering towards women, who constitute about 9% of respondents as opposed to about 7.5% nationally[1]. The distorting effects of grade-mix on the results for the whole sample are generally not large, as the differences in responses between grades are small. However, where it is useful to provide a common base for comparisons between those in Faculties of Engineering and those in other Faculties, the results are weighted to reflect the proportions of an arbitrary grade-mix of 45% professors, 37% associate professors, 9% lecturers and 9% staff in other grades.

Table 2.1
Composition of Survey Sample

	Professors	Associate Professors	Lecturers	Other Grades
All Respondents	52%	29%	9%	10%
Faculties of Engineering	59%	26%	5%	10%
Other Faculties	44%	31%	14%	10%

(2) *Age and Service.* The median age of the whole sample is in the range 46 - 55 years, in accord with the average age for National university staff[1]. For professors, the median age is 46-55 years with only 5% falling in the age-range 36-45 years. Associate professors are younger, showing a median age of 36-45 years but with about one-third of respondents being older than 45 years. Lecturers and staff in other grades have a median age of less than 35 years.

The median period of service by respondents in their present university is greater than 10 years both for the whole sample and also for professors; for associate professors, it is between 5 and 10 years; and for lecturers and other staff

1 Ministry of Education, Science and Culture, Japanese Government Policies in Education, Science and Culture 1990 (1990), Tokyo.

it is less than 5 years. However, almost 45% of respondents have served for less than 10 years in their present university, including 28% of professors. Almost a quarter (23%) of respondents have spent less than 5 years in their present university, including 15% of professors and 27% of associate professors. Neither in age distribution nor in length of service do any significant differences emerge between those in Faculties of Engineering and those in other Faculties.

2. Use of Time on University Duties. *(1) Total Time.* The questionnaire asked respondents to indicate separately, for periods of scheduled teaching and for the rest of the year, the amount of time spent each week on university duties. They were asked to provide this information under four headings: *teaching, research, administration*, and *other university duties.* On the assumption that together the four headings cover university duties, the aggregates represent the total time devoted to university work.

Differences exist in the use of time between the two parts of the year, but the total time devoted to university work remains effectively constant with median and mean times of 43 hours per week. Small differences in the averages calculated for the different grades of academic staff and for faculty differences are not statistically significant.

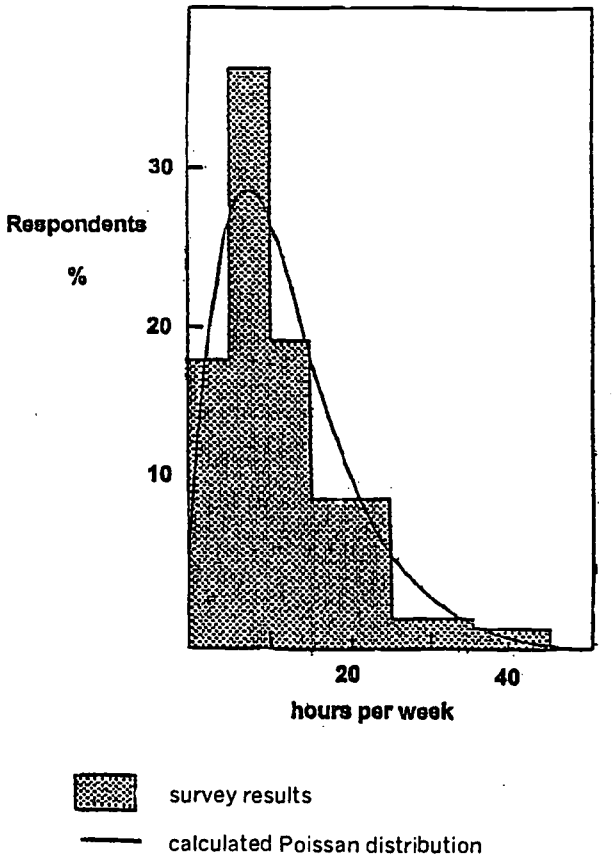
The range of total times reported shows wide variations about the average, with standard deviations of 14 hours per week both for periods of scheduled teaching and for the rest of the year. Distribution about the mean is also skewed. A substantial minority (24%) records figures for a total time devoted to university duties of 40 hours per week, in accord with the formal requirement for staff in the National universities as public servants[1]. By some respondents, an assumption that the working week constituted 40 hours was made explicitly, and others possibly made a similar assumption implicitly. Identification of this formal requirement is shared equally by professors (28%) and associate professors (25%) but only to a lesser extent by lecturers and staff in other grades (8%). If this constraint represents an artificial response, the averages for total time spent on university duties will be distorted[2]. Even so, the distortion will not be large, despite the substantial number of responses recording a total of 40 hours per week. If all returns of 40 hours are excluded from the calculation, both for periods of scheduled teaching and for the rest of the year, the resultant values of the median times move only to 45 hours per week and of the mean times to 44 hours per week. This result is reassuring in establishing confidence in the overall averages and in

2 This point is addressed more fully in Chapter 3.

indicating that any artificial constraint will not substantially perturb the distribution of time allocated to the component duties.

(2) Teaching Time. Teaching constitutes an essential and substantial part of university duties. For purposes of the survey, respondents were asked to include under *teaching* all time spent on preparation, reading, marking and supervision of students as well as class contact time. On this basis, the results show that *teaching* occupies 28% of time during periods of scheduled teaching; and 7% of time during the rest of the year. The median time spent on *teaching* during periods of scheduled teaching is 10 hours per week; with a mean value of 12 hours per week. The range of values included in these averages is wide with a standard deviation of 8 hours per week. Outside the periods of scheduled teaching, the median time falls to 1 hour per week with a mean of 3 hours per week and a standard deviation of 5 hours per week. The overall distribution of time spent on *teaching* during periods of scheduled teaching, conforms to a modified Poisson distribution (Figure 2.1).

Figure 2.1
Distribution of Teaching Time during Periods of Scheduled Teaching



The responses indicate some differences between the different grades of staff and faculties in the amounts of time devoted to *teaching* (Table 2.2). Small differences in time between professors and associate professors are not statistically significant but larger differences from lecturers and staff in other grades do appear to be real. Between faculties, the differences are statistically significant for professors, lecturers, and staff in other grades (at the 1% level) and probably significant (5% level) for associate professors. In consequence, the difference in mean times between respondents from Faculties of Engineering, 11 hours per week, and those in other Faculties, 14 hours per week, is significant even when the grade-mix is adjusted to the standard composition.

Table 2.2
Average Time Spent on Teaching Duties during
Periods of Scheduled Teaching

hours per week

	Professors	Associate Professors	Lecturers	Other Grades
Overall Average	12	13	11	14
Faculties of Engineering	11	12	16	9
Other Faculties	13	14	9	20

During periods of the year when teaching is not scheduled, time spent on *teaching* activities - largely planning and preparation of courses - is reduced. The responses indicate that approximately 60% of the year is occupied by scheduled teaching. On this basis, and averaged over the whole year, the mean time devoted to *teaching* is about 8.5 hours per week, or 20% of the average time spent on university duties.

(3) Research Time. Under this head, respondents were asked to include time spent on applications for grants, preparation of manuscripts and on general scholarship as well as time spent directly on research. On this basis, the responses indicate that *research* is the dominant university duty in terms of time. It accounts for 46% of attributed time during periods of scheduled teaching and 66 % of time during the rest of the year. In total this represents about 54% of the time spent on university duties over the whole year. Overall, the median time for *research* during periods of scheduled teaching is 20 hours per week. This increases to 30 hours per week during the rest of the year. The individual responses demonstrate

substantial variations from these averages (Figure 2.2, standard deviations, 12.7 and 13.8 hours per week for periods of scheduled teaching and for the rest of the year respectively). There are differences in the time committed to research by the various grades of staff and by the faculty groupings (Table 2.3). The small differences between the times spent on research by professors, associate professors, and lecturers do not appear to be statistically significant; but those for staff in other grades - some of whom will be engaged in research full-time - are significant. Differences between faculties, which show those in Faculties of Engineering spending some 4 hours per week longer on research, are significant (0.1% level) both for the separate grades of staff and for the whole Faculties even after adjusting the grade-mix to the standard composition.

Figure 2.2a
Distribution of Research Time during Periods of Scheduled Teaching

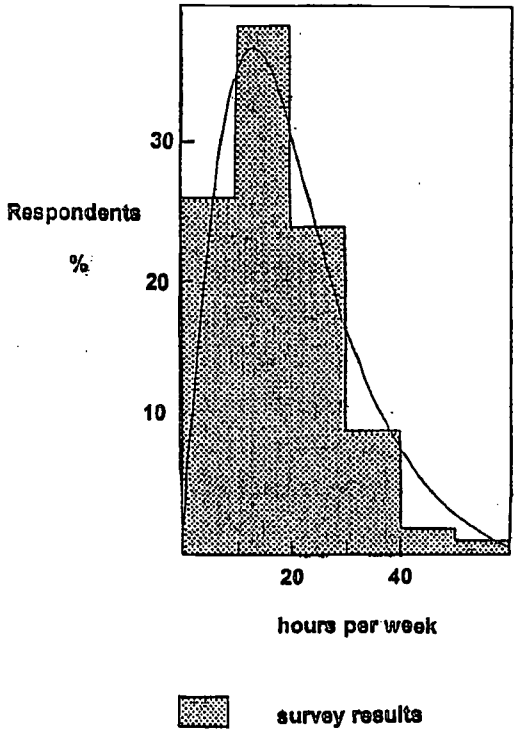


Figure 2.2b
Distribution of Research Time during the Rest of the Year

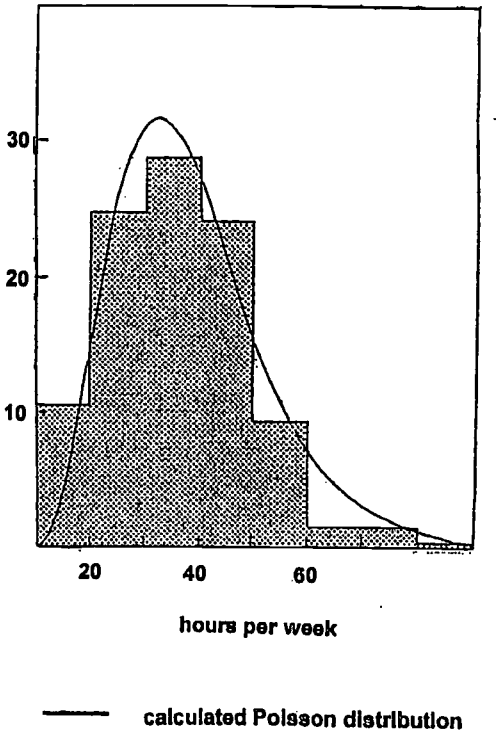


Table 2.3
Average Time Spent on Research

hours per week

	Professors	Associate Professors	Lecturers	Other grades
Periods of Scheduled Teaching				
Overall Average	20	21	18	25
Faculties of Engineering	21	24	23	30
Other Faculties	18	19	15	20
Rest of the Year				
Overall Average	28	29	25	33
Faculties of Engineering	29	32	32	37
Other Faculties	28	27	22	28

(4) Time for Administration and Other University Duties. Administration inescapably accompanies academic duties in universities. Less than 2% of respondents report that they spend no time on it. For purposes of the survey, respondents were asked to include in this category, time spent on departmental, faculty and university business in meetings, discussions, committees and working groups and also time spent on activities such as admissions and the curriculum. Overall, *administration* occupies about 16% of university time. It remains at a constant level throughout the year yielding an overall median time of 5 hours per week (mean, 7 hours per week, standard deviation, 7 hours per week) both for periods of scheduled teaching and for the rest of the year. There is no significant difference in the time taken over *administration* between the faculties. Some differences do though emerge between staff of different grades. On *administration*, professors spend on average one hour per week more, at 8 hours per week than those in other grades, a difference that is probably significant (5% level). A related observation is that there is a high proportion of professors (66%) among the group of respondents who spend more than twice the median amount of time on *administration*. It is possible that this is associated with the duties of heads of departments and deans.

The remaining category is that of *other university duties*. This is intended to include the many and diverse activities undertaken within a university other than

those included in the first three categories. The overall median time spent on such duties is 2 hours per week but this does not fully indicate the range of demands these *duties* make on time. One respondent in four avoids them entirely; in contrast, one respondent in three spends more than 4 hours per week on them, more than twice the median amount of time.

The overall mean time spent on *other university duties* remains constant throughout the year at 5 hours per week (standard deviation, 6 hours per week). This represents about 11% of the total time spent on attributed university duties. In these *duties* there also appear to be clear differences in the time demanded of professors and those in all other grades. Professors constitute a minority (36%) of those who spend no time on such *duties*; and a majority of those for whom they occupy more than twice the median time. The mean time spent by professors on these *duties* (6 hours per week) is significantly longer than that spent by those in all other grades. This difference is largest in the Faculties of Engineering where associate professors report a mean time of only 2 hours per week on *other university duties* - a value that is itself half that reported by associate professors in other Faculties.

Table 2.4

Changes in the Uses of University Time during the Past Five Years [a]

percentages

	Teaching	Research	Administration	Other University Duties
Change in Amount of Time				
Increased	63%	11%	88%	62%
Unchanged	34%	23%	12%	36%
Decreased	4 %	66%	0	1 %

[a] Percentages are of those who have been in service during this five year period

(5) Changes in the Use of Time. Universities have experienced considerable change in recent years. Respondents were asked what changes they had experienced over the past five years in the amounts of time they spend on each of the four categorised areas of university work. The responses show a clear perception both of change and of where change has occurred. There have been increases in the time devoted to *administration, teaching* and *other university duties*; and a decrease in the time spent on *research* (Table 2.4). These perceptions are effectively uniform across the faculties but the impact of change appears to vary

with seniority. Increases in time spent on *teaching* are identified by one professor in two, two associate professors in three, and four lecturers in five. Conversely, decreases in time spent on *research* are noted by three professors in four but only by two out of three associate professors and lecturers. Over the changes in time spent on *administration*, uniformity of opinion exists across all grades of academic staff: about 90% record an increase. Similarly, for *other university duties* an increase is noted by 60% of the whole sample.

Table 2.5
Priorities in the Use of Additional Time

	Teaching	Research	Admin -istration	Other University Duties	Community Activities
Overall Response	1	3	2	4	5
Faculties of Engineering	1	3	2	4	5
Other Faculties	1	4	3	2	5

Respondents were also asked to indicate their preferences for future change: that is, if additional time and other resources became available, what would be their priorities in using them on the four designated areas of university work together with some form of community work. The responses are shown in Table 2.5. They clearly identify *teaching* as having the highest priority, and *community activities* the lowest. Amongst the intermediate priorities, the greater relative importance attached to finding more time for *administration* than for *research* is noteworthy. Indeed, with the exceptions of Engineering professors, who tend to favour *research* as their third priority, and of professors in other Faculties, who identify *administration* as their third priority, the responses generally allocate second priority equally to *administration* and *other university duties*. In consequence, when the results are weighted in accord with the standard grade-mix, *research* and *other university duties* attract equally low priority both in overall response and from those in the Faculties of Engineering.

3. Community Activities. The second part of the questionnaire is concerned with participation in community activities. For the purposes of the survey, community activities were defined as all relevant activities beyond those formally incorporated in the academic programme of the university. This includes all those external activities by which members of university staff benefit the professions,

government, industry and the community in general, through a range of cultural, economic, professional and social work. For convenience, five general areas of community activity were designated:

(a) *Service to the Professions*, which covers contributions to academic and professional associations through committees, editorial and other work; it also includes contributions to other universities and colleges through teaching and related activities;

(b) *Service on Official Bodies*, which includes work for international agencies, national, regional, and local government, and research foundations through committees and provision of expert advice;

(c) *Consultancy and Collaborative Research*, which embraces all those activities where public or private industry, commercial and non-commercial organisations seek expert and professional help though contract, consultation or collaboration;

(d) *Community Social Service*, which provides opportunities for contributions to social welfare, health, pre-school, school, adult and continuing education by direct and indirect work, committee membership, fund raising, provision of special classes, or through membership of service clubs; and

(e) *Service to Cultural and Social Amenities*, which covers contributions to sport, music, theatre, art, literature, journalism and broadcasting, religion, politics, environmental affairs, and includes direct participation, service on committees and in civic affairs generally.

These designations were intended to be convenient rather than comprehensive and the boundaries between the areas were not intended to be precise or rigid. It is clear that respondents were content to exercise some judgement in allocating some of their activities. Respondents were asked to indicate all their contributions to these activities, including those that were less closely linked to university than to personal or family interests.

(1) Participation. The level of participation is high. Almost 94% of respondents are currently active in such work and a further 1% has been active in the recent past. Moreover, participation is both extensive and diverse. Each respondent participates in an average of 5 separate activities spread over 3 of the designated areas (Table 2.6). There are no faculty differences detectable in the extent of participation. Professors report significantly (0.1% level) higher involvement than those in any other grade of staff.

Respondents were asked to indicate the order of attraction provided by the different areas of community work. The most attractive is *service to the professions*; the least attractive is *service to cultural and social amenities.* These

Table 2.6
Participation in Community Activities

	All Respondents	Professors	Associate Professors	Lecturers	Other Grades
Proportion Participating in community activities	95%	100%	96%	86%	78%
Number of different areas (mean)	3	3	3	2	2
Number of different activities (mean)	5	7	4	3	3
Mean Annual Time on Community Activities (hours/year)	210	270	180	180	180

preferences were shared by all respondents. Those in Faculties of Engineering identify *consultancy and collaborative research* as their second preference, followed by *service on official bodies.* In contrast, those in other Faculties prefer *community social service* to *consultancy and collaborative research.* These orders of preference closely parallel the existing situation. This is seen by comparison with the areas of activity in which respondents actually participate, either currently or in the recent past (Table 2.7). These results also show that levels of participation in all areas except that of *cultural and social amenities,* increase with academic seniority. Between the faculties there is greater involvement of Engineers in *consultancy and collaborative research* and a lower level of activity in *community social service* than is shown by those in other Faculties.

(2) Service to the Professions. This is the area that attracts most support in terms of both numbers of participants and the amounts of time devoted to it. Nine respondents out of ten are, or have recently been, active in such work. On average, they spend between 2 and 3 hours per week on it. The level of involvement reflects academic seniority. Contributions come from 97% of professors, 88% of associate

Table 2.7
Participation in Areas of Community Activity [a, b]

	Service to the Professions	Official Bodies	Consultancy and Collaborative Research	Community Social Service	Cultural and Social Amenities
Overall Response	88%	54%	64%	47%	24%
Faculties of Engineering	90%	56%	71%	35%	20%
Professors	98%	72%	80%	38%	22%
Associate Professors	90%	41%	62%	33%	17%
Lecturers	55%	9%	55%	45%	0
Other grades	52%	17%	52%	17%	26%
Other Faculties	85%	52%	56%	60%	29%
Professors	96%	69%	63%	67%	34%
Associate Professors	87%	47%	59%	54%	28%
Lecturers	67%	27%	20%	53%	13%
Other grades	59%	27%	64%	55%	27%

[a] Participants currently active or active in the recent past.
[b] Percentages relate to numbers in the whole sample.

professors, 63% of lecturers, and 56% of staff in other grades. The amount of time spent by professors (mean, 140 hours per year) is similarly significantly greater than that for associate professors (70 hours per year), and lecturers and staff in other grades (40 hours per year). Levels of activity do not differ between the faculties.

Within this area, the largest single activity is service on *committees of professional societies* which is provided by over three-quarters of respondents. Two-thirds of respondents report involvement in *organising conferences*; and half in *editorial work for publications.* The other major activity is *work for other universities and colleges*, normally in the form of part-time teaching. This is undertaken by over half of all respondents: 69% of professors, 49% of associate

professors, 29% of lecturers, and 20% of staff in other grades.

(3) Service on Official Bodies. Rather more than half of the whole sample reports participation in this area with the level of activity determined largely by seniority rather than faculty. Participation decreases from over 70% of all professors, to 44% of associate professors, and 22% of lecturers and staff in other grades. Similarly, the average amounts of time committed to it by those who are active in this area diminish in the same sequence: from a mean time of 60 hours per year for professors, to 40 hours for associate professors, and 30 hours for lecturers and staff in other grades. Numerically, the most important individual contributions are to work for *local and regional organisations.* This accounts for 60% of those who are active in this area of service; professors and associate professors contribute at similar levels. In the other activities, professors dominate representation on *government committees* and *international foundations*; one in three of all professors but only one in ten of all other staff are involved in these activities.

(4) Consultancy and Collaborative Research. Overall this area provides the second most popular form of community work. Over 60% of all respondents are engaged in it and for them it occupies an average of 110 hours per year. The extent of involvement in this area shows clear faculty differences. Responses from the Faculties of Engineering show over 70% of staff participate. For those in other Faculties, the proportion is 58%. The difference between the faculties persists even when allowance is made for the variation in grade-mix. In terms of time spent by those who participate in this work, there are no clear differences between the faculties but there are between the grades of staff. In this case it is the less senior staff who are engaged for longer times. Mean times for professors are 90 hours per year; for associate professors, 110 hours; for lecturers, 170 hours; and for other grades of staff, 240 hours. Amongst the individual activities, *collaborative research* shows the highest level of participation, accounting for 68% of those who are active in the area; participation in *collaborative research* is distributed fairly uniformly amongst the grades of all staff in both groups of faculties. *Consultancy* is provided equally to commercial and non-commercial organisations. It accounts for only slightly less participation than *collaborative research* but professors show a rather larger level of involvement than associate professors and lecturers. *Contract research* provides a minor contribution: only 7% of the total sample indicates experience of such work, either currently or in the recent past. Of those who have this experience, two out of three are professors.

(5) Community Social Service. Slightly less than half of all respondents are active in this area. In the distribution of participation between faculties it provides

a mirror image to that of the previous section. In this case, the smaller contributions come from Faculties of Engineering where 35% of respondents are active participants. In the other Faculties, 60% of respondents participate. Those who are engaged in this work spend an average of 50 hours per year on it. Professors and associate professors commit less time (40 hours per year) to it than lecturers (90 hours) and other grades of staff (70 hours). Over half of the contributions are to *adult education*. Professors provide about two-thirds of the input to *adult education* and in this activity, those from Faculties of Engineering share equally in the work with those from other Faculties. Elsewhere, contributions from the Faculties of Engineering are small. It is those in the other Faculties who make the major contributions to *school* and *pre-school education, health,* and *social welfare* work, and through *community service clubs.* Thus, while one in seven of all respondents is involved in *school education*, those in the other Faculties are three times more likely to participate (with a proportion of one in five) than those in the Faculties of Engineering (one in sixteen). Overall participation in *pre-school, health,* and *social welfare* work is small (6%, 6%, 4% respectively) and the proportions from the Faculties of Engineering are smaller still (3%, 1%,1%). Even membership of *service clubs* (e.g. Rotary, Lions) has membership from Faculties of Engineering (5%) well below that of the other Faculties (13%).

(6) Cultural and Social Amenities. This area consists of minority interests. Less than one-quarter of all respondents either is currently, or in the recent past has been, active in it. For those who are involved, there is an average commitment of about 70 hours per year. There is no clear relation between participation in this area and either faculty or academic grade. A possible link between age and participation is suggested by the increase from 22% of respondents aged less than 35 years (mainly lecturers and staff in other grades), to 33% for those of age greater than 55 years (mainly professors). Only four of the designated groups of activity attract any extensive involvement: *journalism and broadcasting* (9% of all respondents); *sports organisations* (6%); *music, theatre and art* (5%) - which appears to be mainly *music*; and *environmental matters* (4%). Vanishingly small support is recorded for activities related to *religion* (2%), *politics* (1%) and *literature* (<1%).

(7) Financial Rewards. Involvement in community activity is not accompanied by substantial financial reward. While over two-thirds of respondents receive some earnings from it, less than one out of ten obtains more than 5% of annual earnings in this way. Professors earn slightly (but significantly) more than staff in

other grades. There are no significant differences in the earnings between the faculties.

Payment for community work would be unlikely to provide an effective incentive for further increase in the amount of community work undertaken. A large majority (80%) of all respondents indicates that financial reward would not enable them to increase their commitment to community work. Professors (82%) and associate professors (84%) see this slightly more clearly than do lecturers (69%) and staff in other grades (70%). It is lack of time rather than financial reward that limits community activity. Indeed, three-quarters of all respondents indicate that this is so. The constraints of time increase with seniority. It is seen as a limiting factor by 81% of professors and 79% of associate professors. The limitations of time are less apparent to lecturers (60%) and those in other grades (51%).

If there were to be some financial reward for community activities performed on behalf of the university, respondents were asked to identify the order of their preferences for its use. Five possibilities were offered: (a) *personal use*; (b) *academic expenses* (e.g. travel); (c) *research expenses*; (d) *scholarships*; (e) *university, faculty or departmental funds.* There emerges an overwhelming and uniform first preference for using any such money for (b) *academic expenses*; this is followed in second place by (c) *research expenses.* Distantly, as third, fourth, and fifth choices are (d) *scholarships*, (e) *university funds*, and (a) *personal use*, the last two being almost equally unpopular.

Aspects of the results described in this chapter are discussed more fully in Chapter 4 together with those from Chapter 3.

Chapter 3

A survey of all faculties in a national university

3. Survey of All Faculties in a National University

The first survey (Chapter 2) confirmed the expectation that there would be identifiable differences in the use of time between Faculties of Engineering and other Faculties. The differences lay not in the distribution of time between university duties and community activities but rather in the ways in which the time was used. The implication that similar differences would also exist between other faculties was supported by the variations evident when the responses to the first survey were being analysed. Even a superficial examination of the responses from the group of other Faculties in the first survey suggested there were substantial variations.

At the same time it was also clear from the first survey that the overall amounts of time spent on university duties and community activities in the separate universities showed little variation. Accordingly a suitable means of extending the study to obtain information from a wide range of faculties would be through a complete survey of a multi-faculty university. Internal comparisons would then relate to a shared environment; and the indications from the first survey suggested that the results would serve as a useful model for the whole system.

The second survey was undertaken across all the faculties of a large National university. It was again conducted by means of a questionnaire. This was closely similar to the one used previously, covering both attributable university duties and participation in community activities but in addition it included questions about numbers of publications and external collaborations.

1. Sample. *1. Response.* Questionnaires were distributed to academic staff throughout the university. Responses were received from 550 (33%) of academic staff. Academic staff are grouped in four categories. Professors (35%) constitute the largest single group of respondents, with research assistants (28%) and associate professors (27%) providing the other large groups. The fourth group is that of lecturers and constitutes 10% of the total. In relation to the overall university population, the returns provide a small bias in favour of professors at the expense of research assistants. Any consequent distortion is generally small, as the differences between the groups are not large. However, where it is appropriate, estimates for the whole university population are corrected by the application of weights in accord with the actual mix of grades in the university.

Responses showed some variation with faculty. Better levels of response

came from the Faculties of Applied Biological Science, Dentistry, Medicine and the Research Institutes; lower levels of response came from the Faculties of Economics, Education, Integrated Arts and Science, Law, and Letters[1]. Again, where it is appropriate, estimates for the whole university are corrected for the small distortions resulting from this bias. More importantly, there are variations in the responses of different grades of staff between faculties. Where comparisons are made between faculties these are on the basis of survey results weighted to correspond to the actual proportions of the different grades in each faculty.

The validity of the results of a survey is dependent on the adequacy of the sample. Two general criteria need to be satisifed. The sample must be of sufficient size to be statistically reliable; and it must adequately represent the total population. The present survey satisfies both these general conditions: numerically with a total response of better than 30%, and proportionately with a satisfactory distribution of responses from the full range of faculties and grades of academic staff. Even so, generalisations based on the results require caution. The elements comprising a university population constitute an inhomogeneous distribution. This exists both amongst academic staff grades and in the composition of faculties. Amongst academic staff, the designations *lecturer* and *research assistant* cover wide ranges of different responsibilities. Thus, while many lecturers discharge duties similar to those of professors and associate professors, some combine them with explicit clinical work and some are fractional or part-time appointments[2]. Further, the category of *research assistant* includes those who would be identified more accurately as teaching or clinical assistants. Moreover, between the faculties, there are substantial differences between the numbers of lecturers and research assistants so that while the ratio of associate professors to professors remains roughly constant, the ratio of lecturers and research assistants varies widely. Over three-quarters of all research assistants are found in only 4 faculties. Consequently, aggregation of results for all staff may be subject to internal distortion. For this reason, separate aggregations for professors and associate professors (P & AP) are also used regularly in presenting the results.

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1 For statistical convenience the responses from the faculties of Economics, Law and Letters are combined. Separate analysis of the results for the three Faculties indicated that they were generally similar.

2 The proportion of respondents recording a total time devoted to university duties of 24 hours per week or less is approximately 1 in 20 for professors and associate professors, 1 in 5 for lecturers, and 1 in 6 for research assistants.

(2) Age and Service. The median age for the whole sample lies in the range 36 -45 years, in conformity with the average age reported for all National[3] university staff. For the grades separately, median ages are: professors, 46-55 years; associate professors and lecturers, 36-45 years; research assistants, less than 36 years. Only 9% of professors are less than 46 years old (with particular concentrations in the Research Institutes). In contrast, over two-thirds of associate professors are less than 46 and 8% are less than 36 years old. At the other extreme, almost 40% of professors are over 55 years old and some faculties will expect to lose over half of their professors by retirement during the next decade.

Service in the university shows a median value of 5-10 years, both for all respondents and for associate professors and lecturers separately. For professors, it is greater than 10 years; and for research assistants it is less than 5 years. Overall, almost one-third of respondents (31%) has served in this university for less than 5 years. Most of these are research assistants but one professor in six and one associate professor in four has less than 5 years service in the university. The Research Institutes contain a higher proportion of those in senior grades with shorter periods of service.

2. Use of Time. *(1) Total Time.* Respondents were asked to record separately, for periods of scheduled teaching and for the rest of the year, the amounts of time they spend each week on university duties. The questionnaire asked that the time be recorded under four headings: *teaching, research, administration* and *other university duties.* On the assumption that together these four headings cover all university duties, the aggregates should constitute the time devoted to attributable university work. The results show that while there are significant differences between the uses of time within the two periods in the year, the total time devoted to university duties remains almost constant. The corrected average value for periods of scheduled teaching is 46 hours per week; and for the rest of the year it is 45 hours per week[4]. Corrected averages for the separate grades lie close to the overall averages: professors, 48, 46; associate professors, 44, 44; lecturers, 42, 45; research assistants, 46, 44 hours per week.

Variation between faculties is not large, being restricted generally to

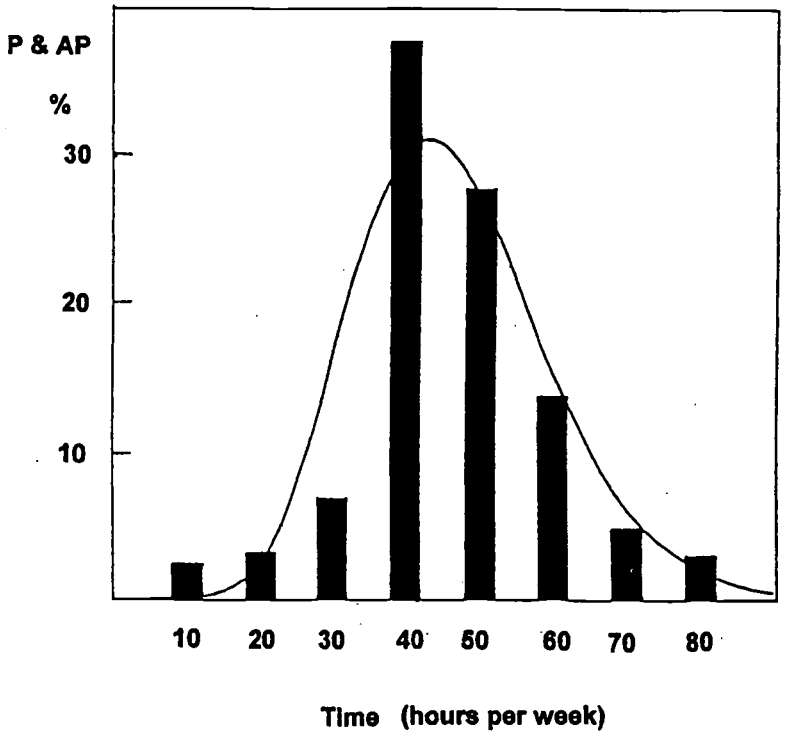
3 National Personnel Authority, Handbook for Pay System of Civil Servants in Japan, Tokyo (1990).

4 In calculating averages, individual values differing from the mean by more than 3 standard deviations were excluded.

$^{+}/_{-}$ about 3 hours per week. Returns from the Faculty of Dentistry provide an exception with averages of 36 and 34 hours per week for periods of scheduled teaching and for the rest of the year respectively. This is attributable to a combination of the high proportion of research assistants in the Faculty and the relatively short time occupied by their university duties (average, 31 hours per week).

Much wider variations are shown by individual members of the academic staff. For professors and associate professors, these yield standard deviations of 13 hours per week, and 15 hours per week over all grades. A histogram of the distribution of total times illustrates the wide variations (Figure 3.1).

Figure 3.1 Distribution of Total Time Spent on University Duties



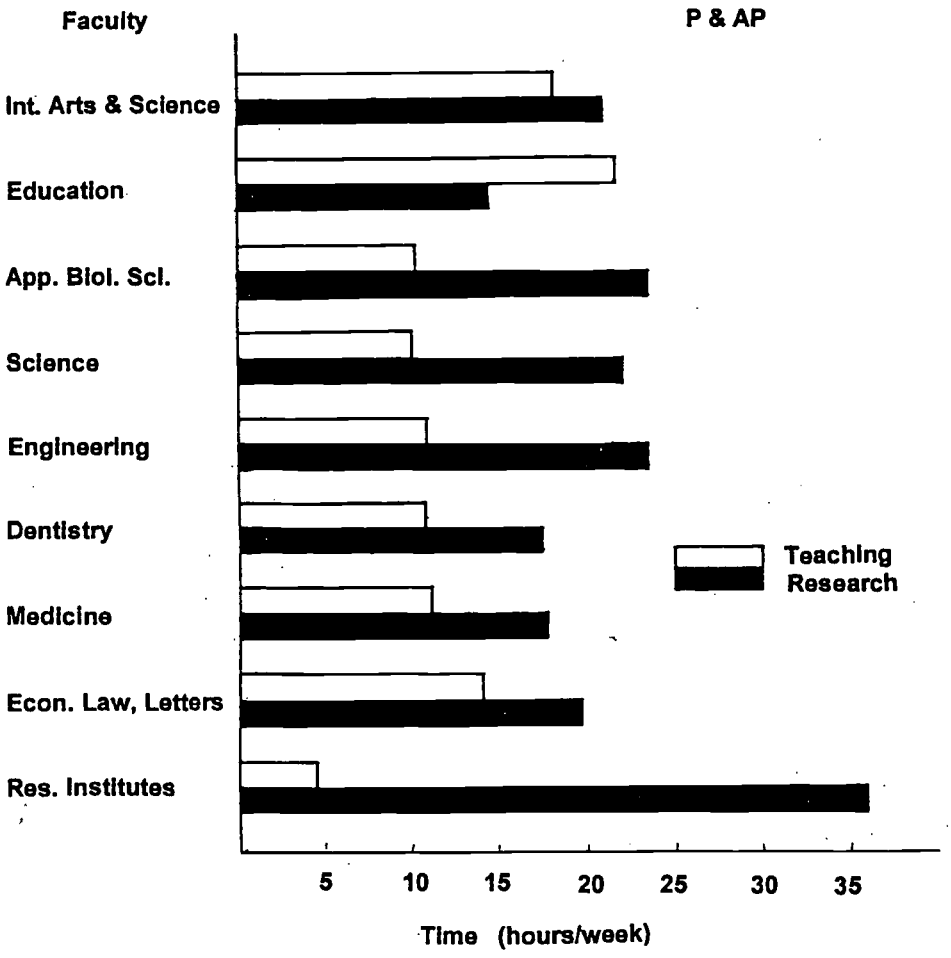
A substantial minority (22%) records an aggregate total time of exactly 40 hours per week devoted to university duties. This is in accord with the contractual obligations for staff in the National universities as public servants. Some respondents provide an explicit statement that the working week constitutes 40 hours; others may possibly have made a similar assumption implicitly. Apparent

recognition of this assumption is shared equally by professors and lecturers (21%), to a greater extent by associate professors (31%), and to a lesser degree by research assistants (15%). It is of course expected that with a normal (Poissan) distribution, a substantial number of respondents would record actual times of 40 hours per week as this is close to the observed median and mean times. But to the extent that the response is contractually correct but artificial, the averages for total time spent on university duties can be distorted. Comparison of a calculated Poisson distribution (modified to incorporate skew corresponding to the difference between mean and median times) does however provide a good approximation to the histogram from the distribution of time (**Figure 3.1**). Despite the high response in the region of 40 hours per week, the distortion does not appear to be large. Moreover, even if all returns of 40 hours per week are excluded, the mean and median values for time spent on university duties are increased by only one hour per week.

(2) Teaching. Teaching includes a variety of activities that together constitute a considerable part of academic duties in all universities. For purposes of the survey, respondents were asked to include under *teaching* all time spent on preparation, reading, marking and supervision of students as well as class-contact time. On this basis, *teaching* occupies an average of 24% of time during periods of scheduled teaching, and 6% of time during the rest of the year. The median time spent on *teaching* during periods of scheduled teaching is 8 hours per week, with a mean value of 11 hours per week. The range of individual times reported is wide, with a standard deviation of 8.2 hours. Outside the periods of scheduled teaching, the median value falls to zero, with a mean of 3 hours per week and a standard deviation of 3.4 hours.

Different grades of staff show substantial differences in the amounts of time they spend on teaching. On average, *teaching* occupies professors and associate professors (13 hours per week) about one and a half times as long as it does lecturers (9 hours per week); and about twice as long as it does research assistants (6.5 hours per week). Even so, the variations for different grades between faculties show wide variation. In the Faculties of Applied Biological Science, Integrated Arts and Science, and Science, associate professors spend 50% more time on *teaching* than professors. Conversely, in the Faculty of Medicine and the grouped Faculties of Economics, Law, and Letters, professors teach for 50% more time than associate professors.

Figure 3.2 Time Spent on Teaching and Research During Periods of Scheduled Teaching



These differences reflect the even wider differences between faculties in the overall times spent on *teaching* (Figure 3.2). The average time spent by academic staff on teaching varies by a factor of three across all faculties (even after having excluded the Research Institutes). Restricting the comparison to professors and associate professors narrows the variation to a factor of two (Table 3.1). The faculties appear to fall into two groups: those requiring clinical and laboratory studies; and those involving primarily literary studies. In the latter group it appears that *teaching* occupies staff for about 5 hours more per week.

Table 3.1 Use of Time by Academic Staff on University Duties [a]

hours per week (mean)

Faculty	Teaching	Research	Admin-istration	Other University Duties	Total
(1) During Periods of Scheduled Teaching					
Integrated Arts and Science	17.2 (18.3)	22.7 (21.0)	6.6 (7.6)	2.8 (3.2)	49.3 (50.1)
Education	19.8 (21.7)	14.2 (15.1)	5.1 (5.7)	2.2 (2.5)	41.3 (43.2)
Applied Biological Science	12.0 (10.2)	25.2 (23.6)	3.8 (4.3)	4.1 (5.0)	45.1 (43.1)
Science	10.0 (10.0)	28.4 (22.1)	6.4 (10.5)	3.1 (4.6)	47.9 (47.2)
Engineering	9.5 (10.9)	24.9 (23.6)	5.6 (6.4)	4.6 (5.3)	44.6 (46.2)
Dentistry	6.7 (10.8)	16.5 (17.4)	3.7 (7.9)	8.7 (8.7)	35.6 (44.8)
Medicine	8.7 (11.1)	19.6 (17.8)	4.9 (6.8)	11.8 (9.8)	45.0 (45.5)
Economics, Law, and Letters	15.5 (14.1)	18.9 (19.7)	4.3 (4.8)	3.6 (3.6)	42.3 (42.2)
Research Institutes	14.8 (4.5)	29.0 (36.0)	4.2 (7.7)	8.7 (3.1)	56.7 (51.3)
All Faculties	10.7 (13.8)	22.1 (21.1)	5.3 (6.8)	6.8 (5.2)	44.9 (46.9)
(2) During the Rest of the Year.					
Integrated Arts and Science	4.8 (4.6)	31.4 (29.4)	6.7 (8.9)	3.0 (3.6)	45.9 (46.9)
Education	4.3 (4.8)	29.1 (31.0)	4.6 (5.1)	2.8 (3.0)	40.8 (43.9)
Applied Biological Science	4.0 (3.3)	33.2 (30.3)	3.0 (3.3)	4.4 (5.4)	44.6 (42.3)
Science	3.7 (3.8)	36.1 (30.8)	5.4 (8.9)	3.5 (4.9)	48.7 (48.4)
Engineering	2.4 (3.5)	33.0 (31.4)	4.9 (5.2)	5.1 (6.0)	45.4 (46.1)

(Table 3.1 continued)

Faculty	Teaching	Research	Admin-istration	Other University Duties	Total
Dentistry	1.8 (1.8)	20.0 (23.3)	4.0 (8.1)	8.6 (7.1)	34.4 (40.3)
Medicine	1.6 (1.8)	22.5 (25.1)	4.4 (5.9)	12.3 (10.3)	43.8 (43.2)
Economics, Law, and Letters	2.5 (3.1)	319.9 (32.1)	3.6 (4.8)	3.2 (4.0)	41.2 (44.0)
Research Institutes	1.4 (1.5)	31.3 (38.4)	39 (7.0)	8.7 (3.0)	45.3 (49.9)
All Faculties	2.7 (3.2)	29.2 (29.9)	4.9 (6.3)	7.1 (5.7)	43.9 (45.1)

[a] Under each heading, the left-hand column gives the average for all staff, the right-hand column (in brackets) gives the average for professors and associate professors.

During the periods of the year when teaching is not scheduled, the time spent on teaching is reduced (Table 3.1). Generally, rather less than two-thirds of the year is occupied by scheduled teaching. On this basis, the mean time devoted to teaching, averaged over the whole year, is about 7.5 hours per week, equivalent to about 17% of total attributable time. For professors and associate professors, the corresponding figure is 9 hours per week, equivalent to 20% of average total time.

(3) Research. In identifying time spent on *research*, respondents were asked to include time spent on applications for grants, preparation of manuscripts, and on general scholarship as well as time spent directly on research. On this basis, the responses indicate that *research* is the dominant university duty in terms of the time devoted to it. On average, it accounts for 48% of attributed time during periods of scheduled teaching and 67% of time during the rest of the year. Taken together these amount to over 55% of the total time for the whole year. Across all staff, the median amount of time for *research* is 20 hours per week (mean time, 22 hours per week) during periods of scheduled teaching. During the rest of the year these figures are increased to 28 and 30 hours per week respectively. The responses indicate substantial individual variations from the average values, with standard deviations of 13.9 and 14.7 hours per week for periods of scheduled teaching and for the rest of the year respectively.

Differences between the averages for different grades of staff are small.

Associate professors (26, 31 hours per week) do achieve higher mean times than professors (22, 29 hours per week) but these differences are not statistically significant. Differences between faculties are larger (Table 3.1). During periods of scheduled teaching three groups of faculties can be identified. The lowest average time for *research* is shown by those in the Education Faculty. The clinical Faculties of Medicine and Dentistry attain higher average times. Times higher still are found in the technological and laboratory-based Faculties of Applied Biological Science, Engineering, and Science. Values intermediate between those of these groups are provided by the Faculties of Integrated Arts and Science, and Economics, Law and Letters. In accord with expectation, those in the Research Institutes show the highest values (Figure 3.2). With the exception of the clinical faculties, these differences largely vanish for periods when teaching is not scheduled (Table 3.1). Those in all other faculties except Medicine (25 hours per week) and Dentistry (23 hours per week), show averages close to 30 hours per week during the rest of the year.

(4) Administration. While 1 in 6 of respondents avoids administrative duties during periods of scheduled teaching, and 1 in 5 during the rest of the year, a large majority of these are research assistants. For those in more senior grades it is inescapable. During periods of scheduled teaching, only 1% of professors and 7% of associate professors spend no time on administration; these proportions rise to 7% and 13% respectively during the rest of the year. In contrast, 22% of lecturers and 43% of research assistants avoid all administrative work throughout the whole year. Overall, the average time spent on administration represents about 12% of attributable university time (mean, 5 hours per week, standard deviation, 4.7 hours). The average values change little between periods of scheduled teaching and the rest of the academic year (Table 3.1). Professors, with an average of 8 hours per week (standard deviation, 6.9 hours), corresponding to 18% of their attributable time, spend substantially more time on administration than associate professors (4 hours) or those in other grades (lecturers, 4 hours; research assistants, 3 hours). A minority of professors (19%) records *administration* occupying 20 or more hours per week throughout the whole year.

Between faculties there are substantial variations in the amounts of time taken by administration (Table 3.1), The Faculties of Dentistry, Integrated Arts and Science, and the Research Institutes all appear to carry heavy administrative loads. The load seems to be particularly burdensome in the Faculty of Science where professors appear to spend more time on administration (15 hours per week) than on teaching (8 hours per week).

(5) Other University Duties. This heading is intended to cover the many and diverse activities that fall outside those of the previous three categories. The overall mean time spent on such activities is 7 hours per week throughout the year, or about 16% of total attributable time. This figure does not change significantly between the periods of scheduled teaching and the rest of the academic year. There are though major differences in the responses from different faculties (Table 3.1). For all but three faculties, the average time reported for other university duties is 4 hours per week. In this majority group of faculties, half of the associate professors, lecturers, and research assistants spend no time on work of this sort. However, two-thirds of professors - and especially those in the Faculties of Applied Biological Science and of Engineering - record substantial commitments. The minority group of faculties is comprised of the Faculties of Dentistry and of Medicine and the Research Institutes. From each of these faculties there is obtained an average time of over 10 hours per week spent on *other university duties*, a time equivalent to 20% of total attributable time. Even in these faculties there are wide variations in time spent on these duties: one third spend no time on them but, at the same time, another third spend 10 or more hours per week on them. Of those in this second group, associate professors (11 hours per week) and research assistants (13 hours) share the heavier commitments of time. For those in the Faculties of Dentistry and Medicine it is easy to attribute these longer times to their involvement in clinical work.

Table 3.2 Changes in the Amount of Time Spent on Designated University Duties

	Change	in	the	Amount	of	Time
University Duty	Increased All Staff	Increased P & AP [a]	No change All Staff	No change P & AP	Decreased All Staff	Decreased P & AP
Teaching	55%	60%	38%	33%	6%	7%
Research	13%	10%	25%	18%	62%	72%
Administration	72%	85%	24%	12%	4%	3%
Other University Duties	49%	57%	45%	39%	6%	4%

[a] Professors and associate professors.

(6) Changes in the Use of Time. The survey asked what changes respondents had experienced over the past 5 years in the amounts of time they spend on the four categories of attributable university duties. The responses identify widespread change and a clear perception of increased demands on time (Table 3.2).

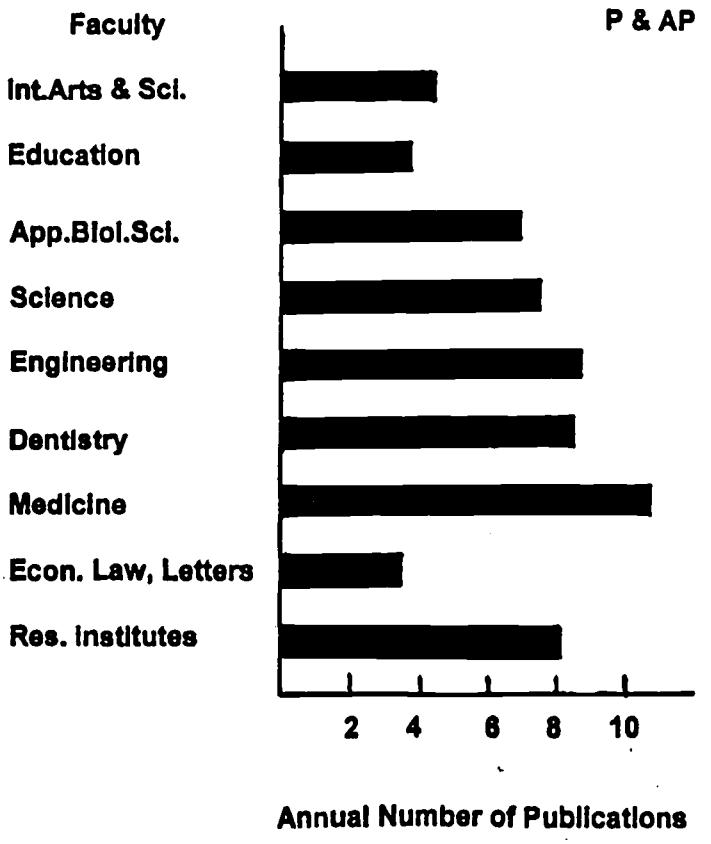
Increases in time devoted to *teaching* and to *administration*, and decreases in time available for *research* are identified by substantial majorities. The impact of change has been greater on professors and associate professors than on lecturers and research assistants. Associate professors (69%) demonstrate the largest recognition of increased time being devoted to *teaching*. Increase in time required by *administration*, and decrease in time available for *research*, are noted by professors and associate professors to similar extents. Apart from the Research Institutes, variations in the perception of change between faculties correspond largely to differences in grade-mix, with larger recognition of change being found in those faculties with smaller proportions of research assistants.

Respondents were also asked to indicate their preferences for change they would wish to occur in the future. They were asked, if additional time and resources were to become available, what order of priority they would have for using them in the four categories of university work or some form of community service. The overall response clearly identifies *teaching* as the highest priority for all grades of staff and for all faculties. The lowest priority is assigned to *community service*, both in overall response and separately for each grade of staff. Similarly clear views are attached to the intermediate priorities. All grades of staff rank *administration* and *other university duties* equally and well ahead of using any additional time for *research*.

Preferences within faculties or groups of faculties do show some variation. The priority given to using additional time for *research* is rather greater in the Faculties of Applied Biological Science and Education and in the Research Institutes; *community service* attracts somewhat higher priority in the Faculties of Dentistry, Integrated Arts and Science, Economics, Law and Letters. But for all faculties, additional time for teaching is identified as having the highest priority.

3. Publications. As an indicator of one of the major products from a university, the survey sought information on publications. Respondents were asked to provide the numbers of their publications in each of six categories: *articles in academic and professional journals; conference and seminar papers; consulting and research reports; books (including chapters in books); patents; and other publications*. To smooth the well known phenomenon of fluctuations in annual numbers of publications, numbers were requested for a three-year period (1993-4, 1994-5, 1995-6).

Figure 3.3 Average Annual Number of Publications

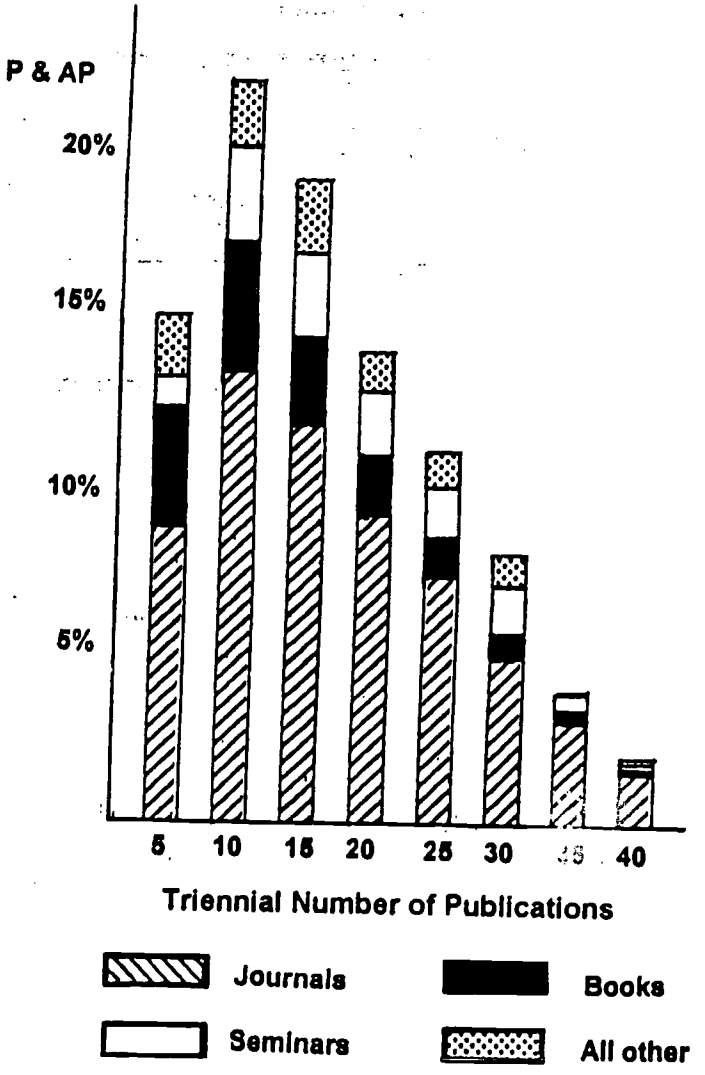


The results indicate that total individual contributions across the whole university amount to about 8,900 per annum. This number will be considerably greater than the total number of publications, many of which will have arisen from collaborations and will have multiple authors. Even so, it represents an average of greater than 5 individual contributions each year from all members of the academic staff. Moreover, a substantial majority of respondents indicates that the number of publications has either remained constant (30%) or increased (53%) over the three year period. This is though shown more clearly by lecturers (96%) and research assistants (91%) than by professors (73%) and associate professors (84%).

There are small differences in the average annual numbers of publications between professors (7), associate professors (6), and lecturers (6) but these are not statistically significant. Research assistants (3 publications) publish less. Wider differences occur between faculties (Figure 3.3). Those most prolific in publications are in the Faculties of Applied Biological Science, Engineering and

Medicine: in each of these faculties the average for all staff is 7 publications per year. At the other extreme, respondents from the Faculties of Economics, Law, and Letters have an average of 3. More generally, two groups of faculties can be identified. The laboratory, technological, and clinical faculties (Applied Biological Science, Dentistry, Engineering, Medicine, and Science) and the Research Institutes have a weighted annual average for professors and associate professors of 9 publications. In all other faculties, the average for professors and associate professors is 4 publications[5].

Figure 3.4 Distribution of Numbers of Publications



5 For research assistants, the average remains at about 3 publications across all faculties except the Faculty of Applied Biological Science (6) and the Research Institutes (4).

Amongst individual respondents there are wide variations in numbers of publications. For professors and associate professors, the distribution conforms to that of a skewed Poisson curve (mean, 7; median, 5; standard deviation, 5.9 publications per year) (Figure 3.4). As is implicit in this distribution, more than half of the publications are produced by less than a quarter (23%) of professors and associate professors.

Numerically, the most important category of publication is the *academic and professional journal* (Figure 3.4). It is also the most popular, with 98% of respondents indicating that they publish articles in *journals*. In total these account for two-thirds of all publications, a proportion which is effectively constant for all grades and almost all faculties. Exceptions are provided by the Faculty of Dentistry, in which 84% of all publications are in articles in *academic and professional journals*; and by the Research Institutes, where the proportion falls to 53%. Publication of *books or chapters in books* provides the second most popular form of publication, involving 60% of academic staff. Writing a book is though a function of seniority: three-quarters of professors and two-thirds of associate professors, but less than one-third of research assistants publish in this way. Overall, *books or chapters in books* constitute about one-eighth of all publications. Higher proportions are found in the "literary" faculties, and notably in the Faculties of Letters (25%) and Education (17%) and in the Research Institutes (19%). Of equal importance numerically, but lower in popularity, are publications in the form of *conference and seminar papers*. These also account for about one-eighth of all publications but attract contributions from only half of the academic staff: two in three professors, one in two associate professors and lecturers, and one in three research assistants. Across the faculties, *conference and seminar papers* are generally of similar numerical importance but appear to be more attractive to professors in the laboratory and clinical faculties and to more junior staff in other faculties. *Consulting and research reports* are produced by 30% of staff. They make small contributions of about 6% of the total of publications across all faculties except the Faculty of Science where they account for 11% - largely due to the contributions of research assistants. *Patents* are of small importance. In total they contribute less than 1% to the overall number of publications and only 6% of staff have published *patents* (mainly professors and associate professors). Only in the Faculty of Engineering does the proportion of publications due to patents rise to 2%.

Supplementary information was also provided about publications arising from collaboration with those outside the university. Well over one-third of all

publications arise in this way: 28% of *articles in journals*, 56% of *books and chapters in books*, 47% of *conference and seminar papers*, 78% of *research reports*, and 43% of *patents*. Across faculties there are wide variations. Low proportions of collaborative publications are reported by those in the Faculty of Dentistry (20%) and Science (17%); and a high proportion by those in the combined Faculties of Economics, Law, and Letters (63%).

Participation in external collaborations is widespread. Two-thirds of all staff report publications arising from this source. Almost three-quarters of professors (72%), associate professors (73%) and lecturers (75%) are involved although the proportion of research assistants (47%) is lower. The annual average number of collaborative publications is 3 for all staff (professors, associate professors, lecturers, 3-4 collaborative publications; research assistants, 2).

It is noteworthy that those who do report external collaborative publications are more prolific authors generally. They show an overall average for all publications of 8 per year (professors, 10 publications per year; associate professors, lecturers, 7; research assistants 4). These numbers are significantly higher than the overall average of 4 publications per year for those who do not report any external collaborative publications (professors, 5; associate professors, lecturers, 4; research assistants, 3).

4. Community Activities. For the purposes of the survey, community activities were defined as all relevant activities beyond those formally incorporated in the programme of university duties. For convenience, five general areas of community activity were identified:

(a) *Service to the Professions*, which covers contributions to academic and professional societies and contributions to other universities and colleges;

(b) *Service on Official Bodies*, including work for international agencies, national, regional and local government and research foundations;

(c) *Consultancy and Collaborative Research*, embracing those activities where public and private industry, commercial and non-commercial organisations seek expert professional assistance through contract, consultation or collaboration;

(d) *Community Social Service*, providing contributions to social welfare, health and education; and

(e) *Service to Cultural and Social Amenities* covering contributions to sport, music, theatre, art, literature, journalism and broadcasting, religion, politics, and environmental affairs.

The boundaries between the general areas were not intended to be precise or rigid

and it is clear that respondents were content to exercise judgement in allocating some of their activities to the most appropriate category. Respondents were asked to include all their contributions to community activities, even those that were less closely linked to university than to personal and family interests.

(1) Participation. The level of participation is very high. The responses indicate that 94% of all staff is currently engaged in some activity and a further 4% has done so in the recent past. Moreover, participation is both extensive and diverse. On average, each member of staff engages in 5 separate activities spread over 3 of the designated areas. Overall there are no clear distinctions in levels of participation between faculties. Between grades of staff there are clear distinctions with professors showing the highest levels of participation (Table 3.3).

Despite differences in the numbers of activities undertaken, the total average time spent on them remains fairly constant at about 3 hours per week throughout the year for all faculties and grades. There are the expected wide variations about this mean value (standard deviation, 2.7 hours per week). The only significant exception is provided by professors and associate professors in the Research Institutes who spend, on average, over 6 hours per week on community activities.

For many respondents it is availability of time that limits the extent of their community activities. Almost three-quarters of all respondents (74%) indicate

Table 3.3 Participation in Community Activities

(a) By Academic Grade (all faculties) [a]

Academic Grade	Service to the Professions	Official Bodies	Consulting and Collaboration	Community Social Service	Cultural and Social Amenities
Professors	97% (3.1)	68% (1.1)	59% (0.9)	66% (1.2)	42% (0.5)
Associate Professors	93% (2.3)	53% (0.7)	46% (0.7)	56% (0.8)	32% (0.3)
Lecturers	81% (1.4)	49% (0.6)	42% (0.5)	63% (1.0)	21% (0.2)
Research Assistants	70% (1.0)	30% (0.3)	48% (0.7)	41% (0.6)	25% (0.2)
All Staff	86% (2.0)	50% (0.7)	50% (0.8)	55% (0.9)	32% (0.3)

[a] Figures in brackets are diversity factors calculated by averaging the total number of activities in a given area over the total number of staff in that grade (e.g., on average, professors undertake 3.1 separate activities in the area of professional service

(b) By Faculty (all staff)

	Service to the Professions	Official Bodies	Consulting and Collaboration	Community Social Service	Cultural and Social Amenities
Integrated Arts and Science	86%	49%	50%	48%	31%
Education	80%	50%	30%	68%	35%
Applied Biological Science	88%	52%	56%	45%	38%
Science	93%	42%	38%	55%	17%
Engineering	85%	50%	70%	25%	23%
Dentistry	82%	43%	47%	66%	20%
Medicine	84%	51%	49%	68%	25%
Economics, Law, and Letters	100%	56%	33%	68%	32%
Research Institutes	81%	58%	53%	62%	15%
All Faculties	86%	50%	50%	55%	32%

that this is so. Limitations due to time are only slightly more evident to professors (79%) and associate professors (74%) than to lecturers (66%) and research assistants (71%).

Some of the work identified as community service attracts financial reward (notably for teaching in other universities and colleges). About two-thirds of all staff obtain some earnings in this way but the amounts are small. Almost 90% of all staff report that these earnings constitute less than 5% of their annual income. Earnings of greater than 20% of annual income are reported by less than 1% of staff[6]. More professors (80%) than those in other grades (associate professors, 69%; lecturers, 54%; research assistants, 43%) report some earnings. Between faculties there are small variations but, exceptionally, rather higher earnings are reported in the combined Faculties of Economics, Law, and Letters, and in one component of the Education Faculty.

The prospect of additional earnings appears unlikely to provide any inducement to extend participation in community work. Over three-quarters of all staff indicate that financial reward would not increase the extent of their

6 Almost all who obtain more than 20% of their income in this way are research assistants.

involvement. This proportion does not vary significantly between faculties. Amongst the grades of staff, an absence of financial incentive is perceived more clearly by professors (89%) than by associate professors (77%) and lecturers and research assistants (67%).

Table 3.4 Preferences in the Use of any Income from Community Service [a]

Academic Grade	Personal Use	Academic Expenses	Research Expenses	Scholarships	Departmental Faculty or University Funds
Professors	11%	44%	38%	3%	4%
Associate Professors	5%	48%	44%	3%	2%
Lecturers	8%	58%	28%	0	6%
Research Assistants	20%	39%	40%	0	1%
All Staff	12%	45%	39%	2%	3%

[a] Expressed as percentages of first choice preferences. Alternative procedures for analysis of the returns (e.g. by assigning weightings to the order of preference) leaves the order unchanged but diminishes the differentials between preferences.

These perceptions are echoed in the responses to a question seeking to identify preferences for use of any money that might become available if there were to be payments for community activities. If this were to happen, respondents were asked to identify an order of preference for its use between: (a) *personal use*; (b) *academic expenses*; (c) *research expenses*; (d) *scholarships*; and (e) *departmental, faculty or university funds* (Table 3.4). Overwhelmingly the most popular preferences are for (b) *academic expenses* and (c) *research expenses*. A distant, third choice is (a) *personal use*. Uses for (d) *scholarships* and (e) *university funds* are almost equally unpopular and are placed remotely in fourth and fifth places. There are no clear faculty differences in the preferences, but research assistants do find *personal* use rather more attractive than those in more senior grades.

The designated areas of community activity attract differing levels of interest and participation (see below). Respondents were asked to list the five general areas in an order of attractiveness. There is common agreement about the most and least attractive areas. Most attractive is *service to the professions*; least attractive is *service to cultural and social amenities*. These extreme pre-

ferences are shared by all grades of staff and all faculties. Attraction to the remaining three areas lies at a generally similar intermediate level. While there are no substantial variations in preferences for these intermediate areas across academic grades, there are between faculties. The laboratory and technological faculties, Applied Biological Science, Engineering, and Science, and the Research Institutes favour work in the area of *consultancy and collaborative research* over *community social work*. Conversely, the literary faculties, Economics, Law and Letters, Education, Integrated Arts and Science, favour *community social work*. Of the clinical faculties, Dentistry follows the latter pattern; but Medicine finds both similarly attractive. These preferences closely parallel the existing behaviour as demonstrated by the areas of activity in which respondents currently participate (Table 3.3.).

(2) Service to the Professions. In terms of both numbers of participants and the amounts of time devoted to it, this is the area attracting most support. Almost nine out of ten (86%) of all staff are, or have recently been, active in such work. On average, they spend between one and two hours per week on it. The extent of their involvement reflects academic seniority: 97% of professors, 93% of associate professors, 81% of lecturers, and 70% of research assistants participate in it (Table 3.3). Similarly, the amount of time devoted to it by professors and associate professors (average, 1.5 hours per week) is significantly greater than that provided by lecturers and research assistants (1 hour per week).

The largest activity within the area is support for the *committees of professional societies*. This is provided by two-thirds of all staff (89% of professors; 66% of associate professors; 48% of lecturers; 26% of research assistants). *Organisation of conferences* and *editorial work* for professional and academic journals involve over a half and one-third of all staff respectively. The remaining major professional activity is *work for other universities and colleges*, usually in the form of part-time teaching. This is undertaken by over half of all staff including three-quarters of all professors, over half of associate professors, and about a quarter of lecturers and research assistants. The high levels of contributions made by professors to this whole area is notable. It is further emphasised by the multiplicity of activities they undertake in this area. Whereas research assistants and lecturers engage, on average, in only one of the individual activities, associate professors are active in two and professors in three of them.

(3) Service on Official Bodies. Half of all staff report contributions to this area. Again it is seniority that determines the level of activity. Participation decreases from two professors in three, to one associate professor or lecturer in

two, and to less than one research assistant in three (Table 3.3). The average amounts of time spent on it by those actively involved do though remain roughly constant at about 1 hour per week for all grades despite the greater number of official bodies on which professors serve. It appears that staff in the Faculty of Applied Biological Science and the Research Institutes devote the largest amounts of time to work in this area.

Numerically, the largest contributions are through work for *local and regional organisations*. This accounts for 37% of all staff. Work for *international foundations* (22%) constitutes a larger component than work on *government committees* (11%). In these activities, particularly extensive contributions are provided by professors in the Faculties of Engineering and Medicine and in the Research Institutes.

Consultancy and Collaborative Research. This area also attracts participation from half of the academic staff but with a different distribution over both grades and faculties (Table 3.3). As participants, professors still provide the largest contribution in terms of number of activities, but the time they devote to them is, on average, no greater than that shown by associate professors, lecturers and research assistants. But the pattern of activity in this area is markedly skewed both in amounts of time and in the distribution of participation. So, the proportion of staff in other grades (30%) engaged in work in this area for longer than the mean time (1 hour per week) is twice that of professors (15%). Moreover, most of the larger contributions to this area are located in the technological and laboratory faculties and the Research Institutes. In the Faculties of Applied Biological Science and Engineering, three-quarters of all staff participate in the work; in the clinical faculties, the Research Institutes and the Faculty of Integrated Arts and Science, participation is restricted to about half of the staff; and in all other faculties, including the Faculty of Science, participation falls to about one-third (Table 3.3).

Amongst the individual activities, *collaborative research* and *consultancy* each attracts participation from one-third of all staff. *Consultancy* for commercial organisations is slightly less popular than *consultancy* for non-commercial organisations. *Contract research* constitutes a minor component (5%) with professors comprising half of those who undertake it. It is noteworthy that over three-quarters of those involved in *consultancy* or *collaborative research* also report publications as a result of external collaboration[7].

(5) Community Social Service. In terms of numbers of participants, this area is the second most popular having 55% overall participation. In all, about two-

thirds of professors and lecturers and rather fewer associate professors are involved (Table 3.3). Those working in this area devote to it an average of about 1 hour per week; professors spend rather less, and associate professors rather more, than the average time on it. Amongst the faculties, participation is effectively the obverse of that found in the previous section. In the Faculties of Economics, Law, and Letters, Education, and Medicine, and in the Research Institutes, two-thirds of staff participate. In the remaining faculties, the proportion is about half, with the exception of the Faculty of Engineering where it falls to one-quarter of the staff.

Most widespread are contributions to *adult education* (31%) with professors in all faculties showing extensive involvement. Elsewhere, *school education* (17%) enjoys particular support from the Faculties of Education and of Science; and *health care* (18%) attracts substantial contributions from the Faculty of Medicine. *Social welfare* (9%), membership of *community service clubs* (10%), and *pre-school education* (3%) attract little support.

(6) Cultural and Social Amenities. Less than one-third of staff are either currently active, or have been active in the recent past, in this area (Table 3.3). For those who are involved, the average commitment of time for professors, associate professors, and lecturers is rather less than 1 hour per week; for research assistants it is about 2 hours per week. About half of all the reported activities are undertaken by professors, with those in the Faculties of Economics, Law, and Letters, Integrated Arts and Science, and Medicine reporting most activity. The other half is distributed with no apparent concentration in any specific grade or faculty. Only four individual activities achieve even modest levels of participation: *journalism and broadcasting* (9% of all staff); *sports organisations* (8%), *environmental matters* (5%) and *music, theatre* and *art* (4%). Expressed support for activities relating to *religion* (2%), *literature* (1%) and *politics* (<1%) is vanishingly small.

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7 There appears to be an anomaly in that these respondents constitute only 58% of those reporting publications arising from external collaborations. The remaining 42% do not indicate any participation in consultancy or collaborative research. While it is possible to identify circumstances in which collaborative publications can be achieved without collaboration, it is possible that this apparent anomaly indicates that responses to the survey understate the extent of consultancy and collaboration.

Chapter 4

Uses of time in national universities

4. Uses of Time in National Universities

A conventional image of university life remains one of remote and timeless academic study, free from external stress and enriched by lengthy vacations and international conferences. From within universities the view is different[1]. External pressures for reform, appraisal and competition added to internal pressures from enrolments, funding and achievement, induce stress. Traditional attractions of academic life were seen to combine social status with a flexible schedule of work and freedom to pursue individual scholarly interest. Time, social change and rapid institutional growth have eroded these benefits. Even so, universities still retain capacity to cater to the diverse needs of individual and idiosyncratic scholars.

It is then perhaps surprising to learn that in many aspects of their structures they display characteristics not dissimilar to those of commerce and industry. The surveys show that in the National universities, the average age of academic staff and the length of their experience with their current institution is closely similar to the averages reported for all employees in industry[2]. Only in the proportion of women graduates (8%) employed do universities depart from the level in industry (13%). It is noteworthy that both the surveys described in Chapters 2 and 3 indicate that one-third of all staff has served for less than 5 years in their present university. This includes 1 professor in 6, and 1 associate professor in 4. This observation appears to cast some doubt on the need to institute special procedures to ensure adequate levels of staff mobility.

The surveys also show that the average working week for academic staff in the National universities is rather longer than the average working week in industry or that reported for university graduates in Japan (including overtime)[2]. The total time devoted to university duties, at an annual average of 46 hours per week, is slightly longer in the second survey but the difference and the small

1 E.L.Boyer, P.G.Altbach, and M.J.Whitelaw, The Academic Profession-an International Perspective (1994), The Carnegie Foundation for the Advancement of Teaching, Princeton.

2 Ministry of Labour, Yearbook of Labour Statistics 1996, Tokyo (1997).

3 Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom (CVCP), Report of an Enquiry into the Use of Academic Staff Time, CVCP, London (1972); S.Court, Long Hours, Little Thanks, Association of University Teachers, London (1994).

4 Higher Education Research Institute, University of California at Los Angeles, Faculty Survey, 1989-90, in The Almanac of Higher Education, The Chronicle of Higher Education, Chicago (1994), US Department of Education, National Center for Education Statistics, National Study of Postsecondary Faculty (1992), Washington (1993).

variations between the estimates for the various grades of staff have no statistical significance. The average is similar to values which have been reported for university staff in other countries[3,4]. In studies over the past 35 years, it appears that the average length of time spent on university duties has increased by 6%-15% in both the UK and the USA[5,6]. This provides an interesting contrast to the general reduction in working weeks in industry and commerce over the same period of time. It is possible to identify this as one source of the high level of stress identified for Japanese academic staff in a recent international survey of university staff[1].

Between universities in Japan and those in other countries there are major differences in the way this time is used. Outside Japan the major activity during periods of scheduled teaching is indeed teaching. Whereas in the UK and the USA 30 years ago, teaching averaged about 14 hours per week[5,6], it has now expanded to occupy over 20 hours per week, corresponding to more than 50% of time during periods of scheduled teaching[3,4]. A number of structural factors will contribute to these differences. Provision for graduate courses has increased, and student/staff ratios have increased in the UK and the USA more than in Japan; and the balance between subject areas differs. So it is of interest that in these surveys, staff identify both that the time they already devote to teaching has increased and that there is a need to find still more time for teaching[7].

A nexus between teaching and research is frequently invoked to describe the relationship between these two principal activities in universities. Whether it is a general truth is much debated, but it appears to be appropriate to describe the use of time in this way - if you do more teaching you do less research. So, the increase in time devoted to *teaching* during periods of scheduled teaching is at the expense of time devoted to *research* during the rest of the year (Figure 4.1). The figures in Tables 2.2, 2.3, and 3.1, illustrate how this affects use of time in faculties and for different grades of staff.

The smaller proportion of time devoted to *teaching* in the National universities is balanced by a greater availability of time for *research*. It is possible

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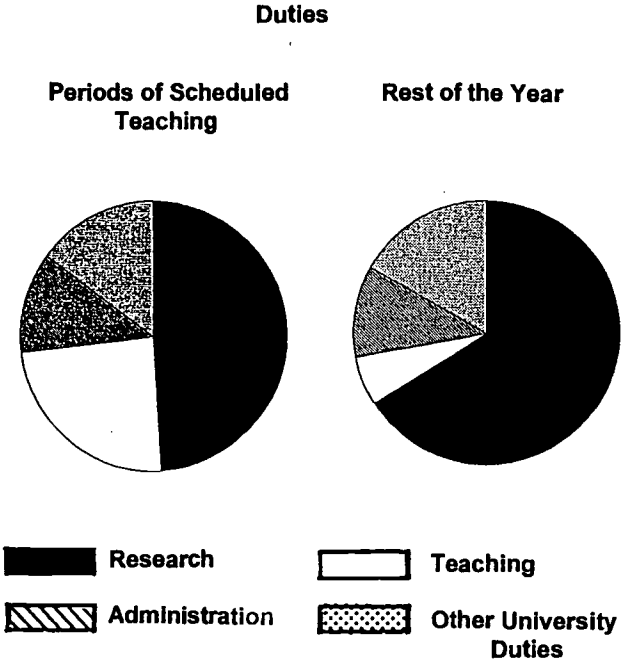
5 Committee on Higher Education (Robbins Committee), Higher Education, Appendix Three, H.M.S.O., London (1963).

6 H.Orlans, The Effects of Federal Programs on Higher Education, Brookings Institution, Washington (1962).

7 It is interesting that the highest average time for teaching in the surveys is reported by the Education Faculty even though traditionally teaching in the social sciences has demanded less time than in the sciences. The student/staff ratio in the Education Faculty does not appear to be unusually high.

Figure 4.1
Distribution of Time between University Duties



that this complementarity, illustrated in Figure 4.1[8], leads to an underestimate of the proportion of time devoted to *research* by those who have artificially restricted their estimate of the total time they spend on university duties to 40 hours per week[9]. Even so, research constitutes the largest component of university duties, accounting for almost half of the time during periods of scheduled teaching, and two-thirds of the time in the rest of the year. In contrast, in British universities,

8 This is also seen at faculty level. Returns from the Education Faculty show it to be unique in using more time for teaching than research during periods of scheduled teaching. In achieving this, professors and associate professors in the Faculty provide the largest amounts of time for teaching and the smallest amounts of time for research during periods of scheduled teaching. During the rest of the year, the average amounts of time they devote to research are as large as those in other faculties.

9 Returns that are deliberately restricted to a total of 40 hours per week for university duties may be particularly susceptible to adjustment of the balance between the estimates of time spent on the separate duties. Subjectively it is possible that time spent on teaching may seem to be better defined than that on research. If so, the time recorded for research may be merely the residual required to bring the total to 40 hours. In comparison with the overall averages, analysis of the returns from those giving a weekly total of 40 hours shows that they assign slightly more time to teaching (12 hours), the same times to administration and other university duties, but less time to research (16 hours, a reduction of 27%). In contrast, the averages for all other returns with total times in the range 35-44 hours per week show a proportional reduction from the overall averages of about 10% for each of teaching, administration, other university duties, and research. The effect on the mean values of any bias arising in this way, is likely to be fairly small.

research occupies about one-third of the time over the whole year[3]; and even in private US research universities the average is below 38% of time during periods of scheduled teaching[4,10,11].

The use of time for *administration* and *other university duties* shows little variation across faculty, institutional or international boundaries. In all cases it appear to be fixed at about one-quarter of the average time devoted to university duties and is effectively constant throughout the year. It follows that the "academic" duties of teaching and research occupy three-quarters of the available time. In the National universities the average annual allocation of time is 20% to *teaching*, 54% to *research*, 14% to *administration* and 12% to *other university duties*. This is roughly equivalent to 1 day per week for teaching, 1 day for administration and other university duties, and 3 days for research, over the whole year. In contrast, the comparable figures for America and Britain would be roughly 2 days per week on teaching, 1 day for administration and other university duties and 2 days for research. This contrast appear to identify the National universities in Japan as

"educational institutions uniquely characterised by a commitment to research;" rather than the alternative

"educational establishments providing teaching in an atmosphere of research"

A direct measure of research activity is provided by publications. In attempts to obtain qualitative estimates of research, it has become conventional to assign weightings to the character and location of publications. The purpose of the surveys was rather to obtain an indicator of levels of research activity across the university; and for this purpose numbers of contributions to publications provides an appropriate measure. Two results emerge: (a) the level of activity as judged by the average number of publications is high; and (b) there exist marked differences between faculties in patterns of publication. Those in the laboratory, technological, and clinical faculties are more prolific publishers and tend to write *articles for*

10 B.R.Clark, The Academic Life, The Carnegie Foundation for the Advancement of Teaching, Princeton (1987).

11 The Carnegie Classification of universities in the United States defines Research Universities (1990) as "offer (ing) a full range of baccalaureate programs, (being) committed to graduate education through the doctorate degree and giv(ing) high priority to research. They receive annually at least $33.5 million in federal support and award at least 50 Ph.D. degrees each year" Research Universities II are defined similarly but with federal funding of at least $12.5 million. [E.L.Boyer, Scholarship Reconsidered, The Carnegie Foundation for the Advancement of Teaching, Princeton (1990)]. While few universities in Japan (or elsewhere) fully satisfy these criteria, they provide the closest approximations to the role assumed by the National universities.

academic and professional journals. Those in the "literary" faculties generate fewer publications but write more frequently in the form of *books.* There is no evident correlation in the time spent on research and the number of publications - a result supported perhaps by the view that, on average, the number of publications has increased over recent years even though the time available for research has decreased. The observation that a majority of publications is produced by a small minority of staff is in accord with a number of results reported overseas[12]; but it is equally significant that all respondents report some publications during the specified period. The number of publications arising from external collaboration (33%) is of interest in revealing the scale of external collaborative research as well as its importance as a source of publications.

For a university system that until recently attached importance to its separation from external influences, participation in community activities by academic staff in the National universities is remarkably high. The level of participation in community activities amounts to 94% over all grades. It is true that the largest area of activity is in *service to the professions,* including academic and professional societies and other universities and colleges. This involves 88% of staff. But it is notable that the same proportion of staff (87%) also participates in the other designated areas of community work. The time involved is also substantial. It amounts to an average of 3 hours per week, a figure similar to that reported for academic staff in universities in other countries[3,4,10]. The surveys did not establish how much of this time was in addition to time spent on university duties. However, by the definitions used and the nature of the work, most of it will be additional and extend the estimated working week to an average of about 49 hours.

The ten most heavily subscribed community activities are listed in Table 4.1. The four most popular fall into the area of *service to the professions.* Involvement in professional affairs is not unique to Japanese academics but the level of activity is notably higher than would be expected elsewhere. Similarly, the extent of part-time work for other universities and colleges is substantially higher than is found elsewhere[1]. Encouraged by government[13], *collaborative research* and *consultancy* now constitute substantial components of community activity, especially in Faculties of Engineering. In contrast, with no more than 7% participation, *contract research* remains as rare as membership of *United Nations advisory bodies* and

12 e.g. P.Ramsden and I.Moses, Higher Education, 23, 227 (1992); K.A.Feldman, Research in Higher Education, 26, 227 (1987).

13 Ministry of Education, Science and Culture, Japanese Government Policies in Education, Science and Culture, 1990, Tokyo (1990).

Table 4.1

Levels of Participation in Community Activities

		Overall	Professors	All Other Staff
1	Committees of Professional Societies	63%	89%	48%
2	Conference organisation	53%	77%	38%
2	Other Universities and Colleges	53%	77%	38%
4	Editorial Work	39%	64%	24%
5	Local and Regional Agencies	37%	55%	26%
6	Collaborative Research	36%	44%	31%
7	Consultancy (commercial and non-commercial) [a]	35%	47%	28%
8	Adult Education	31%	48%	21%
9	International Foundations	22%	35%	13%
10	Health Care	18%	16%	20%

[a] Separately, non-commercial consultancy (19% participation) and commercial consultancy (16% participation) rank 9th and 12th respectively.

involves fewer people than all except the cultural activities of *literature, religion* and *politics*. In other countries it is widely accepted that individual contacts through consultancy and contract research provide highly effective routes to developing collaborative programmes between industry and universities[14]. In America over two-thirds of all Engineering professors earn fees from their contractual links to industry[14a]. It appears that much further deregulation will be necessary before this mechanism for increased collaboration becomes fully effective in Japan.

14 (a) Center for Science and Education Policy, New York University, Report, National Science Foundation, Washington (1981); (b) Advisory Council for Applied Research and Development, Improving Research Links between Higher Education and Industry, H.M.S.O., London, (1983); (c) National Board of Employment, Education and training, Crossing Innovation Boundaries, Commissioned Report No.26, Australian Government Publishing Service, Canberra (1993).

Direct and indirect financial rewards from community activities contribute substantially to universities and academics in other countries[15]. In Japan, the penalties and complexities of regulations constrain the extent of institutional benefit for the National universities, and preclude individual benefit. On this basis the preference for using any money that might be obtained from community activities for academic or research expenses rather than for personal or institutional benefit is rational. In other countries, a more uniform distribution of preferences would be expected, with personal and institutional benefit both rating prominently. There is though an element of illogic in the preferences provided by the responses to the survey. Earnings from teaching in other universities and royalties from books are retained for personal use. There is no reason in principle why the regulations for academics as public servants could not be relaxed further to allow this to apply to other professional activities including consultancy and contracted research[16].

A recurrent factor in the responses to the surveys is a perception of constraints due to limitations on available time. The high level of work-load and a perception that it is increasing with time is shared across all staff. It could be argued that much of this is self-inflicted and some is self-interested. But much is attributable to a sustained high level of collegiality in responding to university needs. It may be that this will be one of the casualties of change. While it is a truism that academic activity expands to consume all available resources, shortage of time appears to impinge particularly on the work of professors. Universally it is accepted that professors will demonstrate academic leadership by undertaking a substantial administrative load. The results of the surveys confirm this, showing that professors spend about twice as long (8 hours per week) on administrative duties as do other staff. They achieve this within a working week only slightly longer than that of other staff by reducing marginally the amounts of time they spend on academic work, teaching and research. Again in community activities, while the work performed by all staff is substantial, the role performed by professors clearly overshadows the contributions from other university staff (Table 4.1). It is a necessary and proper role for professors to exercise academic

15 e.g. In the UK, one quarter of research funding in the universities (equivalent to 48 billion yen) was derived from collaborative or contract research in 1994. CVCP, Research in Universities, Briefing Note (1995), CVCP, London (1995).

16 It has now (1999) been announced that the government plans to review the regulation preventing academics receiving reward for external work for those academics serving on the boards of collaborating companies.

leadership in this way. Commonly it is external agencies that specifically seek professorial involvement. Yet the time that professors devote to community activities is no greater than that of associate professors or lecturers. In many instances, it is inevitable that large parts of the work will be performed not by the professor but by more junior colleagues; on occasion this leads to an external perception that the professor attaches low priority to it. It may be that one conclusion to be drawn is, that without significant internal reorganisation, there is limited scope for any substantial extension of such university activities.

The statistics derived from these surveys provide a contribution to a description of the existing system[17]. It would though be inappropriate to identify the statistical averages obtained from the surveys as individual "norms" The averages conceal a wide diversity as is shown by the standard deviations from the means. The statistics reveal a fundamental diversity of both inputs (e.g. time) and outputs (e.g. community activity). It is this diversity rather than the mean values that characterise individual academic performance. So, even including those who identify their working week as a formal 40 hours, one quarter of all respondents indicates that their university duties occupy longer than 125% of the averages for total time, teaching time and research time. Concurrently, the total university duties of one in ten and the teaching and research of one in three are accommodated in less than 75% of the average times. Nor is academic productivity readily identified with average performance. A majority of research publications originates from a minority (24%) of university staff; and there appears to be no correlation between those who are prolific authors and those who devote most time to research. It would be equally fallacious to assume that longer hours necessarily correspond to qualitatively better outputs. The statistical averages only become useful collectively. At the level of faculty, university, and total system they provide a quantitative description of the existing structure. But they also offer an opportunity to assess the potential for change. If it is important to sustain excellence in the system as a whole and also at the level of university and faculty, such quantitative measures become rational aids to constructive discussion.

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17 Universities in the UK are being asked (1999) to provide details of expenditure of resources and use of time on teaching, research, administration and other duties as part of a Transparency Review of Research (Costing) [J. M. Consulting Ltd., Higher Education Funding Council (HEFC), Bristol (1999)]. It is argued that this data will be of primary interest to individual universities for planning purposes. Its submission, in standard format for the HEFC will doubtless facilitate planning for the whole university system, and for teaching, administration and other duties as well as for research.

Chapter 5

A survey of use of time in private and public universities

5. A Survey of Use of Time in Private and Public Universities

The universities in Japan are divided into three sectors: National, Private, and Public. The National universities maintain high academic standards across a wide range of teaching and research. They enjoy high prestige and provide the necessary benchmark for the country's university system. But in terms of number, size and growth it is the Private and Public sectors that make the larger contributions[1]. Transformation of university education from one serving a limited elite group to one providing open and wider access was largely achieved by the Private universities; and recognition of the special benefits available from massification of access has enabled local Public universities now to become the most rapidly growing of the three sectors.

It was clearly of interest to extend the surveys of the uses of time in the National universities to Private and Public universities. In considering this, two problems become apparent. These both relate to difficulties of obtaining satisfactory samples. The Private university sector is very large (431 universities) and contains institutions varying widely in size, scope and constitution. Conversely, the Public sector is small (57 universities) but it is designed to reflect local needs and so is subject to wide diversity in terms of academic structure and composition. Samples that might constitute reliable models for both sectors would need to be large and to include a considerable number of institutions. This desirable objective was well beyond the capacity of the present study.

As an alternative, it was possible to arrange access for a survey to be carried out in a small group of neighbouring Private and Public universities[2]. The shared physical environment served to minimise one of the many variables implicit in the study. The restricted scale of the sample reduces the precision and reliability of the results and the validity of extending conclusions to the whole sectors. It is clearly desirable to extend and amplify the survey to remedy these defects. Until that is possible it is at least useful to have some data from the Private and Public sectors rather than to rely on subjective and anecdotal opinion. In the event, the results appear to be generically compatible with those from the National

1 Statistical Abstract of Education, Science, Sports and Culture, Ministry of Education, Science Sports and Culture (MESSC), Japan (1997); Schools Basic Survey, MESSC, 1997.

2 The author is indebted to Professor A.Arimoto for making all the arrangements in connection with this survey.

universities; and from experience with the surveys of the National universities it may be that the limited scale of the sample does not impose any substantial errors on the qualitative conclusions[3].

The survey was conducted by means of the same questionnaire that was used for the survey described in Chapter 3. The results can thus be compared directly with those obtained from the National universities. In this chapter, the results from the Private and Public universities are presented. Discussion of the results follows the same sequence as that used in the earlier discussion of the National universities (Chapters 2 and 3). To avoid unnecessary repetition, detailed descriptions of the questions in the questionnaire given in the earlier chapters have not been repeated: there was no variation in the wording for this survey. In this chapter the results from the Private and Public universities are considered together and in the following chapter the results from the three university sectors are discussed and compared.

1. Sample. Questionnaires were distributed to 4 universities. Two of these are Private universities, two are local Public universities - one a metropolitan city university, one a prefectural university.

1. Response. The response provided a 1 in 5 sample (20%) across the four universities, and for three of them constituted a sample of 25%. The sample largely comprised professors and associate professors (90%). This represents a strong bias in the sample with respect to the total university populations and to the average sectoral populations but the distribution between professors (60%) and associate professors (40%) is sufficiently close to that found in the universities in the survey to require no overall statistical correction. However, results for "All staff" would be subject to indeterminate errors and unless otherwise noted all the quoted results and those tabulated in Chapter 6 are for professors and associate professors only,

Women constituted 5% of the total sample, but only 2% of professors were women.

(2) Age and Service. Median age for the whole sample lies in the range 46-55 years. Professors show a median age of over 55, associate professors one in the range 36-45, and other academic staff one of less than 35 years. Over 70% of professors are aged over 55; in contrast two-thirds of associate professors are less

3 In preparatory work for the surveys in the National universities, small scale trial surveys yielded results which were closely similar to those obtained from the more extensive subsequent surveys.

than 46 and only 6% are more than 55.

Almost half of the respondents have been in their present university for less than 5 years, including 40% of professors and 46% of associate professors. These proportions reflect the recent establishment of one of the surveyed universities (where only 16% have worked for more than 5 years); in the other universities, the proportion of those who have served for less than 5 years is only 20% (professors, 19%, associate professors 21%).

2. Use of Time. *(1) Total Time.* For the whole sample, the average total time spent on academic duties is 42 hours per week during periods of scheduled teaching and 40 hours per week during the remainder of the year. There are though differences between the two sectors, with the Private universities reporting mean times for professors and associate professors of 43 and 43 hours per week (median, 44, 43 hours) and Public universities mean times of 40 and 37 hours per week (median, 40, 40 hours) for periods of scheduled teaching and for the rest of the year respectively (see Table 6.1). There are also differences between the grades, with associate professors in Private universities - though not in the Public universities - recording longer hours (mean, 48 hours per week) than professors (41 hours) during periods of scheduled teaching. Differences in *total time* between comparable groups of faculties appear to be small[4].

(2) Teaching. During periods of scheduled teaching, the overall average time spent on *teaching* is 16 hours per week. There is though a significant difference between the two sectors with the mean time for both professors and associate professors in Private universities being 19 hours per week and in the Public universities 13 hours per week (median times, 18 and 10 hours respectively). Within the Public universities, respondents from technology-based faculties report spending less time (10 hours) on *teaching* than those in other faculties (15 hours); in the Private universities no significant difference is reported (18 and 19 hours respectively).

During the periods of the year when teaching is not scheduled, the amount of time spent on *teaching* falls to a mean value of 5 hours per week (median, 4 hours) with no clear differences between sectors, grades or faculties.

(3) Research. In terms of time, research constitutes an academic duty of equal importance to *teaching*. The overall average time for *research* during

4 Standard deviations for total times and for the times of attributable dutues are similar to those recorded for the National universities

periods of scheduled teaching is 17 hours per week (median, 15 hours). Associate professors (19 hours per week) appear to spend rather more time on research than professors (15 hours) but there is no significant difference between the Public and Private sectors. In contrast, within the sectors, professors in technology-based faculties (16 hours per week) do appear to spend more time on research than those in other faculties (13 hours); the average for associate professors (19 hours) does not appear to vary with the faculty grouping.

During the periods of the year when teaching is not scheduled, a majority of time is devoted to *research*, with an overall weekly average of 26 hours (median, 25 hours). For professors the average time increases to 26 hours per week in technology-based faculties and 21 hours in other faculties; for associate professors the comparable increases are to 29 and 26 hours per week respectively.

(4) Administration and Other University Duties. The time spent on these duties is effectively constant throughout the year at mean times of 6 hours per week for *administration* and 3 hours for other *university duties* (median times, 5 hours and 1 hour respectively) both during periods of scheduled teaching and the rest of the year. There are no clear differences in the times spent in the Private and Public universities or in the various faculty groupings. There is though a clear distinction between professors and associate professors: professors spend almost twice as long (7-8 hours per week) as associate professors (4 hours) on *administration.*

(5) Changes in the Use of Time. Respondents were asked what changes have occurred in the distribution of their time amongst university duties over the past 5 years. The responses indicate that professors and associate professors have been affected similarly. There are clear perceptions of increases in time devoted to *administration* and to *teaching* and a decrease of time available for *research.* Between the Private and Public universities marked differences exist in the extent of impact of the changes (Table 6.2). Increase in the times devoted to administration and other duties is experienced more widely in the Private universities. Substantially more of those in the Private universities register decreases in time for research. In general there is a greater perception in the Private sector that university duties have expanded over the past 5 years.

If more time and resources were to become available, respondents in all the universities and across all grades of staff, would attach the highest priority to using them for *teaching.* The second priority would be given to *administration. Research* is rated third but only by the younger respondents; professors rank *research* last equally with *community services* for the use of additional resources;

and associate professors place it below *community services* in order of priority.

3. Publications. All respondents have published something during the past 3 years. The aggregate number of publications reported represents an annual average of almost 4 for each member of staff (median value, 2), an average that does not vary significantly with university sector, academic grade or faculty. Moreover, for three-quarters of all respondents the number of publications has either remained unchanged (41%) or has increased (36%) over the past 3 years despite the reduction in time available for research.

The most popular form of publication is as *articles in journals.* Over 90% of all academic staff contribute to journals. This accounts for almost half (49%) of all publications with an annual average of about 2 articles for each academic staff member (median, 1 article). Second in popularity, accommodating publications from half of all academic staff and accounting for slightly less than a quarter of all publications (22%), are *conference and seminar papers.* Higher than average numbers of these papers are produced in the non-technology-based faculties of the Public universities. Equal in popularity with academic staff (50%) but representing a smaller fraction of the output (10%) are *books (including chapters in books).* This form of publication attracts professors and associate professors in all faculties and in both university sectors equally. In contrast, *consulting and research reports*, accounting for 7% of all publications and involving 30% of all staff, are most commonly produced by professors in the Public universities. *Patents* constitute only 2% of all publications and involve only 6% of respondents, mainly in the technology-based faculties of the Public universities.

Well over half (57%) of all publications arise from collaboration with those outside the university. Such collaborative publications account for over 70% of all publications except *articles in journals* (and for almost half [43%] of those). Similarly almost three-quarters of all respondents (72%) report publications arising from collaborations. Those who engage in such collaborations are, on average, twice as prolific in the numbers of their other publications than those who report no collaborative publications.

Wide variations about the mean values for publications are shown by individual responses. More than half of all publications arise from less than a quarter (23%) of all staff, two-thirds of them being professors.

4. Community Activities. For the purposes of the survey, community activities were defined as all relevant activities beyond those formally incorporated in the academic programme of the university. For convenience, five general

areas of community activity were designated:

(a) *Service to the Professions;*

(b) *Service on Official Bodies;*

(c) *Consultancy and Collaborative Research;*

(d) *Community Social Service;*

(e) *Services to Cultural and Social Amenities.*

The boundaries between these general areas were intended to be sufficiently permeable to allow respondents to exercise judgement in allocating some of their activities to the most appropriate category. Respondents were asked to record all their activities, including those contributions that were less closely linked to university than to personal and family interests.

(1) Participation. A high level of participation is shown in all the universities with 93% of all staff currently involved and a further 5% having been involved at some time during the past 5-year period. Participation is extensive, with each participant contributing, on average, to 3 of the designated areas and 5 separate activities. Overall both professors and associate professors devote, on average, about 3 hours per week to community activities spread over 3 areas; but professors undertake more separate activities (6) than associate professors (4). Comparison between the university sectors suggests that professors in Public universities and especially those in non-technology-based faculties participate in more individual activities (6) than those in the Private universities (5). Levels of activity do not vary significantly for associate professors but those in the Public sector spend about twice as long on them (4 hours per week) as those in the Private sector (2 hours).

Availability of time for community activities is seen as a limiting factor by two-thirds of respondents but this is more evident to associate professors (83%) than to professors (55%).

Some of the work defined as community service provides financial reward. In the Public universities, 5 in 6 professors and associate professors obtain some earnings in this way; in the Private universities the numbers are smaller, covering 3 professors in 4 and 1 associate professor in 2. However, across all the universities the earnings are small, amounting to less than 5% of total earnings for more than 80% of respondents. A very large majority of all respondents (professors, 89%; associate professors 76%) indicate that the prospect of additional personal payment would not provide an incentive for increased involvement in community activities.

This response is clearly supported by preferences for the use of any money

that might be generated if there were to be additional payments for community service work. *Personal use* (11%) constituted one of the less popular options. The most popular choices are for any such income to be made available for *academic expenses* (47%) or for *research expenses* (31%). Least popular are the possibilities of using it for *scholarships* (2%) or for *departmental, faculty or university funds* (8%). These preferences show little variation between university sectors, faculties or grades with the exception of associate professors in Business Faculties who find *personal use* as attractive as provision of more funds for *academic expenses.*

(2) Areas of Community Work. Individual areas of community work provide differing levels of attraction and participation. Asked to list the five general areas in order of attraction respondents show clear agreement that *service to the professions* is the most attractive; least attractive is involvement in *cultural and social amenities.* Of the other areas, *consultancy and collaborative research* proves slightly more attractive to those in technology-based faculties; in the other faculties, *community social service* is preferred. Generally, *service on official bodies* is rather less popular than either of the other two intermediate choices. This order of preference corresponds fairly closely to the pattern of existing behaviour as indicated by the areas of activity in which respondents currently participate (see Table 6.4 below)

(a) Service to the Professions. This provides the most attractive area for community work in terms of numbers of participants (91%), the diversity of their activities (2 activities) and the time they devote to it (1.5 hours per week). Professors show the highest average levels of participation in terms of numbers (96%), and diversity (2.5 activities) but not in time (1-1.5 hours per week). Associate professors, although reporting slightly lower participation and involved in rather fewer activities (89%, 2 activities), on average devote rather more time (1.5-2 hours per week) to it. The major individual activity is *service on committees of professional societies,* performed by almost two-thirds (64%) of all staff (professors, 80%; associate professors, 44%). *Organisation of conferences* involves slightly less than half (45%) and *editorial work* one-third (32%) of all staff (professors, 51%, 42%; associate professors, 34%, 22%). In contrast, associate professors (69%) show greater involvement than professors (58%) in *work for other universities and colleges* (mainly teaching), which overall constitutes the second largest individual activity (59%). There is no apparent difference in the levels of these activities between faculties or university sectors.

(b) Service on Official Bodies. This area attracts participation by over half of

all staff (55%) with professors (63%) showing greater involvement than associate professors (44%). Those who participate in work in this area engage in 1.4 individual activities on average and spend about 1 hour per week on the work. The work is largely concentrated in two of the identified activities: *local and regional organisations* (professors, 55%; associate professors, 25%) and work for *international foundations* (professors, 16%; associate professors, 22%). Those in the Public universities play a particularly large part in the former (professors, 79%; associate professors, 65%) and this accounts for the longer average time (1.5 hours per week) committed to this area by associate professors in the Public universities.

(c) Consultancy and Collaborative Research. Well over half of all staff (58%) contribute to this area also, making it marginally the second most popular area for community work. The proportions of professors (63%) and associate professors (61%) involved are similar, though professors, on average, engage in more individual activities (2 activities) than associate professors (1.2) and spend longer on the work (1.5-2 hours per week, 1.5 hours respectively). There are no differences apparent between the overall levels of contributions from the separate university sectors or faculties. The major individual activity is that of *collaborative research* in which almost half of all professors (49%) and one-third of all associate professors (31%) are engaged. Similar numbers of contributions are made totally to *consultancy*, distributed approximately equally between *commercial* (professors, 24%; associate professors, 12%) and non-commercial (25%, 25% respectively) organisations. In these activities there are no clear distinctions between the contributions of the different university sectors or faculties. The fourth activity, that of *contract research* attracts fewer participants, mainly professors (18%; associate professors 3%), and those mainly from Engineering and Business Faculties.

(d) Community Social Service. This area again attracts about half (51%) of all staff but unusually it is associate professors (61%) who have a higher proportionate involvement than professors (46%). On average, the number of individual activities is slightly greater for participating professors (1.8 activities) than for associate professors (1.4) but the amount of time committed is similar for the two grades (0.5 hours per week). Significantly more involvement is shown by respondents in the Public universities (63%) than the Private universities (32%) and especially by those in non-technology-based faculties. This is notably evident in the major individual activity, that of *adult education.* This involves one-third (35%) of all staff; but of these a large majority comes from Public

universities (participation, 52%) rather than Private universities (participation, 16%). It is largely those in the non-technology-based faculties who perform this work: in the Public sector, participation from these faculties rises to 62%. The only other activities to attract significant support are *school education* (14% overall) and *community service clubs* (14% overall): the latter is dominated by professors from both sectors (ratio of professors: associate professors, 5:1), the former by associate professors mainly from the Public universities (ratio of professors:associate professors, 1:2 overall).

(e) Cultural and Social Amenities. In terms of participation, this provides the least attractive area, attracting less than one-third (31%) of all staff (professors, 26%; associate professors, 33%). In the Private universities, those who participate spend, on average, about 0.5 hour per week on these activities. Longer times are spent by those in the Public universities: professors, 1.5 hour per week, associate professors, 3 hours per week (making this the major activity for the small group of active participants). Despite the differences in time devoted to the work, participating staff in both sectors and grades engage, on average, in the same number of activities (1.5). *Sports organisations* attract most participation (11% overall, 7% professors, 13% associate professors). Other activities receiving some support are *journalism and broadcasting* (9%, 5%, 13%), environmental matters (7%, 9%, 6%), and *music, theatre and art* (6%, 4%, 13% respectively).

Chapter 6

Comparison of the uses of time in the national, private and public universities

6. Comparison of the Uses of Time in the National, Private, and Public Universities

Universities in the National, Private and Public sectors demonstrate identifiable characteristics. These reflect the parameters that have been determined for the whole system of university provision. In consequence, the three sectors emerge as complementary; and competition between universities is largely retained within sectors rather than between them[1]. Complementarity is evident in the constitutional and academic characteristics of the sectors: governance, degree schedules, graduate programmes, evening courses and so forth. These areas are well documented descriptively and statistically[2,3]. Less well defined are the ways in which sectoral characteristics affect academic staff. The results from the three surveys provide material for an attempt to do so.

For an individual institution, data on the uses of time are primarily of interest as indicators of internal priorities. They serve to identify measurable institutional characteristics. They can also provide information about the uses of resources, enabling inputs and outputs to be analysed over a wide range of activities. Alternatively, when data from several institutions are available, it becomes possible to make institutional comparisons. The three surveys described in Chapters 2, 3, and 5 provide basic data for such a comparison.

By making use of essentially identical questionnaires, the surveys are clearly compatible[4]. The major constraint is the limitation to comparison between professors and associate professors in the three sectors. Exclusion of staff in the more junior grades is due to a combination of structural and practical problems. The surveys attempted to cover all full-time members of academic staff. The responses indicated two sources of grade bias. Professors, especially, but associate professors also, proved more responsive to the questionnaire; the small distortion this produced in their responses is readily allowed for. The lower rates of response from the less senior grades was compounded in some cases by

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1 K.J.Morgan, Social, Public and Fiscal Returns from Higher Education in Japan, Research in Higher Education-Daigaku Ronshu, 26, 219 (1997).

2 Statistical Abstract of Education, Science, Sports and Culture, Ministry of Education, Science, Sports and Culture (MESSC) Japan (1998); Schools Basic Survey, MESSC, (1998).

3 MESC, Japanese Government Policies in Education, Science and Culture 1990, Tokyo (1990).

4 The sample of Private and Public universities did not contain Faculties of Medicine or Dentistry. For comparison purposes, contributions from these faculties were excluded from the National university averages.

institutional problems in obtaining responses from them. However, more fundamental problems reside in the wide contractual variations of duties and responsibilities assigned to lecturers and assistants. Moreover, there are great differences in the numbers of junior staff between both faculties and universities. While there are also variations in the proportions of professors and associate professors, these fall within a much narrower range[5]. Discussion of the results is accordingly limited to those for professors and associate professors and an aggregate of them both. A superficial examination of the data from lecturers and assistants across all three sectors suggests that this is unlikely to produce any substantial distortions between the sectors.

The median age for associate professors lies in the range 36-45 years in all the universities. It appears that a normal career pattern for associate professors presumes an age of over 35 years at the time of appointment and allows promotion to full professor some 10 years later (few associate professors are under 35 or over 55 years old). The threshold for appointment as a full professor is provided by the age of 45 years. In the National universities, the median age for professors lies in the range 46-55 years but with a substantial minority (40%) being more than 55 years old. In the other universities the average age of professors is greater. Substantial majorities are over 55 years old in both the Public (68%) and Private (72%) universities. It appears that this is not derived from a later age for promotion of associate professors in these universities but rather from a combination of appointment of older professors and a later age for retirement in the Private universities.

Staff mobility is measurable in terms of length of service in the current institution. In the National sector, 1 professor in 6 and 1 associate professor in 4 has served in their current university for less than 5 years. Even so, the median length of service for professors is greater than 10 years and for associate professors between 5 and 10 years. Mobility in the Private universities appears to be rather less. Smaller minorities of professors (1 in 7) and associate professors (1 in 12) have served for less than 5 years in their current universities and the median length of service for both groups is over 10 years. The survey provides no useful data for length of service in the Public universities as those in the sample are of comparatively recent foundation with a large majority of the staff (68%) having

5 The ratios of the numbers of professors to associate professors across the 3 university sectors are: National, 1.2; Public, 1.3; Private, 2.2 (see Footnote 1). The ratios in individual universities vary but those in the survey samples are similar to the sectoral averages, National, 1.2; Public, 1.2; Private, 2.0.

been appointed within the last 5 years.

The average *total time* spent on attributable university duties lies in the range 37-46 hours per week (Table 6.1). The mean times for those in National and Private universities are above those for all male employees in Japanese industry (including overtime) and those for male university graduates in areas of employment other than universities[6]. The median values for the three university sectors show slightly less variation: for periods of scheduled teaching, National, 45; Private, 44; Public, 40 hours per week. But in all sectors the averages conceal wide variations in individual survey responses. Standard deviations from the means span the range 10.6-14.7 hours so that only the differences between the National and Public universities are statistically significant[7].

Table 6.1 Use of Time on Attributable University Duties (Professors and Associate Professors)

hours per week

	National Universities	Private Universities	Public Universities
Periods of Scheduled Teaching			
Total Time	46	44	40
Teaching	13(28%)	19(43%)	13(33%)
Research	21(46%)	16(36%)	17(43%)
Administration	7(15%)	6(14%)	7(18%)
Other University Duties	5(11%)	4(9%)	2(5%)
Rest of the Year			
Total Time	45	43	37
Teaching	3(7%)	5(12%)	4(11%)
Research	30(67%)	27(63%)	25(68%)
Administration	6(13%)	6(14%)	6(16%)
Other University Duties	6(13%)	4(9%)	2(5%)

6 Ministry of Labour, Yearbook of Labour Statistics, 1996, Tokyo (1997).

7 In a substantial minority of responses, a total of 40 hours per week is recorded: National universities, 22%; Private universities, 13%; Public universities, 24%. The contractual commitment of those employed in the National and Public university sectors is for formal employment of 40 hours per week. The statistical effects of those who choose to record this time artificially in the National universities have been discussed in earlier chapters. It seems likely that any distortion of the averages will be small and would not be expected to modify the results significantly.

The major uses of time for university duties are on *teaching* and *research*. Together these account for about three-quarters of the total time in all universities. The distribution of time between *teaching* and *research* though varies significantly. During periods of scheduled teaching, those in the Private universities devote almost 50% more time to *teaching* than those in either National or Public sector universities (Table 6.1). Although the variations in individual responses are large, the differences in the averages between the Private sector and the National and Public sectors remain statistically significant. The differences are even greater for those in technology-based faculties[8] where the mean times for teaching are 19 hours per week in Private universities and 10 hours per week in the National and Public universities. Conversely, the time devoted to *research* by those in the National universities is significantly greater than that in either the Private or Public universities during periods of scheduled teaching. The average time spent on *research* in the National universities is greater in both technology-based (26 hours per week) and other faculties (18 hours per week). The difference from Private and Public universities is more marked in the technology-based faculties (Private, 17; Public, 19 hours per week) than in the other faculties (Private, 12; Public, 16 hours per week). During periods when there is no scheduled teaching, the differences between the sectors and faculties are largely removed. An exception is provided by those in non-technology-based faculties in Private and Public universities where the time spent on *research* remains significantly lower (21, 23 hours per week respectively) than in the National universities (31 hours per week).

By international standards, the average time committed to *teaching* in the National universities is low. This has been discussed in Chapter 4. The time spent on *teaching* in Private universities is much closer to figures reported from overseas universities. At an average of 19 hours per week it constitutes rather less than half the total time used for university duties during periods of scheduled teaching, figures that are similar to those from American and British universities[9]. A contributory factor must be the closer similarity of the student/staff ratios found overseas to those in the Private universities. The student/staff ratio in the

8 Faculties of Agriculture, Engineering, Science, Applied Science, Computer Science, and Technology are categorised as technology-based.

9 Higher Education Research Institute, University of California at Los Angeles, Faculty Survey, 1989-90, in The Almanac of Higher Education. The Chronicle of Higher Education, Chicago (1994); US Department of Education, National Center For Education Statistics, 1993 National Study of Postsecondary Faculty Washington (1993), S.Court, Long Hours, Little Thanks, Association of University Teachers, London (1994).

Private universities (26.0) is significantly greater than those in the National (10.4) and Public sector (10.3) universities[10], in part attributable to the differing proportions of the various fields of study found in the different sectors and the larger numbers of graduate students found in the National universities[1]. It may also reflect the differing emphases on *teaching* and *research* in the three sectors.

Complementarity between *teaching* and *research* within the National universities has been noted previously. The results of the survey indicate that it applies similarly within and between the three university sectors and is also extensible to comparisons between faculties. A variety of quantitative factors confirms that the traditional importance attached to research is sustained in all universities. It is clearly reflected in the importance of *research* in the use of time. Over the whole year, well over half of the average time spent on university duties in the National universities (55%) is devoted to *research*; and for the Private and Public sectors the proportions are only slightly smaller (47%, 50% respectively). These figures remain substantially larger than those commonly found in universities overseas[9,11].

About one-quarter of the total time is occupied by the residual duties, *administration* and *other university duties* (Table 6.1). They show effectively no significant variation between university sector, faculty or period of the year although those in the Public sector do appear to undertake rather fewer other university duties. This and the slightly lower averages shown for *total time, teaching* and *research* in the responses from the Public sector could be a consequence of the comparative newness of the sample universities but they are not characteristics normally encountered in new universities.

The distribution of time amongst university duties has changed over the past 5 years. In all universities, the amounts of time devoted to *teaching, administration* and *other university duties* has increased. This is identified more clearly by those in the National and Private universities (Table 6.2). For the respondents in the National and Private universities, these increases are clearly perceived to be at the expense of time for *research* which is seen to have decreased

10 The quoted student/staff ratios are gross, uncorrected figures taken from figures published by MESSC (see footnote 2).

11 Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom (CVCP), Report of an Enquiry into the Use of Academic Staff Time, CVCP, London (1972); B.R.Clarke, The Academic Life, The Carnegie Foundation for the Advancement of Teaching, Princeton (1987); E.L.Boyer, P.G.Altbach, and M.J.Whitelaw, The Academic Profession-an International Perspective, The Carnegie Foundation for the Advancement of Teaching, Princeton (1994).

Table 6.2 Changes in the Use of Time on University Duties over the Past 5 Years (Professors and Associate Professors)

Change in the Use of University Time [a]

University Duty	Increased			Decreased		
	National Universities	Private Universities	Public Universities	National Universities	Private Universities	Public Universities
Teaching	60%	50%	49%	7%	5%	20%
Research	10%	8%	29%	72%	71%	37%
Administration	85%	74%	50%	3%	3%	22%
Other University Duties	57%	44%	16%	4%	6%	22%

[a] Percentage of respondents indicating change; in each case, the residual percentage is of those indicating no change.

over the past 5 years. There is also a clear recognition of the need for the changes in use of time to be extended, particularly to provide more time for *teaching*. An overwhelming majority in all universities identifies teaching as the highest priority for the use of additional time. It is interesting that this need is seen equally in the Private universities which already provide 50% more time for *teaching* than the National and Public universities. Similarly (and curiously), despite the reduction in time for research that has already occurred, allocating more time to it rates very low in the order of priority: only *community work* ranks consistently below it in responses across all university sectors.

One established measure of research activity is the number of publications. To publish is apparently accepted as a professional requirement of academic staff, irrespective of tenure: all respondents record some publications. The conventional procedure of weighting publications to obtain some measure of research quality is inappropriate to the needs of this study. The purpose of these surveys was to obtain an indicator of levels of research activity within universities. Accordingly all publications were assigned equivalent weight. On this basis it is of interest that respondents from all universities indicate that, over a period when time for research has generally decreased, the numbers of publications have either remained unchanged or increased. However, the numbers of publications reported by respondents vary widely (standard deviations 1.8 - 5.9)[12] across all three

12 In calculating means, individual values differing from the means by more than 3 standard deviations were excluded.

university sectors; and over half of all publications derive from less than one-quarter of academic staff.

There is no evident correlation between time spent on research in any group of faculties, institutions, or university sectors, and numbers of publications. Yet between university sectors there is a large difference in the numbers of publications. The average annual rate of publication in the National universities is approximately twice that in the Private or Public universities (Table 6.3), a difference which is statistically significant. It is perhaps less surprising that most of this difference arises largely from respondents in technology-based faculties. The difference in publication rates between the technology-based faculties in the three university sectors could be possibly be attributed to some academic cultural differentiation; alternatively it is possible that it derives directly from the larger numbers of research assistants and graduate students in the National universities contributing, through larger research groups, to generate more publications.

Table 6.3 Average Annual Number of Publications [a]
(Professors and Associate Professors)

	Number	of	Publications
All Publications	National Universities	Private Universities	Public Universities
All Faculties	7 [2]	4 [2]	4 [2]
Technology-based Faculties	8 [3]	4 [2]	4 [2]
Other Faculties	3 [2]	2 [1]	2 [1]
	Distribution	of	Publications
Category of Publications	National Universities	Private Universities	Public Universities
Articles in Journals	66% [18%]	47% [27%]	48% [28%]
Books	13% [7%]	9% [8%]	9% [5%]
Conference and Seminar Papers	13% [6%]	19% [17%]	25% [18%]
Research Reports	6% [5%]	6% [5%]	8% [7%]
Patents	1% [1%]	1% [1%]	1% [1%]

[a] Figures in parenthesis are the average numbers of collaborative publications

Most publications occur as *articles in journals*. Over 90% of all professors and associate professors publish in this way. Two-thirds of all publications from the National universities and almost half of those from Private and Public universities are as *articles in journals*. The proportions of those publishing in other ways is remarkably constant across the three university sectors: 50-60% of all professors and associate professors publish in the form of books; 40-50% as conference and seminar papers; 30-35% as *consultancy and research reports*; and 3-10% as *patents*. Measured as numbers of publications (Table 6.3) it is noteworthy that *conference and seminar papers* constitute a more substantial mode of publication for those in Public universities than in either of the other two sectors. The larger number of publications from the technologically-based faculties in the National universities can be identified with their higher rates of publication of *articles in journals, conference and seminar papers* and *consultancy and research reports*. All of these occur at about double the rate for the non-technologically-based faculties in the National universities. No such distinction is observed in the Private or Public universities.

Collaborative work with people outside the universities is now a major source of publications. In the Private and Public universities, a majority of all publications is derived from external collaborations; the proportion is smaller in the National universities but still substantial. Many *books and articles in journals* and almost all *research reports, patents*, and - in the Private and Public universities- *conference and seminar papers* arise from external collaborations (Table 6.3). A large number of these publications can be linked to participation in external consultancy and collaborations. In all the university sectors, high proportions of respondents who participate in these activities report collaborative publications (National universities, 79%; Private, 88%; Public, 70%)[13]. Participation also appears to be a characteristic of those who are the more prolific authors generally. The average annual numbers of all publications, for those who report some publications from external collaboration, are: National universities, 8; Private and Public universities, 4; for those who do not report publications from external collaboration, the annual averages are half of these: 4 and 2 respectively.

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13 A substantial minority of those reporting collaborative publications do not report participation in consultancy, contract research or collaborative research as part of community work (National universities, 40%; Private universities, 34%; Public universities, 47%). While it is possible to envisage collaborative publications arising without collaboration, it seems unlikely that this is a general occurence. It may be that the extent of community collaborative work is significantly under-reported in the surveys.

Table 6.4 Participation in Areas of Community Work [a]
(Professors and Associate Professors)

Area of Community Work	National University	Private University	Public University
Participation over all Areas	96% (3 hpw)	95% (3 hpw)	94% (4 hpw)
Service to the Professions	95% (1.5 hpw)	94% (1.5 hpw)	94% (1.5 hpw)
Service on Official Bodies	61% (1 hpw)	47% (0.5 hpw)	60% (0.5 hpw)
Consultancy and Collaboration	53% (1 hpw)	63% (2 hpw)	58% (1.5 hpw)
Community Social Service	62% (0.5 hpw)	32% (1.5 hpw)	63% (2 hpw)
Cultural and Social Amenities	38% (0.5 hpw)	26% (1.5 hpw)	31% (1.5 hpw)

[a] Participation is given as percentages of all professors and associate professors; figures in brackets are average times (in hours per week) devoted to community work in that area by participants.

Participation in community activities involves virtually all professors and associate professors across all three university sectors (Table 6.4). This work accounts for an expenditure on average of between 3-4 hours work per week by each participant. About half of all this work falls in the area of *service to the professions*. Almost all professors and associate professors contribute and, on average, spend about 1.5 hours per week on it. The individual activities included in this area rate as the most popular (Table 6.5). While a clear element of self-interest is a component of these activities, they are of much importance in the wider community. It is moreover useful to recognise that they constitute only half of the total involvement in community activities. The combined contributions to the other areas of activity involve an almost equal level of participation (National, 87%; Private, 82%; Public universities, 87%) and a similar commitment of time.

Attractiveness of the areas of community work as perceived by respondents is generally similar to the actual levels of participation. *Service to the professions* is uniformly the most attractive as well as the most popular area; *cultural and social amenities* is similarly the least attractive and the least popular. *Community*

social service and *consultancy and collaborative research* share similar levels of attraction but differ according to faculty in terms of participation. Those in technology-based faculties, especially in the Private universities, are much more involved in collaborative and consultative work. Again, while *service on official bodies* is regarded as slightly less attractive by those in Private and Public universities, in terms of participation those in Public universities contribute at levels similar to those in the National universities. If opportunity and incentives are created, these preferences may provide indicators of the relative ease of extension of community activity in the future.

Table 6.5 Participation in Separate Community Activities (Professors and Associate Professors)

	National University		Private University		Public University	
	P & AP	Professors	P & AP	Professors	P & AP	Professors
Professional Committees	75%	89%	74%	87%	62%	75%
Other Universities	64%	75%	57%	57%	65%	59%
Conferences	61%	77%	49%	57%	65%	59%
Local and Regional Organisations	46%	55%	27%	35%	54%	75%
Collaborative work	39%	44%	47%	58%	39%	43%
Editorial Work	49%	64%	31%	39%	37%	44%
Consultancy (a)	38%	47%	50%	50%	37%	29%
Adult Education	40%	48%	16%	19%	52%	46%
International Agencies	28%	35%	23%	17%	12%	16%
School Education (b)	19%	24%	9%	9%	15%	16%
Social Organisations	12%	13%	11%	17%	13%	16%
Contract Work	6%	6%	14%	22%	12%	16%
Sport	9%	10%	11%	-	13%	13%
Government Committees	15%	23%	6%	9%	8%	9%
Journalism and Broadcasting	12%	14%	9%	4%	8%	5%
Environmental Matters	7%	9%	11%	13%	6%	3%

Figures are for participants as percentages of all professors and associate professors (P & AP) and for professors alone.
(a) Combined figures for consultancy for commercial and non-commercial organisations.
(b) Figures for the National universities exclude participation by members of Faculties of Education. Figures for Faculties of Education are, P & AP, 44%; professors, 48%. A similar effect is shown for the activity of *Health Care*. The observed participations are: National universities, P & AP, 9%; professors, 9% (excluding contributions from Faculties of Medicine); Private universities, P & AP, 3%; professors, 4%; Public universities, P & AP, 2%; professors, 4%. Figures for participation from Faculties of Medicine in National universities are P & AP, 56%; professors, 65%

Academic staff in all three university sectors share participation in all activities but the levels of participation vary (Table 6.5). For a number of the individual activities, contributions are provided fairly uniformly across all three sectors: to *school education, community service clubs, other universities and colleges*, and *committees of professional societies.* In other activities there appear to be clear sectoral differences. Those in Public universities show larger involvement with *local and regional organisations* and *adult education.* Similarly from Private universities there is high participation in *consultancy and collaborative research*, especially by professors. The National universities provide major contributions to *organising conferences* and *editorial work* for professional societies, to *international foundations*, and to *government committees*[14]. Generally the pattern of these contributions is in accord with intuitive expectation for the three sectors. The unexpected results are largely the absence of major contributions where they might have been expected. Across all three sectors, participation in the activities grouped under *cultural and social amenities* is surprisingly low; it might have been expected that, given their status and esteem, the National universities would have found a particular role in this area. For those in Public universities, expectations might have been that they would demonstrate a higher profile in *environmental matters.* Again in the Public sector, their involvement in *school education* is less than might have been expected. In the Private universities, *adult education* might have been expected to attract greater support, not least through provision of financially attractive post-experience courses and post-graduate professional education programmes.. The increased contributions from National universities to external *consultancy, collaborative research, and contractual work* are substantial but they might well have been larger, especially in view of establishment of a large number of co-operative research centres.

Currently official and semi-official agencies are applying pressure to universities to extend the scale and scope of their contributions to the community. To a large extent, this pressure arises without knowledge of existing contributions and it constitutes only part of proposals seeking to impose wider responsibilities on universities. These include extension of academic provision through more flexible teaching schedules and life-long learning programmes,

14 A preliminary, exploratory survey of national universities, which included a number in the Tokyo metropolitan area, had indicated notably higher levels of participation in the work of government agencies and committees: overall, 22%; professors, 36%. These observations are not included in the present comparisons.

expansion of graduate schools and post-experience courses, procedures for quality assurance, and public accountability. The proposals face two problems: limitations on time and competing priorities. Already the average time spent on university duties equals or exceeds the socially acceptable levels and the national averages for hours of work; and to this must be added time committed to community activities (3-4 hours per week)[15]. A large majority of respondents in all university sectors indicates that participation in community activity is already limited by availability of time: National, 77%; Private, 69%; Public universities 71% (though the limitation is more evident to professors in National (79%) than those in Private (50%) or Public (60%) universities). Moreover, in all university sectors, using any time that might become available for additional community work would rank well below the perceived needs of existing university duties, especially teaching and administration.

One solution to this dilemma, adopted in other countries, has been to provide additional incentives by permitting fees to be earned and retained by those undertaking additional work. Despite contractual limitations[16], additional income is already received by about three-quarters of academic staff in all sectors (professors, *ca* 80%; associate professors, *ca* 75%). Such earnings are not large. For most of those who receive them (80-90%) they amount to less than 5% of annual earnings. In large part these earnings derive from teaching for other universities and colleges or royalty payments. However, the receipt of these earnings by individuals is in curious contrast to the opinions expressed by respondents about the use of any money that might arise from payment for community work. An overwhelming preference in all university sectors would be for any such money to be used for academic or research purposes. Payments to individuals would be a distant third preference, only slightly less unpopular than use of the money for departmental, faculty or university funds. These preferences are reinforced by over 80% of all respondents (professors, *ca* 80%; associate professors, *ca* 75%) indicating that payment for community work would not provide any immediate incentive sufficient to cause them to increase the time they devote to it.

High levels of participation in community work are dependent on contributions

15 The survey did not establish explicitly how much of this time was additional to time spent on university duties. By the definitions employed and the nature of the work, most of it will be additional and extend the formal working week.

16 e.g. academic staff in National universities, as public servants, are precluded from receiving payment for extra internal or external work.

by both professors and associate professors. It is though evident that professors provide the larger component (Table 6.5). A variety of factors will contribute to this. By virtue of age, experience and reputation, professors may be invited to undertake a wider range of activities; and within their universities, they may also be encouraged to provide more academic leadership though accepting additional responsibilities. Yet the overall average time spent by professors on community work and university duties does not exceed that spent by associate professors. This, together with the clear perception of pressure on time for the primary academic duties of teaching and research, suggests that there exists a ceiling on the time available for external community activities. Any notion that there exists spare time, which can usefully be diverted to more productive activity, is not consistent with the evidence provided by these surveys. Indeed, at its current level, the university time ceiling is well above what is now seen to be socially acceptable in other employment. Consequently, any further extension of community activity is likely to be achieved only by using time at present employed on existing university duties. One possibility would be to reduce the time taken by administration and other university duties. While in principle this might be popularly welcomed it is not clear that it is readily achievable; internationally, 25% or more of attributable time is devoted to these duties in universities. With general recognition that more time is needed for teaching, the only alternative would be to reduce the time available for research. This would be in accord with international practice but it might appear to be counter-productive to divert resources away from one of the primary academic purposes. There remains only the possibility of implementing fundamental change to university structures by replacing the shared academic responsibility of a collegial structure with one based on an executive-managerial model[17]. While this might reduce the demands of academic leadership on professors it is not immediately clear that it would maintain the quality of institutional and academic achievement.

Much of the data provided by the survey identifies features shared by all three

17 Those who are familiar with the detailed care taken in meetings to ensure that decisions are consensual will perhaps be surprised that the proportion of time taken for administration and other university duties in Japanese universities does not exceed that reported for other countries. This may be an indication that the collegiality expressed in this way can have unexpected exogenous benefits. If so, introduction of more managerial structures could prove counter-productive in the use of time. A recent survey in Britain (S.Court, reference 9) identifies assessment of research and teaching quality and institutional quality audit as major components of the growth in academic administration.

university sectors. Given the common origins of the sectors it would be surprising if this were not so. Recognition that, across all the universities - National, Private and Public - most of the respondents are graduates of National universities must reinforce this. Yet each sector demonstrates individual academic characteristics. It has been argued elsewhere[1] that the three sectors are complementary rather than competitive: the totality o f Japanese higher education requires the separate strengths of each of the three sectors. A similar complementary relationship emerges from consideration of the varying contributions provided to community service by those in the three sectors. Although the National universities with their strong research tradition play a major role, it is only together with the contributions from Private and Public universities that a balanced spectrum of community activities is achieved. The strength of the whole system is shown by the high levels of participation. The quality of the contributions is likely to depend increasingly on the special strengths of the individual sectors.

Appendix

Appendix

The questionnaire and an accompanying note was distributed through Faculties. An English version of the questionnaire and note is given below.

Survey on the Use of Time and Service to the Community

A questionnaire on this subject is attached. Responding to it will require some of your time. I apologise for seeking to impose yet another demand on your time. Only you can provide the information that is needed for this enquiry and unfortunately there is no alternative available to seeking it in this way. I shall be very grateful if you can find the time to respond. The context and purpose of the survey is described briefly below.

In addition to their primary responsibilities of teaching and research, universities provide a range of extra benefits to the community. These include the economic and social benefits arising directly from the nature of a university. Very importantly they also include the many individual contributions made voluntarily by members of the university in a wide range of activities.

Encouraging universities to make wider contributions to society is seen as a desirable objective by governments in many countries. It appears though that neither governments nor universities have much information about the extent of these beneficial activities. Indeed, outside the universities there is little knowledge or appreciation of the existing extent of the activities of academic staff. Availability of such information might usefully contribute to a better understanding of the universities and reduce the risk of inappropriate policies being developed.

It is in an attempt to obtain some basic information on these matters that this survey is being conducted. The individual returns will be treated as confidential, kept securely, and only used for the statistical purpose of the survey.

When completed, the questionnaire should be sealed in the enclosed envelope and returned to the Faculty office.

Ref No
(please leave blank)

You may find it helpful to read through the whole questionnaire before starting to enter your answers

---

Please identify your Department and Faculty

.....

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1. Please indicate (in the appropriate box):

(a) the grade of your appointment:

Professor	Associate Professor	Lecturer	Research Assistant	Other
☐	☐	☐	☐	☐

(b) full-time or part-time

full-time	part-time
☐	☐

(c) your sex:

male	female
☐	☐

(d) your age:

less than 36	36-45	46-55	over 55
☐	☐	☐	☐

(e) the length of time you have worked in this university:

less than 5 years	5-10 years	over 10 years
☐	☐	☐

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2. It is frequently said that the most important academic resource is time. Use of time normally varies significantly over the course of the academic year. Please enter the amount of time in hours per week you devote to the categories of work listed below:

(a) during the scheduled teaching periods of the academic year;

(b) during the periods when no teaching is formally scheduled.

Please indicate at (c) the length of the total period of scheduled teaching in your Faculty or Department.

[Under **Teaching** please include time spent on preparation, reading, marking and supervision of students; time spent on preparing publications, applications for grants and on general scholarship should be included under **Research**; **Administration** should also include time spent in Departmental and Faculty meetings, committees and working groups as well as on University business and matters such as admissions. **Other University Duties** might include completing questionnaires.

Time (hours/ week)	Teaching	Research	Administration	Other University Duties
(a) During periods of Scheduled Teaching				
	☐	☐	☐	☐
(b) During the Rest of the Academic Year				
	☐	☐	☐	☐

(c) How long is the total period of scheduled teaching in your Department or Faculty?

☐ weeks/ year

3. There have been many changes in the University in recent years. Please mark the appropriate boxes to indicate how changes in the past 5 years have altered the amount of time you spend on each of the four designated university duties.

Amount of Time	Teaching	Research	Administration	Other University Duties
Reduced	☐	☐	☐	☐
Unchanged	☐	☐	☐	☐
Increased	☐	☐	☐	☐

---

4. (a) Please indicate the total numbers of your publications (author or co-author) during the past 3 academic years in each of the following categories:

Articles (Academic or Professional Journals	Conference or Seminar Papers	Consultancy and Research Reports	Books (including chapters in books)	Patents	Other
☐	☐	☐	☐	☐	☐

(b) Please indicate how many of these publications resulted from collaborations with or requests from external organisations

☐	☐	☐	☐	☐	☐

(c) In comparison with the previous 3 year period, has the number of your publications:

Increased	Remained Unchanged	Decreased
☐	☐	☐

---

5. This section seeks information on the general areas in which you participate in external activities providing some form of service to the community.

A broad definition of community work is adopted. Five general areas are identified in the table on the next page. In a number of these areas, your activities may be less closely linked to the University than to your personal or family interests. Please include them all.

For convenience, the general categories in the table are split into sub-divisions. These are intended to offer a guide to areas of work that fall into the area: they are not expected to be comprehensive nor to exclude other related activities (which can be entered in the box marked "other").

Please mark the boxes in the table corresponding to the activities in which you now make, or in the past 5 years have made, some contributions.

The following notes are intended to amplify the headings given on the next page.

Service to the Professions is intended to cover contributions to academic and professional societies through membership of committees, organisation of conferences, editorial, refereeing and other work. It also includes contributions to other universities and colleges through teaching, examining and related activities.
Official bodies. Section B should include work for the government, international bodies, and their committees and international research agencies. It should also include work done for regional and local government.
Consultancy and Collaborative Research is expected to provide for all the areas where commercial and non-commercial industrial, business or charitable organisations seek expert and professional help through collaboration, consultation, commission or contract.
Community Social Service covers contributions to health, education, PTA's, continuing education, health, and social welfare by fund raising, direct work, committees, special classes and through service clubs (e.g. Lions and Rotary).
Cultural and Social Amenities. All activities which contribute to cultural and social amenities should be included in this section. The possibilities are far wider than can be listed. They should include e.g. performance and membership of teams, choral and orchestral groups, work on committees, organisation of events, participation in civic activities.

If your activities do not fit into any of the general categories (A - E) please use the space in Section 12 to describe them

Areas of Activity

	Current	In Past 5 Years
A. Service to the Professions		
1. Committees of Societies	☐	☐
2. Conference Organisation	☐	☐
3. Editorial Work	☐	☐
4. Work for other universities and colleges	☐	☐
5. Other	☐	☐
B. Service on Official Bodies		
1. United Nations Agencies	☐	☐
2. International Foundations	☐	☐
3. Government Committees	☐	☐
4. Local and Regional Organisations	☐	☐
5. Other	☐	☐
C. Consultancy and Collaborative Research		
1. Commercial Consultancy	☐	☐
2. Non-commercial Consultancy	☐	☐
3. Collaborative Research	☐	☐
4. Contract Research	☐	☐
5. Other	☐	☐
D. Community Social Service		
1. Social Welfare Organisations	☐	☐
2. Health Care Bodies	☐	☐
3. Community Service Clubs, Groups	☐	☐
4. Adult Education	☐	☐
5. School Education	☐	☐
6. Kindergartens and Child Care	☐	☐
7. Other	☐	☐
E. Services to Culture and Amenities		
1. Sports organisations	☐	☐
2. Music, Theatre, Art	☐	☐
3. Literature	☐	☐
4. Journalism and Broadcasting	☐	☐
5. Religion	☐	☐
6. Politics	☐	☐
7. Environmental matters	☐	☐
8. Other	☐	☐

6. Please enter in the boxes below the time you spend each year (hours/year) on the community activities you identified in Section 5.

Service to Professions	Service on Official Bodies	Consultancy Collaborative Research	Community Social Service	Culture and Amenities
☐	☐	☐	☐	☐

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7. Many of the activities you identified in Section 5 will be unpaid but some may generate income (*e.g.* in Area A, teaching for other universities). Please mark the box which corresponds to the proportion of your annual income that is derived from these activities.

0%	Between 0-5%	Between 5-20%	Over 20%
☐	☐	☐	☐

---

8. (a) Are the community activities you are engaged in limited by the amount of time you have available?

Yes ☐ No ☐

(b) Would you be willing to extend your activities if they were rewarded financially ?

Yes ☐ No ☐

---

9. If there were opportunity to undertake more community activities as defined in Section 5, which of them would attract you most? Please number the boxes below in descending order of attraction (1 = most attractive; 5 = least attractive).

Service to Professions	Service on Official Bodies	Consultancy Collaborative Research	Community Social Service	Culture and Amenities
☐	☐	☐	☐	☐

---

10. If in the University there were more time at your disposal, how would you choose to use it? Please number the boxes below in descending order of activities on which you would choose to spend more time, if it were available (1 = most preferred; 5 = least preferred).

Teaching	Research	Administration	Other University Duties	Community Activities
☐	☐	☐	☐	☐

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11. If there were financial rewards for community activities performed by you on behalf of the University, what should happen to the money? Please number the boxes below according to your preferences for the ways in which any money earned might be used (1 = most preferred; 5 = least preferred)

Personal Use	Academic Expenses	Research Expenses	Scholarships	University Faculty or Deptl. Funds
☐	☐	☐	☐	☐

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12. Please use this Section to provide details of any of your activities that do not fit into the general categories provided in Section 5; and to identify those activities which are entered as "other". Please attach extra pages if they are needed to allow you to describe all the substantial activities you undertake.

R.I.H.E. PUBLICATION IN ENGLISH

International Seminar Reports

1 .*Perspectives for the Future System of Higher Education* - Report of the Hiroshima International Seminar on Education, 1977, 149p.
2 .*Higher Education for the 1980s* - Report of the Second Hiroshima International Seminar on Higher Education, 1980, 189p.
3 .*Innovations in Higher Education* - Report of the Hiroshima/ OECD Meeting of Experts on Higher Education and the Seminar on Innovations in Higher Education, 1981, 179p.
4 .*Comparative Approaches to Higher Education - Curriculum, Teaching and Innovations in an Age of Financial Difficulties* - Reports of the Hiroshima/ OECD Meetings of Experts, 1983, 247p.
5 .*The Changing Functions of Higher Education - Implications for Innovation* - Reports from the 1984 OECD/ JAPAN Seminar on Higher Education, 1984, 229p.
6 .*Higher Education Expansion in Asia* - Reports from the 1985 International Seminar on Asian Higher Education, 1985, 169p.
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