

The University and the Community; Use of Time by Academic Staff

Keith J. Morgan

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Summary

A survey of the use of time by academic staff in the National Universities is reported. Data were provided through a questionnaire completed by a sample equivalent to 1% of academic staff; half of the sample was provided by members of Faculties of Engineering and half by other Faculties. Attributable university duties occupy an average of 43 hours per week but the returns show wide variations with a standard deviation of 14 hours. Research occupies approximately half of this time, and teaching about a quarter. Changes over recent years have reduced the amount of time available for research and increased the time spent on administration and teaching. Community activities attract very high support from all staff with the largest contributions being provided by professors. Major activities include service to the professions, external teaching, service on international, national and local committees, and adult education. Collaborative research and consultancy is now an important activity, especially for those in Faculties of Engineering. The area of cultural, social and environmental amenities attracts little support.

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. Moreover, public opinion generally holds universities in high esteem [1]. But equally there is a diversity of views about what universities are expected to do. The traditional academic view of universities as places for the pursuit of scholarship and learning is not universally shared by government, industry and commerce, taxpayers and parents, or students. Each of these segments of the community selects its priority from a spectrum of benefits which embraces wealth generation, commercial convenience, personal advantage, social development, and the advancement of knowledge.

The ability of universities to satisfy such diverse aspirations has proved advantageous. The growth of universities and their facilities over the past century and the accompanying demand for access to them provide clear evidence of this. But retention of these levels of support depends on the ability of universities to continue to meet community expectations, whether

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these focus on employment prospects for graduates or generation of wealth in the economy. Governments are increasingly introducing policies that identify the quality of work within universities and the extent of their wider roles in the community as criteria for funding. In Japan, official policies relating to co-operative research, post-graduate and post-experience courses, life-long education and equity programmes already exist; and discussion of measures affecting the range and quality of academic programmes and research work is being encouraged [2] .

These policies, together with the effects of the initial stages of deregulation of the Japanese National Universities, have already produced recognisable changes. Undoubtedly more substantial changes will emerge, especially as the universities respond to the demands of post-massification higher education. 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 is largely due to a lack of information: it is difficult to construct effective policies if the starting point is vague and the opportunities for implementation are unknown. For a university planning institutional change, it is useful to have access to information about its current situation; and equally it is desirable for central advisory bodies to be aware of the status of the system as a whole. Given the range and scope of current policies, a particular need arises for data rather than anecdotal advice in two key areas:

(i) 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

(ii) the extent of existing involvement by individual members of the academic staff in external activities identifies the base level and the potential for extension of services to the community.

In an attempt to obtain some basic information on these matters, a survey of the use of time and of contributions to the community by academic staff in the National Universities was undertaken during 1994-95. The results are described and discussed in this paper.

Results

The survey was conducted within a small number of National Universities by means of a questionnaire. 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. An abbreviated version of the questionnaire is attached as an appendix [3] .

1. Sample. (1) Response. Questionnaires were distributed to full-time academic staff in the

participating universities; responses were received from approximately 25%. This provided a sample of about 1% of the total academic staff of the National Universities [4]. The sample is biased both by design and by the response. By design, half of the sample was drawn from Faculties of Engineering in the expectation that this would reflect particular aspects of community activity. By response, the total sample is biased towards professors at the expense of associate professors and junior staff (Table 1); and towards women who constitute about 9%

Table 1. Composition of Survey Sample.

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

of respondents as opposed to 7.5% nationally [4] - this bias did not extend to responses from Faculties of Engineering. The distorting effects of grade-mix on the results for the whole sample are generally not large as the differences between grades are small; but where it is helpful to provide a common base for comparisons between those in Faculties of Engineering and those in other Faculties, the results were calculated for an arbitrary grade-mix of 45% professors, 37% associate professors, 9% lecturers, and 9% staff in other grades.

(2) Age and Service. The median age of the whole sample was in the range 46-55 years in accord with average age for National University staff [4]. 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 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 of respondents in their present university is greater than 10 years for the whole sample and for professors, between 5 and 10 years for associate professors, and less than 5 years for lecturers and other staff. However almost 45% of respondents have served for less than 10 years in their present university, including 28% of professors; and 23% have spent less than 5 years in their present university, including 15% of professors and 27% of associate professors. In neither age distribution nor length of service do any significant differences emerge between those in Faculties of Engineering and those in other Faculties.

2. Use of Time (1) Total Time. The questionnaire asked respondents to indicate separately the amount of time spent each week on university duties under four headings: teaching,

research, administration and other university duties, during periods of scheduled teaching and during the rest of the year. On the assumption that together the four headings comprehensively cover university duties, the aggregate represents 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 values at 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

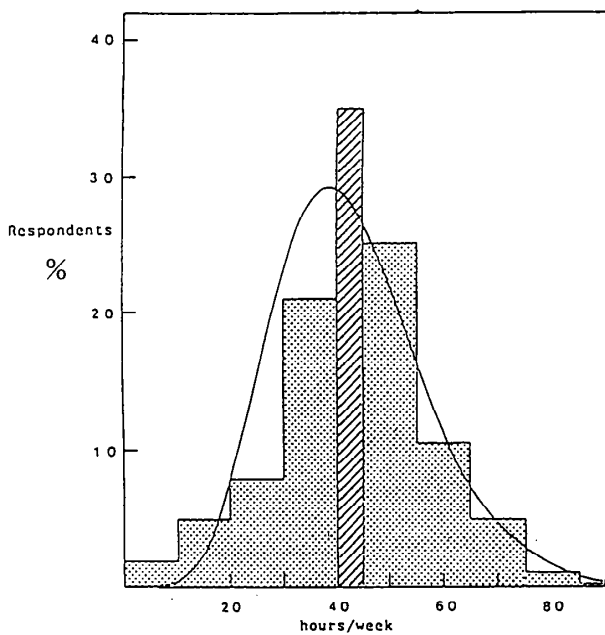


Figure 1a. Distribution of total time spent on university duties during periods of scheduled teaching.

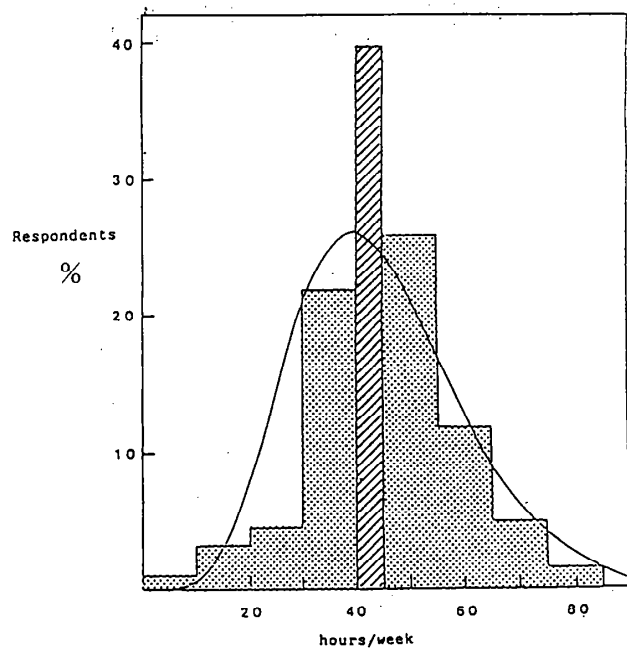


Figure 1b. Distribution of total time spent on university duties during the remainder of the year.

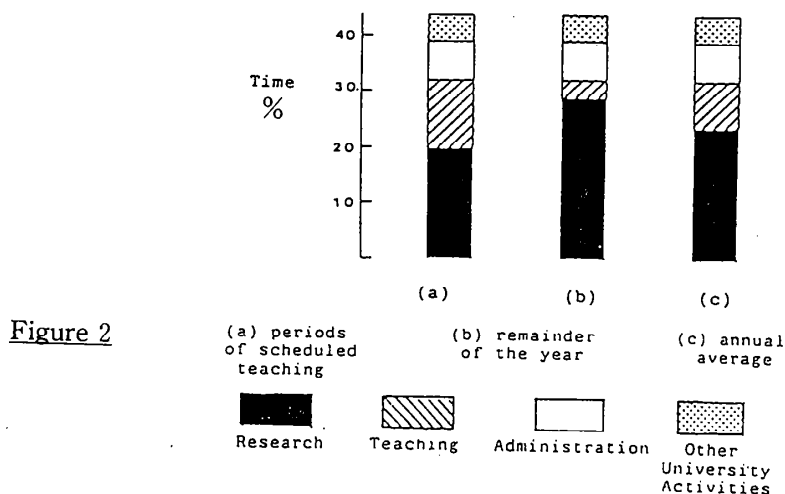


year. Distribution about the mean also provides significant variations (Figure 1). A substantial minority, 24%, records a total time devoted to university duties of 40 hours per week in accord with the requirement for staff in the National Universities as public servants [4]. By some respondents an assumption that the working week constituted 40 hours was made explicitly and others possibly made a similar assumption implicitly. Recognition of the formal requirement is shared equally by professors (28%) and associate professors (25%) but not by lecturers and staff in other grades (8%).

If this constraint represents an arbitrary and artificial response, the averages for total time spent on university duties will be distorted. Some indication that this may be so is provided by

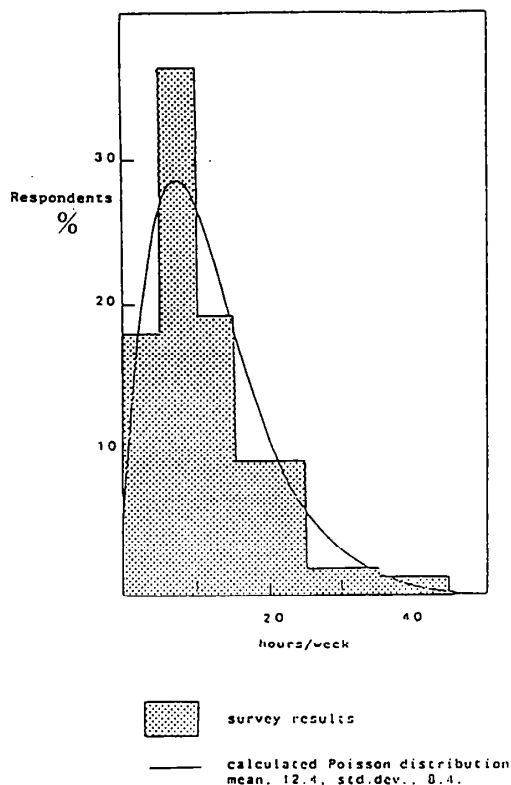
a histogram of the distribution of total time excluding the returns of 40 hours per week (Figure 1). Comparison of a calculated modified Poisson distribution with this histogram shows that it provides a recognisable approximation for the distribution of three-quarters of the returns and, in the absence of special factors, implies that the residual 24% might also follow a similar distribution. However, despite the substantial number of responses recording 40 hours per week, the distortion of the averages is not large. Even after excluding all returns of 40 hours, both for periods of scheduled teaching and for the rest of the year, the calculated values of the medians move only to 45 hours per week and of the means to 44 hours per week. This result is reassuring in establishing confidence in the overall average and in indicating that any arbitrary constraint of 40 hours per week will not substantially perturb the distribution of the times spent on the component duties.

(2) Teaching Time. The distribution of time amongst the four designated university activities conforms to a simple pattern despite wide individual variations (Figure 2). Teaching necessar-



ily constitutes a 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. The results show that, on this basis, 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 but the range of values is wide with a standard deviation of 8 hours per week. Outside the periods of scheduled teaching the median value falls to 1 hour per week with a mean value of 3 hours per week and a standard deviation of 5 hours per week. The overall distribution of time on teaching during periods of scheduled teaching, conforms to a modified Poisson distribution (Figure 3).

Figure 3. Distribution of teaching time during periods of scheduled teaching.



The responses indicate some differences in the amounts of teaching time between the different grades of staff and faculties in the universities (Table 2). The small differences

Table 2 Average Time Spent on Teaching Duties during Periods of Scheduled Teaching.

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

between professors and associate professors are not statistically significant but the larger differences with lecturers and staff in other grades 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 engineering respondents, 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.

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

(3) Research. For this component, respondents were asked to include time spent on applications for grants, preparation of manuscripts and on general scholarship together with time spent directly on research. On this basis the responses indicate that research is the dominant activity in terms of time: it accounts on average for 46% of allocated time during periods of scheduled teaching and 66% of time during the rest of the year. In total this represents about 54% of time over the whole year (Figure 2). Overall, the median time for research during periods of scheduled teaching is 20 hours per week and during the rest of the year 30 hours per week but the responses indicate substantial variations from the average

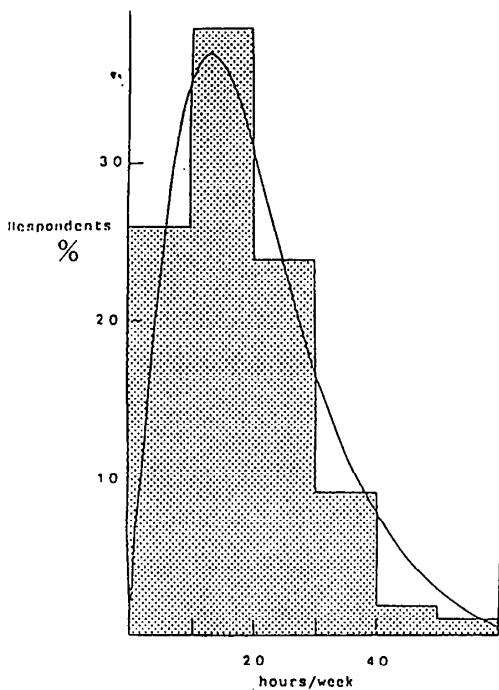


Figure 4a. Distribution of research time during periods of scheduled teaching.

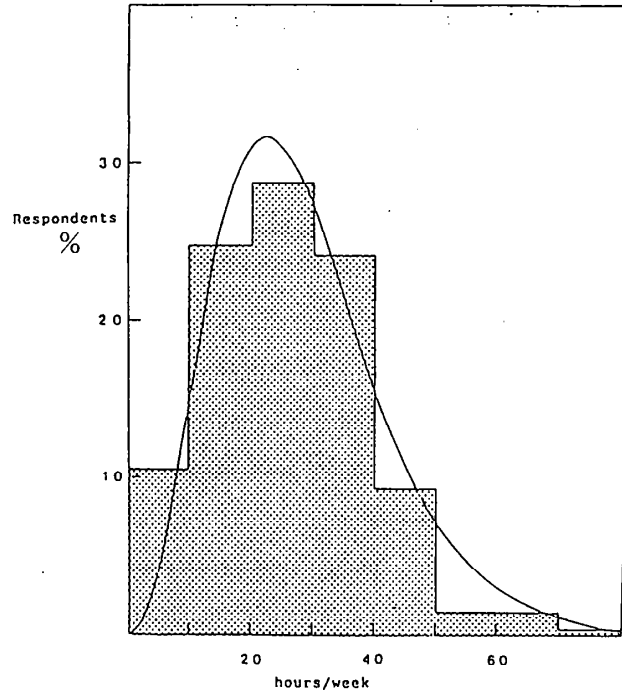


Figure 4b. Distribution of research time during the remainder of the year.

survey results
 calculated Poisson distribution
 (a) mean: 20.4, std.dev., 12.7;
 (b) mean: 20.6, std.dev., 13.0.

values (Figure 4, standard deviations 12.7 and 13.8 hours per week respectively) and between

grades of staff and faculties (Table 3). The small differences between the times spent on

Table 3. Average Time Spent on Research.

<u>Periods of Scheduled Teaching</u>	Professors	Associate Professors	Lecturers	Other Grades
	hours per week			
Overall Average	20	21	18	25
Engineering Faculties	21	24	23	30
Other Faculties	18	19	15	20
<u>Rest of the Year</u>				
Overall Average	28	29	25	33
Engineering Faculties	29	32	32	37
Other Faculties	28	27	22	28

research by professors, associate professors and lecturers do not appear to be statistically significant but those involving other grades of staff - some of whom will be engaged in research full-time - are significant. Differences between the faculties which show those in Faculties of Engineering spending some 4 hours per week longer on research, are significant (0.1 level) both for separate grades of staff and for the whole Faculties even after adjusting the grade-mix to the standard composition.

(4) University Administration and Other 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 under this category time spent on departmental, faculty and university business in meetings, discussions, committees and working groups and time spent on activities such as admissions and the curriculum. Overall, this work occupies about 16% of university time and remains at a constant level throughout the year (Figure 2) yielding an overall median value 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 time. There is no significant difference in the time taken over administration between the faculties but some differences do emerge between staff of different grades. Professors spend on average one hour more at 8 hours per week on administrative matters than those in other grades, a difference which is probably significant (5% level). The same effect is also shown by the high proportion of professors (66%) amongst those who spend more than twice the median amount of time on administration, an effect which may be associated with the duties of heads of departments and deans.

The remaining category, that of other university duties, is intended to include the many

diverse activities that need to be undertaken within a university other than those included in the first three categories. The overall median value of time spent on these duties is 2 hours per week but this does not fully indicate the range of demands they make on time. One in four respondents avoids these activities entirely; in contrast one in three respondents spends more than twice the median amount of time on them. The overall mean value remains at 5 hours per week (standard deviation 6 hours per week) representing about 11% of time throughout the year (Figure 2). In this area also there appear clear differences between professors and the other grades of staff. Professors constitute a minority (36%) of those respondents who spend no time on such duties; and a majority (60%) 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 all the other grades of staff; the effect is most marked in the Faculties of Engineering where associate professors report a mean time of 2 hours per week (which is itself notably less than the 4 hours per week reported by associate professors in other Faculties).

(5) Changes in the Use of Time. Recognisable changes in the universities have occurred in recent years. Respondents were asked what changes they had experienced over the past five years in the amounts of time they spend on the four categorised areas of university work. The responses show a clear perception both of change and of where the changes have occurred. There have been increases in the time devoted to university administration, teaching and other activities; and a decrease in the time devoted to research (Table 4). Responses are effectively

Table 4. Changes in the Uses of University Time during the Past Five Years. [a]

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

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

uniform across the faculties but perception of the changes varies with seniority. Increases in time spent on teaching are identified by one in two professors, two in three associate professors and four in five lecturers; conversely, for time spent on research, three-quarters of professors but less than two-thirds of associate professors and lecturers record decreases. Uniformity of opinion exists across the grades of academic staff in the changes of time spent on administration - about 90% of all grades note an increase; and similarly for other activities where an

increase is noted by about 60% of the whole sample.

Respondents were also asked to indicate their preferences for future change: that is, if additional time and resources became available, what would be their order of priority in using it on the four designated areas of university work together with some form of community activity. The responses (Table 5) clearly identify teaching as having the highest priority and

Table 5. Priorities in the Use of Additional Time.

	Teaching	Research	University Administration	Other University Work	Community Activities
Overall Response	1	3	2	4	5
Engineering Faculties	1	3	2	4	5
Other Faculties	1	4	3	2	5

community activity the lowest. Amongst the intermediate priorities the greater relative importance attached to finding more time for university administration than for research is noteworthy. Indeed, with the exceptions of engineering professors, who tend to favour research as their third priority, and professors in other Faculties, who identify administration as their third priority, the responses generally allocate second priority equally to administration and other university work; and last place equally to community activities and research. In consequence when the results are adjusted to the standard grade-mix, research and other university activities attract equal 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, educational, 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 societies through committees, editorial and other work; it also includes contributions to other universities 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 service on committees,

provision of expert advice;

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

(d) Community Social Service, which provides 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) Services 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. It was asked that respondents should include all their contributions to such activities, including those which were less closely linked to university than to personal and family interests.

(1) Participation. The level of participation is high: 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 with each respondent showing an average of 5 separate activities spread over 3 of the designated areas (Table 6). There are no faculty differences detectable in

Table 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

the extent of participation but professors report significantly (0.1% level) higher involvement than those in any other grade of academic staff.

Respondents were asked to indicate the order of attraction that the different areas of community work provided. The most attractive is service to the professions, the least, service to cultural and social amenities. These 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 work to consultancy and collaborative research. These orders of preference closely parallel the existing situation as is demonstrated by the areas of activity in which respondents actually participate, currently or in the recent past (Table 7). The results

Table 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
<u>Engineering Faculties</u>	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
<u>Other Faculties</u>	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.

show that levels of participation increase generally with academic seniority across all areas except that of cultural and social amenities. Between the Faculties there is greater involvement of engineers in collaborative and co-operative research and a lower level of activity in community social service work than is shown by those in other Faculties.

(2) Service to the Professions. This area attracts most support in terms of both numbers of participants and the amounts of time devoted to it. Nine out of ten respondents are, or have recently been, active on this work and have spent, on average, between two and three hours per week on it. The level of involvement reflects academic seniority: contributions come from 97% of professors, 88% of associate professors, 63% of lecturers, and 56% of staff in other grades. Similarly, the amount of time spent by professors (mean, 140 hours per year) is significantly greater than that of associate professors (70 hours per year), lecturers and staff in other grades (40 hours per year). Levels of activity do not differ between the faculties. Within this area, the largest individual activity is service on the committees of professional societies which is provided by over three-quarters of the 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, which 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 report participation in this area with again seniority rather than faculty determining the level of activity. Participation decreases from over 70% of all professors, to 44% of associate professors, and 22% of lecturers and staff in other grades. The average amounts of time committed by those who are active in this area diminish similarly, from a mean 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 agencies: this accounts for 60% of those who are active in this area of service, and receives similar levels of contribution from professors and associate professors. Elsewhere, contributions by professors dominate representation on government, national and international bodies: one-third of all professors but only one in ten of all other staff provide service at these levels.

(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. Levels of involvement in this area of work show clear faculty differences. Responses from the Faculties of Engineering show over 70% of staff participate; for those in other Faculties the proportion is 58%, a difference that persists even when allowance is made for the differing 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, with the less senior staff engaged for longer periods: mean times for professors, 90 hours per year, associate professors, 110 hours, lecturers 170 hours, and other grades of staff, 240 hours. Amongst the range of activities in this area, collaborative research shows the highest participation involving 68% of those who are active in this area and with a fairly uniform distribution amongst the grades of staff in all faculties. Consultancy, shared equally between commercial and non-commercial organisations accounts for a similar proportion of participation but with professors showing a rather higher involvement than associate professors and lecturers. Contract research provides a minor contribution: only 7% of the total sample indicate experience of such work either currently or in the recent past; two out of three of those who have this experience are professors.

(5) Community Social Service. Slightly less than half of all respondents are active in this area. In terms of participation it provides a mirror image of that in the previous section. In this case, the smaller contributions come from Faculties of Engineering, where 35% of members are active participants in contrast to the other Faculties where 60% of members participate. Those who do engage in this work spend on it an average of 50 hours per year, with professors and associated professors spending less (40 hours) and lecturers and other grades of staff spending more (90 and 70 hours respectively) than this average. Over half of the contributions are in the field of adult education, with professors providing about two-thirds of the input, and those from the Faculties of Engineering sharing equally with those from other Faculties in this activity. Elsewhere, contributions from the Faculties of Engineering are small with those from other Faculties making 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 work, those in other Faculties are three times more likely to participate (with a proportion of one in five) than those in 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 Faculties of Engineering are smaller still (3%, 1%, 1%); even membership of service clubs (e.g. Lions, Rotary) has membership from Faculties of Engineering (5%) well below that of other Faculties (13%).

(6) Cultural and Social Amenities. This area represents minority interests with less than one quarter of all respondents being either currently active or having been active in the recent past. For those who are or have been 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, though a possible link between age and participation is provided by the increase from 22% of respondents aged less than 35 years (mainly lecturers and staff in other grades) to 33% for those over 55 years (mainly professors). Only four groups of activities

attract any extensive involvement: journalism and broadcasting with 9% of all respondents, sports organisations, 6%, music, theatre and art (which appears to be mainly music), 5%, and environmental concerns, 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 the respondents obtain some earnings from it, more than nine out of ten obtain less than 5% of their annual earnings in this way. Professors earn slightly, but significantly, more than staff in all other grades but there are no significant differences in the earnings between the faculties.

Clearly though, it is lack of time rather than financial reward which limits community activity. Indeed, three-quarters of all respondents indicate that this is so. The constraints of time diminish from professors and associate professors, of whom 81% and 79% respectively see this as a limitation, to lecturers and those in other grades (60% and 51% respectively). Moreover, over 80% of all respondents indicate that even financial reward would not enable them to undertake additional community activities. Again, professors (82%) and associate professors (84%) see this slightly more clearly than do lecturers (69%) and staff in other grades (70%).

If there were to be financial reward for community activities performed on behalf of the university, respondents were asked to identify the order of their preferences for its use with respect to five possibilities: personal use, academic expenses (e.g. travel), research expenses, scholarships, or for departmental, faculty or university funds. There emerged an overwhelming and uniform first preference for using any money for academic expenses, followed in second place by research expenses. Distantly as third, fourth, and fifth preferences were scholarships, university funds and personal use, the last two being almost equally unpopular.

Discussion

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 [5], with a belief that high motivation and academic discipline impose formidable demands. 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 elements. 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 their work, contemporary universities display characteristics not dissimilar to those of commerce and industry. The survey shows that in Japan the average working week for academic staff in the National

Universities is 43 hours throughout the year. This is identical to the average working week - and rather longer than that for graduates in industry and commerce [6] . It is also similar to that reported for university staff in other countries [e.g. 7,8,9] .

There is though a major difference in the way in which this time is used. Elsewhere, [8,9] the major activity during periods of scheduled teaching is indeed teaching, which occupies between 40% and 50% of the time; and over the whole year it accounts for about 40% of the time [7] . In Japan the figures are 28% and 20% respectively, that is about half the time used elsewhere. Conversely the average time for research in Japan amounts to well over half of the time for the whole year and 46% of the time during periods of scheduled teaching: in British universities, research occupies about one-third of the time over the whole year [7] ; and even in those American universities categorised as “research universities” [10] the average is below 38% of time during periods of scheduled teaching [8] . The use of time for administration and other duties shows little variation across international boundaries and appears to be fixed at about one-quarter of average time. Overall these figures indicate that in an average working week of five and a half days in Japanese universities, one day is spent on teaching, three days on research, one day on administrative matters and half a day on other university business; in contrast in America and Britain the corresponding figures would be roughly two days on teaching and two days on research. This contrast appears 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 environment of research”.

A nexus between teaching and research is frequently invoked to describe the relationship between these two principal activities in universities. 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 time spent on research during the rest of the year (Figure 2); and the longer time devoted to research in Faculties of Engineering (Table 3) is balanced by the shorter time reported for teaching. Similarly perception of recent changes in the use of time identify decreases in research time as an accompaniment to increases in time for teaching, and administration (Table 4). The results reported by professors nicely illustrate this balance. Although the apparently rather shorter times professors devote to teaching and research are not statistically significant, they match the significantly longer times taken by administrative and other duties and yield in total an average similar to that for all other academic staff.

It would be inappropriate to invoke these statistics in any attempt to identify individual characteristics. The averages conceal a wide diversity as is shown by the standard deviations from the means. So, even including those who identify their working week as the statutory 40

hours, one quarter indicates that university duties occupy longer than 125% of the averages for total time, teaching time and research time; but concurrently less than 75% of average times accommodates the total university duties of one in ten and the teaching and research of one in three. Nor is academic productivity readily identified with average performance - a majority of research publications originates from a small minority of university staff [11,12,13] . It would be equally fallacious to assume that longer hours necessarily correspond to qualitatively better results. Even so it is clear that pressure on time is felt to limit opportunities for teaching (Table 5) as well as community activities. A similar pressure on time in America is related to the need for more time for research [11] . It is tempting to relate this inversion to the existing differences in time allocated to teaching and research, though the accompanying desire in Japan to find more time for administrative duties would be difficult replicate elsewhere.

For a university system that until recently attached importance to its separation from external influences, participation in community activities by academic staff from the National Universities is remarkably high. Equally impressively this is largely achieved voluntarily, without institutional pressure. It is true that the largest contributions are made to academic professional activities serving learned societies and other universities, but exclusion of these activities leaves participation in the other areas still shared by 86% of all respondents to the survey. The time involved is also substantial, amounting to over 4 hours per week on average or 10% of the time spent on university duties. The survey did not establish that all of this time is additional and some of it could have formed part of that included under university requirements. However, by its nature most of this work will be additional and extend the average working week to about 48 hours. The ten most heavily subscribed community activities are listed in Table 8.

High commitment to professional affairs is not unique to Japanese academics but its manifestation does offer special features. The level of active involvement in the work of academic and professional societies is notably higher than would be expected elsewhere. Similarly, the extent of part-time work in other universities is substantially higher than is found in most other countries [5] . Encouraged by government, collaborative research and consultancy now represent substantial components of community activity, especially in Faculties of Engineering. In contrast, and notable for its exclusion from Table 8, is the low level of contracted research (7% participation). Overseas it is long established [14] and widely recognised [15] that individual contacts through consultancy and contractual research provide the most effective routes to developing collaborative programmes between industry and universities. In America over two-thirds of all engineering professors have paid contractual links to industry [14, 16] . It will require much deregulation and removal of the many continuing legal constraints before this mechanism for enhanced collaboration becomes available in the

Table 8. Levels of Participation in Community Activities.

	Overall Response	Professors	All Other Academic Staff
1. Committees of Professional Societies	67%	86%	47%
2. Organisation of Conferences and Meetings	55%	74%	34%
3. Work for other Universities and Colleges	54%	67%	39%
4. Collaborative Research	50%	59%	41%
5. Consultancy, Commercial and Non-commercial Organisations	47%	64%	29%
6. Editorial Work for Publications	45%	58%	31%
7. Service to Local and Regional Agencies	32%	42%	22%
8. Adult Education	26%	33%	17%
9. International Organisations	25%	38%	11%
10. Service to Government Agencies and Committees	22%	36%	6%

National Universities.

Professors provide the major contributions to community activities (Table 8), perhaps through some combination of expertise, status and age. This appears both in the range of activities they undertake and the time they devote to them (on average, 100 hours per year more than those in other grades). In establishing programmes of community activity, leadership from the top is regularly invoked as an essential requirement. By their example, it appears that professors are providing this leadership. Demands on time are though substantial and it is professors who register these most clearly. This must provide a constraint on further expansion of community work unless participation by the other grades of staff can be expanded. In turn, this presents a problem of perception outside the university. It is regularly asserted in industry that the relatively large contribution already provided by non-professorial staff is a symptom of the low priority attached by professors to these projects.

Direct and indirect financial rewards from community activities contribute substantially to institutions and individuals overseas [17]. 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 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 questionnaire. Earnings from teaching in other universities are retained for personal use: there is no reason in principle why the regulations for public servants could not be relaxed to allow this to apply to other professional activities.

Limitations of the survey leave a number of issues unresolved and many aspects which could be clarified by a more extensive study. The general conclusions appear to be qualitatively reliable despite the relatively low response rate: results for individual universities conform to the general patterns revealed by the survey. It would though be advantageous for the base of the survey to be extended in order to confirm the results quantitatively, to extend the statistical analysis to a wider range of faculties, to include private universities [18] and universities overseas, and to clarify issues such as staff mobility and institutional location and culture in **determining academic and community service characteristics**.

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- [18] A small pilot survey suggests there may be significant differences between the National and private Universities.

Appendix Questionnaire

(abbreviated)

1. Please indicate:

(a) the grade of your appointment

(professor, associate professor, lecturer, other);

(b) your age

(less than 36, 36-45, 46-55, over 55);

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

(less than 5 years, 5-10 years, over 10 years).

2. Please indicate the amount of time (hours/week) you can devote to the categories of work listed below:

Teaching, Research, Administration, Other University Activity

(a) during periods of scheduled teaching;

(b) during the rest of the academic year.

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

3. Please identify how the amount of time you spend on Teaching, Research, Administration, and Other University Activities has changed over the past 5 years

Reduced / Unchanged / Increased.

4. Please show on the table those areas of Community Activities to which you now make (current) or have recently made (in past 5 years) contributions.

(A) Service to the Professions: Committees of Societies, Conference Organisation, Editorial Work, Work for Other Universities, Other;

(B) Service on Official Bodies: United Nations Agencies, International Foundations, Government Committees, Local and Regional Organisations, Other;

(C) Consultancy and Collaborative Research: Commercial Consultancy, Non-commercial Consultancy, Collaborative Work, Contracted Work, Other;

(D) Community Social Service: Social Welfare Organisations, Health Care Bodies, Community Service Clubs, Adult Education, School Education, Kindergarten and Child Care, Other;

(E) Service to Culture and Social Amenities: Sports Organ-izations, Music, Theatre, and Art, Literature, Journalism and Broadcasting, Religion, Politics, Environment, Other.

5. Please enter the amount of time (hours/year) you spend on each of the areas of community activity you identified in (4)

Area A, B, C, D, E.

6. Please indicate what proportion of your annual income is derived from community activities:

0, 0-5%, 5-20%, over 20%

7. Are the community activities you undertake limited by time ?

Yes / No

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

Yes / No

8. If there were opportunity to undertake more community activities which area would attract you most ? Please indicate the order of your preferences by numbering the areas listed below (1 = most attractive, 5 = least attractive) :

Service to Professions, Official Bodies, Consulting etc, Social Service, Culture and Amenities.

9. If in the university there were more time at your disposal, how would you choose to use it ? Please indicate the order of your preferences by numbering the activities listed below:

Teaching, Research, Administration, Other University Activities, Community Activities.

10. If there were financial rewards for community activities performed on behalf of the university, how should the money be used ? Please indicate the order of your preferences by numbering the possible uses listed below:

Personal Use, Academic Expenses, Research Expenses, Scholarships, University Faculty or Departmental Funds.

大学と地域社会；大学教員の活動時間分析

キース J. モーガン*

本論文は日本の国立大学教員の活動時間に関する調査結果を報告するものである。関連データは全国立大学教員の1%に相当するサンプルを対象とするアンケート調査を通じて集められた。回答者の半数は工学部の教員であり、残り半分はそれ以外の学部の教員である。大学教員として勤めるべき週当たり平均時間は43時間であるが、回答には14時間の標準偏差の幅が見られる。研究に費やされる時間はこの時間のおよそ半分をしめ、教育のための時間は約4分の1である。近年の改革動向の中で、研究に使える時間は減少し、管理運営と教育に費やされる時間が増えている。社会的活動は全ての教員から非常に高い支持を得ているが、とりわけ職階別に見て教授がこの面での最大の貢献をなしている。社会的活動のうち的主要なものには、専門学問分野に関わる種々のサービス活動、他大学での教育活動、国際的、国内的あるいは地域コミュニティへのサービス活動、社会教育活動が含まれる。共同研究やコンサルティングも、とくに工学部の教員にとっては今や重要な活動である。文化活動、社会活動、環境問題に関わる活動はほとんど支持を受けていない。

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