Submission to the Tertiary Education Advisory Commission

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June 2000

Introduction

We are expatriate New Zealander academics and researchers who maintain an active interest in the New Zealand tertiary sector. Since November 1999, we have produced press releases, opinion pieces, and speeches (available online at

http://www.het.brown.edu/people/easther/nzpolicy/). We have received such a strong and positive response to our efforts from both inside and outside New Zealand – a list of 60+ signatories to our original press release is available at the URL given above – that we are confident that our submission speaks for a much larger group of "drained brains" than the six names listed above.

Our submission addresses five main areas. These are:

- (1) the "brain drain" or "intellectual diaspora" of expatriate New Zealander academics and researchers;
- (2) early career development for academics in New Zealand;
- (3) research funding in New Zealand universities;
- (4) the standard of tertiary education and research policy in New Zealand, and the mechanisms for expatriate input to such policy work; and
- (5) the importance of the humanities in building a "knowledge society."

These issues are, of course, related. The thrust of our argument is that government should involve the global network of knowledge producers when doing the crucial work of developing and supporting New Zealand's academic talent. New Zealanders who belong to the international research community and who retain affection and concern for their homeland have a great deal to offer policy-makers and innovators.

Our expertise and interest is in universities, and so our submission is mostly limited to that area. Other tertiary providers certainly have an important role to play in New Zealand. But the universities are the flagships of the tertiary education sector, perform most of the international quality research, and largely determine New Zealand's international academic reputation. Government policies of the last decade have blurred the distinction between universities, polytechnics and other tertiary providers, and this has compromised the quality of university education. We very much hope that TEAC will reaffirm the clear distinction between types of providers given in the Education Amendment Act 1989 and the special role of universities in performing research, awarding higher degrees, and providing a full spectrum of course offerings.

In addition to our analysis of the issues, we include here several recommendations for specific policy actions. For convenience we have provided an index to these proposals below.

Finally, we warmly welcome this excellent chance to "phone home," given the traditionally woeful state of communication between expatriates and those responsible for tertiary education and research policy in NZ. The formation of TEAC is a hopeful sign of an improvement in relations between policy-makers and the global network of New Zealand's knowledge workers. We look forward very much to seeing the strategic guidelines that will emerge from this sectorwide dialogue.

But please, please, keep us in the information loop. Despite improved access to information from home afforded by the internet, we find it difficult to stay abreast of developments in the sector. We are particularly starved of government-level information: a submission three of us made on the previous government's Tertiary Green Paper seemed to disappear into a black hole and generated no further contact. A more collaborative response would help everyone – New Zealand can't afford to lose access to the expertise and opinions of *any* of its brains, whether they're at home or overseas.

To that end, we encourage you to contact us at any time. Naturally, we hope also to be included on follow-up e-mail lists and mail-out updates, and look forward to being directly notified of future opportunities to share our knowledge.

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Summary of Recommendations

Please note: Appendices 1 and 2 contain extended discussion of some of our proposals.

Recommendation: a unit consisting of representatives from departments responsible for Tertiary Education and Research, Science and Technology be instituted. This group would have responsibility for expatriate relations, gathering and analysing data about the brain drain, and commissioning research into the phenomenon. An initial report, outlining the preliminary findings, should be produced within the first twelve months. Naturally, such a unit would liaise extensively with expatriates, and we are happy to help put analysts in touch with expatriate networks.

Recommendation: institute a programme with the express purpose of financially assisting short visits by academic expatriates to share their knowledge and skills with their local counterparts

Recommendation: undertake a review of all government programmes and websites of relevance to expatriate academics. The purpose of the review is to make sure that the information flow is as efficient as possible. The review committee will of course include expatriates; we would be happy to contribute members to such a committee.

Recommendation: commit to the basic principle of benchmarking with selected other countries, with personnel in the relevant ministries specifically responsible for relations with overseas granting and policy agencies.

Recommendation: circulate tentative policy much more widely, taking particular care to solicit views from traditionally overlooked groups such as expatriates and those early in their career.

Recommendation: commit to the basic principle that when formulating any policy intended to help a particular age group (such as prospective PhD students, postdoctoral fellows, etc), the ministries actively solicit input from the group to be affected and those a few years further along in their academic career.

Recommendation: review hiring procedures for all positions connected with tertiary education and research policy work, and immediately increase the number of analysts with PhD training and research experience.

Recommendation: a government-run website (ideally a joint project between the Ministries of Education, RS&T, and Culture and Heritage) giving career information for prospective academics and researchers, promoting inter-generational links in the research community and fostering links between skilled expatriates and New Zealand. See outline in Appendix 1.

Recommendation: the funding formula for tertiary institutions should be "smoothed" over several years so that short term fluctuations in enrolments do not undermine departments and programs that have taken many years to build.

Recommendation: the funding formula must do more to recognize both the research and teaching outputs of tertiary institutions. In particular, some of the money currently tied to EFTS funding should be specifically allocated to the support of research within the tertiary sector, along the lines suggested in the 1998 White Paper.

Recommendation: specific funding schemes to support and foster excellent research groups and programmes should be created, in addition to the project based support provided by the Marsden Fund.

Recommendation: the TADS scheme and Enterprise Scholarships scheme should be reviewed, and either significantly redesigned or scrapped entirely, and their funding reallocated to more effective schemes. See extended discussion in Appendix 2.

Recommendation: the Marsden Fund should be tripled.

Recommendation: support for Humanities research - both via the Marsden Fund and from other sources - should be reviewed and enhanced, with a view to providing better career pathways for young scholars.

Recommendation: the funding cuts for "taught" postgraduate programmes be immediately retracted, and a proper study undertaken of the best way to boost funding subsidies for these essential transitional degrees.

Recommendation: the NZST Postdoctoral Fellowships scheme be extended to all fields of study, and its name and organizational structure amended accordingly.

Recommendation: a partner hire system be pursued in all New Zealand universities, along the lines of international best practice in the area.

Recommendation: conduct a review of the humanities in New Zealand, evaluating the current state of this branch of the tertiary sector (this would include compiling numbers on enrolments as well as hiring and redundancies), and assessing what material support is needed to sustain and develop the humanities as a national resource. The Australian Research Council's review may serve as a model; such a review would naturally involve the participation and expertise of HUMANZ, the Humanities Society of New Zealand/ Te Whainga Aronui.

Recommendation: initiate an investigation, supplementary to the above review, into the role – and potential – of the humanities in collaborative offerings with departments of science, law, engineering, architecture, and beyond. Contestable funding for innovative and high-quality interdisciplinary programmes would allow departments and faculties to expand their audience without further strain on already stretched budgets.

Recommendation: address the current imbalances in research funding and post-doctoral opportunities for the humanities, given that in order to call itself a "university," an institution must have an active, productive, fully-integrated, well-resourced and comprehensive humanities faculty. (See our related recommendations about research funding elsewhere in this submission.)

Recommendation: work collaboratively to develop better communication between tertiary institutions, employers, policy-makers, the public, and current and future students, about what the humanities do, what they give to New Zealand, and why fully-rounded universities with full-on humanities faculties are absolutely indispensable to a "knowledge society."

1 Expatriate issues and the brain drain

A burgeoning knowledge society must aim to recruit world-class talent, in order to raise the level of intellectual intensity and diversity and to foster the growth of local talent. But to put it bluntly, who wants to come to New Zealand? Our small table at the global academic job-fair is looking increasingly shabby, and those decorative silver ferns are wilting.

In such a context, New Zealanders currently sharpening their academic and innovative skills overseas are a highly recruitable group. For reasons of national pride and identity, as well as family and whanau commitments, they are far more likely than other nationals to be willing to make some sacrifices for the sake of bringing their skills home to New Zealand. A little patriotism, homesickness and nostalgia go a long way: most of us left New Zealand fully intending to return with our suitcases full of world-class ideas, approaches, and insights.

On the other hand, highly skilled workers – and academics in particular – have always operated in a global job market, and have often sacrificed home affiliations for professional rewards. A certain amount of emigration and exchange at this level is normal; a certain number of skilled New Zealanders will never return to this country, despite any lingering patriotic or nostalgic tendencies. But at what point does this phenomenon tip over into "brain drain"? Is New Zealand currently exporting more intellectual and social capital than it can afford to? Is it keeping away smart New Zealanders who are desperate to come back?

1.1 Let's do the numbers

The number of expatriate New Zealand "knowledge workers" can only be guessed at, but anecdotal evidence shows it to be substantial, probably in the thousands. What we do know, according to a recent Ministry of Commerce report on the knowledge economy, is that:

"Well-educated people in New Zealand are twice as likely to emigrate as their counterparts in the United States and nearly twice as likely as those in Chile, according to the 1999 World Competitiveness Report (issued by *The Economist*). New Zealand's ability to retain its skilled workers is similar to that of China and Venezuela, while countries such as the Czech Republic and Thailand are better able to retain their knowledge workers than we are." See the Ministry of Commerce report

http://www.moc.govt.nz/pbt/infotech/knowledge_economy/ for more on this issue.

Beyond this, we must rely on educated guesswork because as far as we know, no basic research has been done to ascertain the main causes of New Zealand's brain drain, its extent, and possible solutions. Further research could attempt to read this basic information against a wider historical and geographical framework, formulate reliable ways of collecting data, and would suggest policies in education, employment, immigration, and other areas.

There is an urgent need for research into this topic. One possible reason why so little is known about the brain drain is that this issue does not fall neatly into the ambit of a single government department, and so we make the following recommendation.

Recommendation: a unit consisting of representatives from departments responsible for Tertiary Education and Research, Science and Technology be instituted. This group would have responsibility for expatriate relations, gathering and analysing data about the brain drain, and commissioning research into the phenomenon. An initial report, outlining the preliminary findings, should be produced within the first twelve months. Naturally, such a unit would liaise extensively with expatriates, and we are happy to help put analysts in touch with expatriate networks.

1.2 Bring them home

How do academic New Zealanders end up overseas in the first place? The career path for New Zealanders in most academic disciplines requires a PhD and/or postdoctoral work done overseas in order that the person concerned achieve the professional standard expected by a world-ranked university. A certain fraction of these "short-term" expatriates then become "long-term" expatriates by taking up a permanent position in an institution overseas.

If New Zealand wants to harness the intellectual horsepower these people represent, policymakers must make a serious commitment to (a) reducing this "long-term" fraction and (b) ensuring that the knowledge and skills of the long-term expatriates are not lost to New Zealand.

(a) Reducing the Proportion of Long-Term Emigrés

In our view, the main reason so many academics and researchers emigrate from New Zealand (or fail to return) is the lack of opportunity to pursue an internationally credible career in this country. Simply put, there are too few jobs, and working conditions in those that exist are often substandard. Direct salary considerations play some role, but a relatively minor one. The key problem is a chronic lack of the (moral and financial) support necessary for a productive research programme. In addition, attractive alternatives to university positions are much fewer in New Zealand than in countries with a larger industrial base and more high-tech companies.

The degree to which our initial press release about the major causes of the brain drain (November 1999) was enthusiastically supported by many expatriates, makes us confident that this diagnosis is substantially accurate.

Recommendations for creating a more research-friendly environment can be found in Section 3 of our submission.

Recommendations for providing an attractive environment for highly recruitable young academics can be found in Section 2.

(b) Keeping Up Contact With New Zealanders Overseas

Long-term expatriates have much to offer New Zealand. They are very likely to be at excellent institutions and to be more in touch with international best practice than their academic counterparts working in New Zealand. Their perspective can help dilute the insularity which can easily occur in an academic community as small as New Zealand's.

Yet, outside of a few local programmes such as University of Canterbury's Erskine Fund, little money is set aside to facilitate contact between New Zealand researchers overseas and those at home. Small travel and support grants to bring home New Zealanders who are doing excellent work overseas could make a huge difference to the intellectual vigour of academic departments and educational institutions in New Zealand. Recipients might be PhD students overseas wanting to attend a summer conference in NZ, along the lines of those run by the New Zealand Mathematics Research Institute, or tenured professors visiting a New Zealand university to give a short course in their field of speciality. (Such a scheme need not be limited to the tertiary sector, of course). Further, as shown by the instant and loud response to our press release last year, a large number of expatriates retain a lasting commitment to New Zealand. However, it is also clear that there are major barriers to their contributing on a more frequent basis.

The main barriers are the lack of information flow between New Zealand and expatriates, as well as a perceived lack of interest from New Zealand in improving this situation. It is difficult, for example, to determine from outside New Zealand whether various funding schemes or indeed policy documents invite expatriate submissions; much information is not properly available from websites, which are the primary way expatriates keep in touch with New Zealand events. A true knowledge society would be one that would take advantage of developments in communications technology to connect smart New Zealanders with each other, no matter where they happen to be physically based.

Recommendation: institute a programme with the express purpose of financially assisting short visits by academic expatriates to share their knowledge and skills with their local counterparts

Recommendation: undertake a review of all government programmes and websites of relevance to expatriate academics. The purpose of the review is to make sure that the information flow is as efficient as possible. The review committee will of course include expatriates; we would be happy to contribute members to such a committee.

Recommendation: in Appendix 1 we outline a proposal for a NZ Expatriate Directory and a One Stop Information Shop designed to bring together the brains and information necessary to make New Zealand's thinking sector a truly global one.

1.3 A footnote on non-emigré "brain drain"

Although our focus is on the international loss of talent, we encourage TEAC to take a more comprehensive approach when defining and accounting for the "brain drain." As currently used, the term implies a crisis at the national level alone. This ignores the streams of people who *don't* get their passports stamped as they flood out of the skills reservoir. With this in mind, we would like to mention several other "brain drains" that TEAC could and should usefully address in its recommendations to the Minister. This is not an exhaustive list, but it's a start.

Some local phenomena that aren't called "brain drain" but should be:

- numbers of Maori, Pacific Island and low-income students at universities are falling every year, and when these students are radically underrepresented at higher levels of tertiary education (cf. the University of Auckland Taskforce on this subject);
- mature students decide not to get degrees because they've worked out how long it will take them to repay student loans and it's just not "worth it";
- rocketing fees put medical and law degrees out of the reach of lower and middle income people;
- students are duped into wasting precious time and money at institutions that should never have been accredited in the first place;
- universities don't offer courses at times of day or year convenient for school teachers who need to stay plugged into what's happening in the field;

- superb, internationally-ranked research departments are endangered because of a lack of bums on seats in an EFTs-based funding system;
- academic departments water down their required curricula in order to attract EFTs; or worse, are forced to offer inadequate tuition because
- the humanities and pure science struggle to gather EFTs because they're (inexplicably, compared with hiring practices overseas) not perceived by students or employers as relevant to a "knowledge economy";
- the last government can issue an educational manifesto called "Bright Futures" (which the current government has yet to officially revise or reject) that is fabulously designed and attractively illustrated with references to film, fashion, and the arts, yet doesn't once mention, in the text alongside these pictures, the relevance of the arts and humanities to a Bright Future.

2 Early Career Support

Overview

We can all attest from our own experience to the huge effect that good advice and relatively small amounts of moral and financial support can have on the career development of a young academic.

In recent years the government has instituted some admirable schemes to assist in early career development. Unfortunately there have been as many backward steps as forward ones, each one leaving New Zealand further behind comparable nations. Without a major commitment to greater assistance for young academics in the New Zealand setting, the brain drain will continue to accelerate, and the thinking sector of New Zealand will suffer from a significant generation gap, as young academics leave the sector, or the country, or both.

The life-cycle of a New Zealander who becomes (or hopes to become) an academic in a university looks something like this:

- an honours or master's degree in New Zealand;
- a doctoral degree, often overseas;
- a two to six or more year postdoctoral "apprenticeship" is required (in the sciences, in particular) before
- the highly qualified researcher and thinker achieves the desired goal of a tenurable university or research position, or
- finds equally challenging and worthwhile work outside the academic sector

Some recent government policies (and subsequent university conditions) have placed great pressure on those at every stage of this life-cycle. In many cases, policies designed to nurture young thinkers have had quite the opposite effect. Below, we discuss several readily fixable examples.

2.1 Honours degrees: incubating researchers and innovators

The first step on the ladder to a career in research and innovation is an honours or master's degree, which is an absolute prerequisite for the higher degree of Ph.D. Any sector-wide programme designed to boost research and the production of knowledge must necessarily improve access to this level of study.

However, recent government policy decisions have made it *more* difficult for institutions to offer teaching at this level. For the 2000 academic year, the Ministry of Education cut the tuition subsidy for each enrolled student in a "taught" postgraduate programme (course-based, i.e. honours year) by 26.6%, and increased the subsidy paid per "research" student (thesis-based; i.e. second year masters by thesis and Ph.D.) by 12.8%. This translates into a loss for the institution of \$4000 per honours student.

Ostensibly, the Ministry wished to encourage more "research" degrees to be undertaken at the expense of "taught" programmes. But there are two major problems with this rationale: Firstly, the names "taught" and "research" are misleading in this context. In the sciences and in the humanities, it is not possible to go on to thesis-only postgrad study without first completing a postgrad course with a "taught" component. Three years of undergraduate study is not adequate preparation for a student to design and complete their own programme of advanced research. This transition to independent research is well understood in the United States, for example, where the "taught" masterate is the norm and graduate schools require substantial coursework before admitting students to PhD candidacy.

Secondly, in the New Zealand context, many "taught" programmes require independent research projects, many of which yield publications in the international literature for the field.

The effects of the Ministry's subsidy reduction for honours students were immediate: a 3% increase in overall undergraduate subsidies and a 7% decrease in postgraduate funding (according to the calculations of the NZ Vice Chancellors' Committee based on last year's student numbers). To recapture the lost revenue under the current funding system, departments are coerced into increasing undergraduate enrolments at the expense of postgraduate ones, and into cutting staff numbers (Victoria University, for example, is in this position). The net result of this policy (which appears to have been formulated without proper investigation into, or understanding of, the possible effects) is the absolute opposite of what was intended: a decline in research capacity in New Zealand universities.

Recommendation: the funding cuts for "taught" postgraduate programmes be immediately retracted, and a proper study undertaken of the best way to boost funding subsidies for these essential transitional degrees.

2.2 Ph.D. students

The next step is the PhD. Here again there have been serious policy mis-steps. The Top Achiever Doctoral Scholarships announced in the previous government's Bright Future package are an egregious example of an ill-considered and ultimately backward policy step. Our detailed critique of the basic conceptual flaws of the scheme is found in Appendix 2. In addition, the first year of operation showed serious deficiencies in the execution of the policy. The experience of one of us (ATPS) in interacting with the TADS bureaucracy is found in Appendix 3 and bears careful examination.

Recommendation: several are listed in Appendix 2.

2.3 Post-doctoral fellows

Postdoctoral positions are an essential career step in most disciplines, as well as a powerful source of intensive and cutting-edge research (since many postdocs are devoted full-time to research and publication). New Zealand still offers far too few of these positions. The New Zealand Science and Technology Postdoctoral Fellowships (of which one of us (MW) was a grateful recipient) are an excellent step forward in this respect and bring New Zealand more into line with countries such as Canada and Australia. However they do not apply to the humanities, an imbalance with negative long-term effects (see section 5). Postdoctoral fellowships should of necessity be available to excellent candidates in every field of knowledge production, in order to foster the diversity that is necessary for truly profitable cross-fertilization of ideas.

Recommendation: the NZST Postdoctoral Fellowships scheme be extended to all fields of study, and its name and organizational structure amended accordingly.

2.4 Lectureships

The next level, that of lecturer, would benefit from many improvements and incentives. New Zealand cannot compete for staff on the international market on salary and monetary resources alone, so we need to think of more creative ways to attract and retain top flight academics.

- As mentioned above, and in our section 3 on research support, support for research is a major incentive, and in many cases, the primary consideration, outranking salary.
- Any trend towards an increase in the number of adjunct (temporary contract) lecturers will be a disincentive to serious scholars, and should be avoided unless New Zealand wishes its universities to be seen as second (or third) class institutions.
- At the risk of stating the obvious, happy universities attract quality staff. With major, arbitrary redundancies happening at several New Zealand universities, and international coverage of these in industry journals, the international profile of New Zealand as a desirable intellectual workplace is plummeting.
- Another area in which New Zealand could usefully make itself attractive to world-class scholars is that of hiring partners. Increasingly, especially as more women gain higher degrees, qualified academics travel in pairs. Remarkably few universities have realized that this situation can be exploited to obtain more productive staff. Some, such as the University of Wisconsin system, have procedures for allowing universities to hire the partner of a staff member (provided of course that they meet the hiring standard). Small colleges in the American Northeast arrange to soak up each other's partner hires (a collaborative arrangement that could certainly work in the larger cities).

This mild form of "affirmative action" reduces staff turnover and increases productivity with minimal risk to research quality. Such a scheme would definitely make New Zealand more attractive at recruitment time. We personally know of several couples of high academic standard to whom this would have made the difference between working in New Zealand and (as they unfortunately did) deciding to remain overseas.

Recommendation: a partner hire system be pursued in all New Zealand universities, along the lines of international best practice in the area.

2.5 Career advice

Finally, a general problem for young scholars at every level is where to find good advice about postgraduate study and career matters. Several of us could share anecdotes that illustrate the necessity of being put in touch with the right people with the right information at the right time. A truly integrated and globally-networked knowledge society will aggressively promote contacts between current and future academics, both in New Zealand and overseas.

At the moment, such contacts are ad hoc and more or less random. One of us (AP) has advised several prospective physicists after being contacted via the "Kiwi Physicists Abroad" webpage (note that this page was set up and promoted by expatriates, not initiated by anyone in New Zealand); others have provided advice via informal links (often initiated by the inquiry "Are there any New Zealanders at O'seas U?"). Another of us was told in correspondence by a senior person at MoRST, "I wonder if we shouldn't be tapping into people like you as an intelligence network - you are all probably exposed every day to exciting new ideas." We believe that a more coordinated and energetic approach than these currently isolated and infrequent contacts would be of enormous benefit to New Zealand's intellectual industries, and suggest such a programme in Appendix 1.

Recommendation: a government-run website (ideally a joint project between the Ministries of Education, RS&T, and Culture and Heritage) giving career information for prospective academics and researchers and promoting inter-generational links in the research community. See outline in Appendix 1.

3 Research and tertiary education in New Zealand

Almost every discussion of tertiary education policy in New Zealand pays homage to the intimate connection between research and tertiary teaching. However, New Zealand policy-makers have not consistently translated this belief into policies and programmes which foster research within the tertiary sector.

3.1 EFTS funding and research

On the face of it, the EFTS-based funding system appears to have little to do with research. And that is precisely the problem. New Zealand's universities are required to engage in excellent teaching *and* research. However, despite facing the challenge of producing these two outputs, university funding is determined almost entirely by a single input - the EFTS based funding from Vote Education combined with student fees, which recognize only the teaching work of the university.

The EFTS formula allows funding levels to fluctuate sharply from one year to the next, which is a much shorter timescale than that required to build and sustain strong academic programmes. This hinders long term planning and new initiatives within the tertiary sector, which in turn makes it difficult to nurture and maintain strong research groups. It has also led to the disturbing situation in which departments that produce world ranked research but have a comparatively low number of EFTS (such as the Victoria Philosophy department) have been forced to lay off academic staff. Building strong research groups takes time, stability and a willingness to embrace risk - whereas the uncertainty introduced by EFTS based funding hinders planning, and forces institutions to trade away long term benefits for short term security.

As well as the immediate damage done to individual programmes, this problem has a more insidious effect: the visible lack of job security makes the New Zealand tertiary sector a much less attractive place for young academics (both expatriate New Zealanders, and citizens of other countries) to work. This disincentive, combined with the low level of overall research support in New Zealand compared to OECD norms, represents a significant barrier to the recruitment and retention of excellent academic staff in the highly competitive international job market. Moreover, this is a problem that makes recruitment harder for all New Zealand universities, not just those which have actually experienced redundancies.

Rigid EFTS-based funding forces individual departments and institutions to compete directly for students. This is not intrinsically undesirable; however, the intensity of the competition has led to a significant dilution of academic standards. For example, the pre- and co-requisite mathematics requirements for many science based courses have been eroded over the last decade in an effort to attract students. As a consequence, the minimum standard required to obtain a BSc degree at many universities in New Zealand has declined measurably. In addition, there is strong anecdotal evidence for less quantifiable erosions of standards driven by the competition for students and scarce resources: grade inflation, a watering down of curricula, fewer assignments and tests, and the cancellation of tutorials and supplementary classes. Finally, competition between departments for students can reduce the incentive to departments for offering interdisciplinary programmes, or encouraging students to study a broad range of classes.

The weakening of undergraduate courses is a problem in its own right, since it means that New Zealand's university students are receiving a less rigorous education than they once did, while paying more for it. Moreover, it also makes it more difficult to recruit excellent staff, as the erosion of standards sends a clear signal that New Zealand's tertiary institutions are not committed to excellence in teaching - or, in the most charitable interpretation, that New Zealand does not provide its tertiary institutions with the resources they need to translate their commitment to excellence into practice. Given that this year's undergraduate is potentially next year's researcher and innovator, the erosion of standards at the undergraduate level will have unavoidable consequences for the quality of post-graduate and research degrees, not to mention workplace participation, undertaken by these students.

3.2 Public sector support for research

It is well established that support for both public and private sector research in New Zealand lags well behind the norm for advanced economies. For example, in the United States the National Science Foundation (NSF) funds approximately 10,000 projects per year, which is approximately 30% of the total number of proposals received. The nearest New Zealand analogue to the NSF is the Marsden Fund which, in 1999, funded 74 proposals, giving a success rate of approximately 10%. Given that the Marsden fund carries the burden of supporting most of the research undertaken in New Zealand, the total amount of funding available is scandalously low for a nation attempting to fashion itself into a "knowledge society."

If the Marsden fund was to fund the same number of projects per capita as the NSF, it would need to be doubled in size - and the large number of excellent but unfunded proposals is strong evidence that this money would be put to good use. However, even if the Marsden fund was tripled in size the overall level of funding for pure research in New Zealand would still be considerably less than in other leading economies, as the Marsden fund dominates support for pure research in New Zealand, while in the United States researchers have access to funds from the National Institutes of Health (which is five times larger than the NSF), NASA and the Departments of Energy and Defense. Furthermore, large amounts of the research carried out in American universities is supported by private companies and philanthropic trusts, and support of this kind is rare in New Zealand.

Consequently, in the United States 43% (1993 figure) of university faculty are supported by one or more outside grants, whereas in New Zealand the corresponding figure is much lower. This exacerbates the problems caused by the EFTS model, since academics have a much lower level of access to alternative sources of funding than their international peers.

We are especially concerned at the lack of support for research in the humanities available within New Zealand. Some support for humanities scholars is provided by the Marsden Fund, but this is a small fraction of what is already, by international standards, a tiny pool of money. Moreover, there is considerable anecdotal evidence that young New Zealander scholars in the humanities overseas are not aware that the Marsden fund even supports humanities research nor that it represents a possible source of funding for projects that would facilitate their return to New Zealand.

A byproduct of the lack of support for research in New Zealand is that post-doctoral positions within New Zealand are extremely scarce. Not only does this deprive research groups of the stimulus and input from having young, active and full-time researchers working alongside academics and students, it also contributes directly to the lack of support and coherent career structures for young researchers within New Zealand, and exacerbates the "brain drain".

A further problem with the Marsden Fund is that it is designed to fund specific projects, and

cannot be used to directly support overall research programmes - particularly in departments that are producing excellent research but are under threat because their teaching activities do not attract a sufficient level of EFTS funding. Again this puts New Zealand in an unfavourable position with respect to many other countries, where funding agencies will support long term research programmes, rather than individual projects. In particular, this sort of funding would facilitate the formation of "Centres of Excellence" for specific research fields within universities.

Finally, we are strongly concerned that some recently introduced schemes to promote research are fundamentally flawed. In particular, the Bright Futures scholarships which are targeted toward encouraging post-graduate students appear to be deeply misguided. The Top Achiever Doctoral Scholarships scheme is analyzed in detail in another part of of our submission, and our concern is not just that this programme and the associated Enterprise Scholarships scheme is flawed, but that the money used to fund them could be far more effectively spent to better encourage research within the tertiary sector.

3.3 Recommendations and conclusions

Having surveyed the problems faced by researchers in New Zealand's universities, we can see a number of concrete measures that should be considered by TEAC.

Recommendation: The funding formula for tertiary institutions should be "smoothed" over several years so that short term fluctuations in enrolments do not undermine departments and programs that have taken many years to build.

Recommendation: The funding formula must do more to recognize both the research and teaching outputs of tertiary institutions. In particular, some of the money currently tied to EFTS funding should be specifically allocated to the support of research within the tertiary sector, along the lines suggested in the 1998 White Paper.

Recommendation: Specific funding schemes to support and foster excellent research groups and programmes should be created, in addition to the project based support provided by the Marsden Fund.

Recommendation: The TADS scheme and Enterprise Scholarships scheme should be reviewed, and either significantly redesigned or scrapped entirely, and their funding reallocated to more effective schemes.

Recommendation: The Marsden Fund should be tripled.

Recommendation: Support for Humanities research - both via the Marsden Fund and from other sources - should be reviewed and enhanced, with a view to providing better career pathways for young scholars.

4 Tertiary education and research policy

We have serious concerns about the way tertiary education and research policy has been made in recent years. On several occasions, clearly substandard work has been done (such as the Tertiary Green Paper of 1997, and the TADS scheme which we critique in Appendix 2), and good intentions have sometimes gone badly awry when translated into policy.

Despite the current emphasis on "knowledge" as an asset, the main problem seems to be a dearth of thorough groundwork and analytical rigour in the relevant ministries, which seriously compromises the "knowledge" that is being produced.

The basic cure is to adopt the methods used by academics and researchers themselves:

(i) a resolutely international outlook;

- (ii) information sharing;
- (iii) rigorous peer review, and
- (iv) high standards of evidence and argument.

Turning to specifics, we note that other countries have a much longer history than NZ of serious policy-making in these areas. Not every overseas policy will work in NZ, but there is no need to reinvent the wheel every time we need a wheelbarrow. Jurisdictions such as Israel and California, for example, can teach New Zealand a lot about how to develop and maintain a powerful university system.

Recommendation: commit to the basic principle of benchmarking with selected other countries, with personnel in the relevant ministries specifically responsible for relations with overseas granting and policy agencies.

To avoid further flawed policies with unintended consequences, wider-ranging and more focused consultation is required - not just with the usual sector organizations dominated by senior academics but directly with those who will be most affected and with those who are most likely to know what effects the policies will have. The TADS scheme, for example, would have been immediately recognized as flawed by almost any young academic who had recently completed an overseas PhD.

Recommendation: circulate tentative policy much more widely, taking particular care to solicit views from traditionally overlooked groups such as expatriates and those early in their career.

Recommendation: commit to the basic principle that when formulating any policy intended to help a particular age group (such as prospective PhD students, postdoctoral fellows, etc), the ministries actively solicit input from the group to be affected and those a few years further along in their academic career.

Continued application of the last two recommendations will help in achieving goals (iii) and (iv). If the research and analysis conducted by the ministries responsible for funding and nurturing New Zealand's knowledge production is not of the same rigorous standard and intellectual calibre as that performed by the research sector, something is badly wrong.

Recommendation: review hiring procedures for all positions connected with tertiary education and research policy work, and immediately increase the number of analysts with PhD training and research experience.

5 Get Sm(Arts): An Argument for Boosting the Humanities

Introduction

The last major attempt at producing a blueprint for a "knowledge economy," the policy document called *Bright Future: Making Ideas Work for New Zealand* was fatally flawed. The brochure featured fashion and film heroes like Zambesi and Peter Jackson and proclaimed that "ideas" of all kinds were New Zealand's "greatest asset" – but, incredibly, not one of the policy incentives was targeted towards the humanities (the arts and social sciences). Fashion and film were fine for packaging purposes, but the only ideas that "worked for New Zealand" and made our future "bright," it seemed, were those in applied science and technology.

This anachronistic assumption – that the study of culture is optional – is something we hope TEAC will dispel when it reports back to the government. Although TEAC's terms of reference do not specifically address the humanities, they do ask for guidance in the matter of key issues and strategic directions. The presence of a comprehensive humanities faculty distinguishes a research university from other tertiary institutions, so the vitality of the New Zealand humanities is inseparable from the international credibility of New Zealand universities. Therefore, an indisputably strategic direction for a knowledge-oriented society is a new and intensified focus on the art of thinking, via the thinking arts.

In what follows, we argue that these branches of inquiry furnish thinkers and ideas that nourish New Zealand's profitable cultural industries, enhance social cohesion while leading to informed and lively debate, and give New Zealand a recognisable cultural identity in an increasingly homogenised world. We go on to suggest some areas in which New Zealand can improve its commitment to this branch of knowledge and unleash the full potential of the thinking arts.

NOTE In preparing this submission, we have drawn extensively on the arguments of Meaghan Morris and Iain McCalman in their report for the 1996-7 Australian Research Council's strategic review of the state of the humanities in Australia. Page references are to the version of the report published in the journal *Public Culture* 11:2, 1999, pp 319-45: "Public Culture and Humanities Research in Australia: A Report." An earlier version can be found online with the complete report and many other excellent submissions at

http://www.asap.unimelb.edu.au/aah/research/review/.

5.1 Thinking About Thinking: or, What the Humanities Do All Day

The new Minister of Education has called attention to the need for "joined-up solutions to joined-up problems" and "graduates who have the capacity for critical reflection and judgements" (Steve Maharey, 5 May 2000 Speech: "Towards the Innovative University"). As the Minister suggested, this is where the humanities excel: they have been measurably of value to New Zealand in producing generations of New Zealanders who can read and think and write intelligently. These graduates have fanned out into jobs in schools, tourism, television, libraries, film, museums, translation, radio, print journalism, comedy, writing, web content provision, policy analysis, law, festivals, and the performing arts, thus contributing directly to the economic and social health of the nation.

There are more indirect benefits, too. The role of the humanities in the world's foremost universities today is to convey accumulated knowledge, to hone leading edge insight, and above all to question how that knowledge itself is generated and applied. This "thinking about thinking" is a basic item in the intellectual toolbox, since it's not just applicable to the time spent gaining a degree, but lays the ground for a lifelong curiosity that balks at received wisdom. Exposure to this meta-thinking produces graduates who are able to formulate the new questions and approaches necessary for innovation. It also (as Morris and McCalman point out) produces a population that can pursue lifelong learning opportunities with confidence, and that has "the creative and intellectual skills to self-employ or start small businesses in culture and educationrelated areas" (333). Education in the humanities, therefore, allows replication not just of ideas, but of competent independent thinkers. An investment in the humanities is thus an investment in the future – and a cheap one at that.

Further, many of the most complex issues we now face – such as globalization, nationalism, ethics, human rights, sexuality, the family, new medical procedures, social policy, the adoption and impact of new technologies, the ever-changing workplace, privacy, what it means to be a person in the 21st century, to mention just a few – stand at the intersection of many fields of inquiry, and must be tackled in creative and rigorous ways. Interdisciplinarity – which is what happens when multiple forms of knowledge mesh to produce new knowledges – presupposes an active, vibrant humanities faculty alongside engineering, technology, law, medicine, science, and other fields. Even MIT (Massachusetts, not Manukau!), which as its name suggests is focused on technology, has an outstanding humanities faculty. Any institution worthy of the designation "university" must have a fully-functioning, well-resourced, and productive humanities faculty to assist with the task of puzzling out the way the world now works.

This is true at street level, too: New Zealand is undergoing major and rapid cultural changes at every level, but in many cases we've been here before, and it is the historians, cultural studies experts, sociologists and literary researchers who can provide perspective and illumination. New Zealanders need to be culturally and historically literate in ways that help them understand both home and the world at large, both how we got here and where we're going. Research about New Zealand stimulates local historical and cultural literacy, providing both the vocabulary and the methods for lively debate about what it means to be a New Zealander. This critical citizenship is crucial for the functioning of a democratic society. In turn, the local production of research about other places and questions of global interest offers a bridge of comprehension between New Zealand and the world, enabling New Zealanders to welcome and begin to understand arts, ideas, news – and people – from other places.

As Morris and McCalman also point out, smaller places like Australia and New Zealand are especially vulnerable to being "swamped" by larger cultural economies (330). The humanities and the arts play a major role here too, helping to "brand" New Zealand as something more than a green place with sheep. An evolving national identity is crucial in giving a small place a profile in this increasingly globalized world, and providing a point of identification for New Zealanders. And the contribution of the arts and humanities to "quality of life" should not be underestimated: when global capital relocates, it's not all about low wages: hi-tech companies are on the lookout for liveable places with active cultural lives. In this context, New Zealand should do all it can to earn the sobriquet it was given last year by *Wallpaper*, a global lifestyle magazine: the Stockholm of the South Pacific. Finally, in addition to the tangible benefits listed above, the humanities tells us more about ourselves and the world we inhabit. The arguments that persuade a society to support pure science projects in astrophysics, for example, apply with equal force to the humanities. Pure research, in the arts as well as the sciences, is the air that applied research breathes.

To recapitulate, the humanities can be seen as

- (a) a source of well-trained and articulate people who are active and productive in a variety of industries, especially but not only the cultural and educational sectors
- (b) a long-term investment in creativity and learning for life
- (c) a fertile ground for interdisciplinary work
- (d) a source of credibility for New Zealand universities at the global level
- (e) a source of democratic and cosmopolitan literacy at home, and of cultural sovereignty and a recognisable identity in the world
- (f) a valid and valuable arena for the pursuit of knowledge for its own sake, alongside applied knowledge.

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We hope that the social and cultural value of the humanities is already well understood by policy-makers and tertiary and cultural institutions. Given the recent \$80 million investment in the performing and media arts, the government has a vested interest in supporting the cultural criticism with which such arts are already in dialogue.

But instances like the silence of the Bright Future document, and students being told by WINZ staff that their arts degrees are "useless," suggest that the value of the thinking arts to business and the wider New Zealand community has not yet been fully appreciated or assimilated. Below, we expand on the broader relevance of a humanities education, with the hope of persuading the business community to collaborate with tertiary institutions on nurturing excellence in this field.

5.2 The Art of Business: Employing All Kinds of Knowledge

"These aspiring managers, social workers, diplomats, and performers have one thing in common. They study Arts."

- recent print advertisement for the University of Auckland

We begin by reiterating a view from within the business community. Bob Jones made the point more than a decade ago, and it's one that software pioneer Sir Gil Simpson has illustrated in his recruitment policy: a Classics or Philosophy major might add more value to your company than someone with a degree in Marketing. For example, world-class consulting companies like McKinsey & Co and Boston Consulting Group are realising they can train a humanities PhD in

what an MBA knows in 3 weeks to 4 months, but an MBA can't gain a humanities graduate's skills in a comparative amount of time. Accordingly, these businesses are actively recruiting people with arts degrees – at all levels – on top campuses all over the world.

Many burgeoning industries in the United States, not just management consulting, recognise that studying the humanities – at both the undergraduate and postgraduate level – leads to a range of skills that are applicable in a variety of challenging contexts. These skills include:

- rapidly locating and assimilating new information;
- breaking down and understanding complex content;
- weaving complicated and evolving fields of information into a comprehensible document;
- an exceptional level of problem-solving tools and experience;
- the ability to convey complex information to audiences of varying levels of expertise;
- an enthusiasm and curiosity about how systems work;
- expertise in the most nuanced medium society has for thinking and articulating complex ideas: language.

A transformation in hiring assumptions and practices would be a start; more active corporate support of the thinking arts would be even more beneficial (see the Merrill Lynch Innovation Grants, at http://www.ml.com/innovation, for an example of broad corporate support of talent). One of us (JG) was supported early in her study of Japanese literature and culture by a grant from Fletcher Challenge in association with the New Zealand Japan Foundation; relationships of this kind between business and the arts should not be anomalous, but commonplace and common sense.

5.3 The State of the Arts: Are We Failing our Future?

The role of the humanities as we have sketched it here is a best-case scenario. But at the moment, the humanities are embattled and dispirited, which seriously compromises their ability to contribute to New Zealand at the highest possible level. Some symptoms of this malaise are as follows.

- Economically viable and educationally excellent departments are being downsized or dismantled because they're not "profitable enough".
- Long term planning is extraordinarily difficult, due to the fluctuating annual EFTS-based funding.
- EFTS-based funding leads to counterproductive competition between departments and institutions, instead of interdisciplinarity and collaboration.
- There is virtually no "give" in the budget for expansion into cutting-edge and innovative subject areas (such as cultural studies, for example).

- Senior academics are leaving for overseas universities such as Princeton in the US, and Cardiff in the UK.
- Junior New Zealand academics overseas are warned by colleagues in New Zealand to keep away, or (see Michelle Elleray's case study in Appendix 4) are unable to find a way back.
- The dearth of junior hires has created a generation gap, which leads to a loss of traction when coming to grips with new ideas and approaches
- The infrastructure is suffering badly, with university libraries (which should be not only the best of their kind in New Zealand, but world-class) barely adequate for undergraduate study, let alone postgraduate work. The Minister of Education refers to universities as "storehouses" of knowledge, but such a metaphor implies constant replenishment but our universities are in danger of becoming crumbling time capsules instead.
- Even as electronic access to teaching and research resources offers enormous potential for keeping small and distant places like New Zealand plugged in, most tertiary institutions even the universities provide only spotty and difficult access to the wired world.
- There is still a general PR problem, which universities, policy makers and opinion leaders need to address: the outmoded notion, still alive and well at WINZ, that an arts degree is "useless."

What can be done to produce the humanities renaissance necessary for a fully-functioning knowledge society? We offer the following broad suggestions, and would happily participate in future discussions on developing the humanities.

Recommendation: conduct a review of the humanities in New Zealand, evaluating the current state of this branch of the tertiary sector (this would include compiling numbers on enrolments as well as hiring and redundancies), and assessing what material support is needed to sustain and develop the humanities as a national resource. The Australian Research Council's review may serve as a model; such a review would naturally involve the participation and expertise of HUMANZ, the Humanities Society of New Zealand/ Te Whainga Aronui.

Recommendation: initiate an investigation, supplementary to the above review, into the role – and potential – of the humanities in collaborative offerings with departments of science, law, engineering, architecture, and beyond. Contestable funding for innovative and high-quality interdisciplinary programmes would allow departments and faculties to expand their audience without further strain on already stretched budgets.

Recommendation: address the current imbalances in research funding and post-doctoral opportunities for the humanities, given that in order to call itself a "university," an institution must have an active, productive, fully-integrated, well-resourced and comprehensive humanities faculty. (See our related recommendations about research funding elsewhere in this submission.)

Recommendation: work collaboratively to develop better communication between tertiary institutions, employers, policy-makers, the public, and current and future students, about what the humanities do, what they give to New Zealand, and why fully-rounded universities with full-on humanities faculties are absolutely indispensable to a "knowledge society."

Appendix 1 Information In/ Information Out: A Proposal to Tap the Intellectual Diaspora

This part of the submission addresses two groups of thinkers and innovators – those inside New Zealand, and those overseas with an interest in New Zealand – and one problem: how to keep them in touch with each other? How to locate fellow researchers, sources of funding, great opportunities, new projects, when both the people and the information are so widely dispersed? In other words, how to locate, access, and use to best effect New Zealand's intellectual diaspora?

We propose a web-based "brains trust," made up of two parts: a voluntary directory of expatriate New Zealanders and a comprehensive one-stop shop offering information about opportunities in New Zealand for smart people.

This resource will encourage the flow of skills and knowledge between the expatriate community and New Zealand, and link expatriate New Zealanders (and talented others) with employment opportunities in New Zealand.

In principle, such a project could be created and maintained by any interested person or organisation. Since it would be unlikely to be financially self-supporting, it will work best if managed by (or at least sponsored by) government.

Below, we outline the form and rationale for the two prongs of this resource.

The directory

Rationale

To invoke the term "brain drain" is to imply that educated New Zealanders living overseas are necessarily "lost" to New Zealand. However, there's another way of seeing it: those same drained brains constitute a vast web of skills and information located across the globe, just waiting to be pulled into a network and called to action.

A recent UNESCO report on brain drain in the global context

(http://www.unesco.org/most/meyer.htm) argues that the only way many small countries can retain access to emigré expertise may be to mobilize networks of expatriates. Until now, the government seems to have been reluctant to appeal to the stubborn loyalty that many expatriate New Zealanders retain for their homeland. But that loyalty is itself a major resource.

True, many professional associations and societies (the RSNZ and University Alumni Associations, for instance) already maintain networks of their own members. The extra advantages of the meta-directory we propose are that it would be interdisciplinary, would extend beyond the borders of academia and the professions, and would offer a single point of contact for searchers.

The following examples illustrate specific possible uses of the directory:

Auckland schools that are currently offering bonuses of several thousand dollars to expatriate New Zealanders who return home and take up teaching positions could search the directory for qualified teachers living overseas.

A New Zealand firm seeking legal representation in the United States could search the directory for New Zealanders working in American law firms, thus locating lawyers who are familar with both the New Zealand and American legal systems.

The directory would help MoRST locate expatriate New Zealander scientists who could serve as referees for grant applications. This would broaden the pool of potential referees, and avoid conflicts of interest that may arise when referees are drawn from a comparatively small local scientific community.

A New Zealand yacht designer seeking short-term help with computer simulations of a new hull design could search the directory for consultants with expertise in computational fluid dynamics.

A film school looking for a visiting lecturer with insight into the international marketplace to offer master classes (in screenwriting or editing, for instance) could search the database for New Zealanders working in the film industry overseas.

Format

We envisage a computerized database accessed via the World Wide Web. If needed, searches and registrations could, of course, be made by post or telephone.

Since much of the information in the directory will be private, and because individuals currently employed overseas may not want to advertise their willingness to consider job offers from New Zealand, strong privacy safeguards will be needed if the directory is to function well.

Individuals adding their names to the directory would have the option of providing different levels of information, including

- Contact details and addresses.
- Professional and educational qualifications.
- Institutional affiliations and employers.
- Specific skills, and areas of special knowledge.
- The circumstances in which the information they have given can be provided to searchers (see privacy issues, below).

Gathering Information

The existence of the directory, and an invitation to register, could be advertised in a variety of ways. We suggest advertising on websites read by expatriate New Zealanders (on-line versions of New Zealand newspapers, web-sites such as nz.com, enzed.com, and newsroom.co.nz, newsletters and newspapers focused on expatriates (Newzgram or New Zealand News UK), and university alumni associations.

Privacy Issues

Privacy concerns must be addressed and safeguards provided to ensure that the information is not used for unwanted commercial or personal solicitations.

The directory may work best if individuals can specify a variety of privacy levels for the data they provide, as a person may wish to make some details publicly available, while restricting others to searchers who have established their bona fides with the directory administrators.

One stop information shop

Rationale

We suggest supplementing the network outlined above with a "one-stop shop" that collates information about research, funding, networking, and "smart industry" opportunities in New Zealand.

The world-wide web has certainly enhanced the ability of overseas New Zealanders to stay in touch with news and developments at home. However, at the moment it is still very difficult for "drained" New Zealand brains to find information about opportunities to return and bring their expertise with them, or even to collaborate with New Zealand-based researchers from afar. The personal experiences of one of us (ME) are described in Appendix 4.

Putting all of the relevant information in one place will not only provide easier access for people both at home and overseas, but will also have the following advantages:

- it will present the research sector, educational institutions, and those industries that wish to recruit highly educated people as one cross-sector stratum, thereby boosting the collaboration so ardently sought by government and business;
- it will reveal any gaps in the recruitment and development spectrum (e.g. postdoctoral opportunities for beginning scholars);
- it will represent New Zealand as a place where educated and talented people (and their expertise) are welcome.

Format

The website, which would draw from the best available web design (cf. Te Kete Ipurangi, run by the Ministry of Education) in order to present New Zealand's best and smartest face to the world, will gather and present information about:

- research funding
- scholarships and fellowships
- post-doctoral opportunities
- industry-sponsored research
- academic jobs
- research jobs
- conferences and gatherings
- jobs requiring Masters degrees or PhDs
- other useful links, eg CRIs, Creative New Zealand, the Royal Society, agencies that recruit highly educated people for business

Again, in principle, such a site could be run by anyone; given the Minister of Education's stated wishes to both retain (or regain) some leverage in the tertiary sector, and to cultivate collaboration with business, we suggest that Government is best placed to create and maintain such an initiative.

Appendix 2 Top Achiever Doctoral Scholarships Scheme - A Critique

In August 1999, as part of its Bright Future package, the previous government announced the Top Achiever Doctoral Scholarships [TADS] scheme. The scholarships are aimed at the top 10% of post-graduate students, and offer an annual stipend of NZ\$21,641 plus course fees and conference attendance costs. Their stated aim is "to assist top PhD students to get the best education the world can provide."

The motivation for the TADS programme is laudable, but it is inadequately researched and badly designed. Worst of all, it risks squandering resources that are needed elsewhere.

1. There is no evidence that students in the "top 10% of post-graduate students" who want to go overseas currently experience difficulty in obtaining financial support to attend world-class PhD programmes.

Many New Zealanders complete PhDs at international universities. Some are funded by prestigious scholarships (eg Rhodes, Prince of Wales, Commonwealth, Fulbright) but most are supported directly by the universities themselves, with money derived from research grants, university endowments, teaching assistantships, or private philanthropic organizations.

It has not been established that significant numbers of the students who are eligible for TADS and who wish to study overseas are unable to obtain funding to support their studies. Consequently, there is no guarantee that the TADS will boost the number of New Zealanders who obtain PhDs overseas.

Certainly, public funding could be specifically targeted to qualified students who are currently underrepresented in postgraduate programmes. Likewise, money could be earmarked for sending students to institutions that are unable to fully support doctoral students. However, the Bright Future package does not address these subtleties, and simply proposes to throw money at those who already have it.

2. Awarding Top Achiever scholarships for overseas study effectively subsidizes wealthy overseas institutions with scarce New Zealand funding.

The scholarships promise to pay students' fees and living expenses for the "minimum time" required for the degree. This requirement could not be strictly enforced, as the "minimum time" mandated by universities for a PhD is often as low as two years, but in practice the vast majority of students require at least five years to complete a PhD in the United States.

Moreover, the fees for good doctoral programs in the United States often exceed US\$20,000 per year. Combined with a living allowance and travel expenses, the cost per student / per year could exceed NZ\$70,000, leading to a total cost of at least NZ\$350,000 for the entire degree.

As explained above, virtually all students who want to pursue post-graduate study overseas find financial support from outside New Zealand. Awarding Top Achiever Scholarships for international study thus effectively subsidizes overseas institutions by replacing the support that these institutions are already giving to New Zealand students.

3. The "bond" imposed by the Top Achiever scholarships is unenforceable and counterproductive.

Recipients of the Top Achiever scholarships will be "bonded" to work in New Zealand for the same number of years that they were supported by the scholarship. Realistically, this bond will

be impossible to enforce, given that people who violate its terms will be outside New Zealand's legal jurisdiction.

Moreover, no guarantee is given that the scholarship recipient would be able to find work in New Zealand that used his or her expertise. Enforcing the terms of the bond would thus bar young researchers from continuing their training and professional development through post-doctoral fellowships overseas.

4. The opportunity cost of providing these scholarships is far higher than the benefits they are likely to bring.

The poor health of New Zealand's tertiary education and research sectors is well documented. New Zealand money unnecessarily allocated to support overseas PhDs is desperately needed elsewhere. For example, the money could:

- fund autonomous research institutes or "centres of excellence";
- create new lecturing positions at tertiary institutions, or
- increase the amount of contestable research funding in the Marsden fund (currently fewer than 1 in 10 proposals are funded, and no one believes that we are even close to funding every worthwhile application);
- address equity issues that prevent or discourage some students from undertaking postgraduate study.

Recommendation: We suggest freezing the TADS scheme, and make the following alternative suggestions for effectively addressing the targets of the TADS programme.

- (a) Investigate the number of potential students who are unable to obtain funding for postgraduate study, both in New Zealand and overseas. This will reveal whether these scholarships meet a currently unsatisfied demand for research support.
- (b) If there is a significant demand for support for overseas post-graduate study that is currently not be fulfilled, assess the relative benefit of supporting overseas PhDs, compared with other possible uses of the money.
- (c) Design alternative grants, or partial scholarships that may be held in conjunction with other sources of funding, that allow young New Zealanders to gain experience in the global academic and research community.

A major drawback of staying at home to do a PhD is New Zealand's isolation and lack of some specialised research resources and equipment. What is needed is a policy that enables young New Zealand-based researchers to obtain the benefits of studying overseas, collaborate with international researchers, and gain access to a wide variety of equipment and resources.

To address this problem, we strongly suggest providing grants to enable New Zealand PhD students to travel overseas for periods ranging from a few weeks to a year at a time. This money would support attendance at international conferences or specialised post-graduate courses and "summer schools."

Students enrolled in a PhD programme at a New Zealand university could also be supported as visiting scholars at overseas institutions for a semester or a year. Visiting scholars do not normally pay fees, but can study and attend classes alongside their peers, and consult with academics at the host institution. The cost per student of such a scheme would be a fraction of what the TADS policy proposes to spend on overseas PhDs, and thus the same pool of money would benefit many more young scholars.

Imaginative, responsive, "best of both worlds" schemes like these will ultimately broaden and strengthen connections between New Zealand and the international research community, connections that are vital if New Zealand is to be part of a truly global circulation of knowledge.

Appendix 3 TADS: providing opportunities for whom? Alice TePunga Somerville

In August of this year I am moving to New York State to start a PhD in English at Cornell University. I have grown up in a very supportive family, who are very proud of what I am doing, but their support has not been financial or in the area of specific advice from their own experience at tertiary institutions. Not many girls growing up in Glen Innes know that studying for a PhD overseas is an option, let alone a realistic option, but the support and advice of a small number of committed academics at the University of Auckland where I completed my BA and MA allowed me to have this dream.

In my path towards this point of departure, I came into contact with the TADS scheme. Disturbingly, I discovered the chasm between the processes of applying to the US universities and applying for the TADS funding made the TADS scheme not a viable option. There are several flaws to the TADS scholarship as it is at present, and three of these are the dates of application rounds, the stipulation that the scholarship may be held with no other scholarship, and the issue of bonding. When I was attempting to clarify the logistics of the application last December, I found that these problems were exacerbated by the difficulty I had trying to get straight answers to my specific questions from the administrators of the scholarship.

The dates of the application rounds, mid-December and mid-April, are both very badly timed for students applying to universities in the US.

Because the application form expects a student to nominate one university, and provide proof of acceptance there, the December date is too early. Application forms for Masters and doctoral programmes are due in the US between mid-December and late January, but mostly around the New Year, and students hear of their acceptance between mid-February and late March. No student applying to the US could prove acceptance until March at the earliest.

The April deadline is no better, and this is due mostly to the fact that the process of applying for places at US institutions involves a student submitting applications to more than one university. Most US students would apply for about five universities; because of the expense of application fees, I applied for three. This stage clearly precludes a student from being able to nominate a single institution at the earlier stage, however, there are further implications of this practice. Once a student has offers of places at the universities, a number of considerations are weighed up to decide which one to attend, and most universities (certainly all of those to which NZ students would want to apply) agree on a date by which offers need to be accepted. This year that date was 15 April.

Of course, the pertinent consideration is often financial, a fact which is especially true for New Zealand students, and so funding availability needs to be known by this deadline. In my case, I ended up seriously considering offers from Columbia University and Cornell University. Columbia's package offered no money at all for the first year, and 'full' funding from years two to six. Their 'full' funding included a fees waiver and an annual stipend of \$13000, which is a little less than I would need to survive in New York City. Cornell, on the other hand, offered me a fees waiver for each year, as well as \$16000 per year, which is a little more than I will need to live in Ithaca. Having no family resources to fall back on, and no desire to take on a NZ\$60000 personal loan, I was left with little choice. The process of applying for, and deciding about, university study in the US is obviously a very different process than in NZ. In short, a student who is applying to US institutions cannot supply any acceptance details until well after the December deadline, and needs to know about available support (notably, about TADS) before the April deadline.

The second major factor, the stipulation that the TADS must be held without other scholarships, is closely related to the above timing issue.

The TADS is available only to students who have an 'A' average from their existing academic record, and almost all of these students who are applying to institutions in the US will also apply for the Fulbright Graduate Award. The Fulbright covers travelling expenses, and offers a US\$15000 one-off payment. This is obviously very generous, but is not financially worth what a TADS would be worth over the period of a five year PhD programme. Of course, the Fulbright is also a prestigious award, which some students may wish to take for the kudos and networking/ publicity opportunities it offers, and for the 'boost' it may give to their applications to US universities.

A student needs to notify the Fulbright office by mid December whether they will accept or decline their offer. This effectively places a student in the position of making a 'choice' between accepting a guaranteed one-off payment, and risking that they may not receive the TADS scholarship for which they have not yet applied. It is unfair to place a student in the very real position of deciding between a bird in the hand or two in the bush.

I attempted to argue last year that the Fulbright was a grant, not a scholarship, because it was only a one-off payment, but I was told that this line of thinking was not acceptable, and further was given a piece of advice that "life is about hard decisions", which frankly I found a little insulting. While I can understand that the stipulation is set up to avoid the situation where students could receive far more money than they need by getting a number of scholarships at the same time, the generality of this type of blanket 'prevention' strategy backfires when it is applied to specific situations. It is unnecessary and unfair to exclude promising students at this early stage of the game. Several other funding bodies simply ask students to declare all of their scholarship 'earnings', and the funding body then may decide (or not) to adjust the level of support accordingly.

Thirdly, the issue of bonding is discussed in other areas of this submission. The TADS scheme was set up to support the top doctoral students New Zealand has to offer, and then proceeds to bond them to a homestay for as long as they were supported (which could be up to five years, in the case of some PhDs). The crucial - and potentially academically fatal - flaw is that no extra funding has been allocated to provide more junior faculty jobs or post-docs for these new young academics to take up; let alone the fact that for some disciplines a move home at this early stage may well prevent them from becoming the academic they have the potential to be, and thus prevent them from making the later contribution they could make to New Zealand.

Young students about to embark on their PhDs are not naive when it comes to issues of job availability (and the increasing lack thereof) at New Zealand universities. This generation of students is the generation who have paid dearly for our educations through loans and inaccessible allowance schemes. Many of us have actually borne much of the blow of earlier slashes to department budgets, while we worked our way through our Masters degrees as tutors. We know very well how stretched our Departments are from the fact that we have had to scramble for tutoring hours each year, and from the conversations we have been privy to with our stressed lecturing staff. This is particularly so for those of us who work with - or have special interest in - the experience of Maori students and staff on our university campuses.

Surely, therefore, it is cruel to hold out to already indebted students a large enabling sum of money with one hand, and yet deliver with the other a bonding to the very real uncertainty of our current university employment circumstances. Frankly, a promise to return and live in the present New Zealand university climate seems a very difficult vow to make when one is embarking on what could otherwise be the greatest opportunity of one's academic life.

The important thing that can be observed from all aspects of the TADS process which I have discussed here is that the regulations for the scholarship have been formulated entirely independently from any consultation with (or attention to) academics and students who know anything about the US system. While I acknowledge that the scheme was not set up to meet solely the needs of students who choose to attend the best institutions in their fields in the US, the greater issue is that an entire branch of policy and practice has been developed without adequately consulting with a group whom that branch is supposedly set up to nurture.

Appendix 4 All Dressed Up But Nowhere To Go Michelle Elleray

The following is a personal anecdote which highlights problems inherent in any sort of bonding system (as implemented in the Top Achiever Doctoral Scheme), and the difficulties faced by young humanities scholars given the lack of postdoctoral opportunities in New Zealand.

I am currently in the English Ph.D. program at Cornell University, and was sponsored to the US by New Zealand Fulbright, although Cornell has paid my tuition fees of US \$25,000 p.a. and a stipend for living costs of US \$16,000 p.a. Having accepted the Fulbright award, which paid for a return airfare between Auckland and Ithaca, New York, I am now bonded to return to New Zealand for two years before I can accept any permanent job in the USA, a requirement enforced by the US Immigration and Naturalization Service (INS) rather than New Zealand Fulbright or the New Zealand government I should add. There are no jobs appearing in my field in New Zealand, nor are there postdoctoral fellowships in New Zealand that I can apply for independently, and while INS doesn't care what work I do for the next two years, the American academic market isn't going to look at me if I spend those two years doing anything other than academic work. I am therefore unable to work in the country to which I wish to return (New Zealand), and will also be unable to re-enter the largest academic market for my discipline (USA). Thus, having spent the last six years doing a Ph.D. at one of the top institutions worldwide for my discipline, I now find I probably won't be given the opportunity to pass on my knowledge to others. This situation will only be exacerbated exponentially for those who will be bonded for 5, 6, or more years under the Top Achiever Doctoral Scheme.

When I accepted the Fulbright award I knew about the two year homestay requirement, and since my priority was to return to New Zealand (and still is) I was perfectly happy to accept that condition. The academic scene was a bit downmouthed at the time, but everyone talked about the bunch of retirements just around the corner that would open up the field to scholars like myself, especially with academic credentials from an institution like Cornell. I didn't expect that in the six years I was gone the universities would undergo a downsizing, retrenchment, corporatisation and devaluation that would result in a desperate focus on short term goals at the expense of long-term sustainability of intellectual standards, educational quality, and research opportunities.

In the absence of any academic jobs in New Zealand for which I can apply, I have looked on the world wide web for postdoctoral opportunities in New Zealand and discussed possibilities with lecturers and colleagues who are currently in New Zealand. My hope is that a post-doc would allow me to wait out the downturn in the New Zealand academic market. My options are anything but promising, however, as evident in this summary of post-doc opportunities for a humanities scholar:

1. The only university advertising its own post-docs is Auckland: there are three of them for the whole university, and to get one a faculty member at the University of Auckland has to write a grant proposal, stating their own qualifications, and saying they need you to work with them. Thus your chance of getting a post-doc ends up being more reliant on the academic standing of the faculty member than your own academic standing, your work needs to be tied to theirs, and clearly drained brains without Auckland affiliations will be out of luck. 2. The Marsden Fund provides substantial amounts for humanities research, as evident in the Robin Hyde and Print Culture projects they've funded. Of course, the fact that money is available for humanities research is not immediately evident from their website, where the first line reads: "The Marsden Fund was set up to support excellence in scientific research and excellent scientific researchers." In the section titled "Marsden Fund Objectives" the words "Arts" and "Humanities" do not appear at all, though we are told that a key objective of the Marsden Fund is "enhancing the reputation of New Zealand science." The Marsden Fund people point out, moreover, that the Marsden Fund is not for a "general post-graduate or postdoctoral fund." As with the University of Auckland post-docs, the money for junior scholars is tied to a senior academic's research proposal, or at least that is how it appears from the sample budget on the Marsden Fund's website. Also, the rather curious refereeing system of the Marsden Fund works against junior research applicants (of whatever discipline): referees cannot be "close colleagues, former research supervisors, co-authors, [or] collaborators," yet, by definition, a junior level researcher is just embarking on an academic career and is therefore unlikely to have gained meaningful contact with people outside these categories.

3. There are two fellowships that I know of-one at the Turnbull Library, and the other at the Stout Centre (which covers New Zealand society, history, and culture). Advanced academics like Michael King and Rachel Barrowman have been getting these (i.e. you need a book or two and a public profile), so these fellowships are not much help for recent Ph.D.s. Besides, they're advertised in the *Listener*, and not on the web, so information about them may be difficult to obtain if you're currently a drained brain graduate student.

To summarise the problems inherent in the situation outlined above:

- none of this money is geared towards junior level researchers, particularly those with independent projects;
- tying post-docs to a senior academic's work promotes an institutionalised form of the old boys' network (though the network is not necessarily gender specific);
- New Zealand scholars overseas who wish to return to New Zealand are disadvantaged if they are either not known by a senior scholar of good standing in New Zealand, or their field is not covered by a senior academic already;
- given a radical disproportion between funding applications and money available, funding bodies tend towards the safe and sure bet (money clearly spent wisely) rather than "cutting edge" research, despite official wording to the contrary.

I am not a willingly drained brain. I would be back home at the drop of a hat, but I need something to return to: I need postdoctoral opportunities that allow me to feed my family and conduct research which will keep me in the academic loop, since the small New Zealand academic market means jobs in my field will not necessarily appear once a year; I need to know that a job in my field will turn up somewhat more frequently than once every seven or so years; and should I ever get an academic job in New Zealand, I need working conditions that allow me to research and teach at a high level. If you can't provide these, don't go bonding promising young scholars to whom you give money–it will prove a waste for both you and them.

References:

The University of Auckland Postdoctoral Fellowships:

http://www.auckland.ac.nz/research/research.html (see "University Sponsored Research Funds," Post-doctoral Fellowship Application Form).

Marsden Fund: http://www.rsnz.govt.nz/funding/marsden_fund/index.php/

About the authors

Richard Easther studied physics at the University of Canterbury, completing a PhD in 1994. Since then he has held post-doctoral positions at Waseda University in Tokyo, and Brown University in Providence, Rhode Island. Richard's research focusses on the connection between particle physics and the evolution of the universe, especially in the first few moments after the Big Bang, and computational methods in high energy theoretical physics. In October, he will be moving to New York City to take up a research fellowship at Columbia University.

Michelle Elleray completed a B.A. at Victoria University, Wellington, in English, and has worked as a contemporary dancer and a high school teacher of mathematics, English, and performing arts. After completing an M.A. at the University of Auckland with a thesis on choreographer Douglas Wright, she entered the Graduate School at Cornell University to pursue a Ph.D. in English. Michelle is currently completing her dissertation on settler cultures of New Zealand and Australia, while amusing her three-year-old daughter.

Jolisa Gracewood majored in French and Japanese at the University of Canterbury, and went on to complete an M.A. in Japanese. She spent two years at Tokyo University on a Japanese Ministry of Education (Monbusho) Scholarship, and then moved from the big city to small-town upstate New York to do a Ph.D. in Comparative Literature at Cornell University. She is currently completing her dissertation on mid- and late- 20th Century notions of "Asia/Pacific," and is actively seeking work inside and outside academia.

Amanda Peet is a theoretical physicist, and completed her BSc(Hons) at the University of Canterbury, before gaining her PhD from Stanford University. After completing her PhD, Amanda held post-doctoral appointments at Princeton University, and the Institute for Theoretical Physics in Santa Barbara. She has just been appointed as a Assistant Professor in Physics at the University of Toronto, and will begin work there at the end of this northern summer.

Alice TePunga Somerville (Te Atiawa ki Waiwhetu/ Pakeha) graduated with her MA (1st class honours) in English at the University of Auckland in 1998. Her focus within the study of literature is on Maori, Indigenous, Pacific and 'minority' writing, and she is specifically interested in how ideas about identity impact on, and are shaped by, this writing. Since (and during) the completion of her Masters, Alice has worked in the areas of Maori student learning support and Maori staff development at the University of Auckland, and she is presently the NESB (Non English Speaking Background) Learning Coordinator at the Student Learning Centre, Massey University (Albany). She is a Fulbright scholar, and in August she will commence her study towards a PhD in English at Cornell University.

Mark Wilson completed a BSc(Hons) in mathematics at the University of Canterbury and a PhD in mathematics from the University of Wisconsin. He then held a NZST Postdoctoral Fellowship at the University of Auckland. After working at Northern Illinois University he was appointed Assistant Professor at the University of Montana in 1999. His research interests are mainly in (pure and applied) discrete mathematics.