Letters

On the Move to Thunder Bay

To most members of the Geological Survey of Canada, the proposed establishment of an Institute of Precambrian Geology in Thunder Bay is a serious concern deserving responsible and informed discussion. We find it distasteful to have this matter trivialized by unsubstantiated statements, contrived issues, flippant comments and feeble attempts at humour ("Pyroclasts", *Geosci. Canada*, v. 5 no. 4).

Ward Neale asserts, without documentation, that academics and company geologists favour decentralization of the Geological Survey of Canada. This statement may express the views of a minority but, in our experience, it is not true as a generalization. Such sweeping claims demand factual support; otherwise they become idle suppositions.

After people have settled in a community, they are reluctant to move. This trite observation is singled out by Dr. Neale for special attention, although this point was never an issue. We find no reference to it in the letter on decentralization published in Geoscience Canada, (v. 5 no. 3) in fact, about half of the signers of the letters do not have to move.

Another non-issue cherished by Dr. Neale is the upsurge in morale supposedly experienced by Survey geologists upon removal from Ottawa. Belief or disbelief in this dubious process is irrelevant because of the official reasons for the move to Thunder Bay do not include expectations of increased happiness and productivity of Precambrian geologists.

The issues of concern are clearly stated in the letter to the Canadian Geoscience Council. We repeat that the central theme of the letter is the opposition of the majority of the professional staff to further fragmentation of the Geological Survey of Canada, leading to the destruction of the parent organization. Ward Neale need not feel hesitant about expressing his views as a minority of one, but in doing so he should curb his predilection for irrelevancy and keep his mind focused on the true issues.

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I don't think that Ward Neale meant us to take his column in Geoscience Canada (Pyroclasts, v. 5, no. 4) seriously, since he failed to address any of the real concerns that have emanated from the Ottawa community concerning the relocation of the 'Precambrian Institute' in Thunder Bay. Rather, he chose to grapple with the strawman of what he presumes to be the personal reluctance on the part of those concerned to foresake the luxury of the capital for the rigours of the wilderness. This is too obviously a provocative prod from the editor of Pyroclasts not to suspect that Ward is inviting a storm of heated debate with which to enliven the columns of our national forum. The fact that the field has already been sensitized by similar responses from all manner of officialdom is reasonable assurance that the jibe will indeed penetrate responsive tissue. Fair enough, Ward. I expect you are girded for the onslaught. However, this whole question is not just a game to amuse the readers of Geoscience Canada. At the risk of being labelled an insufferable spoil sport, I would like to return to some of the aspects of this move that are of deep concern to the people involved.

First, let me make clear that the organization of an Institute of Precambrian Geology is viewed with enthusiasm by all or most of us here. The Canadian Shield is the major and best exposed Precambrian mass in the world and since most of it is in our country it gives us an unparalleled opportunity to make a unique contribution to man's knowledge of the early history of the earth. It is also a source of major wealth. What is surprising is that this does not appear to have been recognized in an organizational way until the present time. Now that it has, the choice of its location is a critical factor in its future vitality and influence. It is not sufficient to wanly hope that, if successful, it will create its own field of attraction for other scientists, for the initial environment is undoubtedly an element in the success of any such institution (Calgary, for example). Can you imagine a business enterprise being so careless in the choice of location for a new research laboratory?

The letter sent to the Geoscience Council by a large proportion of the Ottawa geoscience community and published in *Geoscience Canada* (v. 5, no. 3) is a reasoned statement on why further fragmentation of the Geological Survey is not in its future best interests. It should be taken seriously and at face value, not as a devious means of securing our comfortable berths in Ottawa. There is no need to repeat what has already been well stated in that letter, but I would like to expand a view of my own which stems perhaps from my interests in both halves of the Canadian Shield.

The division of the Shield into two major parts by Hudson Bay tends to channel lines of communication to the northwest and northeast from a pivotal point at about the location of Ottawa. Not

surprisingly, research interests follow similar lines. Eastward the principal centres of Precambrian studies - Université de Montréal- Ecole Polytechnique, McGill, Université de Québec à Chicoutimi, and the Mines Department in St. John's - are primarily concerned with Abitibi and the Quebec-Labrador landmass. Westward, Precambrian research focuses predominantly on western Ontario and the northwestern Shield. There is very little overlap. One can almost regard this as the two solitudes of the Canadian Shield; to be immersed in one or the other is to be buoyed subtly along in the mainstream of local activity. In Ottawa we enjoy excellent relationships and fruitful contacts with both sides of the Hudson Bay divide as befits an organization concerned with the geology of the entire Shield. Removal to Thunder Bay will undoubtedly diminish our contacts and ultimately our interests in the eastern wing of the Shield as we become caught up in the activities of our more immediate neighbours. A small point perhaps, but I believe an important one. Ironically, if one were seeking to establish for the first time a Precambrian research group devoted to study of the Canadian Shield as a whole, these considerations would make Ottawa the prime choice for its location, just as Calgary would be for a Sedimentary and Petroleum Institute, and Vancouver for a Cordilleran study group. It is a pity that the choice having been right in the first place must now be abandoned for the sake of change. The establishment of the Precambrian Institute in Thunder Bay or elsewhere in the western Shield may well be the first step in the diminution of its role to that of the Geological Survey of the Northwest Territories.

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I'd like to bring to your attention certain errors in Pyroclasts ('Oh to be in Thunder Bay now that GSC is almost there'). (Geosci. Canada, v. 5 no. 4). These range from minor to awful but, as a rule, they are regrettable. To whit:

1) Neale is manifestly not "absolutely the only person I know who is very pleased . . ." Mr. Andras is pleased. Some members of Treasury Board were reported to be secretly ecstatic, if such a word can be applied in an inanimate context. A Mr. Benjamin Whittleford of Hants Harbour was known to be pleased although he cannot remember why. Members of the firm of Addit, Audit, Wheedle and Whyne, Accountants to the City of Thunder Bay are reported to have smiled at the news. The list is endless and it is difficult to conceive that a person of Neale's wide acquaintanceship would not be willing to acknowledge anyone on it, sauf himself.

2) "All senior administrators opposed the move." They did not. One was quick to respond - "Which move?" Three were out of town. Three were practising duets on the canal enroute to the Art Centre and declined to be interviewed. At least two were recently deceased and it is surely unsporting of Neale to confuse such a condition with inattention to the question, let alone opposition.

3) "Although academics and company people favour Survey decentralization . . . preferred the move to be to Toronto or Winnipeg." They did not. They only said that publicly to curry favour with the cities of Toronto and Winnipeg, both of which are short of curry. Privately they said that if there was any logic to the matter at all, the move would be to Yellowknife. On that basis (they continued as one voice) they were relieved that the situation would remain normally illogical. ". . . or some such other large centre." This is either innuendo by implication or vice versa. There *are* no other some such large centres, thank God

4) ". . . who don't wish to leave Ottawa with its parks, canals (sic), Art Centres (sic), broad streets . . . etc." The dark implication here seems to be that Ingo and his colleagues, upon leaving, would strip Ottawa of its parks, canals (sic), Art Centres (sic) and take them with them. This would not only be impractical but probably unsanitary. There are limits to what even Treasury Board will allow under the category of "removal expenses - personal effects."

It would be possible to proceed in this vein but, hopefully unnecessary. The above irrelevancies and inanities are meant to make the point - if it needs making - that this is exactly what Pyroclasts is guilty of feeding your readers.

Dr. Neale, in his catalogue of observations concerning the proposed Thunder Bay move, has zeroed in fearlessly on irrelevancies. Those who take this thing seriously are not *really* concerned with over-40 morale, rain in Halifax, Dr. Keen's reported exaggerations or the nesting habits of USGS fauna. But they *are* uneasy about possible effects on GSC's continued existence as a national agency with national responsibilities that do not always coincide neatly with regional boundaries (either geological or political) or even (so help us) with regional aspirations. They also worry about the grubby realities of dollars and man-years that are needed to allow the GSC to function realistically on a national basis.

The idea of "regionalization" (of GSC operations) is technically valid (and, of course, geopolitically popular) but it involves tradeoffs and it is the problem of trying to evaluate the longer-term effects of such tradeoffs that is at the heart of the matter. In an ideal world GSC could doubtless provide regionalized services without dilution or fragmentation of its remaining critical mass apparatus in Ottawa. Unfortunately, in the real world of fixed (declining, in real terms) resources of manpower and funding the argument boils down to whether fragmentation through regionalization is the greater or lesser evil. Granted that it is not a simple problem, and that the arguments pro and con are unlikely to be totally objective, human beings being what they are (. . . er, human) neither should they be reduced to the kind of smokescreen peripherals that Pyroclasts would have us swallow, er, inhale.

Perhaps Pyroclasts needs to be reminded of the venerable old Pyropsalm that goes (approx. transl.) - "... it is easier for former dwellers in glass houses to pass rocks in the direction of the Glasshouse than it is for a camel to pass H_2O through the eye of the Needle."

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The Rich Get Richer?

In his pyroclasts column in *Geoscience Canada*, v. 5, no. 4, "The Rich Get Richer", commenting on the policies of granting agencies, Ward Neale once again uses the 14 lb. sledge hammer for driving home a truth for which a normal geological pick would have done very well.

His main points are: 1) The "big names" are funded repetitively by different agencies for the same projects, 2) They spend these funds by forcing their less fortunate colleagues to do the work which they ("the names") were supposed to do; 3) The change in the philosophy which had lead agencies to direct more funds to the active researchers and less funds to the less active researchers may have gone to far; and 4) There is a reluctance amongst granting agencies to recognise when a "big name" has become less effective than his level of support warrants and therefore to cut him back to size.

Recently having finished a three-year term on the NRC Earth Sciences Grant Selection Committee, the last year as chairman, I would like to comment on these points.

With respect to point 2, most granting agencies and certainly the NRC make a point of being informed about all sources of grant and contract funds. The project for which the funds are requested is tailored accordingly. Ward himself cites an example of this at work. Even if there are flaws in this area, those who are not involved in the granting system as recipients or as adjudicators probably do not realize that NRC and Energy, Mines and Resources grants are only "grants in aid" or research and that the university itself covers most of the cost of research through salaries for support staff and through provision of space and facilities. At the University of Toronto we find it necessary to charge research grant holders for a small portion of the research expenses from NRC grants where departmental equipment and facilities such as XRF, microprobe, neutron activation, thin and polished sections, geophysical equipment, shop facilities, and personnel are concerned. With the continuing squeeze on university finances, there is a strong pressure to maintain the teaching capacity while the bulk of the budget cuts come from a university's very large contribution to the research costs. This means that a greater proportion of the technicians needed in research have to be supported from research grants. At Toronto we are continually reassessing and raising our cost to research workers. In short, I don't believe that there has been major duplication of funding and, if some has occurred, it is most unlikely that it has come close to covering the full costs of any project. If NSERC follows the established policy of NRC of providing no more than "grants in aid", we are going to have to continue to find additional support for NSERC projects. Previously this has come from one's university - in the 1980's we are going to have to do precisely what Ward is complaining of, that is raise it from other external sources if we are to continue doing research.

Within my experience, Ward's point 2 of less fortunate colleagues being forced to work on projects for which someone else is funded has no substance whatsoever. It is possible that he includes post-doctoral fellows in this category. Although they are certainly colleagues in one sense, the "post-doc", which is something that most of us have done and usually enjoyed, is unique and quite different to the normal faculty position. None of us would welcome a return to the ridiculously small salary that NSERC sees fit to allot as a post-doctoral fellowship, but I suspect many look back rather fondly on our post-doctoral years as a period when research was uppermost in our minds, paper work and administration were minimal, and we could devote our full energies to developing our careers as scientists. While I believe that "post-docs" are exploited in terms of the salaries that we can pay them, I think that this category of scientist is one of the great strengths of a university. It provides the opportunity for cutting-edge research to be expanded greatly without the disadvantages of long-term commitments and high overheads. At the same time the "post-doc" himself (or herself) has the opportunity to come to the attention of his peers and find himself a place in the regular "academic establishement" if this is what he wishes and if he is good enough.

With respect to Ward's point 3, that of the rich getting too much and poor

getting too little, I have prepared Figure 1 on the basis of statistics provided to me by NSERC. This shows the frequency distribution of grants over recent years. From 1974 to 1978 the average grant has increased from $8.84 K to $11.92 K (35%), the upper decile from 15.0 to 22.5 (50%) and the upper percentile from $24 K to $34 K (42%).

I submit that as far as NRC is concerned, large grants have not increased at a very much greater rate than the average grant. In terms of real dollars, all have been getting poorer, especially since 1975.

In briefing us on the system of grant allocation prior to the 1978 competition, NRC indicated that they thought that no field of science other than high energy physics warranted higher support than earth science and that the very few warranted less. They did acknowledge, however, that for "historical reasons" some fields did receive higher average operating grants (in 1978 the average chemistry grant was $16.9 K and the average physics grant, exclusive of nuclear physics, was $13.3 K). NRC were attempting at that time to alter the disparity by making "special allotments" to certain disciplines to increase their funding relative to other disciplines. One of the criteria that provides an argument for a special allotment has been the selectivity of a given selection committee. Selectivity was assessed in part by the ratio of grants awarded to "effective applicants". "Effective applicants" were defined as those already receiving funds plus applicants new to the system. The smaller the ratio, the better the selectivity of the committee. Recently Earth Science has had a poorer level of selectivity (i.e., a higher ratio) than many other disciplines. In part this may have been the result of some rather heavy pruning in the early 1970s, but the suspicion remains that Earth Science committees may be somewhat "softer" than other committees in the physical sciences.

Having sat on the committee for three years, I think that the concept of selectivity is vital. It is much easier (and more popular) for a committee to give a little to everybody than to identify real strengths and real weaknesses and reward them accordingly. When we couple this with the financial difficulties that I have mentioned earlier, I think that Ward is dead wrong in saying that the pendulum has swung too far. I think it has a lot further to swing. NSERC, and other agencies, cannot be in the business of supporting universities as educational institutions - they must not get involved in the politics of tertiary education and must be particularly careful to avoid pressure that comes from some quarters to give a little to most academic staff just so that every individual can retain his self-respect (the maintenance of self-respect is the role of the university and not the role of a competitive granting agency) - they must look for maximum return on their dollar in terms of quality research and spend it accordingly; otherwise they will become yet another aspect of Canadian government in which political considerations are allowed to outweigh efficiency.

I agree with him on his fourth point, that of the need for the more efficient pruning of grants awarded to the "big names". There is a certain momentum in the system which applies to everyone, not just the "big names", but because more money is involved, it is more obvious with those who have been supported heavily. This is not to say that those former leaders in research who have become sidetracked by geopolitics, administration, consulting, or just plain middle-age stagnation have not been cut back severely in the past (some people reading this will be very aware of this), but I think that there is room for improvement in the critical scrutiny that people in this category are subjected to.

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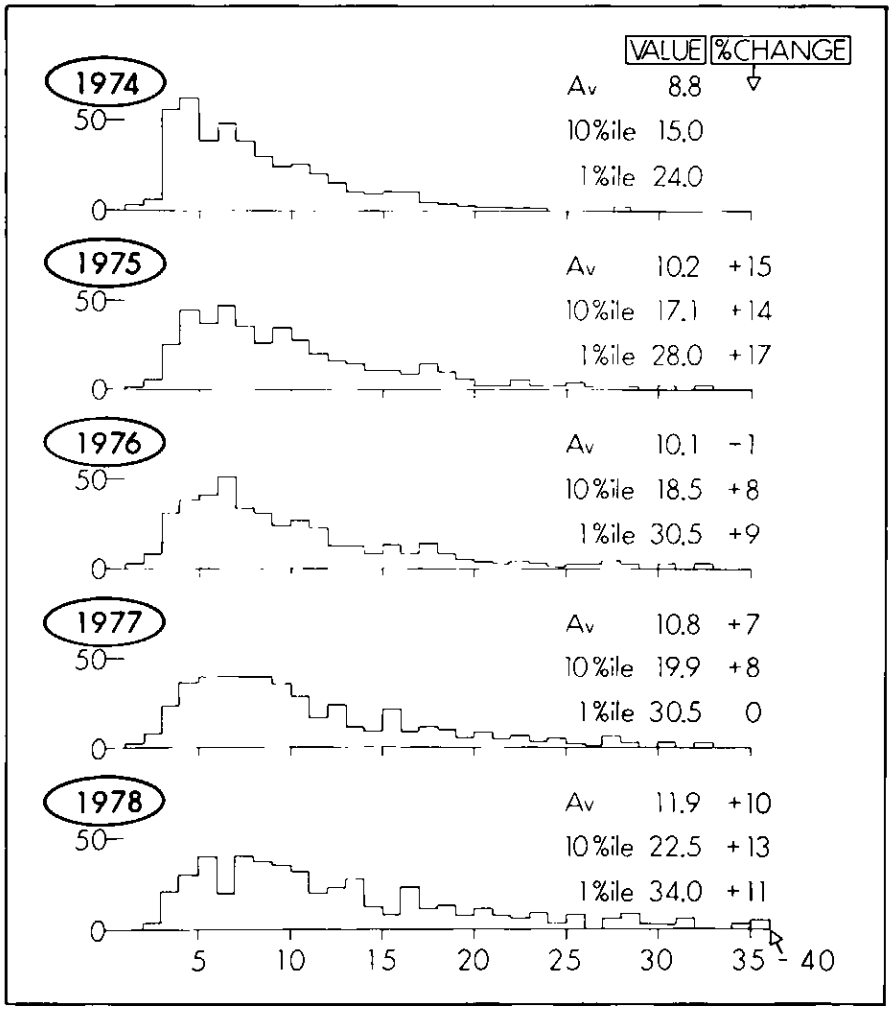

Figure 1
Frequency distribution (number of grants awarded falling with each $1,000 interval) for NCR grants for the years 1974 to 1978 together with the average, upper 10% and 1%, of the grants in 1,000s of dollars for each year.