

PROCEEDINGS OF THE AUSTRALIAN RANGELAND SOCIETY BIENNIAL CONFERENCE
Official publication of The Australian Rangeland Society

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The reference for this article should be in this general form;

Author family name, initials (year). Title. *In*: Proceedings of the nth Australian Rangeland Society Biennial Conference. Pages. (Australian Rangeland Society: Australia).

For example:

Anderson, L., van Klinken, R. D., and Shepherd, D. (2008). Aerially surveying Mesquite (*Prosopis* spp.) in the Pilbara. *In*: 'A Climate of Change in the Rangelands. Proceedings of the 15th Australian Rangeland Society Biennial Conference'. (Ed. D. Orr) 4 pages. (Australian Rangeland Society: Australia).

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THE PSYCHOLOGY OF ARID ZONE MANAGEMENT

(The relationship between a manager's needs and the standard of resource management he adopts)

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Abstract

Using principles established by Maslow the relationship between a manager's needs and the stocking strategy he adopts is explored. Conclusions from economic and social surveys of the arid zone of Australia are then used to predict the likely effect of the socio-economic status of arid zone managers on the land resource. These predictions are related to some sections of Land Acts relevant to arid Australia.

Introduction

In the rangelands of Australia some land administrators are trying to influence the stocking strategies adopted by pastoralists, but in the final analysis it is always pastoralists who determine stocking pressure, it is they who determine the pressures which are placed on the land resource. They determine this pressure on the land by considering the pressures placed on them by their family, their friends, their administrators, their stock agents, their bank managers and many other people with whom they make regular contact.

As pastoralists increase the pressure on the land resource it is possible for overgrazing to occur.

Overgrazing occurs when the demands placed on a plant community are greater than it can sustain without decreasing future production. It is usually characterized by soil erosion, a decreasing population of perennial plants and an increasing population of annual plants. Soil erosion removes plant nutrients from the soil and hence decreases plant production. In the uncertain climate of the arid zone a predominantly annual plant community produces less animal produce than a perennial one. Thus overgrazing may lead to a decrease in future production - a decrease in the future carrying capacity of the land. Why do some pastoralists place extreme pressure on their land?

LEVEL OF SATIFIED NEEDS

↑ MANAGERS
RESOURCE
GOOD
MANAGERS
RESOURCE
BAD
←

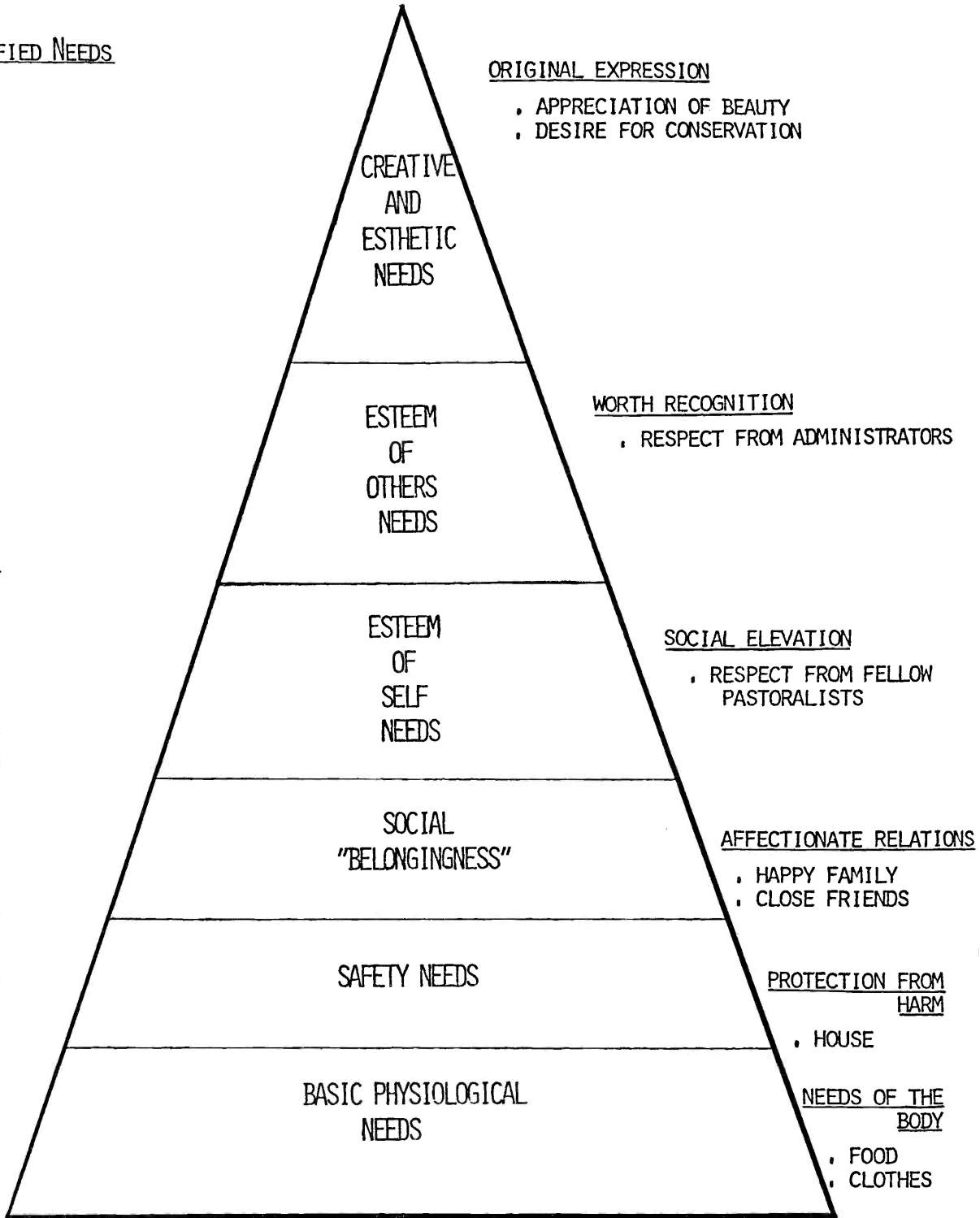


Fig. 1

They do this because, either

- a) they are natural gamblers; they realize that the pay-offs from carrying many sheep in good seasons are great and they are prepared to face the consequences of a bad season; they hope they can take sufficient evasive action to avoid severe damage to their land;
- b) they are unaware of the damage they may cause by overgrazing; their perception of the biological resilience of their land is incorrect;
- c) the social and economic pressures placed on them leave them no alternative but to place extreme pressure on their land.

We will ignore the gambler and the grazier who has a bad perception of his environment. These are better treated as separate topics. The aim of this paper is to attempt to address the problem of the third type of overgrazer from a psychological perspective.

Perhaps the first question which can be asked is what are the motivations or needs of a pastoralist who applies considerable pressure to his land and how do these needs contrast with those of the conservative manager? In the absence of any empirical data we will use Maslow's (1970) hierarchy of needs to attempt to identify *one type* of overgrazer.

A Manager's Needs

Maslow, in a general personality theory, analyses people's needs in terms of an hierarchical structure (see Fig. 1).

The lowest needs are *physiological* needs (food, water, warmth, etc.). These are followed by *safety* needs (job, security, shelter, etc.), then *belongingness and love* needs (family, etc.) and finally *esteem* (or community recognition and cultural) needs. Generally lower needs must be satisfied before higher needs become important to the individual. Maslow suggests that we only pay attention to our higher needs after our lower needs have been gratified.

It can be assumed, in Australia, that the physiological needs of all pastoralists are satisfied. We are not aware of any pastoralists who are not adequately clothed and fed. Thus we will not discuss this level of poverty any further.

At the next level, however, it is clear that not all pastoralists have their safety needs satisfied. A survey of rural poor in New South Wales found that "many respondents were in overcrowded substandard houses without adequate insulation, floor coverings and so on" (Commission of Inquiry into Poverty, 1974). Properties with poor economic returns and high debt clearly have less security than profitable enterprises. They are more concerned with short term survival than the long term consequences of overgrazing.

Poor financial circumstances also threaten belongingness and love needs in the context of the social isolation of the arid zone. For example, education costs are high because of the necessity to send children to boarding school. Parents with poor economic returns, therefore, obviously have more

difficulty in providing such education than those in better financial circumstances. There is tremendous pride in being able to educate one's children. It enables the parents to belong to a community, to be respected by one's neighbours. Some may overgraze to maintain their position in society. By doing this they may be able to temporarily maintain their position in society.

Finally, esteem and cultural needs are satisfied from regular community activities such as involvement of the local pastoral associations or other community organizations. Obviously, the economic "battler" with no work force, and no spare time or cash can expect little involvement with such activities even if he is interested.

It seems that so far we have merely stated the obvious, graziers with more money are likely to satisfy higher needs than those with less income. Nevertheless, despite this assertion, Gibbings and Reithmuller (1976) report that "low levels of economic performance did not lead to an unfavourable attitude towards rural life, nor was it linked with dissatisfaction with goal achievement" in south-west Queensland woolgrowers.

We will argue, however, that although a general acceptance of arid zone living is common to all economic levels *overgrazing is more common among the poorer than better financially endowed graziers*. This is because a poor pastoralist has not consistently fulfilled either his security or belongingness needs; his aims are satisfied by short term practices which avoid the disaster of bankruptcy. This leads to the use of management procedures which tend to provide the most funds in the shortest time; for example overgrazing.

By contrast the high income grazier, having satisfied his lower needs, has the opportunity to assume more complex challenges such as gaining social prestige and the intellectual fulfilment which can be obtained by maintaining a well-regarded conservatively managed property. He will take an extension officer's advice because he has both the appropriate motivation and the economic leeway to do so.

While the management behaviour of these two types of pastoralists is quite different, both can be reasonably satisfied with their achievements (Gibbings and Reithmuller, 1976) because they have *different* aspirations.

Maslow (1970) develops 16 principles associated with the distinction between higher and lower needs, 4 of which will help elucidate the relevance of the hierarchy of needs to overgrazing.

1. *"The higher the need the less imperative it is for sheer survival, the longer gratification can be postponed and the easier it is for the need to disappear permanently."*

Conservative management may be regarded as a higher need; it is a dispensable luxury when compared with the pastoralist's need to survive a financial crisis. The benefits of conservative management are subtle and generally long term and are therefore not perceived as important in coping with an immediate security problem. Higher needs are less urgent than lower needs. It is easy to put off the gratification or fulfilment of higher needs. Unfortunately, conservative management is a higher need. A manager may feel justified in placing greater value on sending his son to boarding school than on having a station for him to return to. Educational costs are high and it is necessary to build these costs into a station's overheads (Yates, 1974). The alternative is to send one's children to a local school or educate them by correspondence. Apart from the

argument that the quality of the education is less, there is certainly less esteem in these alternatives.

2. *"Living at the higher need level means greater biological efficiency, greater longevity, less disease, better sleep, appetite, etc."*

According to Maslow those able to operate at a higher need level are more effective both biologically and psychologically. Managers living at a lower level, therefore, may be less able to "rationally" consider alternative stocking strategies. Since their decisions are biased by short-term day-to-day survival they are inflexible in relation to their management decisions.

This inflexibility of lower need farmers can be a serious disadvantage. Gibbins and Reithmuller's (1976) study of the economic performance of Western Queensland graziers found flexibility to be a very important component of managerial success in the arid zone.

3. *"Higher needs require better outside conditions to make them possible."*

Good environmental conditions (e.g. social, familial, economic, educational) encourage the achievement of higher needs, or in this particular discussion, conservative management.

So far we have discussed only economic considerations, but it is also pertinent that arid zone pastoralists often operate under conditions of extreme social isolation which has at least three important consequences:

- (i) social recreation becomes different; less frequent and more intense. Perhaps the result is less discussion about management;
- (ii) the opportunity for a constructive peer influence on management practices is diminished. There is less repetition;
- (iii) there is greater opportunity for managers living at a low need level to turn in on themselves and stop communicating with their peers.

4. *"A greater value is usually placed upon the higher need than upon the lower need by those who have been gratified in both."*

"Such people will sacrifice more for higher need satisfaction and will more readily be able to withstand lower deprivation." For example, they will find it easier to "withstand danger for the sake of principle." Maslow's comments here suggest that those who have been conservative managers and have adopted a long term managerial strategy will tend to adhere to these views even through difficult economic circumstances.

From the social scientist's viewpoint, therefore, it seems that any efforts expended on attempting to change graziers' attitudes toward conservative management are justified in that the effects of any success will be long-lasting. In summary, there is a psychological predisposition for poorer graziers to place greater pressure on their land because of the need for immediate financial gratification. Although this may simply be regarded as the statement of a truism, the psychological description afforded by the use of Maslow's hierarchy of needs is compatible with Child's (1974) description of management practices in arid zone farms in south-west Queensland.

Before the 1969-72 drought period, two types of pastoralists were recognised; those adopting an arid zone management policy which acknowledges the likelihood of prolonged drought and those clinging to temperate practices.

After the lessons of the drought Childs suggests that there are two different groups. (a) "There are those producers whose needs are for safety and survival. They are not confident of surviving the next climatic or economic crisis, they are in debt and lack the resources or skills necessary to overcome a crisis. Their motivation is to survive and this is often misdirected into trying to "beat" the seasons and the government." (b) "There are those whose needs are beyond the survival level. They know they can successfully overcome the next crisis. They have the resources, the skills, the experience and they have little or no debt. They can satisfy their personal ego or social needs."

Changing Overstocking Practices

The identification of the group of overgrazers who are motivated by their desire to gratify their lower needs is significant. This type of individual is probably the hardest to influence. His management strategies will remain rigid until his lower needs are gratified.

The Western Lands Act of N.S.W. (1901) (s.26(2)) states that land shall be allocated to applicants in the most need of additional land. The local Land Board is required by law to assess the needs of applicants for land. This analysis predicts that if an applicant is granted sufficient land to build his station up to something well in excess of one home maintenance area he would place less pressure on his land. This is consistent with section 18D(v) which states "a lessee shall not overstock...."

The local Land Board's current practice of identifying all the applicants motivated by their desire to gratify their lower needs and allocating a small parcel of land to each applicant will not prevent overgrazing unless all applicants receive sufficient land to give them land whose aggregate area is greater than one home maintenance area.

If the Western Lands Commission's desire is to ensure the long term productivity of the land resource it must continue to apply pressure to the local Land Boards to build up a few applicants to a reasonable area rather than to give many a small pittance.

The Land Acts, 1962-68, of Queensland gives the Commissioner the power to reject an applicant for a preferential pastoral holding if he considers that the applicant's financial means are inadequate (s. 57 (10)).

There is no doubt that there are economically secure individuals and companies who do adopt an exploitive attitude towards their stations. They do this for either personal reasons or because their perception of the environment in which they work is incorrect. It appears from the literature that gamblers and bad perceivers who receive a reasonable income are more receptive to extension officers' suggestions than those people who are forced to live at a level of low needs because of economic and motivational circumstances. Richards (1973) in a review of the psychological literature related

to farming found that farmer income status is the key underlying variable to most psychological relationships. This suggests that adoption of non-adoption of recommended practices follows indirectly from a much more basic decision to compete or not to compete at a certain level in agriculture.

In the arid zone it is usually recommended that a pastoralist who places great pressure on his land should reduce the number of stock on one's property. The financially insecure grazier obviously has not the resources to take a short term reduction in income and is unlikely to adopt such a suggested practice. He is striving for survival rather than a model station; anything seemingly superfluous to his aim to survive will be rejected.

Conclusion

From the above information there seems to be little that administrators and psychologists can do to modify stocking strategies adopted by pastoralists motivated by their desire to satisfy their lower needs. The only course available to them is to elevate the grazier from his pressing financial difficulties through subsidies, grants or *sufficient* additional land. To provide pastoralists with sufficient land it will be necessary for many pastoralists to leave the industry.

Policies which keep marginal pastoralists and graziers poor will do so at the expense of the land resource. Marginal graziers must be given the opportunity to get big and if they like, to get out.

Gibbins and Reithmuller (1976) have found that economic criteria do not accurately predict a pastoralist's satisfaction with his way of life in the arid zone; so that it appears that as long as they can survive many marginal graziers will attempt to stay, perhaps to the long term detriment of their environment. In the final analysis then the decision of what to do about high debt pastoralists, who are motivated by a desire to gratify their low needs, is a political one, both in relation to the present situation and future planning. If it is decided that existing properties, given appropriate management practices, are potentially economically viable and that agricultural development is desirable in the arid zone then some influx of more land or financial assistance is required.

This assistance may take one of three forms; a grant of sufficient additional land, a direct financial subsidy to the individual grazier, or increased community or social services to the arid zone as a whole.

Our preference is for the first course of action. However, we must stress that to grant small pieces of additional land will not solve the problem. If it is only politically feasible to allocate small pieces of land there is a very strong case for leaving the allocation of land to the market place. In the market there are no arguments about justice equity, etc. Yates (1974) has eloquently described the huge familial and social costs which have to be absorbed within the pastoralist's property budget because of isolation. A reduction in this social cost, or in psychological terms, an easier gratification of belongingness needs, should both economically and motivationally provide an improved environment for the introduction of improved management systems for all pastoralists.

Finally, we must consider this paper in the light of future planning.

We should attempt to prevent the recurrence of the pastoralist whose behaviour becomes dominated by the economic vicious circle described here and by Childs, Gibbings and Reithmuller, and Yates. Economic pressure decrees short term decisions which especially in the arid zone eventually lead to further financial difficulties. Psychologically, the pastoralist by entering this situation is ever increasingly placing constraints on the limits of his own behaviour. Eventually, there is no behavioural choice, there are no real decisions for him to take and prospects of behavioural change in relation to management are nil.

The simplest method to avoid this situation is, of course, to ensure that potential pastoralists have sufficient financial resources to viably maintain a property on a moderate stocking level. Again this is a political decision but one which must be taken if we are to promote desirable land management behaviour among our arid zone managers.

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