NEW ZEALAND FOREST MANAGERS — A SUBCULTURE?

J. J. KENNEDY* and W. R. J. SUTTON†

ABSTRACT

A subculture is defined as any group with a value system differing from those predominating in society at large. It is proposed that New Zealand forest managers have become a subculture, as evidenced by language, dress, artefacts, aesthetic tastes, beliefs, and attitudes. Results of a questionnaire show a general consensus on some issues (e.g., obligation to future generations, multiple-use forestry, wood production, job enjoyment, and challenge) and a diversity of opinion on others (especially the need to maximise wood-volume production). The existence of a subculture can be beneficial to its members as well as to society in general, but only if the subculture remains responsive to a changing society.

INTRODUCTION

That forestry is an ancient profession has been substantiated by archaeological evidence dating back to Greek and Roman times (Winters, 1974; Richardson, 1975). Many current attitudes towards management of forests can be traced back hundreds of years to Europe. Despite local adaptations, New Zealand forest managers still share many beliefs and attitudes (e.g., importance of soil and crop protection, and the need for yield regulation) with a worldwide and ancient profession.

One New Zealand adaptation has been to include a strong subprofessional ranger group in its forest managers. In New Zealand forest managers may not “stand out” from the rest of society as obviously as some of their uniformed European counterparts, but we contend that they form a group or subculture of New Zealand society, bound together by many shared beliefs and attitudes.

This paper further analyses the questionnaire sent to all members of the New Zealand Institute of Foresters (NZIF) in January 1978 (for preliminary analysis, see Kennedy and Sutton, 1978). Rather than present results here as tables of

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data followed by comment, this analysis explores the theory of a subculture. It is not possible, however, to prove or disprove the validity of the theory since, for such a test, the attitudes towards forestry of a random sample of New Zealanders would have to be compared with those of forest managers. The argument that New Zealand forest managers form a subculture is thus based only on example and the citation of other studies.

METHODS

Questionnaire Respondents

A questionnaire (Kennedy, 1978) mailed to 699 members of the New Zealand Institute of Foresters resident in New Zealand produced a response from 542 members (78%). Within the five classes of membership, response rate varied from 36% for veterans to 83% for full members.

In this paper we are interested in the attitudes of forest managers (defined here as either full or associate members of the Institute). Of the 540 NZIF members so classified, 435 (81%) responded to the questionnaire.*

Of the 435 full and associate NZIF members responding, 78% were born in New Zealand. Eighty-one percent lived in New Zealand from age 10 to 18 years in communities of the following sizes:

- Rural area or town of less than 3000 people — 34%
- Town of 3000 to 10,000 — 16%
- Large town (10,000 to 25,000) — 11%
- City of 25,000 or more — 39%

A further breakdown of the data by present age is given in Table 1. Also given is the national population for the census year nearest to the median age of each group in their youth. The youngest age-group (20-24) and the two oldest (55-64, and 65 and over) were excluded because the samples were too small to give a representative sample.

The nation's population has become urbanised but, whereas the older forest managers tended to have been recruited from small communities, the position is now reversed. Fewer young forest managers are being recruited from rural communities and more from the larger centres of population.

The mean age of the respondents to the questionnaire was 40 years and 73% live in the North Island (43% in Rotorua

*Responses of this "forest-manager subset" differ somewhat from those given by all 542 members and circulated previously (Kennedy and Sutton, 1978).
TABLE 1: DISTRIBUTION OF NEW ZEALAND FOREST MANAGERS IN THEIR YOUTH COMPARED WITH THAT OF THE NATION

<table>
<thead>
<tr>
<th>&quot;Present age&quot; Groupings of Forest Managers (yr)</th>
<th>Population Sample</th>
<th>Population Distribution Percentage by Community Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3000&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>25-34 Forest managers as 10- to 18-yr-olds ....</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>1961 national census</td>
<td>39</td>
<td>14</td>
</tr>
<tr>
<td>35-44 Forest managers as 10- to 18-yr-olds ....</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>1961 national census</td>
<td>43</td>
<td>12</td>
</tr>
<tr>
<td>45-54 Forest managers as 10- to 18-yr-olds ....</td>
<td>38</td>
<td>13</td>
</tr>
<tr>
<td>1945 national census</td>
<td>42</td>
<td>8</td>
</tr>
</tbody>
</table>

<sup>*</sup>In the national census the upper size limit of the community was 2500 and not 3000.


Conservancy). Over half (57%) are employed by the New Zealand Forest Service (NZFS), 22% by forest industry, and 7% by other Government departments and local authorities; the rest (14%) are retired, consultants, privately employed, etc.

Of the sample, 67% have more than 5 years' forestry experience and 50% have more than 10 years' experience. Most (51%) of this experience was either in production or in utilisation, 19% was in research, 7% in amenity and multiple-use work, 4% in administration, and 19% in other activities. Although most experience was in exotic forestry, 14% of the sample gained half or more of their experience in indigenous forestry.

About 80% of the forest manager sample had 3 or more years of formal training and over half had one or more university degrees.

NEW ZEALAND FOREST MANAGERS AS A SUBCULTURE

In a classic article, Duerr and Duerr (1971) described the forestry profession in the United States as an occupational subculture. Duerr (1972) claimed that it is even possible that United States forestry curricula attract and "select out" a special type of person to become a forest manager. Several studies have compared forestry students with other university students, observing considerable differences (Bourdor, 1954; Brody, 1957). Holland and Beazley (1971) tested 209
forestry students at the University of Illinois and found several significant differences between them and the general college population. The interpretation was that, compared with the average male student, the forestry student

is more concerned with material activities, expresses hostilities naturally, is willing to meet the world "on its own terms", and tends towards independence and autonomy. Furthermore, forestry students appear to lack an egocentric life style, to have a low need for career status and economic competition, to be low in anxiety, and generally satisfied and contented.

Perhaps forest managers in New Zealand are not as distinct a subculture as those in the United States, but the possibility warrants consideration.

A Subculture Defined

A standard sociology textbook (Baldridge, 1975: p. 97) states: "Any group that has a value system different in some respect from the dominant values of the society is called a subculture. . . . Subcultures usually develop special life-styles, language, and value systems."

There are many subcultures in New Zealand society that stand somewhat apart in attitudes, dress, language, or life style. They can be distinguished by ethnic origin (e.g., Pacific Islanders, Chinese), by life style and dress (e.g., bikies, hippies), and, as we propose, by occupation (e.g., loggers, boilermakers, teachers).

SUBCULTURAL COMPONENTS OF NEW ZEALAND FOREST MANAGERS

Subcultures can be distinguished by uniqueness in cultural components.

Language

Examination of forestry publications, reports, and conversation shows a language that uses common words in strange ways, creates new words, and occasionally uses a dead language (Latin). Some brief examples are:
	nouns: cant, site index, basal area, butt, dominance, mensuration, class, _Pseudotsuga menziesii_, latewood.

verbs: skid, blank, thin to waste, fell, angle-count, nurse.

adjectives: productive, intensive, vigorous, tolerant, normal.

abbreviations: d.b.h.(o.b.), O/C, S.I., s.e.d., 2iC, HO.
### TABLE 2: MANAGERS' ATTITUDES TOWARDS AESTHETICS OF FOREST STANDS

<table>
<thead>
<tr>
<th>Statement and Number*</th>
<th>Percentage Agreement</th>
<th>SA†</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>40. I personally feel a well-managed radiata forest is as aesthetically pleasing to view as a virgin indigenous forest. (χ² = 23.6; significant at 0.5% with 5 d.f.)</td>
<td>CO:‡</td>
<td>12</td>
<td>43</td>
<td>8</td>
<td>32</td>
<td>4</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>NZFS:</td>
<td>6</td>
<td>25</td>
<td>16</td>
<td>39</td>
<td>12</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>ALL:</td>
<td>8</td>
<td>31</td>
<td>13</td>
<td>37</td>
<td>10</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>41. I personally feel a thinned and pruned radiata stand is more aesthetically pleasing than an untended radiata stand of the same age. (χ² = 5.7; not significant at 0.5% with 5 d.f.)</td>
<td>CO:</td>
<td>23</td>
<td>69</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>NZFS:</td>
<td>26</td>
<td>61</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>ALL:</td>
<td>25</td>
<td>64</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

*Statements reproduced as presented in original questionnaire (Kennedy, 1978).

†Abbreviated as:
SA: Strongly agree
A: Agree
N: Neutral
D: Disagree
SD: Strongly disagree
No: No opinion

‡Abbreviated as
CO: Forest industry or company employed
NZFS: NZ Forest Service employed
All: All full and associate NZIF comprising the “forest manager” subsample
Dress

There is no official uniform for New Zealand forest managers as in Germany, United States, Austria, and other countries, other than those in State Forest Parks. In the field, forest managers’ dress usually involves boots, “Swandri” jacket, and a safety hat tenderly cured with dents and random patterns of tree marking paint.

Artefacts

Forest managers in New Zealand tend to use pottery, weapons, and dwellings similar to their neighbours’. But increment borers, diameter tapes, safety hats, etc., are more likely found in the forest manager’s home than that of neighbours.

Art and Aesthetic Taste

Subcultural groups often vary greatly in their image of a beautiful woman, a pleasant landscape, a prestigious dwelling, or an attractive forest.

When asked if “I personally feel a well managed radiata forest is as aesthetically pleasing to view as a virgin indigenous forest”, 39% of the responding forest managers agreed or strongly agreed, 13% were neutral, and 47% disagreed or strongly disagreed (Table 2). But when those who worked for forest industry were compared with those employed by the NZFS, significantly more industry forest managers agreed or strongly agreed (55%) than did NZFS managers (31%). We have little idea how the New Zealand public would feel about such an aesthetic choice, but it appears that forest managers in industry accept the aesthetic qualities of radiata forests more than NZFS managers.

Given an exotic forest, forest managers overwhelmingly agreed that “a thinned and pruned radiata stand is more aesthetically pleasing than an untended radiata stand . . .” (Statement 41, Table 2).

Beliefs and Attitudes

Forest managers should think in terms of decades

A common forest-manager response to concern about the appearance of a recently logged area is, “Don’t worry, in 4 to 6 years this area will be green and fully stocked with trees”. For better or worse, the public generally appear to think in terms of single years, and cannot wait decades for the results of today’s forest management.
TABLE 3: SOME FOREST MANAGER ATTITUDES

<table>
<thead>
<tr>
<th>Statement and Number*</th>
<th>SA†</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Planning periods of 50 years or more are necessary for forestry.</td>
<td>8</td>
<td>42</td>
<td>15</td>
<td>28</td>
<td>4</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>10. Forest managers do not have a strong obligation to meet the needs of future generations of New Zealanders.</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>40</td>
<td>56</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>23. Wood production should be the major objective of exotic forestry in most State forests.</td>
<td>16</td>
<td>69</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>24. Wood production should be the major objective of indigenous forestry in State forests (other than protection forest areas).</td>
<td>18</td>
<td>43</td>
<td>9</td>
<td>27</td>
<td>2</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>29. All State forest land should be managed under multiple-use principles.</td>
<td>2</td>
<td>14</td>
<td>13</td>
<td>55</td>
<td>15</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>30. When possible, private company forests should allow multiple uses as well as wood production.</td>
<td>18</td>
<td>43</td>
<td>9</td>
<td>27</td>
<td>2</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>35. Outdoor recreation, scenic quality, and/or other amenity values are not important considerations in managing exotic forests on State forest land.</td>
<td>16</td>
<td>73</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>36. Outdoor recreation, scenic quality, and/or other amenity values are not important considerations in managing indigenous forests on State forest land.</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>53</td>
<td>38</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>48. Foresters and rangers know what is the best for State forest lands.</td>
<td>1</td>
<td>16</td>
<td>26</td>
<td>43</td>
<td>11</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>52. The New Zealand public has as much right as forest managers to decide the goals or objectives for which State forests are managed.</td>
<td>9</td>
<td>41</td>
<td>13</td>
<td>29</td>
<td>7</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>56. I do not enjoy my job.</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>42</td>
<td>48</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>57. I find my job challenging.</td>
<td>34</td>
<td>57</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>

*, †, all as for Table 2.
With hindsight, attitudes toward time were not examined very well in the NZIF survey. One agree/disagree statement (No. 8, Table 3) stated "Planning periods of 50 years or more are necessary for forestry"; 50% agreed or strongly agreed, 15% were neutral, 32% disagreed or strongly disagreed, and 3% had no opinion. Although half the sample agreed in some way, the small proportion that strongly agreed and the 32% who disagreed might reflect the shorter New Zealand planning period with 30-year radiata pine rotations. One wonders how they would have answered this question in 1920 or 1940 when the realities of long-rotation forestry still dominated concepts of time?

Forestry and the forest manager's obligation to society

Forest managers generally think in terms of future generations. Statement 10 (Table 3) states "Forest managers do not have a strong obligation to meet the needs of future generations of New Zealanders", and 96% disagreed or strongly disagreed with this. The forest managers' view of their protector-provider role is illustrated in Statement 48 (Table 3). Half the respondents disagreed that "foresters and rangers know what is best for State forest lands", and only 17% agreed. An abnormally high proportion (28%) remained in the middle, neutral position. Even less consensus is illustrated in responses to Statement 52 (Table 3), "The N.Z. public has as much right as forest managers to decide the goals and objectives for which State forests are managed", as 50% strongly agreed or agreed, 13% were neutral, and 36% disagreed to some extent.

It seems that there is definite consensus that forest managers in this country have a "strong obligation" to the future needs of society, but how society can communicate its perceived current and future needs to managers for incorporation into forestry practice is less clear.

Forests are for multiple use

Responses (see Table 3) to several statements indicate that a multiple-use philosophy is held by most forest managers. There was major agreement with the strongly worded statement "All State forest land should be managed under multiple-use principles": given the condition "all", there are reasons for 27% disagreement (Statement 29). There was 89% agreement that "when possible, private company forests should allow multiple uses as well as wood production" (Statement 30). Statements 35 and 36 argue that "outdoor recreation, scenic quality and/or other amenity values are
not important" in the management of exotic and indigenous forests, respectively, and both were overwhelmingly rejected.

Since the indigenous forest management policy (NZFS, 1977) and the Forests Amendment Act (1976) both emphasise a New Zealand commitment to multiple use, it could be argued that the multiple-use philosophy is not peculiar to the subculture because it has now become a value of New Zealand society.

Wood production is the major goal of forestry

Forestry's original role was wood production, and early definitions of forestry stress this purpose; e.g., "... the foundation of forestry is the growing of trees as a crop to be cut and used" (Chapman, 1912: p. 7).

In New Zealand, too, wood production was the early goal of indigenous and exotic forestry. Forest managers now, however, would appear to give support to the indigenous forest management policy as 70% disagreed to some extent that "wood production should be the major goal of indigenous forestry in State forests (other than protection forest areas)" (Table 3, Statement 24).

Even though forest managers generally agreed (Statement 35) that multiple-use considerations were important in exotic forestry, 85% of them agreed or strongly agreed that "Wood production should be the major objective of exotic forestry in most State forests" (Table 3, Statement 23).

There was, however, no such general agreement on the statement "The objective of exotic forestry in New Zealand should be to produce the maximum wood volume possible" (Statement 25). Overall opinions were evenly divided but analysis by employer and age (see Table 4) showed that 57% of private company employees agreed or strongly agreed with the maximum-wood-volume objective, while only 31% of Forest Service employees did so. Of those over 65 years old, 67% agreed to some extent but only 24% of those in the 20-24 age group did so (Table 4).

New Zealand now has adequate volume of wood to meet domestic needs, and an increasing surplus for export. One of the major concerns expressed in response to the open-ended question "In your opinion, what is the greatest problem(s) or challenge(s) facing N.Z. forestry in the future?" was how, and to where, New Zealand would export its surplus exotic wood. Early in this century when wood shortages were believed imminent, maximum-volume exotic production made sense. Today this attitude is under challenge.

We have not tested the attitude of the New Zealand public on these issues. Their opinions about forestry's responsibility
TABLE 4: FOREST MANAGER ATTITUDES ON A MAXIMUM VOLUME OBJECTIVE FOR NEW ZEALAND EXOTIC FORESTRY

Statement*: 25. The objective of exotic forestry in N.Z. should be to produce the maximum wood volume possible.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Subgroup</td>
<td>SA</td>
</tr>
<tr>
<td>Employer:</td>
<td></td>
</tr>
<tr>
<td>CO:‡</td>
<td>11</td>
</tr>
<tr>
<td>NZFS:</td>
<td>5</td>
</tr>
<tr>
<td>ALL:</td>
<td>8</td>
</tr>
</tbody>
</table>

\( \chi^2 = 36.9, \text{ significant at } 0.5\% \text{ with 5 d.f.} \)

Age class:
(a) 20-24 yr | 3 | 21 | 9 | 44 | 17 | 6 | 100 |
(b) 25-34 yr | 8 | 26 | 12 | 39 | 14 | 1 | 100 |
(c) 35-44 yr | 8 | 34 | 13 | 38 | 6 | 1 | 100 |
(d) 45-54 yr | 9 | 43 | 16 | 25 | 7 | 0 | 100 |
(e) 55-64 yr | 10 | 46 | 6 | 33 | 5 | 0 | 100 |
(f) 65+ yr | 14 | 53 | 17 | 13 | 0 | 3 | 100 |

\( \chi^2 = 50.2; \text{ significant at } 0.5\% \text{ with 25 d.f.} \)

*, ‡, †, all as for Table 2.

Job enjoyment and challenge

Two statements in the questionnaire on which there was a very high level of consensus related to job enjoyment and challenge (see Statements 56 and 57 in Table 3). We doubt whether there would be many other social groups in which 90% of the members found their jobs both enjoyable and challenging.

SOME CLOSING COMMENTS

A subculture binds people together and allows energy to be efficiently directed in specific areas. When the beliefs, values, and goals of a subculture are consistent with society's goals, everyone gains. The problems occur when the subculture's goals differ from those of a larger society. In emerging urban societies, the dominant culture may not hold the practical, utilitarian attitudes common to the forestry subculture.

The examples given in this paper illustrate some assets of a forest manager subculture. But they can become disad-
vantages when it is necessary to incorporate other specialists or the public into forestry. Shared, specialised forestry language and beliefs can be confusing and threatening to "outsiders". The use of forestry jargon and concepts in management plans or at public meetings can be judged as snobbish and elitist by the public — regardless of the forest manager's intent.

Being a member of the New Zealand forest manager subculture can satisfy many important individual and group needs but this can become a liability if the group defensively pulls together like a herd of musk oxen when challenged by "outside" society. In a harsh arctic environment, the group-protective instinct of the musk oxen "locking horns" in a circle of defence has remarkable survival advantages. The greater the group cohesion of a subculture, the greater may be the risk of such a reaction occurring in response to a perceived outside threat. Forestry practices throughout the world are under criticism, but if this criticism is a consensus of society at large, to form an immovable circle of defence could be disastrous for a subculture in a democratic society.

Whether New Zealand forest managers can legitimately be viewed as a subculture is a moot point. However, we hope that this analysis will provide an opportunity for introspection and improved understanding of the forest manager's position in society.

ACKNOWLEDGEMENTS

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REFERENCES