

Environmentality judiciously fired: Burning questions of forest conservation and subject transformation in the Himalayan foothills

MacKinnon, I.

Author post-print (accepted) deposited by Coventry University's Repository

Original citation & hyperlink:

MacKinnon, I 2019, 'Environmentality judiciously fired: Burning questions of forest conservation and subject transformation in the Himalayan foothills' Environment and Planning E: Nature and Space, vol. (In-Press), pp. (In-Press).
<https://dx.doi.org/10.1177/2514848619874690>

DOI 10.1177/2514848619874690

ISSN 2514-8486

ESSN 2514-8494

Publisher: Sage

Copyright © and Moral Rights are retained by the author(s) and/ or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This item cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder(s). The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

This document is the author's post-print version, incorporating any revisions agreed during the peer-review process. Some differences between the published version and this version may remain and you are advised to consult the published version if you wish to cite from it.

Environmentality judiciously fired – Burning questions of forest conservation and subject transformation in the Himalayan foothills

Dr Iain MacKinnon

Accepted Version

Here is a link to the published version in Environment and Planning E: Nature and Space:

<https://doi.org/10.1177/2514848619874690>

'Environmentality' has become a key concept in political ecology in the quarter of a century since it was coined.¹ It appears to have been first used by Timothy Luke (1995) to analyse the transition towards sustainability focused governance regimes. He posited 'environmentality' as a concept for understanding how political actors establish 'instrumental rationalities in the policing of ecological spaces'. The concept was further developed by Arun Agrawal (2005a) in a book-length case-study of forest governance in north India. This work is still the most comprehensive empirically-based articulation of 'environmentality' as a means by which political technologies can change people's subjectivity towards care for the environment. Since then, Robert Fletcher (2010) has made a compelling argument that Agrawal's analysis represents just one sub-category among a variety of 'environmentalities' – a development that Agrawal (2005a: 226) himself anticipated. However, Agrawal's study not only provides the major empirically-based foundation for more recent work on the creation of 'environmental subjects', but is also widely discussed in the political ecology literature generally (e.g. Olsen and Messeri 2015. Schaberg 2014. Heatherington 2012.) – including an extensive section in a recent textbook (Robbins 2012).

¹ See Fletcher (2017) for a detailed review of the concept's development within political ecology.

Agrawal employed the term in his analysis of forest governance in Kumaon in Himalayan north India to disclose how, in his view (2005a:11), as a result of decentralised forest governance legislation introduced by the British colonial regime in 1931 'many residents in Kumaon have changed profoundly in their actions and views about forests' from which they derive livelihood. He argues (2005a: 16, 164) that the new regulatory regime has produced among people in Kumaon what he calls 'environmental subjects' who have come to 'care about the environment' and for whom 'the environment constitutes a critical domain of thought and action'. 'Environmentality', an adaptation of Michel Foucault's work on 'governmentality', is the conceptual centrepiece of his argument. Agrawal (2005a: 23f) describes 'environmentality' as 'concurrent processes of regulation and subject making' that lead to 'the simultaneous redefinition of the environment and the subject as such redefinition is accomplished through the means of political economy'.

In addition to the book, Agrawal summarised his findings in the journal *Current Anthropology* (2005b) accompanied by a series of scholarly commentaries and a response to them by Agrawal. The commentators were given limited scope to develop their arguments. However, several outline criticisms made there are pertinent to this article's analysis and will be developed here, in particular those of Susana Narotsky (Agrawal 2005b: 183), who contended that in Agrawal's analysis 'the concrete historical processes that produce particular forms of government and subjectivities are represented by insufficient evidence, while the data analysis is often obscured by oversignified concepts'. A further criticism (Agrawal 2005b: 184), related to Narotsky's comment on concepts, questioned if Agrawal had sufficiently considered whether the category 'environment' means the same thing when applied to the actions of the state, as to the actions of the Kumaoni people.

Agrawal's (2005b: 186f) reply to his critics in the *Current Anthropology* exchange did not seriously address the comments highlighted here. In later comments made to the political ecologist Paul Robbins (Robbins 2012: 218) he acknowledged that he 'did not pay sufficient attention to the lives of people [in Kumaon] beyond what was necessary to make the argument in the book', adding that although 'to talk about people without really knowing them...is quite unsatisfactory', this approach is 'a failure of of nearly all social science

research that claims to be about people'. Despite this failure, Robbins concluded that Agrawal's 'historical analysis...and careful survey of local people together effectively show the power of institutions to make people think and be in a certain way'. Indeed, according to Robbins, Agrawal had shown that the people in Kumaon had 'digested the colonial program of forest governance and made it very much their own'.

This article interrogates this conclusion and the concept of 'environmentality' generally by asking burning questions of its empirical foundations. It proceeds by way of an extended critique of Agrawal's work as the most comprehensive case study of a situation in which a process of the creation of 'environmental subjects' is said to have been identified. Agrawal's hypothesis is that: a profound shift has occurred in the beliefs, interests and actions of people in Kumaon towards protecting their forests; this change can be considered the emergence of 'environmental subjectivity'; and the change has occurred following and as a result of the colonial state's creation of institutions to localise forest governance. The validity of this hypothesis hinges on evidence being adduced for two claims: firstly, evidence demonstrating that little interest for the care and protection of forests existed among forest users before the decentralised regulatory regime was introduced; secondly, evidence of 'environmental subjectivity' being expressed today by forest users in a way that it was not before the regulatory changes.

This article tests these claims by examining the evidence Agrawal has produced for them, and his interpretation of that evidence. . Relatedly, the article also questions some of the methodological issues that Agrawal faced in assessing people's beliefs, interrogating his approach to gathering the historical evidence that he believes discloses the people's lack of care for the forests in the early twentieth century. Agrawal's work is being particularly focussed on because even scholars who critique the way he has used the 'environmentality' concept (e.g. Fletcher 2010: 176. Heatherington 2012: 567) rely upon his empirically-based analysis as a means of justifying their own focus on the creation of subjects concerned with protecting the environment. In asking its burning questions, and in offering one set of answers to them, this article does not to seek to incinerate 'environmentality' completely as a concept, but rather to provoke or contribute to an analytical equivalent of the native process of 'judicious firing' of the forest in Kumaon that is outlined later in this article, the

purpose of which was not to destroy but to regenerate the forest. The article is therefore a way of testing the empirical basis of 'environmentality' in a carefully prepared interrogative fire which can expose weaknesses in the concept as well as the intellectual work required to bring its ideas into renewed and useful life.

*

Agrawal exemplifies the concept of 'environmentality' and its ramifications through an analysis of the historical relationship between government structures and people in Kumaon. He focusses (2005b: 169) on the consequences of a set of regulations, The Forest Council Rules (FCR) of 1931, which were passed in order 'to facilitate the formal creation of village-based forest councils that could govern local forests'. The FCR replaced an existing policy in which control over the forest, since the establishment of British colonialism in Kumaon in 1815, had been claimed by the colonial authorities and centralized by them. This policy had been marked by an initial period in which largely unrestrained exploitation of the forests had caused great destruction and led to a subsequent period in which colonial authorities prioritised a conservation policy managed by the Indian Forest Department set up in 1864. A Forest Act followed in 1865 which gave the colonial administration greater control over the forests. This Act was superseded in 1878 by another Forest Act which gave the Forest Department new powers to create two classes of forest land, 'protected forests' and 'reserve forests'. In the 'reserve forests' local people no longer had customary rights of access and use. According to Richard Tucker (1984: 343), the people's rights there were redefined as 'privileges' which could be removed or restricted according to the Forest Department's assessment of the condition and needs of the forest.

In the course of a major report criticising colonial forest policies which was written at the time of the protests the Kumaoni lawyer and political organiser – and later major regional and national political figure – Govind Ballabh Pant (1922: 34) emphasised that 'Government control over reserved forests is much greater than in the case of protected forests, and the main difference between the two may be summed up in the phrase that in the former everything is an offence which is not permitted while in the latter nothing is an offence which is not prohibited'.

In 1893 further legislation declared that any land not already marked out as village forest or reserved forest would become District Protected Forest [DPF] (Pant 1922: 39, 40). In 1911 a large part of the DPF was declared reserved forest, and therefore subject to much stricter controls. Dhirendra Datt Dangwal (2005: 112) has claimed that more than one-third of the total 1,476,000 hectares of DPF was made into reserved forest at this time. Both Dangwal and Ramachandra Guha (1989: 69f. 2006: 115f) emphasise that the forest department's increased control of the reserved forest enabled it to be more readily exploited for new commercial uses such as resin production. Local resentment at being excluded from land they had previously utilised and relied upon for livelihood quickly boiled over into protests in 1916 and, more seriously, in 1921, including widespread fire-setting in forests. As a result of these serious protests – which will shortly be examined in more detail – the Kumaon Forest Grievances Committee was established to investigate the causes of the unrest. The work of the Committee recategorised many of the reserves and reestablished villagers' rights. Another demand repeatedly heard by the committee was for local councils to manage forest areas for villages, an outcome eventually achieved by the FCR legislation in 1931.

In Agrawal's analysis (2005a: 12, 15, 127) the new local forest councils enabled by the FCR 'dispersed government throughout Kumaon' and have become 'regulatory communities' in 'governmentalized localities...knit together by the thread of state power'. In this view 'Decision makers in these community-based councils became agents of environmental regulation' and, thus, 'environmental subjects'. Indeed, Agrawal occasionally takes this argument further, claiming that not only decision-makers but entire 'local communities' have become 'agents acting in the service of environmental regulation'.

As noted, Agrawal's argument hinges on the proposition that the beliefs and actions of the people of Kumaon towards their forests have changed since the FCR was established. He claims (2005a: 179) there are significant differences 'in the voice and tenors of the archival and more recent statements' that he collected which, he believes, (2005b 170) 'offer a basis for making the judgement that the practices and views of many of Kumaon's residents

about their forests have changed substantially...These changes in subjectivities have occurred since the passage of the Forest Council Rules in 1931'.

Agrawal (2005b: 170) outlines the following detailed changes he claims to have found:

Some of these changes reflect a greater interest in careful use of forest products, a greater willingness to abide by regulations, and a stronger desire to call upon state officials to help protect trees in comparison with the past.

These specifics are part of the more general change in relation to the emergence of 'environmental subjectivity' which Agrawal (2005a: 164, 177) sums up by claiming that 'concern about the environment has not always existed in Kumaon' and concluding that people there are 'far more interested in forest protection' than they were before the creation of the FCR.

At this point in the analysis he makes an acknowledgement that raises critical methodological questions about how he has assessed the beliefs of historical actors. He states (2005b: 170): 'I do not report statements and actions of the same individual persons who lived in the early 1900s, but a systematic change seems to have occurred in the forest-related practices and beliefs of individuals belonging to the same social class and status over the time period in question.'

This acknowledgement is important because of Agrawal's previously expressed methodological commitment (2005b: 163) that investigators 'can deduce internal states of mind only from external evidence. There is no direct access to inner thoughts or subject positions'. This methodological commitment entails that Agrawal produces external evidence that can give a reliable indication of the 'internal states of mind' of the people in Kumaon when they set fire to the forest in the early twentieth century to show that they had no concern for the environment in doing so. However, Agrawal has elsewhere acknowledged (Agrawal 2005a: 16) that 'Evidence from the early twentieth century ... is fragmentary and can be gleaned only through archival materials produced by state officials.' That is, in making his interpretation of the people's 'internal states of mind' Agrawal has had

to rely solely upon the state officials' interpretation of the actions of the villagers, and whether they were motivated by care for the forest or a lack of care. Moreover, it transpires that in this instance the possibilities for interpretative elucidation of the intentions of the villagers are even more impoverished. This is because Agrawal has also noted (2005a: 231[n.3]) that when the state reports considered the 'incendiarism' of the early twentieth century those reports fail 'to signify villagers' own interpretation of why they were setting fires'.

These acknowledgements mark two important methodological constraints on the possibility of establishing the 'internal state of mind' of those involved in the forest protests: firstly, no statements have been adduced from villagers before 1931 from which to draw direct evidence of their beliefs about protecting the forest before the FCR was established; and, secondly, the official state reports that are used as evidence are said not to give the villagers' point of view regarding their reasons for setting the fires. At face value, therefore, there appears to be no 'external evidence' by which to achieve reliable access to the 'subject position' or 'internal states of mind' of villagers involved in the protests, and to disclose their reasoning for setting fires in forest areas. In light of this lack of evidence, it seems highly questionable to claim (Agrawal 2005a: 16. Agrawal 2005b: 170) that 'the practices and views of many of Kumaon's residents about their forests have changed substantially' since the FCR, and that, moreover, not simply changes, but 'momentous changes' have taken place with regard to the Kumaoni people's relationship to the forest.

Elsewhere he mentions in a footnote (Agrawal 2005a: 252 [n.31]) that in using the writing of colonial officials 'to reconstruct the nature of subaltern opposition' his methodological approach is similar to that used by subaltern scholarship as this had been described by Gayatri Spivak, although he does not detail how he uses this approach. In the essay that Agrawal cites, Spivak (1988a: 202-205, and see also the version of this essay in Spivak 1988b) carefully describes a means by which strands and sub-strands of a historically specific subaltern 'consciousness' may be delineated within a particular political insurgency, even when the scholar has no direct evidence of the subaltern point of view and must rely on evidence that comes from those hostile to the insurgency. She highlights that a criticism of this approach is that it may create a 'negative consciousness' of the subaltern group

which is 'always askew from its received signifiers' and produces 'the consciousness not of the being of the subaltern, but of that of the oppressors'. From a post-structural perspective, Spivak posits that the project to retrieve subaltern consciousness can instead be considered as 'the charting of...the subaltern subject-effect'. In this approach, the direct evidence of colonial officials being used to chart this subaltern subject-effect should not be considered as coming from a 'sovereign and determining subject' but instead should itself be considered as belonging to an effect, partially conditioned by the previous agency displayed by the subaltern insurgency. Spivak then summarises this method by way of a claim from subaltern scholarship that it 'should be possible to read the presence of a rebel consciousness as a necessary and pervasive element' within the evidence given by those who are hostile to the agency of that consciousness. She describes this as an essentialist approach, but commends it as a form of 'strategic' essentialism being used for political ends that are both scrupulous and visible.

It is not clear that the same can be said of Agrawal's account; neither is it apparent that he has even adopted something akin to the subaltern school's approach of using the evidence of colonial authorities hostile to the insurgency in order to draw out and recover significant details of 'rebel consciousness'. For instance, his analysis (2005a: 175, 176) of the 'historical environmental subjectivity' of Kumaon people during the protests, as this subjectivity was viewed through the prism of the colonial administration's reports, concludes that the villagers were 'ungrateful', 'uncooperative', 'irresponsible' and 'unreliable'. However, this litany can hardly be posited as an interpretation that recovers the villagers' own point-of-view as regards their reasoning for setting fires; it is more a parroting of the prejudices of imperial rulers, familiar to insurgents throughout the colonial world, and articulating, as Spivak warned, 'the consciousness not of the being of the subaltern, but of that of the oppressors'. (For details of these prejudicial views as common to the experience of the colonised, see Osterhammel 2005: 107-110. For a detailed case study, see MacKinnon 2017: 33-39) Moreover, the claim implicit in Agrawal's analysis that 'subaltern' consciousness in Kumaon can only be reconstructed from archival materials produced by state officials is questionable; other, potentially more direct, evidence (Mittal 1986: 21, 165. Pathak and Bhakuni 1987: 399. Rawat 1999: 49, 50. Singh Chauhan and Panwar 2002: 110-112. Khanna

2015) is available for forming a native point of view, in texts of political poetry and newspapers promoting social reforms.

The apparent lack of available direct evidence for the internal states of mind of villagers, and the methodological limitations of his approach to interpreting the colonial records, appear to be very considerable obstacles for Agrawal in his efforts to substantiate any claim that before the FCR the Kumaon people were not concerned about the environment and had little interest in protecting it. It is perhaps for this reason that he places such stress on villagers' use of fire-setting as a weapon of protest.

*

For Agrawal the fact that before the FCR was established the villagers set fires that burnt large areas of forest is a significant indication of their lack of an ethos of care for the forest. He argues (2005a: 11) that more recent views among villagers that forest protection is necessary 'are in stark contrast to those prevailing at the beginning of the century when Kumaon's residents were setting fires in forests and refusing to inform on those whom the state considered criminals'. Although Agrawal acknowledges that the colonial reports do not give local reasons for setting the fires, he nevertheless concludes (2005a: 11, 164, 173) that the setting of fires marked the Kumaonis as 'fire wielding state-defying rebellious hill men' who had no concern for the forest environment and 'opposed efforts to protect' it.

Agrawal contrasts this putative anti-conservationism among the Kumaoni people with the conservationism of the colonial regime. In delineating the regime's conservation policies, Agrawal argues (2005a: 11, 84) that the 'forest department of Kumaon remade the meaning of forests and institutionalized their care and maintenance by the end of the nineteenth century'. Yet British colonial administrations practiced a particular kind of conservation, one with a particular set of objectives, and Agrawal's analysis seems to lack nuance on – if not confuse – this point. It seems to mischaracterise the actions, if not the beliefs, of British colonial foresters to describe this form of conservation in terms of protecting the *forest*, a claim that Agrawal (2005a: 43, 44, 59, 65) repeatedly makes.

However, elsewhere he appears to recognise that 'forest conservation' may not be the best way to characterise the objective of the particular kind of management regime installed by the British. In an extended description of colonial forestry in Burma, Agrawal notes that teak, in particular, was prioritised for conservation because it was economically useful. He quotes (2005a 244[n.23]) Dietrich Brandis, the British chief conservator in Burma and later colonial inspector general of forests in India, stating that 'the chief object of forest conservancy in Burma is to ensure the permanent production of a sufficient quantity of teak and other valuable kinds of timber' because the price of teak 'is higher than the price of any other timber'. But its prioritisation meant that it was *teak* that was being cared for, maintained and conserved; it was not conservation of the forest. Indeed, Agrawal remarks (2005a: 53) that the 'overriding objective in plantations' introduced as part of the colonial conservation regime was to ensure that 'diversity in a forest was minimised' in favour of a limited range of commercial types. Caring for and maintaining teak in areas where 'species diversity was too high' meant destroying other species that could affect the production of teak as timber. Agrawal argues (2005a: 44) that the development of high value plantations required the colonial regime to 'eliminate' the pre-existing forest with its 'valueless trees'.

In early twentieth century Kumaon the *chir* pine was one of the main trees targeted for colonial plantations. According to Richard Tucker (1984: 345), the focus on *chir* was largely because it produced 'the finest resin on the subcontinent'. Colonial foresters acknowledged (Champion 1923b: 412) at the time that it was the importance of the resin industry that 'has frequently been the reason for the introduction of modern management, and even their [*chir*'s] retention as reserves'. Between 1912 and 1921 some 777,000 hectares of *chir* had been made reserved forest (Pant 1922: 76), and colonial records (Stebbing 1926: 660) show that in the the years between 1910 and 1920 there was an eightfold increase in the area of forest for resin production in Kumaon using a total of 2,135,000 resin channels by 1920. *Chir*'s commercialisation in this way became a significant cause of the conflict (Guha 2010: 45. Pant 1922: 65. Stebbing 1926: 407. Rawat 1999: 45) between villagers and government. A whole range of restrictions were placed on villagers in the new reserves, including what was effectively a complete ban throughout Kumaon on burning the forest floor. This was particularly resented by the local people as a source of hardship. Traditionally, fires were set

in *chir* forests to remove a thick layer of pine needles which both hampered human and animal movement and hindered new growth of grass.

The protests against the new restrictions were focussed on these reserved forests (Tucker 1984: 347. Guha 1989: 75f, 82), with the *chir* forests a particular target in the fire-setting of 1916 and in the larger rebellion of 1921; one senior forest official claiming at the time (Stebbing 1926: 659) that 'the whole of the *chir* forests were burnt in 1921'. According to Guha (2006: 113), 'The fires were generally directed at areas where the state was at its most vulnerable: for example, compact blocks of *chir* forest worked for timber and /or resin. Significantly, there is no evidence that the large areas of broad-leaf forest, also controlled by the state, were at all affected.' Ajay Singh Rawat (1999: 46) believes the 1921 protests affected 'more than 82,880 ha of forest' and 'ruined 1,150,000 of resin channels and 2,437,500 kg of resin' – Guha (1989: 82) claims that 1,500,000 channels were destroyed. Colonial officials had anticipated the production of more than three million kilograms of resin in 1921. As a result of the fires less than one million kilograms was produced. (Trevor and Smythies 1923: 211)

If we accept the estimate that there were around 2,000,000 hectares of forest in Kumaon in 1921², it therefore appears that the fires set by villagers affected less than five per cent of the afforested land in Kumaon but, in doing so, villagers were able to destroy – at a conservative estimate – more than 50 per cent of the channels used for resin production. The fires' disproportionate destruction of resin production equipment suggests the fire-setting of 1921 may well have been strategic. It can be posited that the Kumaon people targetted resin producing *chir* plantations because resin production was a rapidly proliferating form of commercial forestry whose overriding land management objective, as Agrawal noted, was to reduce the diversity of Kumaon's forests, and required the exclusion of its people. From the perspective of people in Kumaon, resin production may have been

² Dangwal's (1999: 108f) recent forest history of Kumaon argues it is difficult to estimate the overall forest cover in the early twentieth century because the two main historical sources with this information in the United Provinces, including Kumaon, are unreliable in terms of calculating the entire forest cover of the division at that time. Nonetheless several historical and contemporary accounts (Pant 1922: 45, 56. Krishna 2002: 1846. Trevor and Smythies 1923: 19) suggest that 2,000,000 hectares may not be an unreasonable estimate for the purpose of the comparison made here.

threatening forest diversity³ that they wished to see conserved for their own economic reasons but which seem to have been incompatible with the economic agenda of the colonial regime. It is possible to agree with Guha's conclusion (1989: 82) that in the Kumaon protests, 'destruction by arson was not simply a nihilistic release but carefully selective in the targets attacked...burning the *chir* forests represented a direct confrontation with the colonial authorities. The decision to burn the commercially worked areas was predicated [on the fact that] ... the export of forest produce by the state clashed strongly with the subsistence orientation of the peasant'.

Moreover, it is possible to take the argument on fire further, and construct a case that the villagers' routine use of fire in non-protest circumstances may have been a central component of non-colonial Kumaon forest management practices, as part of a traditional forest conservation system. This is not Agrawal's view. Following the argument of WP Baumann, Agrawal states (2005a: 106, 111) that there is 'little evidence to support the claim that prior to the British a culture existed wherein 'forest conservation was a social ethic' ... or indeed of any regular system of forest management' in Kumaon. Agrawal concludes that 'the incidence and intensity of local government of forests was low until the arrival of the British', and that the reservation of forests by the colonial regime 'likely boosted self-organisation'. Coping with scarcity imposed by colonial forest policy is one non-colonial rationale for managing forests. However, others might also exist, and this article will now tentatively and defeasibly propose one of these.

In his report written during the protests in support of the forest users and criticising the colonial regime, G.B. Pant (1922: 65) wrote that villagers believed the ancient 'practice of setting fire to the forest lands' brought multiple benefits.

'The village people have an invincible faith in the utility of firing the forest judiciously. In unfired forests pine needles are piled so thickly that neither men nor cattle can move on the hill side and the growth of grass is also smothered.

³ Shrubs and fungi found in *chir* forests are used for nutritional and medical purposes. (Kala 2003)

The burning of the forests at seasonable times is believed to be helpful to the growth of grass without causing any injury to the trees.'

An argument in favour of judicious fire-setting was also made by a senior colonial forest officer who said (Champion 1923b: 411) that introducing fire-prevention can 'actually increase the dangers from fire, in that when from any cause a fire starts in the protected area, the accumulated needles, debris and often grass give rise to a conflagration incomparably greater and more liable to injure the standing crop than the quiet fire of the annually burnt forest'. Pant stated that fire-setting had been recognized in the 'rules framed for the management of the district protected forests' but that there had been 'strict prohibition against setting fire to the reserves' which was overwhelmingly considered 'a source of widespread hardship'.

Immediately following his criticism of the colonial policy prohibiting fire-setting in reserves, Pant claimed (1922: 65-67) that 'The formation of extensive reserve forests, specially in the midst of disarmed people, is an outrage on humanity'. The contiguity of reserved forests to villages, he added, gave 'a wide latitude to the ravages of wild animals', estimating that 300 people may have been killed by animals over the course of the previous year in Kumaon as well as many other cases in which people were 'maimed, disabled or injured'. He also claimed that the 'damage to crops and cattle [from wild animals] must be tremendous indeed' and called for statistics to be collected on the condition of villages in the vicinity of reserved forests.

Pant appears to be claiming that the new management system in reserved forests had created ecological changes in areas close to human habitation such that under the new management system wild animals had greater freedom for destructive action than previously. Is it possible that the villagers' regular burning of forests near villages changed local ecosystems in ways which the villagers believed led to less chance of wild animals destroying crops, or of surprising or being surprised by humans?

Certainly, Jim Corbett, the early 20th century hunter and conservationist, observed (1954: 12, 85f) in the course of one of his accounts of hunting man-eating tigers and leopards that both species prefer 'heavy cover' where they can lie up. In another book he recounts (1952:

18.) how two local men used fire to flush out wild boar – which can cause human casualties and crop destruction – from long dry grass. In this instance, it was a Kumaoni man who proposed to Corbett that the animals might be lying in the grass, suggesting that the proposal could have been based on an understanding of the local environment that would today be considered (Berkes 2012) an aspect of traditional ecological knowledge. Elsewhere Corbett stated (Das 2009: 21) that widespread fellings by the forest department created habitat loss that disturbed and displaced large predators.

Other traditional Kumaon practices may also have created ecological conditions which mitigated against surprise encounters with wild animals. A colonial forestry officer (Moir 1882: 274-277) took direct issue with regulations which prevented grazing cattle in reserved *deodar* tree forests. Against the prevailing orthodoxy in the forest service, he felt this restriction was counterproductive as he found ‘a vigorous crop of young seedlings’ growing in unprotected forests where cattle grazed while, on the other hand, after a number of years of excluding cattle in reserved areas a ‘growth of grass and shrubs of all kinds’ were, he believed, choking out seedlings of the *deodar*.

Perhaps the heavy cover of long grass and shrubs in ungrazed and unburnt areas of reserved forest close to villages provided a habitat for dangerous animals. It seems possible to interpret Pant as presenting an argument that the colonial regime's ban on fire-setting as a management practice on land close to villages meant that villagers were no longer able to prevent the growth of long grass and shrubs in those areas with the result that these areas could then shelter wild animals that had greater latitude, not only to destroy village crops, but also to claim many human lives each year. In this view, an alternative interpretation of the rationale for fire-setting emerges. In this scenario, far from being opposed to actively conserving the forest, the villagers already had long-standing governance practices, including setting fires, which the colonial forestry's reservation regime had outlawed without considering that these practices were actions that expressed a form of rationality for governing the forests.

However, it was not only the native politician G.B. Pant who could conclude (1922: 75) that a ‘natural system of conservancy’ was practiced by the villagers in Kumaon in opposition to the colonial regime. According to Guha's (2006: 106) account, Deitrich Brandis, the colonial

inspector of forests in India, said he found sacred woodlands 'most carefully protected' in many areas, including the *deodar* temple groves in the Himalaya. Brandis called this protection the 'traditional system of forest preservation' of an 'indigenous Indian forestry'.

If we follow Pant and Brandis in considering an indigenous conservation system in Kumaon, this opens space for questions related to what such a system is for. What do the creators of a such a system believe needs to be conserved? How do conservation practices reflect those beliefs and priorities? What kind of forest would a conservation policy based on such priorities and objectives conserve? One response to such questions, based on the argument above, would be to propose that the objectives of an indigenous system would be concerned not with the commercial motivations of British colonial conservation, but instead with the conservation of livelihood and life. The Kumaonis' longstanding practice of firing the forest judiciously appears to have enabled them to maintain grazing areas as well as achieving other of their own priorities – for instance, this article has suggested, to conserve the forest in such a condition that it could to the greatest degree possible supply a livelihood while also preserving human life and crops against destruction from wild animals. The colonial forest service argued (Champion 1923a) that these longstanding practices had altered, rather than conserved the natural equilibrium of the forests. Yet, if this was so, it was no different to what the British conservationists had set out to do, and it was also achieved on the basis of reasoned observation and action. The different conservation practices and outcomes proposed here would reflect the different priorities and motivations for conservation held by the British and the Kumaoni people who had taken responsibility for governing the forest. Regardless of whether one agrees or not with the argument made here on the role of fire in managing forest land before the FCR's creation in the 1930s, the evidence presented makes difficult to maintain Agrawal's contention that the Kumaoni people lacked an ethic of care for their forests.

*

Having brought into question Agrawal's historical argument, we can now examine the second set of evidence on which his argument hinges: evidence of the existence of 'environmental subjects' in Kumaon today. Agrawal's investigation of contemporary

Kumaonis' attitudes towards forest protection included a survey containing the following question (2005a: 183f):

If forests are to be protected, should they be protected for 1) economic reasons such as their contribution of fodder, firewood and green manure, or for 2) non-economic benefits they provide including cleaner air, soil conservation, and water retention.

The question was designed to examine 'the extent to which villagers see forests as an environmental rather than as a primarily economic resource', presumably, therefore, indicating the existence of 'environmental subjectivity'. Agrawal (2005a: 1-3, 16, 174, 179. 2005b: 162, 167, 180. The direct quote below is from 2005a: 164) makes a Kumaoni man, Hukam Singh, the primary exemplar of an 'environmental subject', beginning both the book and the article on 'environmentality' with Singh's statements and returning to him repeatedly, placing great explanatory weight on his words.

He [Singh] started out an environmental skeptic. But over the period I knew him his concern for the environment grew to a point where he came actively to defend the need for environmental protection and regulation.

Yet, on the basis of Singh's published testimony, and in the specific terms set out in the survey question as to why forests should be protected, it is possible to argue that he has not become an environmental subject. His motivation for forest protection is not, primarily, couched in environmental terms. Agrawal reports (2005a: 2) that Singh told him: 'Just think of all the things we get from forests – fodder, wood, furniture, manure, soil, water, clean air'. This is a list, first and foremost, of goods for consumption rather than environmental goods. Of the seven goods that Singh mentions: the first four are direct economic goods; the next two, arguably, are indirect economic goods necessary for the provision of direct economic goods (notice that whereas Agrawal's survey question had focussed on 'soil conservation' and 'water retention' as non-economic environmental processes, Singh talks about 'soil' and 'water' as substances); only the final item on Singh's list, 'clean air', can be considered a clear example of an environmental good.

Under the terms that Agrawal himself set out (2005a: 2, 183-185), it would appear that Hukam Singh's primary reasons for protecting the forest are for its products for consumption. This marks him as having primarily an economic motivation for forest protection, rather than a non-economic or environmental one. It is also arguable that two of the headmen cited by Agrawal (2005b: 169f) in support of his 'environmental subjectivity' hypothesis, also frame their protection practices in economic terms, on the desire for more wood, or for sweet fruits.

Part of the difficulty that Agrawal's argument faces here is a lack of clarity about what is meant by 'the environment'; more specifically, it is that readers are not given enough information about how people in Kumaon conceptualise 'the environment', and this means that it is not possible for us to know when interviewees are expressing views that indicates their putative 'environmental subjectivity'.

Agrawal claimed (2005b: 162) that in considering an actor in the forests to be an environmental subject 'I do not demand a purist's version of the environment as necessarily separate from and independent of concerns about material interests, livelihoods and everyday practices of use and consumption'. Instead, he believes that evidence of a desire to protect a collective forest resource can be considered an environmental subjectivity 'even with the recognition that such protection could enhance one's material self-interest'. He concludes: 'In such situations self interest comes to be cognized and realized in terms of the environment.'

On the one hand, this very loose interpretation of 'the environment' would appear to open the way for Agrawal to redescribe Hukam Singh's economic concerns as evidence of 'environmental subjectivity' (although arguably, in terms of the analysis the present article has made, it could equally be used to redescribe the actions of historical Kumaonis as indicating 'environmental subjectivity', even though Agrawal believes they lacked this mentality). On the other hand, such a loose definition is in tension (to put it mildly) with the strict division between 'environment' [at times he also calls this category 'non-economic']

and 'economic' conceptual categories Agrawal used (2005b: 177) in his survey questions and in his analysis of survey responses. This definitional tension is never properly worked out.

On the other hand, Agrawal's discussion also imposes a strong conceptual restriction on the mode of thinking of 'environmental subjects' when he states that their views on forest protection must be 'cognized and realized in terms of the environment'. This stricture reinforces a claim earlier in the same discussion when he argues that environmental subjectivity occurs when people begin to think and act in relation to 'something they identify as "the environment"'. This requirement entails that regardless of whether the putative 'environmental subject' is primarily concerned with protecting the forest for individual or for collective benefit, they must rationalise their actions and views in relation to something that *they* identify as the environment. This approach corresponds to the methodological advice of the intellectual historian Quentin Skinner (2002: 49-51), that we 'should begin by assuming that what people actually talk about provides us with the most reliable guide to their beliefs...To begin by insisting that they must really be talking about something else is to run the highest risk of supplying them with beliefs instead of identifying what they believed'.

However, in the case of Kumaon, the villagers themselves, at least in the testimonies offered by Agrawal (who would surely wish to emphasise any such references), do not appear to express their views in relation to something they identify as 'the environment'. 'The environment' does not appear to be part of their beliefs about the forest. Nowhere in his quoted testimony, for example, does Hukam Singh use the term as a discursive object in relation to practices in the forest. The same appears to be true of the other respondents. Singh's argument for protecting the forest is primarily – especially if we interpret his use of 'country' as meaning the land around the village – couched on village and forest level concerns and specifically in maintaining a supply of necessary goods for livelihood.

Skinner adds (2002: 49-51) that one circumstance in which it would be legitimate to go beyond 'the stock of descriptions available to the people studied by ethnographers and historians' is 'if we wish to identify not merely what they believed but to comment on the place of those beliefs within some larger historical pattern or narrative'. In this instance it

would be to place beliefs about forest protection in Kumaon within the larger context of the emergence of environmental thinking. However, if such a project is undertaken, Skinner warns against the temptation to revise the terms that people use to describe their beliefs. Although the new terms may help to illuminate the implications of a theoretical perspective they will 'almost certainly serve at the same time to import a number of irrelevant and even anachronistic resonances'.

As Agrawal has not adduced evidence from villagers' testimonies which demonstrate that 'the environment' is a term or 'critical domain of thought' in their conceptual framework, it is incumbent upon him – as a critic in *Current Anthropology* had implied – to explain what he means by invoking 'the environment' as a relevant semantic category in the villagers' ways of thinking, and of how this concept of the environment can be drawn out from their testimonies. However, to achieve this he must provide his readers with a consistent definition of 'the environment'. The fact that in his analysis he sometimes posits a categorical difference between 'economic' and 'environmental' reasoning while at other times defining environmental – or 'non-economic' – concerns in a way that elides clear distinction with economic concerns, makes it impossible for the reader to know what he does mean by environmental reasoning, or subjectivity, regardless of whether or not it is being applied to people in Kumaon.

The lack of clarity regarding the position of 'the environment' in the conceptual systems of contemporary Kumaonis, raises the question of whether Agrawal may have redescribed their local and practical livelihood concerns in the forest as a means of bolstering his own larger theoretical enterprise about the environment. He acknowledges (2005b: 162) that the environment is 'the subject of my research' and assumes that the evidence he has gathered relates 'to forests as an example of an environmental resource'. He also states (2005b: 161) that in his first interview with Hukam Singh it was Agrawal himself who framed their conversation about the forests in terms of something he 'was calling "the environment"'. It is noteworthy, too, that Hukam Singh's list of forest goods is effectively a recapitulation of the examples given in Agrawal's survey question, with the addition of one economic good ('furniture'). To what degree, then, may have Agrawal's own repeated analytically-oriented interventions in forest politics influenced the views and testimonies of

villagers? Such critical self-reflexivity is largely missing from Agrawal's account, although he does acknowledge (2005a: 181) that as a student in 1989 he had already defined the forest councils in Kumaon as 'environmental institutions' and was in Kumaon to research 'their [environmental institutions] effects on the actions and beliefs of their members'. However, it is by no means clear that the people he interviewed were thinking of the councils and their effects in this way, and it does rather seem as if Agrawal's account imposes his own way of thinking and research agenda onto people in Kumaon, rather than seeking – as Skinner, Clifford Geertz and many other scholars in the humanities have recommended – to think as they think and to see the world from their point of view. On the face of it, it seems that it is Agrawal, rather than state actors, who has been producing 'environmental subjects' in Kumaon, and that his work may be seen as exemplifying Luke's original thesis that 'environmentality' is a way of understanding how political actors establish 'instrumental rationalities in the policing of ecological spaces'.

*

To understand how Agrawal has been limited in his conception of what counts as agency and subject formation it may be worth reconsidering the development of the meanings of 'governmentality', the Foucauldian concept from which 'environmentality' derives. In his editor's commentary in the volume of lectures in which Foucault first introduced the concept, Michel Senellart (Foucault: 2007: 387-391, and see also 108-110) states that Foucault began with a historically delimited sense of 'governmentality' before later developing a 'more general and abstract meaning'. Today (Dean 2010: 24f, 28, 267), 'governmentality' is generally used by political theorists in these two related but distinct ways. The more general meaning is concerned with the ways in which we 'think about governing ourselves in a wide range of contexts' and with 'different rationalities or...mentalities of government'. 'Rationality' in this sense is said to refer to 'any way of reasoning or way of thinking about, calculating and responding to a problem which is more or less systematic and which might draw upon formal bodies of knowledge and expertise'. In its historically delimited sense, 'governmentality' is a particular form – or forms – of government rationality that emerged in early modern Europe in inseparable association with the emergence of the state as the predominant form of social organisation and rule

among Western European societies, and the development of political economy as the dominant knowledge system for validating political action. These historically and geographically particular forms of reasoning were subsequently 'exported to large parts of the globe owing to the colonial expansion and the post-colonial set of international arrangements of a system of sovereign states'.

Agrawal (2005a: 219) acknowledges that 'governmentality' can be delineated in locations 'outside of Western modernity' and appears to position his own work in this way. However, although he proposes that 'governmentality' can be used as an 'analytical optic' or construct to investigate 'the nature of institutionalized power outside of Western modernity', in practice his findings and conclusions on 'environmental subjectivity' in relation to Kumaon appear to depend almost entirely on the application of the historically delimited Eurocentric sense of 'governmentality' which spread out of Europe as a result of colonial expansion⁴. For instance, he defines 'environmentality' as a way to understand how the simultaneous redefinition of environment and subjectivity 'is accomplished through the means of political economy'. This definition gives exclusive explanatory power for environmental and subjectivity change to political economy, a historically delimited form of knowledge developed almost entirely within and integral to Western modernity and its forms of government.

Accordingly, when it then comes (Agrawal 2005a: 223f) to using what he calls the 'governmentality optic' to 'illuminate and track the uncertainties and unexpectedness of new forms of government' this optic systematically marginalises the involvement and agency of local people. For instance, when he draws on a governmentality perspective to exemplify 'how problems that require government...come into being' he selects 'environmental degradation' as a 'problem' in nineteenth century Kumaon. He then privileges the role of 'forest officials' in finding the 'solution' to the 'problem'. The sole role

⁴ Robert Fletcher's important argument (2017) that Agrawal's use of the concept belongs to a 'disciplinary' sub-category of environmentalities effectively makes the same point. However, Fletcher may not break down the base concept far enough. His emancipatory proposal for 'liberation environmentality' risks the same Western-centrism as Agrawal's, if, as he suggests, it is to be conceived of as a 'left, socialist' environmentality, and therefore still ground in Western categories and assumptions about what constitutes a process of liberation.

of the villagers, in Agrawal's view of the situation, is to contribute to the 'problem'. But note that in this depiction the ongoing commercialisation of the forests by the forest department for imperial revenues is not conceived – either by forest officials in the nineteenth century, or (more problematically but perhaps relatedly) by Agrawal in the twenty-first – to be part of the overall historical problem of 'environmental degradation'.

Equally, when Agrawal (2005a: 224) uses nineteenth century Kumaon to show how 'environmentality' can be used to delineate strategies of government that cause different agents to fail or succeed in struggles for power, the optic privileges some actors and elides others from the picture:

In Kumaon, for example, the revenue department was able to prevail against the forest department by finding unexpected aid in the protest strategies chosen by local residents.

In this view, the actors in a struggle to control the forests were the 'revenue department' versus the 'forest department'. The agency of villagers is reduced to the role of 'protesters' who, in this account, had no strategy or outcome for themselves but appear as unwitting instruments on behalf of the revenue department; a position consistent with the limited historical narrative Agrawal had previously outlined.

However, these are images that come from one particular picture of the forest politics of nineteenth century Kumaon. This picture should not be accepted as the only one. It is the picture of forest politics that emerges when the substance of the interrelations of indigenous beliefs, interests and actions in the forest have been systematically removed by the analytical filters of a particular preconceived 'optic'. As this article's burning questions of Agrawal's historical analysis have shown, this is not the only way to picture forest politics in colonial Kumaon, and it is, therefore, not the only way to conceive of this 'problem'. For instance, what Agrawal calls 'environmental degradation' was also a problem for the villagers who, within the confines of political agency available to them, and perhaps drawing on the practices and beliefs of their own conservation tradition, appear to have taken targeted, rational action to eliminate what may have been, from their perspective, the

major cause of degradation in their circumstances – the growth of resin production. Delineating these aspects of the picture could help to constitute a genuinely non-Western governmentality in Kumaon's forest politics, critically augmenting Agrawal's useful and insightful but exclusive and therefore limited application of Western forms of rationality onto the diverse actors struggling for control over the forests.

*

If we consider that Agrawal has carried out his study on the presumption that his limited Western-centric concept of 'governmentality' (grounded exclusively in 'political economy' as an explanatory mechanism) is, in fact, a neutral 'analytical optic' which can be used to elucidate situations of governance beyond Western modernity, then this may help us to understand how it is that he has offered such a limited account of the actions, beliefs, concepts and rationalities of Kumaon people in their struggles for control of the forest in the colonial era. The preconceived ontological filters of the optic that be brought to bear on the historical sources had already occluded the possibility that Kumaon people might operate politically in non-Western forms of authority and subject formation practices not infiltrated fully by empire, and might have their own cultural ways of making and following rules and of establishing and maintaining authority for making and following rules. His historical narrative is a result of the constraints of his 'optic'.

When Foucault (2000: 315. See also discussion in Tully 2008a: 71-131) sought to recast the critical Enlightenment attitude associated with Immanuel Kant he phrased the recast attitude as a question: 'In what is given to us as universal, necessary, obligatory, what place is occupied by whatever is singular, contingent, and the product of arbitrary constraints?' He points out this would entail a critical stance that is not concerned with formal structures or universal values, but is instead a 'historical investigation into the events that have led us to constitute ourselves and to recognise ourselves as subjects of what we are doing, thinking, saying'.

In his study, Agrawal was unable to give fair consideration to the actions, beliefs, concepts and forms of reasoning of Kumaonis because his own ontologically limited analytical optic

regarded Western forms of agency and thought as universal, necessary, obligatory. However, the pre-constraints imposed by this optic, which Agrawal's study then sought to impose upon forest struggles in Kumaon, themselves constitute a way of seeing that Agrawal has learned, internalised, and reproduced, and, in a critical Enlightenment attitude, his book can be considered part of the history of the way that he, and those who have followed him, have become subject to what they do, think and say.

Moreover, the particular learnt way of seeing political contention that Agrawal reproduced on Kumaon had the effect of filtering out the voice and agency of those subaltern actors who stood under and against the colonial regime. As a result, the study can be considered in terms of James Tully's (2008b: 127, 129) challenging argument to social scientists that 'our dominant languages of disclosure and research conceal and overlook the imperialism of the present' such that much of the leading theoretical work on public law and politics contains 'persisting...unexamined imperial features' which are 'internally related to imperialism in some way'.

Agrawal seemed to affirm this claim in his interview with Robbins when he acknowledged (2012: 218) that 'a failure of nearly all social science research that claims to be about people' is that it presumes 'to talk about people without really knowing them'. Furthermore, such social science does not 'talk about people' innocently but, instead, does so, as Agrawal and his publisher assert (2005a: 214, cover material), in order to 'give general lessons' about how those people, and others, should act and, in doing so, should help to 'guide the thinking and training of a generation of young environmentalists' and other political actors.

I suggest that 'training' be understood here as the creation of limits, in the sense of 'causing something to grow in a particular direction or into a required shape'. Tully's argument suggests that processes of 'training' young minds to see the world by using and developing analytical optics ground in Western traditions of thought will impose limits on those minds such that they tend to overlook 'continuing non-imperial forms of life'. Tully (2008b: 164f) calls these 'local alternative worlds' which imperialism has left operating 'to some constrained extent...building its relations of control and exploitation parasitically on them'. These local worlds 'are the living basis underlying Western imperialism' without which

imperialism would not survive. Yet such worlds are largely overlooked, argues Tully, because they are 'recognised and categorised within inherited imperial languages as being 'less developed', 'pre-modern' or 'particular'".

We in the West have yet to enter into the difficult kind of dialogue with the others of the world that brings this horizon of persisting languages and practices into the space of questions and opens the interlocutors to a non-imperial relationship of dialogue and mutual understanding. This would be the beginnings of an alternative to imperialism.

This article's analysis has suggested that our predominant Western conception of 'environmentality' as a way of seeing political struggle is an example of the persisting language and practice of imperialism as these are brought to bear on alternative worlds. Its application overlooks and fails to recognise the alternative because as an optic the concept has been ground in the assumptions of the historically delimited and Eurocentric sense of 'governmentality'. Yet Tully may have overstated his conclusion that the West has yet to begin the difficult process of questioning the prejudices (in Gadamer's sense of the term) that it brings to its views of others in the world, and of becoming open to the possibility of non-imperial relationships of mutual understanding. Tully's (2008a: 4f, 160-184. 2008b: 195-221) own important work on 'democratic constitutionalism' may find resonance with many forms of participatory inquiry, including, for instance, the 'constitutionality' approach (Haller et al 2015) which has been formulated as a way of understanding successful locally-led, 'bottom-up' processes of designing institutions for local governance of natural resources. It was introduced to contest the perceived privilege that 'environmentality' analyses give to 'top-down' and state driven design processes. The 'constitutionality' approach emphasises the importance of dialogue and negotiation, the leadership role of local actors, and the importance of local people's material and numinous relationships to place in the formulation and application of rules for living practically from that place. In doing so, it seeks to enable the diversity of human ways of understanding and working with nature to be seen, included and affirmed in institution building and governance processes that work towards sustaining what the academic and food sovereignty activist Michel Pimbert (2018: 16-22) calls bio-cultural diversity on a liveable planet. Listening to and learning from local

belief and practice, and supporting local inclusion and decision-making agency may be considered an equivalent to the 'judicious firing' of indigenous forest management in Kumaon; its regenerative powers not only helping to bring new life to the immediate local contexts in which control over natural resources are being negotiated, but also acting as a fire to clear away and to renew Western-centric analytical preconceptions that constrain our understanding of those struggles, and the beliefs, motivations and forms of rationality of their actors.

[9454 words]

References

Agrawal A (2005a) *Environmentality: Technologies of Government and the Making of Subjects*. Durham: Duke University Press.

Agrawal A (2005b) Environmentality Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India. *Current Anthropology* 46 (2): 161-190.

Ammarell G (2002) Bugis Migration and Modes of Adaptation to Local Situations. *Ethnology* 41 (1): 51-67.

Baumann PB (1997) Historical Evidence on the Incidence and Role of Common Property Regimes in the Indian Himalayas. *Environment and History* 3: 323-342.

Berkes F (2012) *Sacred Ecology* (3rd ed.). Abingdon: Routledge

Champion HG (1923a) The Influence of the Hand of Man on the Distribution of Forest Types in the Kumaon Himalaya. *Indian Forester* 49 (3): 116-135

Champion HG (1923b) 'The Interaction Between *Pinus Longifolia* (*Chir*) and its habitat in the Kumaon Hills' in *Indian Forester* 49 (8): 405-415.

Corbett J (1952) *My India*. London: Oxford University Press.

Corbett J (1954) *The Temple Tiger and More Man-Eaters of Kumaon*. London: Oxford University Press.

Dangwal DD (2005) Commercialisation of Forests, Timber Extraction and Deforestation in Uttaranchal, 1815-1947. *Conservation and Society* 3 (1): 110-133.

Dangwal DD (1999) *Colonial Forestry and Agrarian Transformation the U.P. Hills, 1815-1947: An Agro-ecological History of the Central Himalayas*. PhD Thesis, Jawaharlal Nehru University, New Delhi.

Das P (2009) Jim Corbett's Green Imperialism. *Economic and Political Weekly* 44 (15): 20-22.

Fletcher R (2010) Neoliberal Environmentalism: Towards a Poststructuralist Political Ecology of the Conservation Debate. *Conservation and Society* 8(3): 171-181, 2010. DOI: 10.4103/0972-4923.73806.

Fletcher R (2017) Environmentalism unbound: Multiple governmentalities in environmental politics. *Geoforum* 85: 311-315. DOI:10.1016/j.geoforum.2017.06.009

Foucault M (2000) *Ethics: essential works of Michel Foucault volume 1* (ed Rabinow P). London: Penguin.

Foucault 2007. *Security, Territory, Population. Lectures at the College De France 1977-1978* (ed Senellart M). Basingstoke: Palgrave MacMillan.

Guha R (1989). Saboteurs in the Forest: Colonialism and Peasant Resistance in the Indian Himalaya. In: Colborn FD (eds) *Everyday Forms of Resistance*. Abingdon: Taylor and Francis, pp. 64-93

Guha R (2010 [1989]). *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya* (20th anniversary edition). Ranikhet: Permanent Black.

Guha R (2006) *How much should a person consume?: environmentalism in India and the United States*. Oakland: University of California Press.

Handa OC (2002) *History of Uttarchanal*. New Delhi: Indus Publishing.

Heatherington T (2012) The Changing Terrain of Environmentalism: EIONET and the New Landscapes of Europe. *Anthropological Quarterly* 85 (2): 555-579.

Kala CP (2003) Indigenous uses and structure of chir pine forest in Uttarchanal Himalaya, India. Paper submitted to the *XII World Forest Congress*, Quebec, Canada, 21-28 September 2003. Rome: United Nations Food and Agriculture Organisation. Available at: <http://www.fao.org/docrep/article/wfc/xii/0060-a1.htm> (accessed 25 September 2018).

Khanna A (2015) Garhwali and Kumaoni poetry – State's rich oral traditions. *The Pioneer Sat*. 21st Mar 2015. Available at: <https://www.dailypioneer.com/2015/state-editions/garhwali-and-kumaoni-poetry-states-rich-oral-traditions.html> (accessed 23 September 2018).

Krishna S (2002) Economic Profile of Uttaranchal. *Economic and Political Weekly* 37 (19): 1843-1849

Luke TW (1995) On Environmentalism: Geo-Power and Eco-Knowledge in the Discourses of Contemporary Environmentalism. *Cultural Critique* 31: 57-81.

MacKinnon I (2017) Colonialism and the Clearances. *Northern Scotland* 8: 22-48. DOI: 10.3366/nor.2017.0125

Mittal AK (1986) *British Administration in Kumaon Himalayas: A Historical Study 1815-1947* Mittal Publications.

Moir E McA (1882) Cattle-grazing in deodar forests. *Indian Forester* 8.

Olson V and Messeri L (2015) Beyond the Anthropocene: Un-Earthing an Epoch. *Environment and Society: Advances in Research* 6: 28–47 DOI:10.3167/ares.2015.060103

- Osterhammel J (2005) *Colonialism: a theoretical overview*. Princeton: Markus Wiener.
- Pant GB (1922) *The Forest Problem in Kumaon*. [Republished in 1987 with a commentary by Dr. Ajay S. Rawat.] Gyanodaya Prakashan.
- Pathak S and Bhakuni H (1987) Rise and Growth of Kumaon Parishad, 1916-26. *Proceedings of the Indian History Congress* 48: 397-403
- Pimbert M (2018) Constructing Knowledge for Food Sovereignty, Agroecology and Biocultural Diversity: an overview. In: Pimbert M (ed) *Food Sovereignty, Agroecology and Biocultural Diversity. Constructing and Contesting Knowledge*. Abingdon: Routledge, pp. 1-56.
- Rawat AS (1999) *Forest Management in Kumaon Himalaya: Struggle of a Marginalised People*. New Delhi: Indus Publishing.
- Robbins P (2012) *Political Ecology - A Critical Introduction* (2nd ed). Chichester: Wiley-Blackwell.
- Singh Chauhan T and Panwar P (2002) Kumaoni Language and Literature. *Indian Literature* 46 (2): 108-113
- Schaberg C (2014) Environmentality and Air Travel Disasters: Representing the Violence of Plane Crashes. In Dickson LA and Romanets M (eds) *Beauty, Violence, Representation* Abingdon: Routledge pp.120-138.
- Skinner Q (2002) *Visions of Politics Vol. 1: On Method*. Cambridge: Cambridge University Press.
- Spivak GC (1988a) *In Other Worlds: Essays in cultural politics*. Abingdon: Routledge.
- Stebbing EP (1926) *Forests of India [volume III]*. London: John Land and the Bodley Head.

Trevor CG and Smythies EA (1923) *Practical Forest Management*. Allahabad: Government Press, United Provinces.

Tucker RP (1984) The Historical Context of Social Forestry in the Kumaon Himalayas. *The Journal of Developing Areas* 18 (3): 341-356.

Tully J (2008a) *Public Philosophy in a New Key Volume I: Democracy and Civic Freedom*. Cambridge: Cambridge University Press.

Tully J (2008b) *Public Philosophy in a New Key Volume II: Imperialism and Civic Freedom*. Cambridge: Cambridge University Press.