Social networks and stakeholders' views:
some implications for social learning initiatives

Christina Prell

Lecturer in Sociology
University of Sheffield, UK

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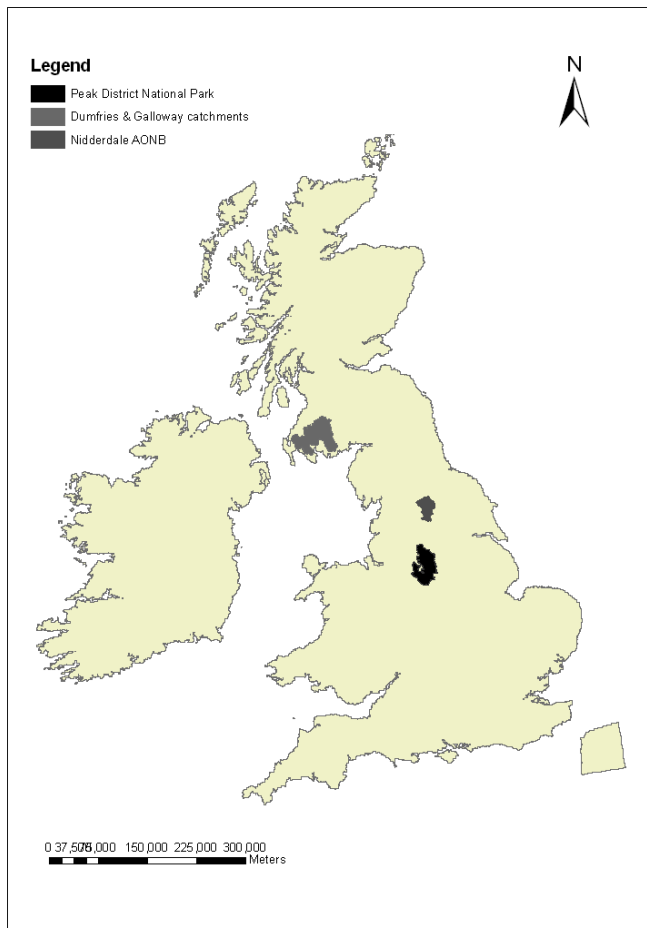
Klaus Hubacek, Mark Reed, Liat Raicin

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www.env.leeds.ac.uk/sustainableuplands

Research context:

- Case study(s): UK Uplands
  - Site one: Peak district national park
    - Prell et al. (2008; 2009)
  - **Site two: Nidderdale Area of Natural Beauty (AONB)**
- Started the research in 2006 and will end in 2009.

Providing some more context:

What characterises the UK uplands?

Drinking water

Biodiversity

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Carbon

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Recreation

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Hunting

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Farming

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Research context:
Upland Challenges

- Historic pollution

- Burning regulation

- CAP (little is known about the effect that decoupling subsidies from production will have on upland farming)

- Kyoto (most uplands are grazed extensively and therefore management that enhances carbon storage can be used to meet Kyoto emission reduction targets under Article 3.4)

- Cultural, demographic and climate change

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Research context:
Upland Challenges

- Within this context of diverse resources, challenges and uncertainties…
- Stakeholders struggle with everyday land management issues…
- At best, they find land management a complex business….
- More often, they are asking 'what do we do now, where do we go from here?'

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Larger Goal of this Project:

- Thus, within this context of uncertainty and challenges, we have developed with stakeholders an iterative learning process….
- …aimed at helping stakeholders to better anticipate, adapt, and manage the many changes and resources in UK uplands
- Social networks and network analysis have played a key role both in stakeholder selection (uncovering a small group that represents the wider network), and in helping us understand the role of networks in forming stakeholder views on land management.

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Why do we need to understand social networks for resource management?

- If we can understand how networks work, their content and structure, and what particular outcomes derive from kinds of networks, we can:
- 'Engineer' the network to do what we want (James Coleman):
  - Create deliberative arenas where real changes in relationships, thinking and management can occur (resource management hope).

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The network:

- Social network consisting of stakeholders in Nidderdale, England.
- Nidderdale is an AONB, which is a unique classification in England:
- Certain 'sites' are designated AONBs, and as such, they need to be managed and protected in certain ways:
  - Conservation defined in context of preserving the 'natural beauty of the landscape.'
  - Management must be done through involving local residents and land managers, local government, national and international conservation policy

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The network:

- The management team for the Nidderdale AONB had thus already assembled a 'network' of sorts for advising purposes…

- This is a group of roughly 30+ individuals, representing a wide range of organizations, views and 'stakes'….
  - businesses; local and national government; local and national non-government conservation groups; recreationists; water organizations

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The network and other data:

- This group was our starting point, and then we 'rolled a snowball' out to a total of 55 actors:
  - Names had begun repeating at that point, indicating that we had reached 'saturation' if you will.
- In addition, we gathered responses on a series of Likert scaled items regarding land management. These items were constructed from previous unstructured interviews with key stakeholders.
- We also gathered details of actors' organizational affiliation, and based on this information, we developed 7 stakeholder categories:
  - Local conservation, National conservation, Water, Business, Recreation, Citizen, Land manager.
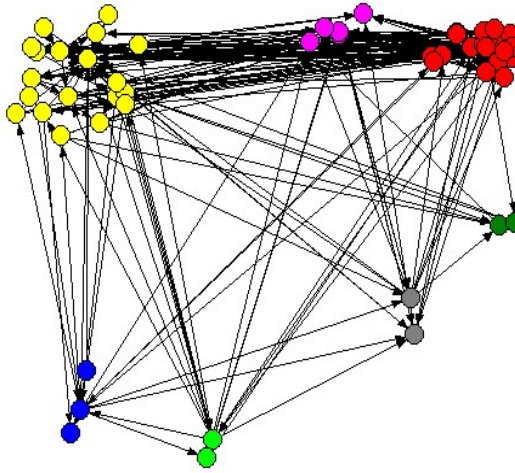
The network according to stakeholder category

Re: your last LM decision in Nidderdale, whom did you speak with?

Are there places you go to where LM issues are frequently discussed? Who tends to be there?

Any other individual/org. you speak with about LM issues in Nidderdale?

Did you have a dispute with anyone in the last year?

How frequently do you communicate with this person?

To what extent does this person/org. influence your views re: Land management?

To what extent do you understand…agree with this person's view re: LM?

Land management issues:

' I think we should rely more on previous experience when it comes to land management strategies'	Changing land management to reduce water colour is important
'I rely on what I have done in the past when forming opinions about land management'	We should allow the uplands to return to a natural state, without management
'I think we should experiment with new land management strategies'	Land owners need to work more closely with agency staff and Government policy
Land management practice is guided too much by regulatory bodies	Enforcement of tighter moorland burning regulations is important
Improving carbon storage in uplands is important	Exploring Nidderdale's potential for hydropower is important
Land owners need more autonomy in making land management decisions	We should encourage more local people into the farming sector
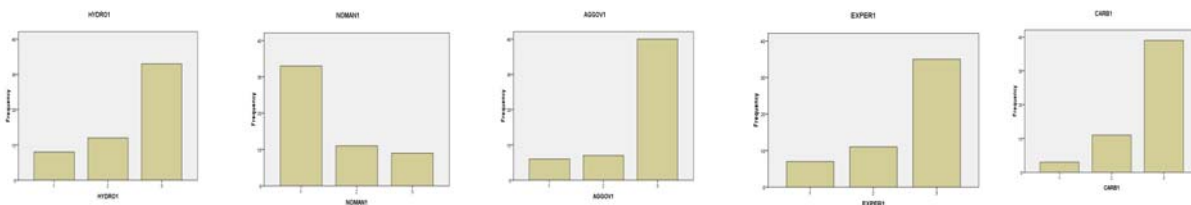
Low amount of controversy, i.e. largely in agreement

High amount of
controversy
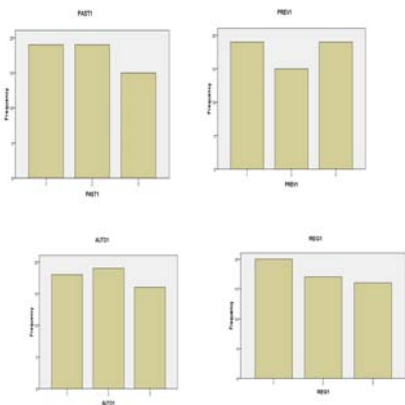
Medium amount
of controversy
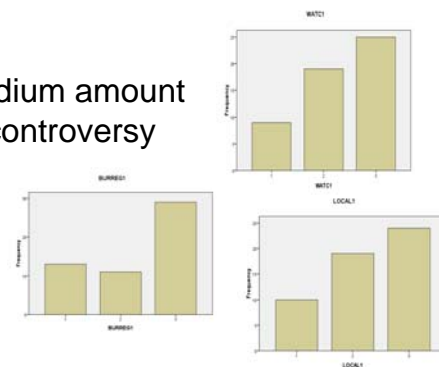
Some 'predictions' about how networks and views coincide:

- People who share social ties with one another are more likely to share same/similar views regarding land management
  - Homophily (dyadic contact)

- This likelihood increases…
  - the stronger the tie (dyadic contact via strong tie).
  - and the denser the structure in which tied actors are found (Simmelian tie)
    - Triad

Actors who share a tie share same/similar views regarding land management

LM View (all measured via 3 pt. likert scales)	Significance level
Land owners need more autonomy in making land management decisions ++	0.018
Enforcement of tighter moorland burning regulations is important +	0.003
Exploring Nidderdale's potential for hydropower -	0.049
Encouraging more local people into the farming sector +	0.059
Changing land management to reduce water colour +	0.051
Allowing the uplands to return to a natural state, without management -	0.008

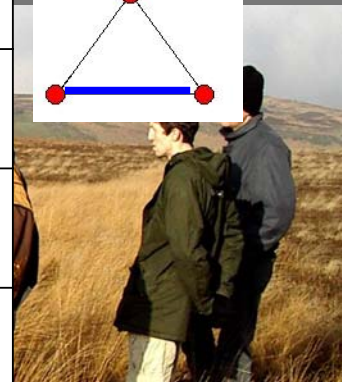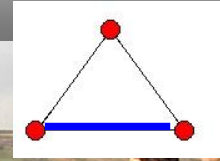A joint Research Councils Research Project co-sponsored by DEFRA & SEERAD

Actors who share a strong tie even more likely to share same/similar views regarding land management

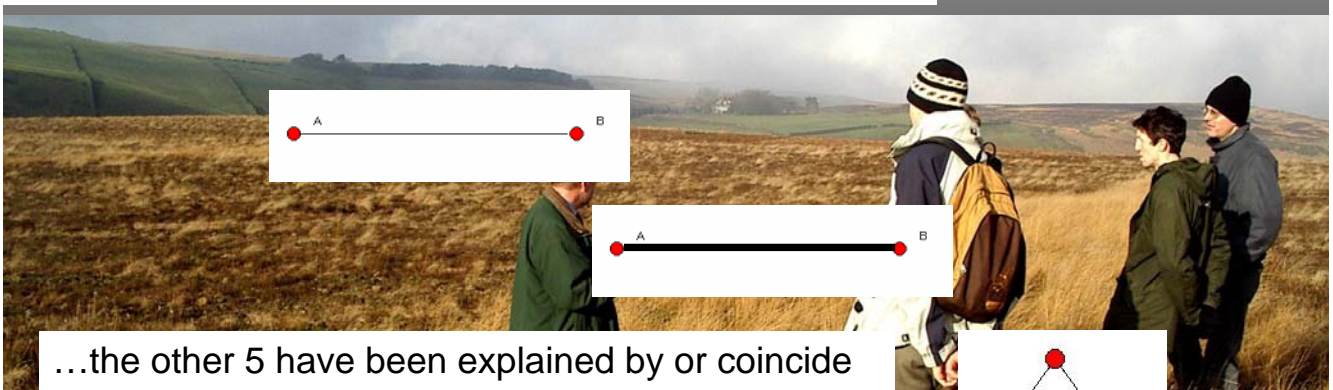| LM View (all measured via 3 pt. likert scales)	Significance level
Land owners need more autonomy in making land management decisions ++	0.012
Enforcement of tighter moorland burning regulations is important +	0.011
Exploring Nidderdale's potential for hydropower -	0.039
Encouraging more local people into the farming sector +	0.006
Changing land management to reduce water colour +	0.006
Allowing the uplands to return to a natural state, without management -	0.009
Land owners need to work more closely with agency staff and Government policy -	0.046

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Simmelian ties and land management views: (correlation)

LM View (all measured via 3 pt. likert scales)	Significance level
Land owners need more autonomy in making land management decisions ++	0.054
Enforcement of tighter moorland burning regulations is important +	0.051
Allowing the uplands to return to a natural state, without management --	0.026

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7 of the 12 Land management views have been explained by or coincide with social network features…

…the other 5 have been explained by or coincide with additional social network features + stakeholder categories….

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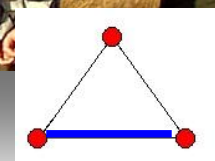
Discussion/Conclusions

- Dyadic level:
  - Yes, sharing a tie seems to coincide with sharing a similar (same) view towards certain land management issues or perspectives.
  - Yes, sharing a **strong** tie seems to coincide *slightly better* with sharing a similar (same) view towards certain land management issues or perspectives.

Discussion/Conclusions

- Higher order structures:
  - Sharing a Simmelian tie coincided with similarity in opinions for 3 of the land management views, two of which were controversial ones.
  - …implying that sharing a Simmelian tie with another actor increases the likelihood of sharing similar views on a land management issues, especially if it is a controversial issue.

Implications:

- Often, we think about 'inclusion' or 'diversity' in terms of stakeholder categories, thinking that different stakeholder categories automatically implies differences in opinion…

- However, these results indicate that one needs to also think about the informal structure found in social networks, because they are also doing a lot of 'conforming' work…

Implications:

- In addition, these findings indicate that initiating a social learning 'intervention' is not easy :

- If you want to create a 'deliberative space' for actors to come together, form ties, exchange views, learn from one another and 'change,'….

- Then one is 'fighting against' strong ties and dense structures.

- Thus, the 'bottom-up' strategy of involving a 'wide team' of stakeholders is going to be difficult…

- ..But I do not wish to imply that I see top-down initiatives as necessarily the alternative….
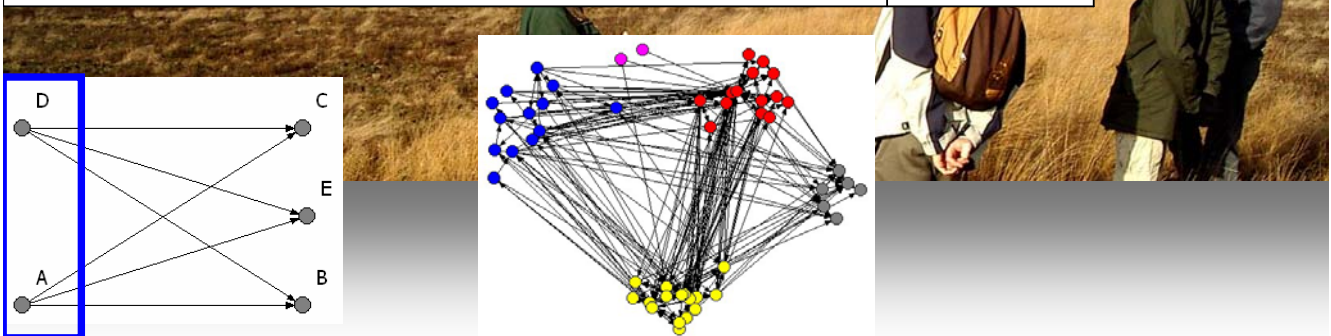
Thanks and feedback?
(INSNA Sunbelt: Networks and natural resource management)

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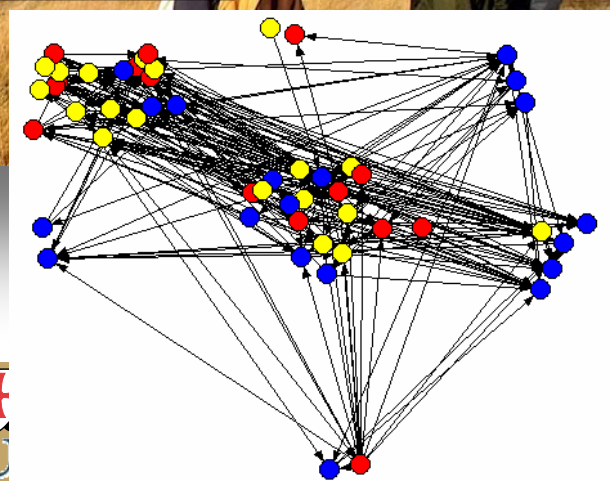
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Cohesive subgroups and land management views:
Subgrouping based on position

Models	B and Significance level
Improving carbon storage in uplands -	B = -0.29; p = 0.024
' Land management practice is guided too much by regulatory bodies' ++	B = 0.27 p = 0.025

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Stakeholder category and land management views:

Land management view	B and Significance level
' I rely on what I have done in the past when forming opinions about land management' ++	B = 0.42; p = 0.003
' I think we should rely more on previous experience when it comes to land management strategies' ++	B = 0.31; p = 0.009

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