Anthropology for Epidemiologists: Qualitative Methods in Public Health Investigations

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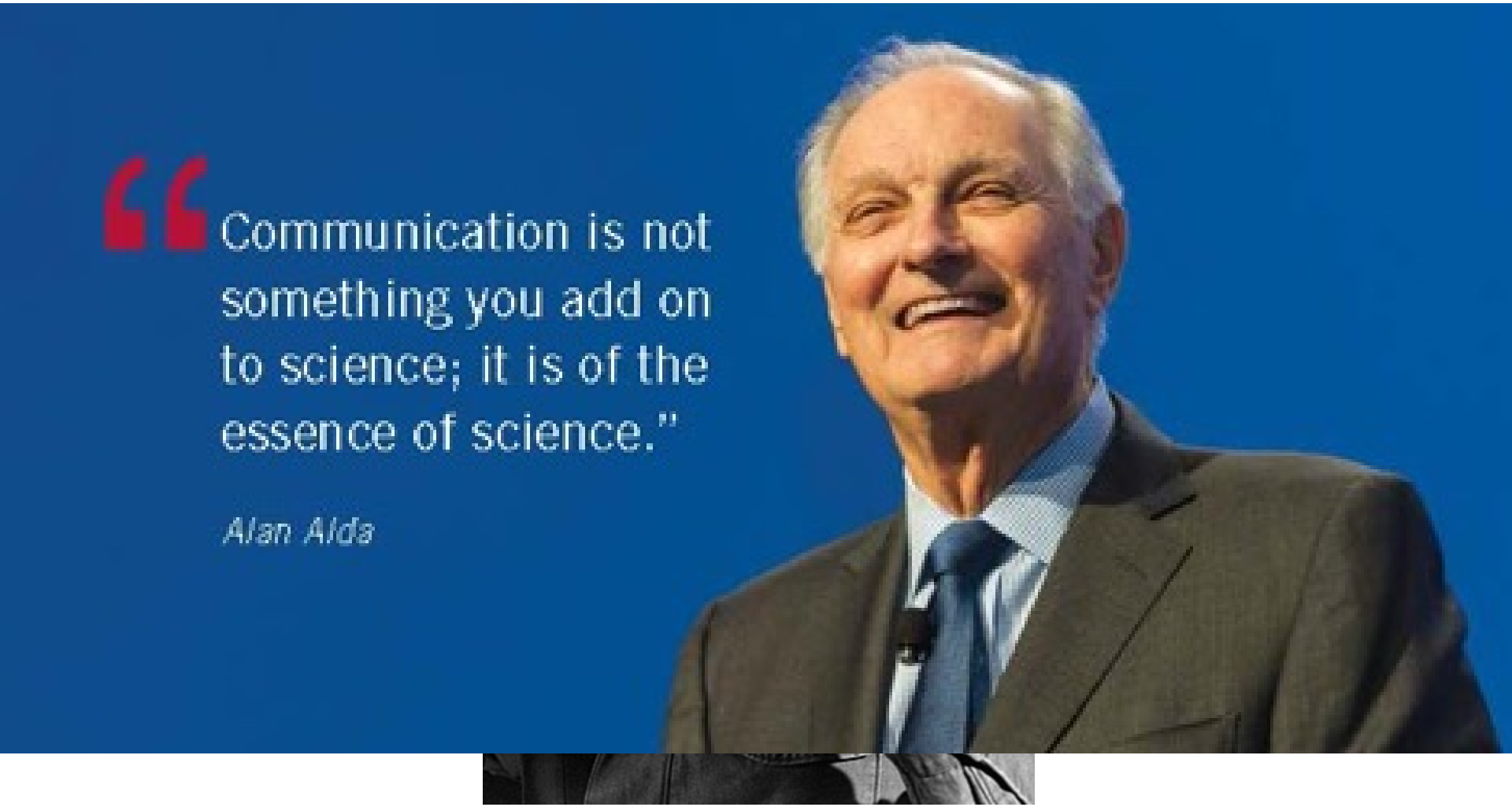
HIDDEN BRAIN

What would Alan Alda do?



Anthropology and Epidemiology: case definitions

What is “anthropology”?

The scientific study of the origin, the behavior, and the physical, social, and cultural development of humans

What is “epidemiology”?

The study of the relationships of the various factors determining the frequency and distribution of diseases in a human community

When anthropology met epidemiology

Inherently interdisciplinary:

- Academics and applied practitioners work together to develop and use new methodologies
- Discipline-specific perspectives can be synthesized and extended

Integrated/holistic approaches

- New solutions sought for complex scientific and social issues and “wicked problems”
- One health / all-hazards / health in all policies

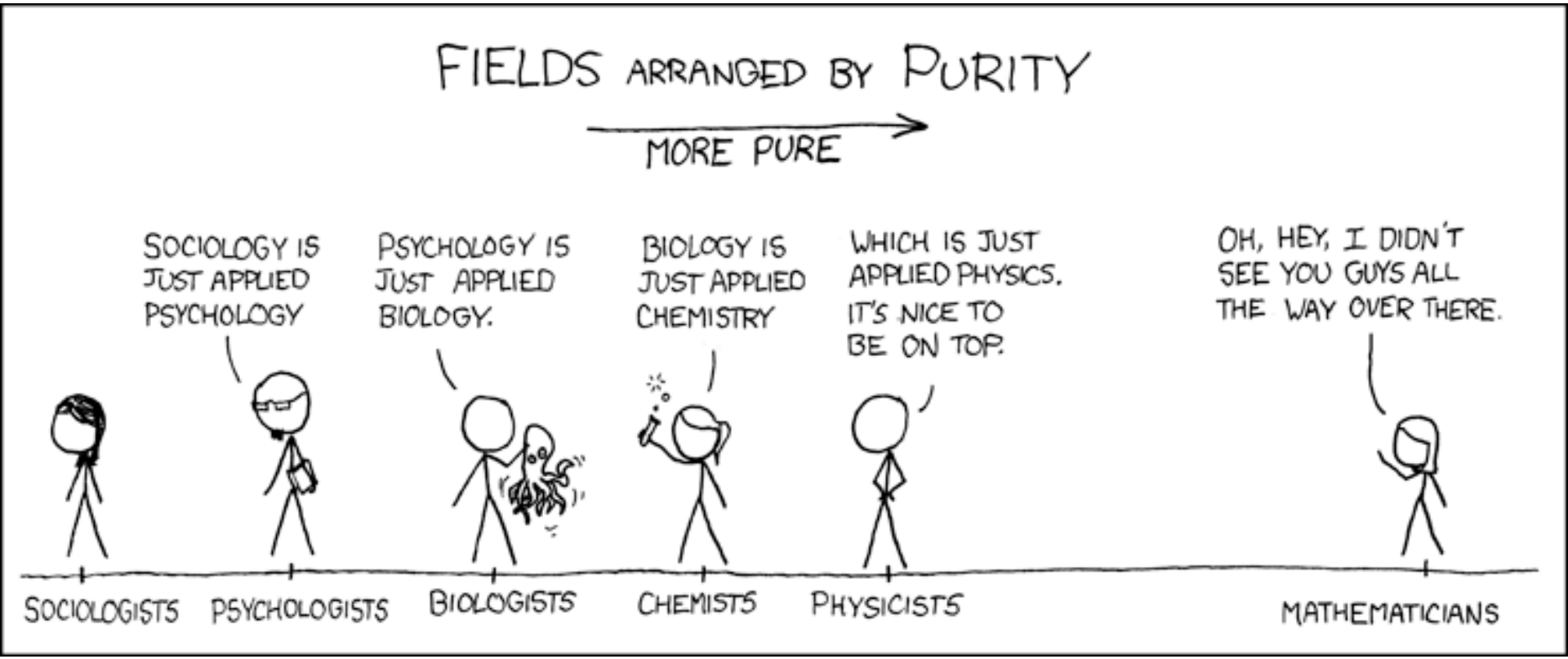
Why use qualitative methods?

"Research" = any *systematic* investigation, designed to develop or contribute to generalizable knowledge

- Investigators who use qualitative methods are usually trying to *understand* rather than *predict*
  - sampling for meaning, not for statistical representativeness

- Health and illness happen in a sociocultural context
  - qualitative methods allow us to understand why, how and in which circumstances different people take decisions and interpret their own actions relative to their health

So…what's the problem?



“Qualitative researchers don’t count”

...because they are interested in what *is*, not in how much or how many.

- If you do not know what to count, then how can you count how many?

...because they have sampling problems.

- Qualitative samples are not usually representative in the dimensions needed to make inferences from the sample to the population
- Qualitative samples are representative for *meaning*, but counting will not necessarily contribute to our understanding

...unless measurement enhances the description, and allows for valid comparison.

Qualitative data collection in public health

- In-depth interviews
- Focus groups
- Surveys/questionnaires
- Participant observation
- Online communities and blogs (‘netnography’)
- Oral histories
- Photography and video
- Diaries, archives and other documentary sources

used more often

used less often

Anthropologists (and their methods) in outbreaks

PLOS | NEGLECTED TROPICAL DISEASES

VIEWPOINTS

EcoHealth 13, 234–247, 2016
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ECOHEALTH

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Original Contribution

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Rat-atouille: A Mixed Method Study to Characterize Rodent Hunting and Consumption in the Context of Lassa Fever

Jesse Bonwitt,[1] Ann H. Kelly,[2,3] Rashid Ansumana,[4] Schadrac Agbla,[5] Foday Sahr,[6] Almudena Mari Saez,[7] Matthias Borchert,[7] Richard Kock,[8] and Elisabeth Fichet-Calvet[9]

How can qualitative methods contribute to outbreak investigations?

- Asking better questions
  - Study design is iterative - data collection and research questions are adjusted according to what is learned
- Explaining incongruous findings
  - Direct observation or trusted informants may contradict ‘desirability bias’
- Improving access to some environments
  - Building trust and rapport

How can qualitative methods contribute to outbreak investigations?

- Connecting policy and practice
  - Understanding why evidence-based public health programmes fail
- Identifying the negative or unintended consequences of health interventions
  - What happens when the response infrastructure is gone?
- Characterizing the social context of disease
  - Understanding human amplification of infectious diseases requires different analytical tools than those used to understand the dynamics of primary transmission

A call to action:

In September 2015, The McGill Qualitative Health Research Group alerted the 'Twitterverse' to a manuscript decision letter from BMJ:

Subject: BMJ Manuscript Decision Research

Sep-2015

Dear xxxxxxxxxxxxx

Thank you for sending us your paper. We read it with interest but I am sorry to say that qualitative studies are an extremely low priority for the BMJ. Our research shows that they are not as widely accessed, downloaded or cited as other research.

We receive over 8000 submissions a year and accept less than 4%. We do therefore have to make hard decisions on just how interesting an article will be to our general clinical readers, how much it adds, and how much practical value it will be.

- What followed was a “Twitterstorm” #BMJnoQual
- 76 scientists from 11 countries sent an open letter to BMJ in December 2015:

…we argue that *The BMJ* should develop and publish a formal policy on qualitative and mixed method research and that this should include appropriate and explicit criteria for judging the relevance of submissions. We acknowledge that (as with all methods) some qualitative research is poor quality, badly written, inaccessible, or irrelevant to the journal’s readership.

We also acknowledge that many of *The BMJ*’s readers (not to mention its reviewers and editors) may not have been formally trained to read, conduct, or evaluate qualitative studies. We see these caveats as opportunities not threats.

Additional material

Comparison of methods

	Quantitative	Qualitative
General framework	• Seek to confirm hypotheses about phenomena • Instruments use more rigid style of eliciting and categorizing responses to questions • Use highly structured methods such as questionnaires, surveys, and structured observation	• Seek to explore phenomena • Instruments use more flexible, iterative style of eliciting and categorizing responses to questions • Use semi-structured methods such as in-depth interviews, focus groups, and participant observation
Analytical objectives	• To quantify variation • To predict causal relationships • To describe characteristics of a population	• To describe variation • To describe and explain relationships • To describe individual experiences • To describe group norms

Comparison of methods

	Quantitative	Qualitative
Question format	Closed-ended	Open-ended
Data format	Numerical (numerical values assigned to responses)	Textual (obtained from audio, video, and field notes)
Flexibility in study design	• Study design is stable from beginning to end • Participant responses do not influence or determine how and which questions researchers ask next • Study design is subject to statistical assumptions and conditions	• Some aspects of the study are flexible • Participant responses affect how and which questions researchers ask next • Study design is iterative, i.e. data collection and research questions are adjusted according to what is learned

Collection – analysis – interpretation continuum

Qualitative data analysis occurs concurrently with data collection

It is an iterative process: the researcher generates an emerging understanding about research questions

1. Analysis leads to the identification of issues where more data is needed
2. Analysis informs the sampling process:
    - At some point in the data collection/analysis process, no new categories/themes emerge
    - This is ‘data saturation’ - data collection is complete

The constant validity check

1. Look for consistency and inconsistency between respondents, and find out why they disagree about important things
2. Check respondents' reports against other sources of evidence
3. Be open to evidence that doesn't fit:
   a) Normal human/cultural variation?
   b) Your lack of knowledge ?
   c) A truly unusual case?
4. When you think you understand, seek out alternate explanations from respondents (and colleagues)
5. Embrace the outliers

Qualitative research and quality:

Agar M. Toward a qualitative epidemiology. Qualitative Health Research. 2003; 13 (7)

Critical Appraisal Skills Programme: CASP Qualitative Checklist http://www.casp-uk.net/casp-tools-checklists

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Questions?