

## Introduction

Scientometric studies typically investigate the primary literature, but much applied research and science advice is documented in grey literature. We check whether similar patterns are observed in agency publications and propose potential mechanisms.

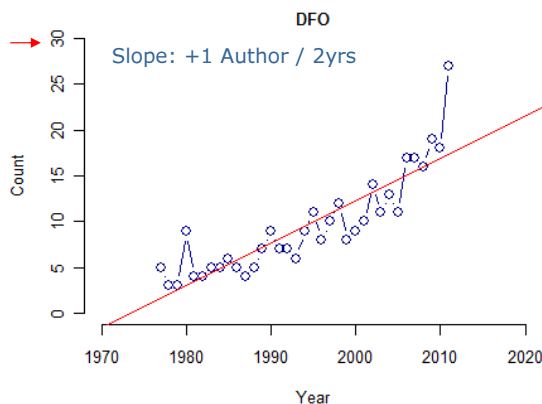
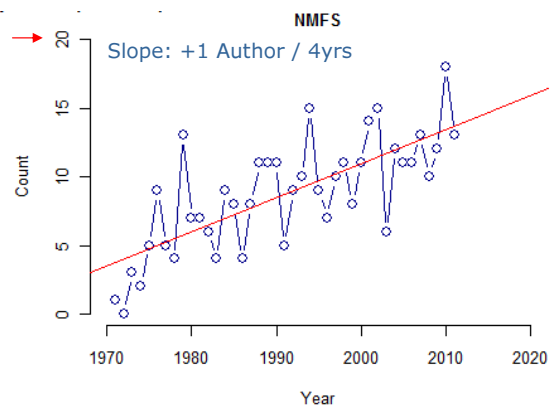
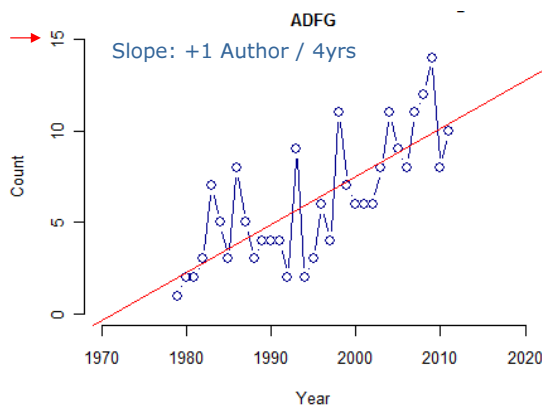
## Data

GreyFish Dataset with 14,000 agency documents, and growing. For this poster, we focus on research papers:

- 791 from Alaska Department of Fish & Game
- 1,193 from National Marine Fisheries Service (US)
- 3,753 from Fisheries and Oceans Canada

Sources, assumptions, metadata, R scripts and more at [www.solv.ca/GreyFish](http://www.solv.ca/GreyFish)

## Pushing the Envelope: Max(Authors)



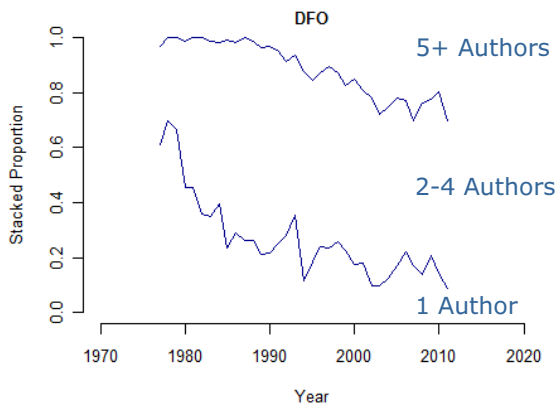
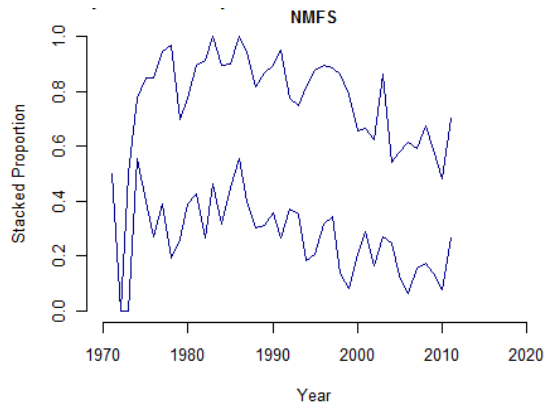
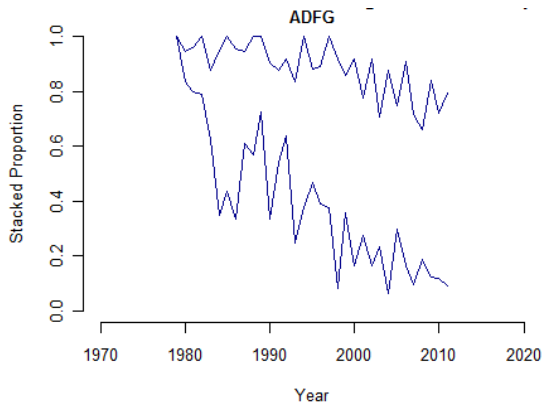
### Observations

- Same pattern in all 3 agencies
- Steady increase
- No sign of peaking

### Questions

- Proxy for scope?
- Proxy for controversy? (if outliers)

## Shifting Baselines: Prop(Multiple Authors)



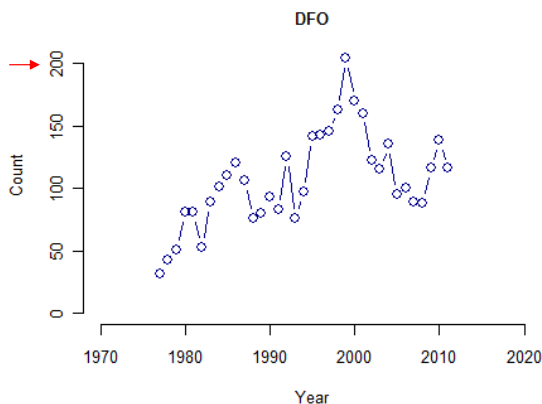
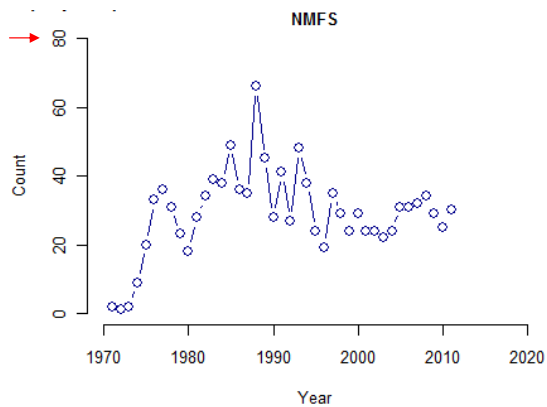
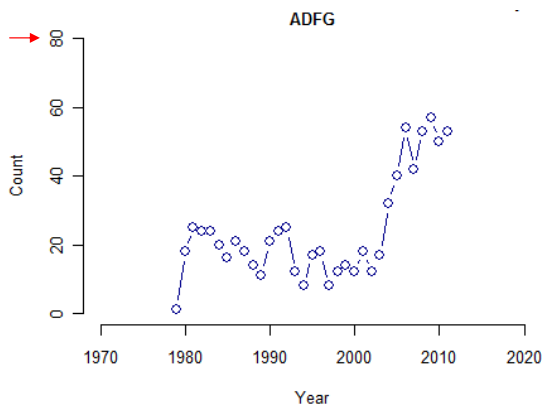
### Observations

- Same pattern in all 3 agencies
- Demise of the single author!
- Bulk of work by 2-4 authors
- 5+ author reports encroaching

### Questions

- Proxy for scope?
- Tech reducing cost of collaborations?

## Total Output: Num(Reports)



### Observations

- Variety of patterns

### Questions

- Recruitment pulses?
- Funding or staffing changes?
- Competing for recruits?
- Backlog in web-publishing?

## Conclusions

### Mechanisms to Explore

- **Reports  $R \propto$  Scientists  $S$**  (agency staffing, funding for collaborations)
- **$S/R \propto$  Scope** (Do broader questions result in more authors?)
- **$R/S \propto 1/\text{scope}$**  (Does expanding scope reduce productivity per author?)
- **$R/S \propto 1/\text{seniority}$**  (Do scientists shift from grey lit to 1° lit over time?)
- **$S/R \propto$  Tech** (Do computers and telecom facilitate collaborations?)
- **$R \propto$  Tech** (Does computer-technology improve and/or increase output?)

### Next Steps

- Formalize a process-based taxonomy of grey literature
- Find collaborators from different agencies
- Expand/proof the data sets
- Start fitting models!