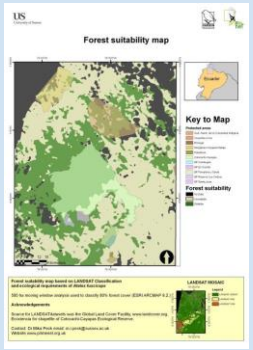
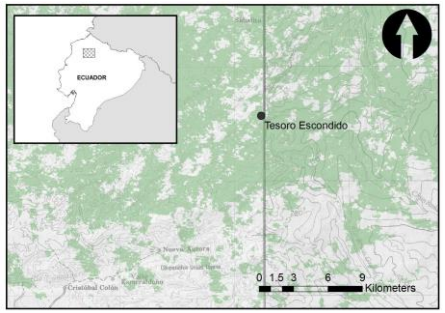
HIVE Seminar

Personal musings on ‘Publication Quality Under Pressure: Strategies for When, Where and How to Publish’

Dr Mika Peck, School of Life Sciences 2016

OUTPUTS





Focusing Conservation Efforts for the Critically Endangered Brown-headed Spider Monkey (*Ateles fusciceps*) Using Remote Sensing, Modeling, and Playback Survey Methods

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Abstract Brown-headed spider monkeys (*Ateles fusciceps*), endemic to the Choco-Darien forests and lower Andean forests of NW Ecuador, are considered critically endangered. Unfortunately, scientific data regarding the actual status of populations is lacking. We combined satellite image analysis, species-specific habitat assessment, and a field survey technique using playback to focus conservation efforts for this species. First, we identified remaining forest via a LANDSAT mosaic and then applied species-specific criteria to delineate remaining forest with potential to hold populations. By combining this with the historical distribution from ecological niche modeling and predicted hunting intensity we generated a species-specific landscape map. Within our study area, forest capable of sustaining *Ateles fusciceps* covers 5872 km^2, of which 2172 km^2 (40%) is protected. Unprotected forest considered suitable for *Ateles fusciceps* extends to 3700 km^2 but within this only 989 km^2 (23%) is under low hunting pressure and likely to maintain healthy populations of *Ateles fusciceps*. To overcome problems of sampling at low primate density and in difficult mountain terrain we developed a field survey technique to determine

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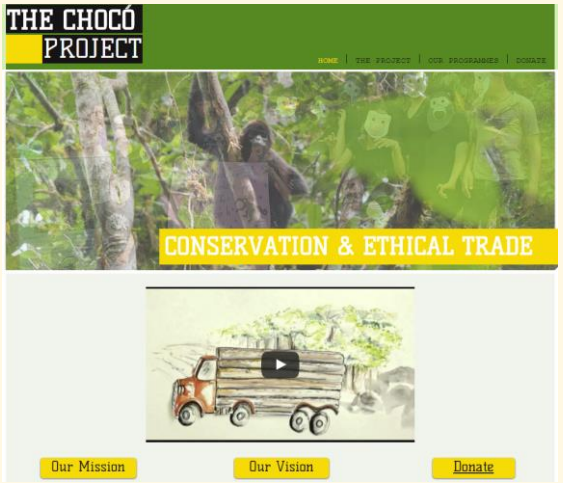
IMPACTS



Agendas of **disciplines, funders,** government, and others seeking to influence the types of research that get published and where

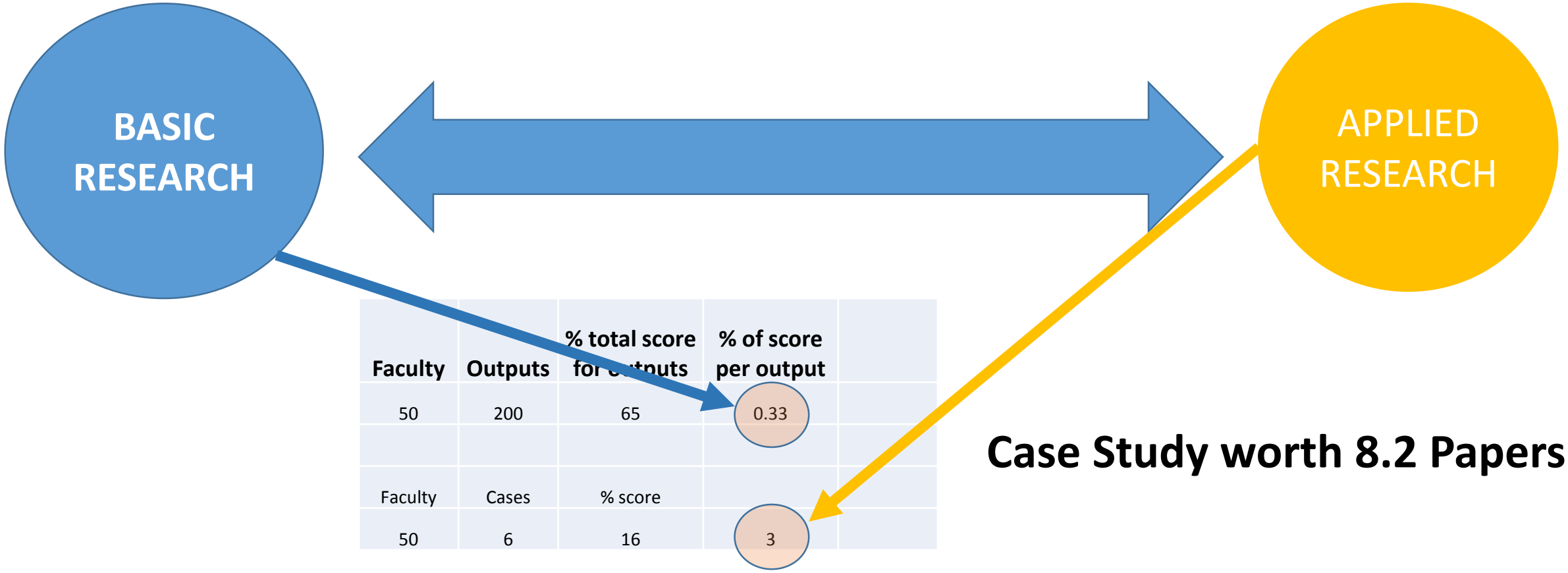
Disciplines cover the full spectrum from Basic (Pure) Research to Applied Research

CONSERVATION BIOLOGY

Influence of government/Institution – Research Assessment Exercises

OUTPUTS (Top 4 Research Publications)

IMPACTS (Case Study of Impact)



Faculty	Outputs	% total score for outputs	% of score per output
50	200	65	0.33

Faculty	Cases	% score
50	6	16

3

Case Study worth 8.2 Papers!

Conflicting definitions and perceptions of publication quality

‘…is it better to submit a paper in a

- high IF journal,
- a paper that has been highly cited, even if it appears in a low IF journal,
- or a paper that the **submitter believes is their best work**?’ [1]

[1] Eyre-Walker, Adam and Stoletzki, Nina (2013) *The assessment of science: the relative merits of post- publication review, the impact factor, and the number of citations.* PLOS Biology, 11 (10). e1001675. ISSN 1544-9173

The assessment of science: the relative merits of post- publication review, the impact factor, and the number of citations

Eyre-Walker & Stoletzki (2013) investigated 3 methods of assessing the merit of a scientific publication:

- subjective post-publication peer review (as per REF 2014)
- the number of citations a paper accrues
- Impact factor of Journal

Datasets investigated

- Wellcome Trust (WT)
- Faculty of 1000 (F1000) database

Results: Subjective Assessment of Merit (i.e. REF 2014)

- Correlations between assessor scores low (40% by chance alone)

	Correlation btw assessors	r	p
Welcome Trust dataset	47%	0.36	<0.001
Faculty 1000 dataset	50%	0.26	<0.001

- Strong correlation between assessor score and Impact Factor of Journal.
- **SO** either high IF journals publish papers of greater merit **OR** assessors biased by high IF journals
- Using number of citations to define merit STILL found positive partial correlations between assessor and Impact Factor of journal

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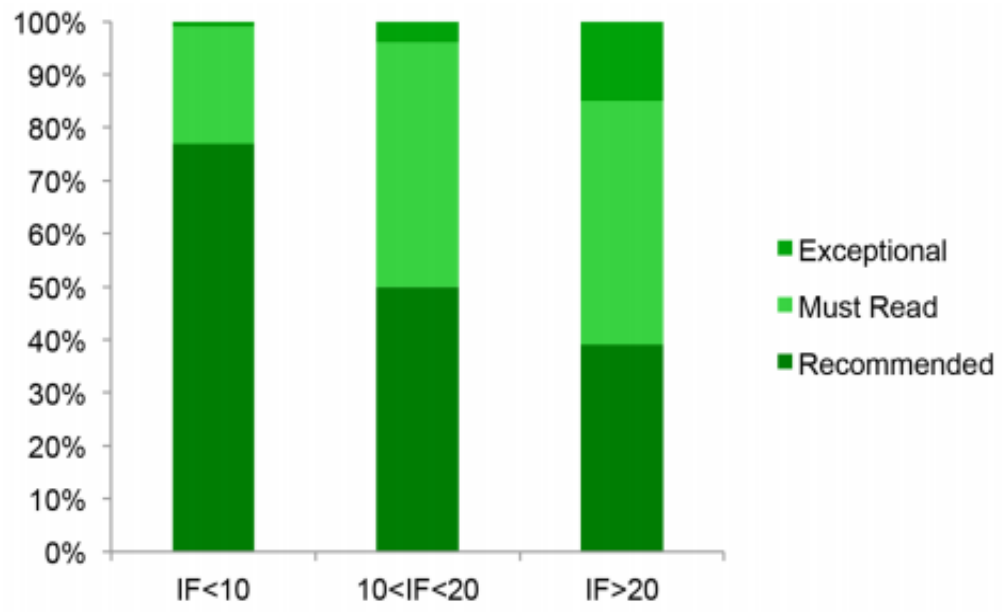

Figure 3. The proportion of papers, with between 90 and 110 citations in the F1000 dataset, scored in each category as a function of the IF of the journal in which the paper was published. The numbers of papers in each category are 131, 194, and 128 for IF<10, 10<IF<20, and IF>20, respectively.
doi:10.1371/journal.pbio.1001675.g003

'Overall it seems that subjective assessments of science are poor, they do not correlate strongly with each other and they appear to be *strongly influenced by the journal in which the paper was published*, with *papers in high ranking journals being afforded a higher score that their intrinsic merit warrants*.'

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Conclusions

- '…**none of the measures of scientific merit that we have investigated are reliable**. In particular subjective peer review is error prone, biased, and expensive; we must therefore question whether using peer review in exercises such as the RAE and the REF is worth the huge amount of resources spent on them.' [2008 RAE cost £12 Million to Gov and £47 to Universities]
- Ultimately the only way to obtain (a largely) unbiased estimate of merit is to have **pre-publication assessment**, by several independent assessors, of manuscripts **devoid of author's names and addresses**. Nevertheless this will be a noisy estimate of merit unless we are

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So, what should the pragmatic researcher do?

- If potential for an IMPACTS CASE STUDY then prioritise
- high Impact Factor journals ‘influence’ assessments – AIM FOR HIGHEST IMPACT JOURNAL POSSIBLE?
- Need for open source part of next assessment – PROMOTE EMERGING MODELS OF PUBLICATION (i.e. PEERJ) – the more ‘good research’ [Highly cited] published there the higher the Impact Factor…. RISKY?