



Ecosystem services, social interdependencies and collective action: moving from a conceptual to an actionable framework

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Ecosystem services, social interdependencies and collective action : moving from a conceptual to an actionable framework

Cécile Barnaud^a, Clémence Moreau^{a,b}, Raphaël Mathevet^{b,c}

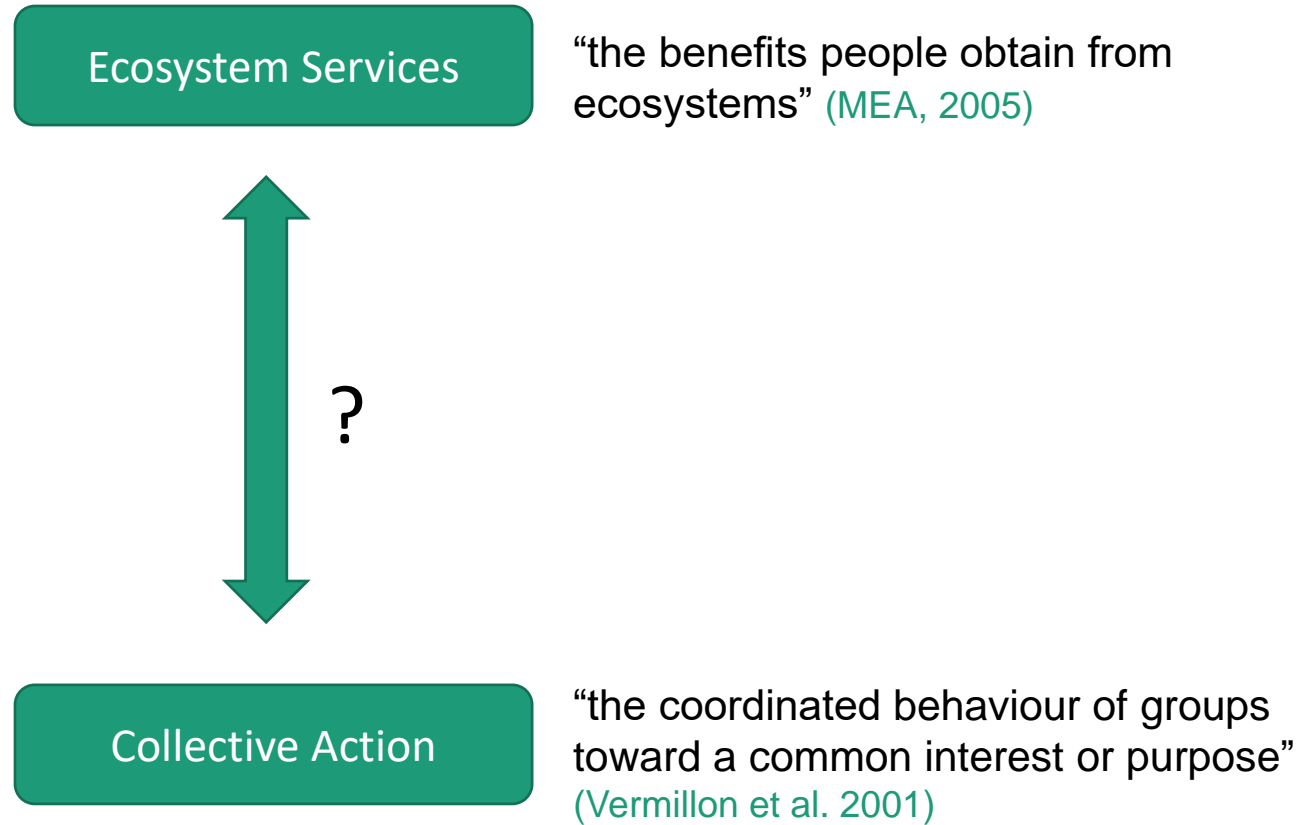
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^bUMR CEFE, CNRS, Montpellier, France;

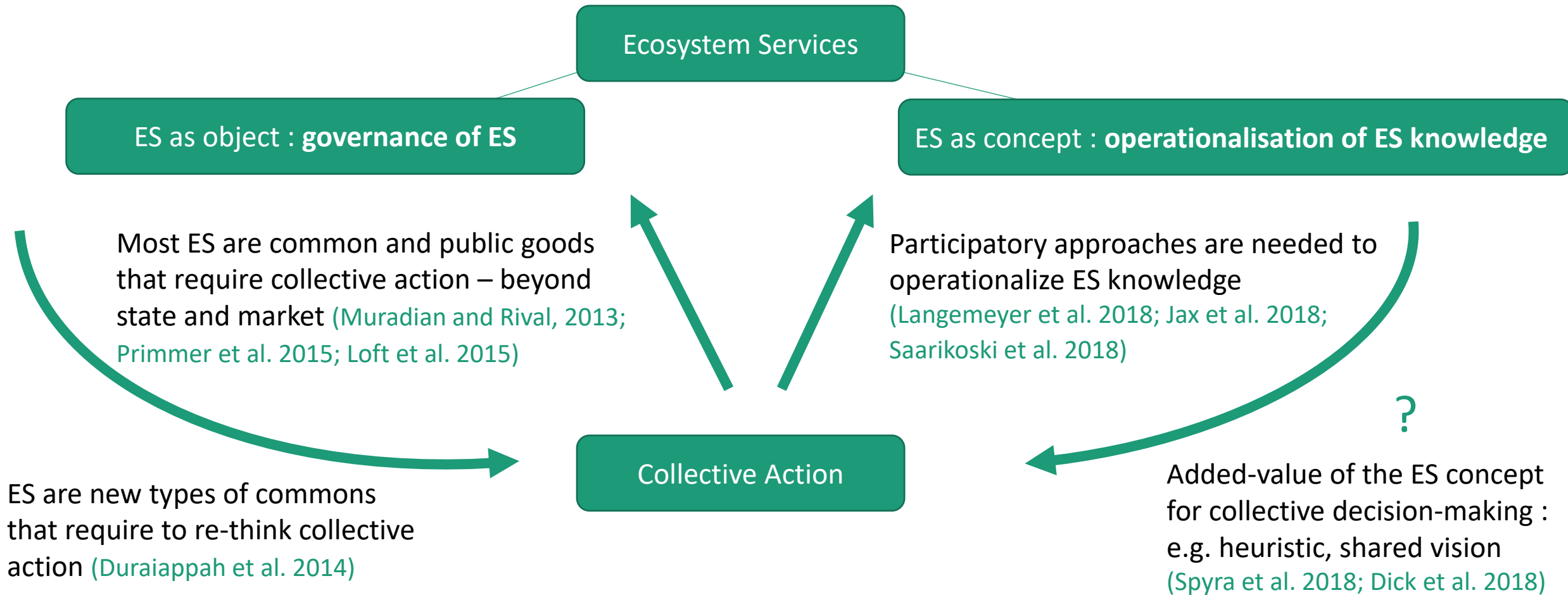
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3 July 2019, IASC Conference, Lima, Peru

Ecosystem Services and Collective action : which connections?



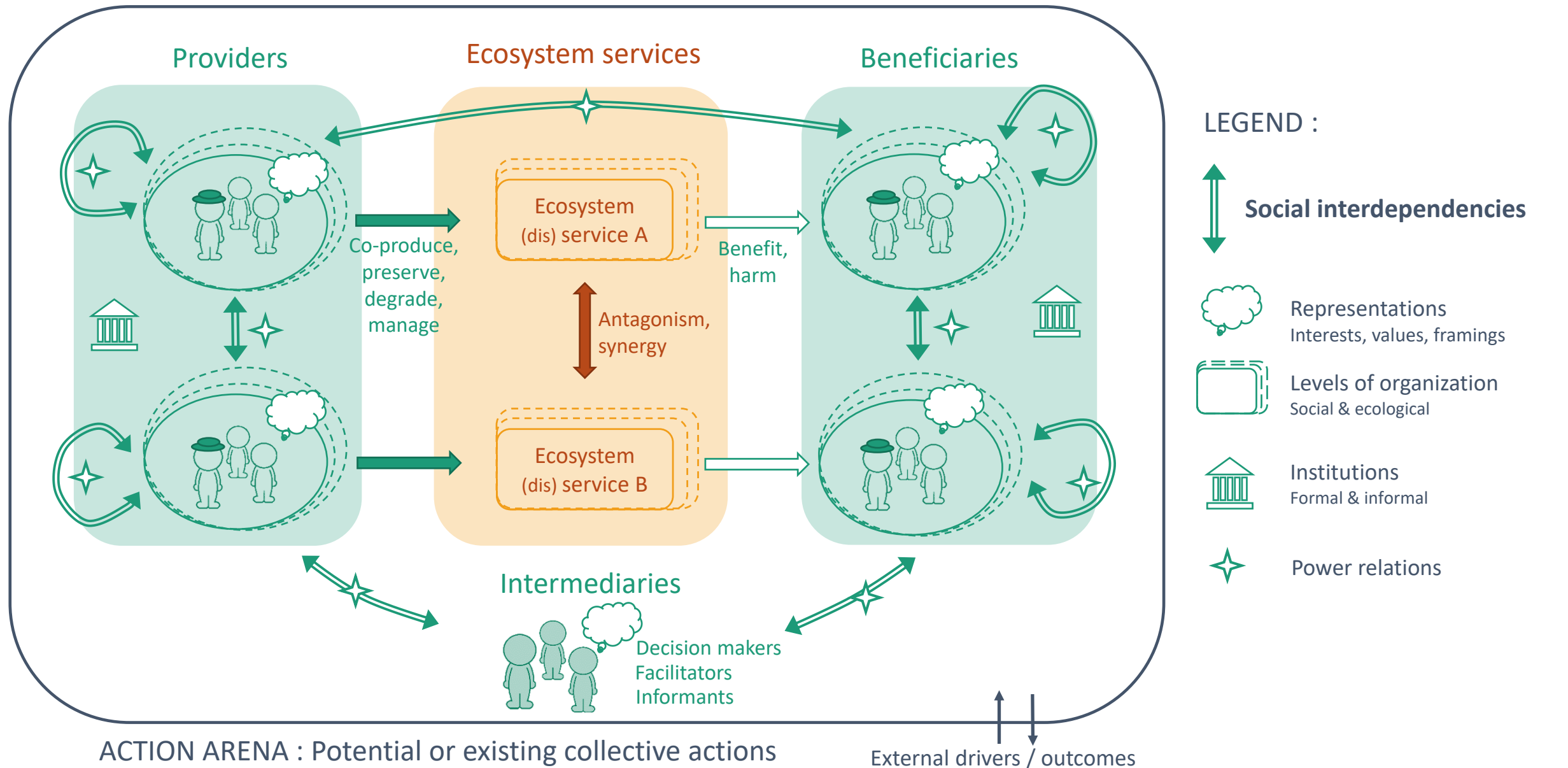
Ecosystem Services and Collective action : which connections?



Research question

Used to highlight **social interdependancies**,
could the ES concept help to
understand *and foster* **collective action**?

Conceptual framework



Moving from an analytical to an actionable framework

→ Using the ES concept to increase people's awareness of interdependencies



Biological control
Apple production (France)



Salliou et al. (2019) Sustainability

Land abandonment
Pyrénées National Park (France)



Barnaud et al. (subm.) J. Rural Studies

Land abandonment
Cévennes National Park (France)



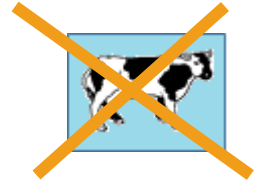
Moreau et al. (in press) DDT

Land abandonment
Montseny Biosphere Reserve (Spain)

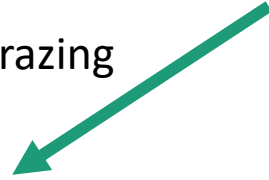


Context : a conflict over farming practices in the Cévennes National Park

Open grasslands with rocks



No grazing

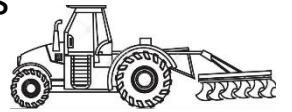


Shrublands and woodlands



(!) Permits

Removing rocks
Ploughing



Meadows : permanent / temporary



How to conciliate agriculture with
heritage and biodiversity
conservation?

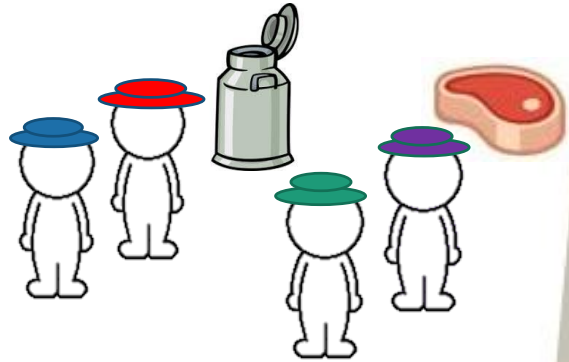
SECOLOZ : a Role-Playing Game highlighting trade-offs among ES

A Role-Playing Game = a model, a simplified representation of a socio-ecological system



Objective of the Secoloz game = each player tries to **achieve his/her own objectives**, which implies **negotiating trade-offs among ES**

4 farmers aiming
to maintain their livestock



Targetted ES

Hay + grass

Actions

Remove rocks (!)
Plough meadows (!)
Cattle grazing
Re-open shrubland

ROLES of the GAME



3 National Park Agents
with competing objectives

Targetted ES



Tourism satisfaction
Patrimonial landscape



Grass
Patrimonial
landscape



Biodiversity

Actions

(!) Give permits
Distribute subsidies

Among them : a mayor

Targetted ES Water quality



SECOLOZ : a role-playing game for collaborative management of landscapes on the Mont-Lozère

<https://www.youtube.com/watch?v=evUtcM5zX1Y&app=desktop>

Effects of the RPG on the participants

Enhanced mutual understanding, empathy

Aknowledging and dealing with uncertainty

- Cumulative effects / thresholds
- Ambiguity / Disputed knowledge claims

Increased awareness of social interdependencies

- Between farmers and national park agents
- Among farmers
- Among national park agents
- With other stakeholders and the society as whole

Exploring institutional innovations

- Need for concerted management at landscape scale



Added-value of the ES or the RPG?

CCL : lessons on social interdependencies and.. commons!

Cultural landscapes : commons that are **socially constructed** and should therefore be **inclusively negotiated**

- Social interdependencies are +/- perceived
 - Awareness of interdependencies (**learning**): necessary, but not sufficient (**Leeuwis, 2000**)
- Social interdependencies are +/- asymmetric, +/- desired, +/- voluntarily hidden
 - Need to negotiate interdependencies : deal with multiple interests, power asymmetries (**negotiation**) (**Saarikaski et al. 2018**)
- Social interdependencies are +/- regulated by institutions
 - Need to create institutional space for interdependencies (**institutional innovation**) (**Muradian & Rival 2013; Loft et al. 2018**)

