

# Helicopter Science:

Concepts, Practices, and  
International Collaborations

November 17, 2022

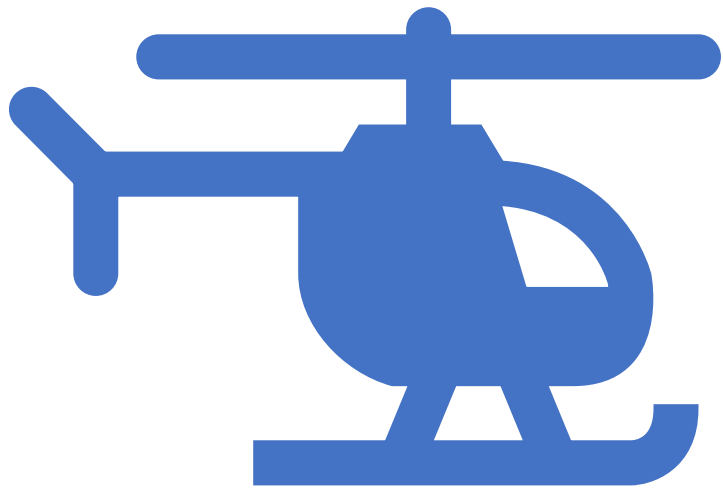




# Helicopter science:

Some definitions

Dr. Sandra Russo



**Helicopter science** – when researchers from higher income or more privileged settings carry out research in resource-poor settings with limited to no involvement of local communities or researchers

<https://doi.org/10.1038/s41561-022-01010-4>

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**Parachute science** – when researchers drop down from a Western or ivory tower into a foreign community for field work, gather data, and zip off home without acknowledging or engaging the contributions of local researchers in that community

<https://www.sciencefriday.com/segments/parachute-science-problem/>



# Decolonizing science

- **Decolonization** is a movement to eliminate, or at least, mitigate, the disproportionate legacy of white European thought and culture in education.
- <https://doi.org/10.1038/d41586-018-01696-w>
- In academia, it means to confront and challenge the colonizing practices that have influence education in the past and are still present today.
- <https://www.uvic.ca/research/centres/youthsociety/assets/docs/briefs/decolonizing-education-research-brief.pdf>

Decolonization is a PROCESS!



# Knowledge co-creation



COLLABORATIVE



KNOWLEDGE SHARING

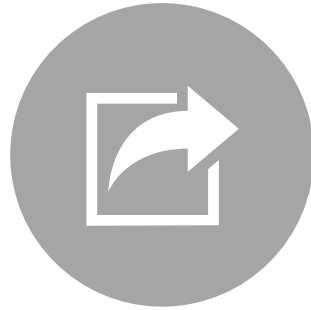


KNOWLEDGE CREATION

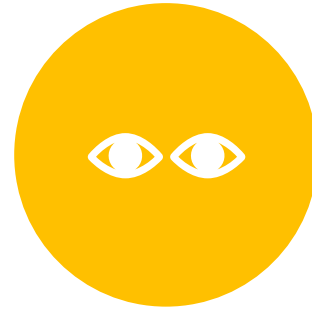
# The process we want



COLLABORATE



SHARE



RECOGNIZE



CO-CREATION OF  
KNOWLEDGE

Helicopter  
Science:

The Role of Culture in  
International Collaboration

Dr. Michael Kung



“Well  
yes, but  
actually  
no”

What does culture have to do with  
collaboration?

# Hofstede's Cultural Dimensions Theory

- Power Distance Index
- Individualism vs Collectivism
- Masculinity vs Femininity
- Uncertainty Avoidance Index
- Long Term vs Short Term Orientation
- Indulgence vs Restraint

# Grounding helicopters in grad school?

Dr. Karen Kainer

Duchelle, Biedenweg, K., Lucas, C., Virapongse, A., Radachowsky, J., Wojcik, D. J., Londres, M., Bartels, W.-L., Alvira, D., & Kainer, K. A. (2009). Graduate Students and Knowledge Exchange with Local Stakeholders: Possibilities and Preparation: Graduate Students and Knowledge Exchange. *Biotropica*, 41(5), 578–585. <https://doi.org/10.1111/j.1744-7429.2009.00563.x>

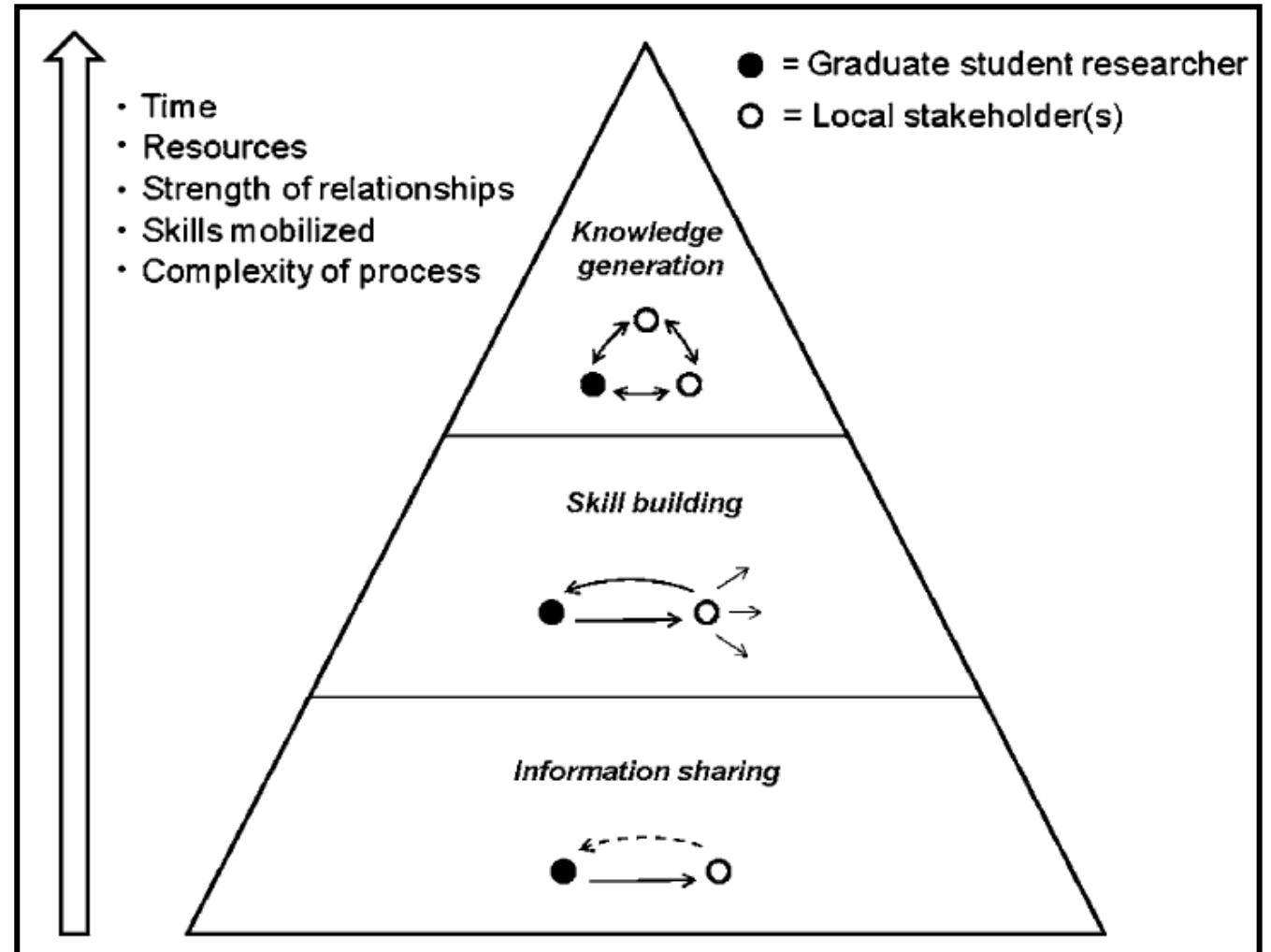
## Grounding helicopters in graduate school?

Knowledge exchange –  
sharing, use, and generation  
of information through  
methods appropriate to the  
context, audience, and  
overall objectives

# Knowledge exchange conceptual framework

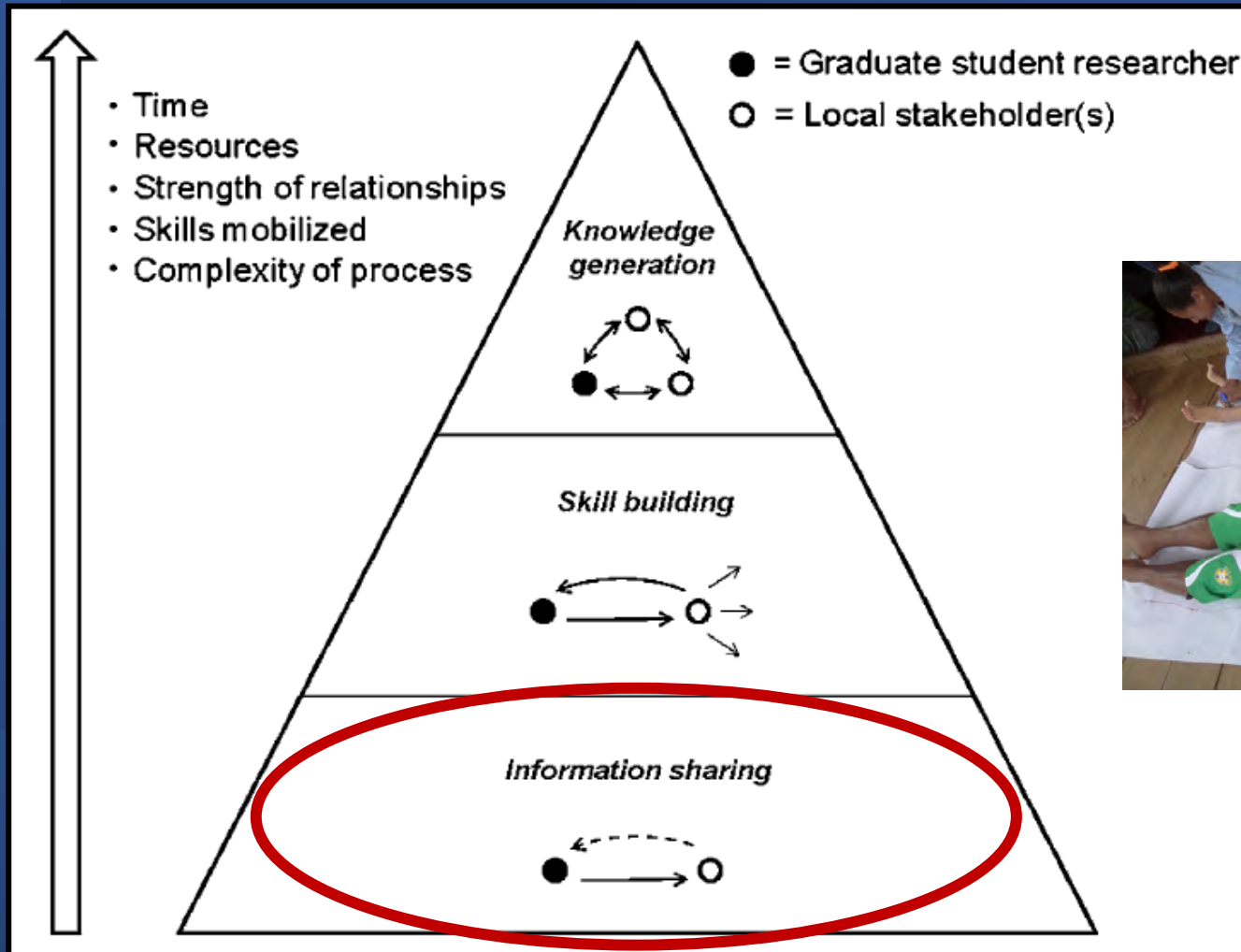
Duchelle, Biedenweg, K., Lucas, C., Virapongse, A., Radachowsky, J., Wojcik, D. J., Londres, M., Bartels, W.-L., Alvira, D., & Kainer, K. A. (2009). Graduate Students and Knowledge Exchange with Local Stakeholders: Possibilities and Preparation: Graduate Students and Knowledge Exchange. *Biotropica*, 41(5), 578–585. <https://doi.org/10.1111/j.1744-7429.2009.00563.x>

## Grounding helicopters in grad school?



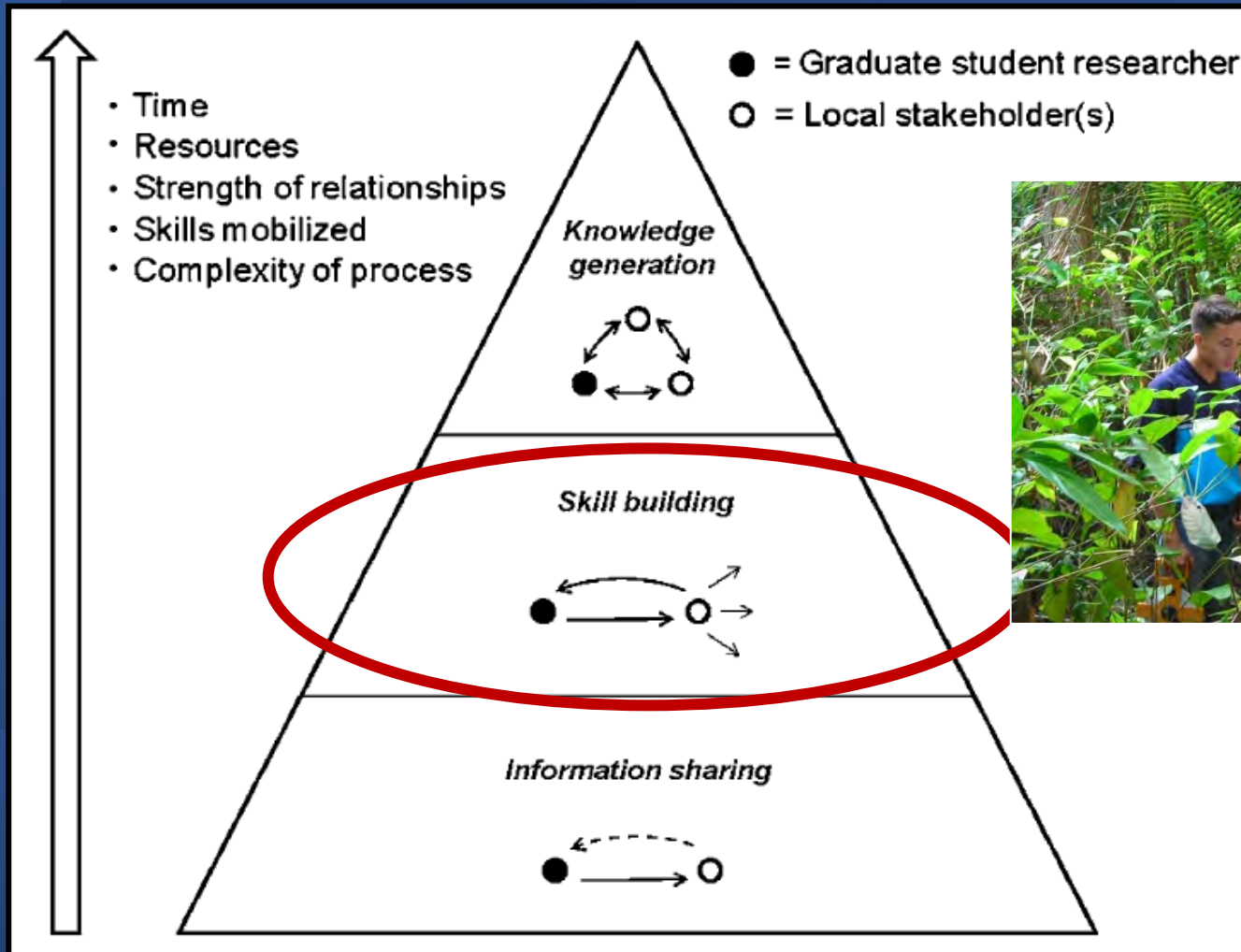


# Primarily one-way transmission of ideas





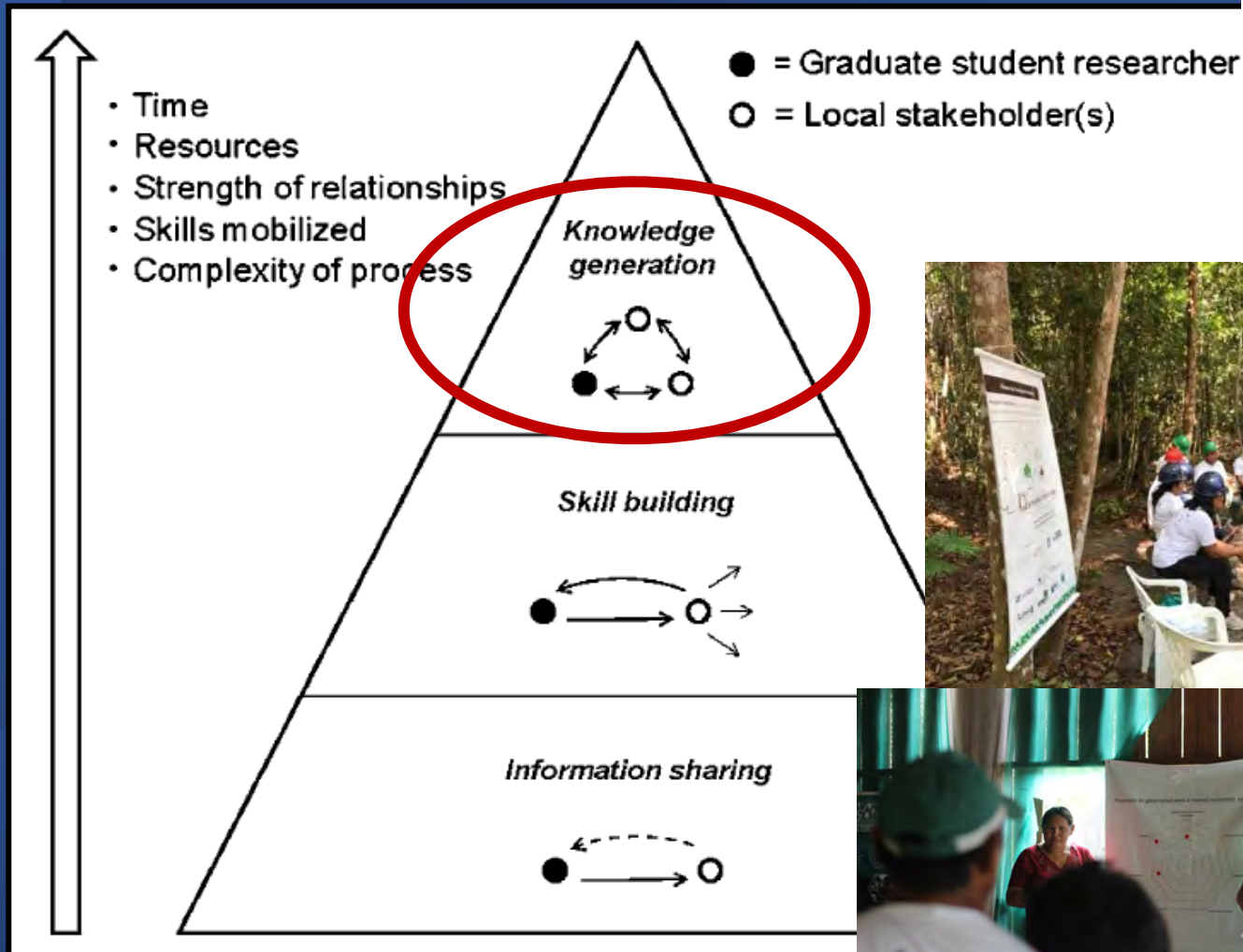
## Capacity building – on both sides





## Partners in knowledge creation

- Defining & refining research questions
- Relevance to local realities
- Trust in research process
- Learning applications
- Research rigor



RESEX	AND OUR APPROACH TO RESEARCH	AND OUR APPROACH TO RESEARCH	INTERPRETE DE CORTE	CICLO DE CORTE	ADMEBO DE MANEJOS	TIPO DE TRANSORTE ABAJOTE	TIPO DE TRANSORTE HACIENDAS	BALCEGOS	GRUPO DE TRAMADO
CHICO MENILIS	2013	2014	10-2%	10	10	TRATOR	RAI SA	UI	INVESTO
ITUXI	2014	2015	10-2%	10	10	TRATOR	RAI SA	UI	INVESTO
INUMBI	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
PARAISO	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
PORTI MAU DELS	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
ITALIQU	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
ARIPU	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
JUCARI	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
MARIA	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
ARIGUA PRIMA	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO
TERCA	2016	2017	21.5	25	25	TRATOR	RAI SA	UI	INVESTO

Duchelle, Biedenweg, K., Lucas, C., Virapongse, A., Radachowsky, J., Wojcik, D. J., Londres, M., Bartels, W.-L., Alvira, D., & Kainer, K. A. (2009). Graduate Students and Knowledge Exchange with Local Stakeholders: Possibilities and Preparation: Graduate Students and Knowledge Exchange. *Biotropica*, 41(5), 578–585.

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# Institutional Challenges to Achieving Effective Global Collaborations and Equitable Partnerships

Dr. Bette Loiselle

Differences in responsibilities and time available for conducting research

Ability of institutions to manage, administrate and distribute funds

Tension between “collaboration and control”

Limitations imposed by funding sources

Fiscal and legal risks



Thank You!

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