

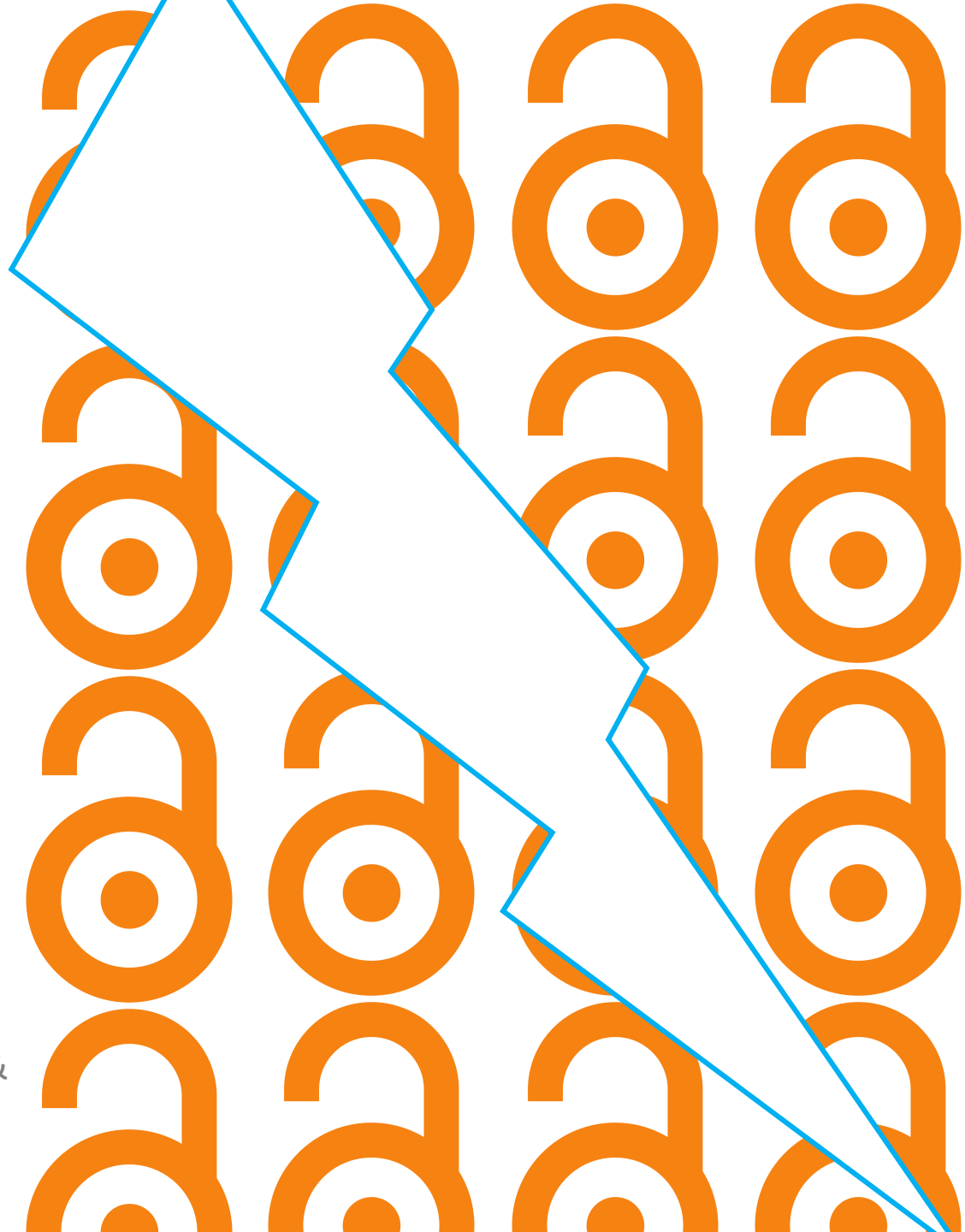


# Behavioral Reluctance in Adopting Open Access Publishing: Insights From a Goal-Directed Perspective

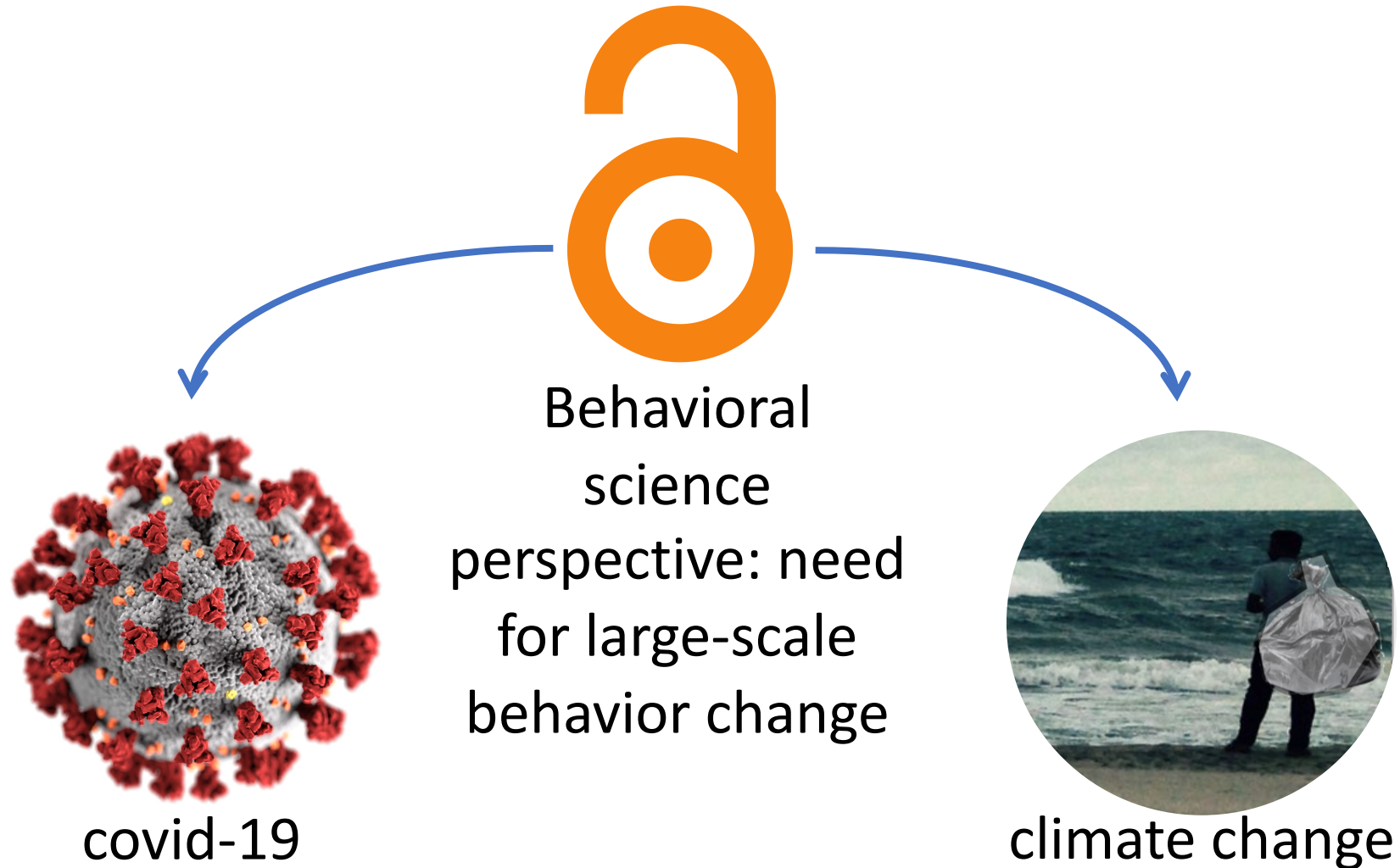
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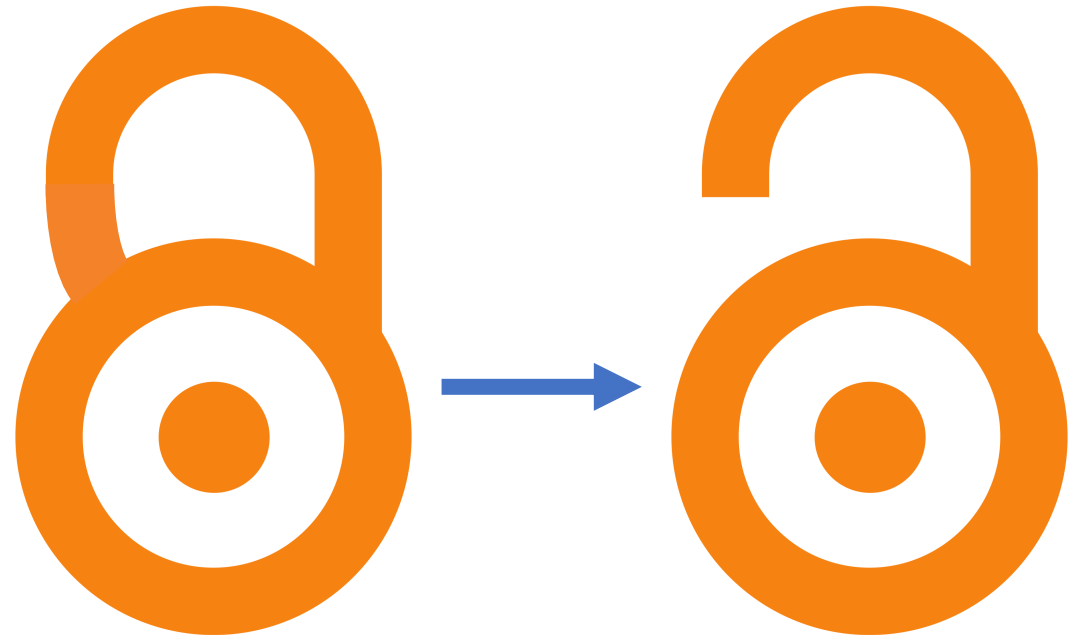


# Background: Behavioral sciences



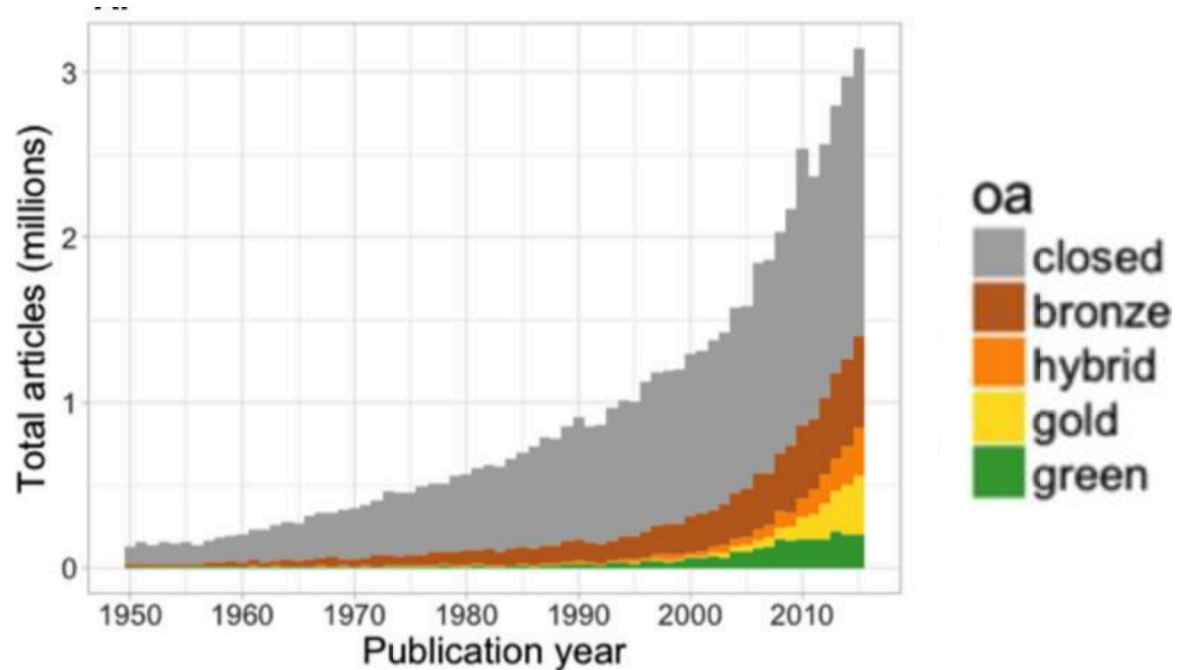
# Open access publishing

- Many good reasons:
  - Effective science
  - Accessibility of knowledge
  - Research based on public funds
  - Increased media coverage
  - More citations
  - Retaining author rights
  - *“OA is seen as especially benefiting ECRs in career progression”*  
(Nicholas, et al., 2020)
  - for a review of benefits, see, e.g., McKiernan et al., 2016

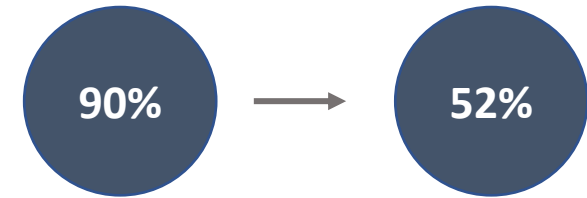


# Open access publishing is happening

not

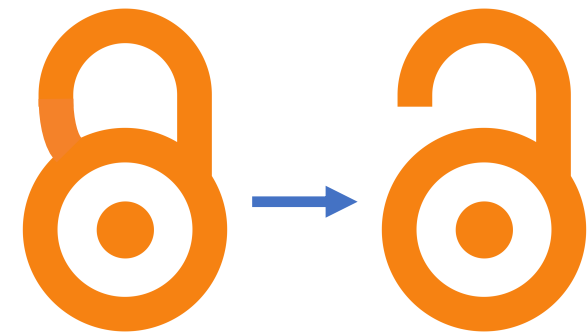


Retrieved from (Piwowar, et al., 2018)



positive attitude    actual publishing

Dallmeier-Tiessen et al., 2011 (more recent:  
Rowley et al., 2017; O'Hanlon et al., 2020)



# Understanding and Addressing Behavioral Reluctance



## **FIRST**

Understanding open access publishing from a goal-directed perspective



## **SECOND**

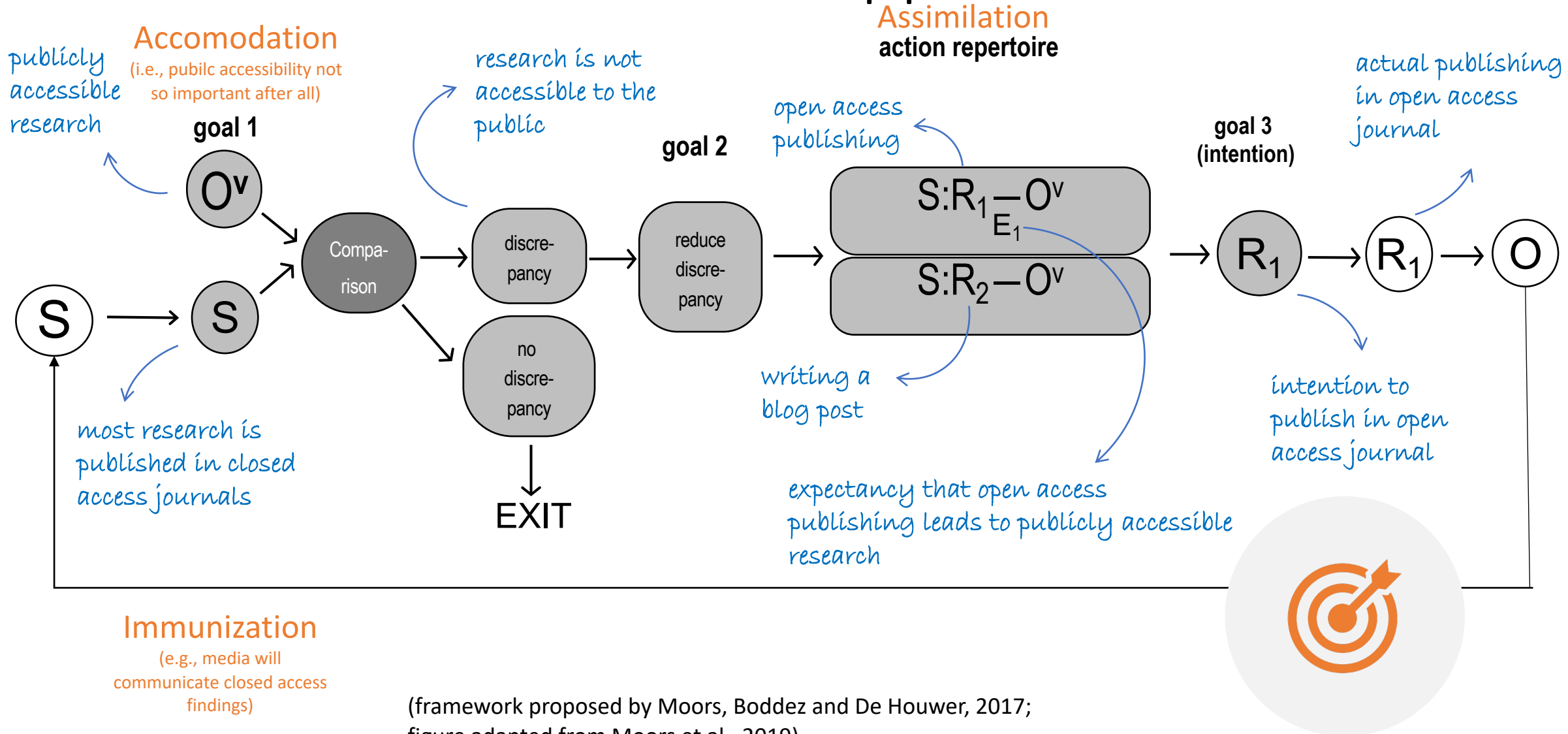
Understanding why, from this perspective, open access publishing does not occur (barriers)



## **THIRD**

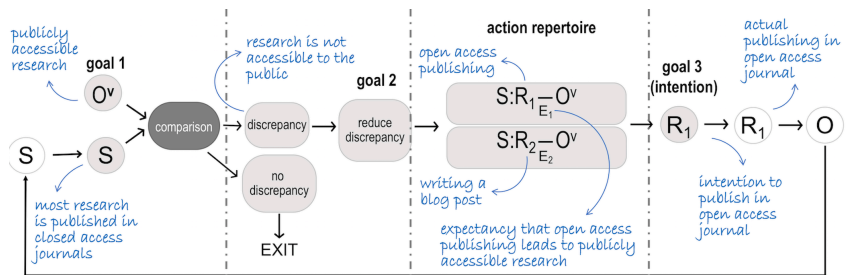
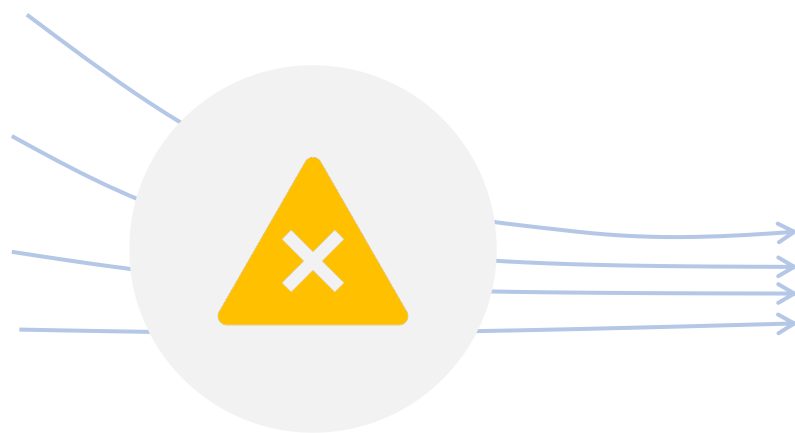
Formulate strategies to address the identified barriers

# Goal-directed framework applied to OAP



(framework proposed by Moors, Boddez and De Houwer, 2017;  
figure adapted from Moors et al., 2019)

# Understanding behavioral reluctance



**SECOND**  
Understanding why, from this perspective, open access publishing does not occur (barriers)

**THIRD**  
Formulate strategies to address the identified barriers

Values of Goals
Discrepancy Detection
Action Repertoire
Expectancies
Representational Quality



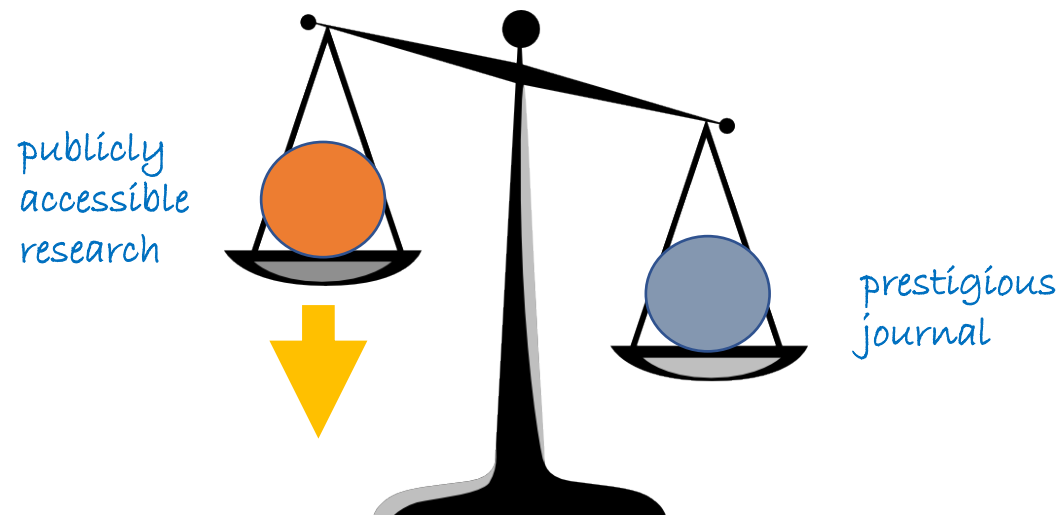
# Values of Goals

Journal reputation most important criteria, OA only 14<sup>th</sup>/ 17

(Nature Publishing Group/Palgrave Macmillan, 2015)

## ⚠ Low relative value of relevant goal

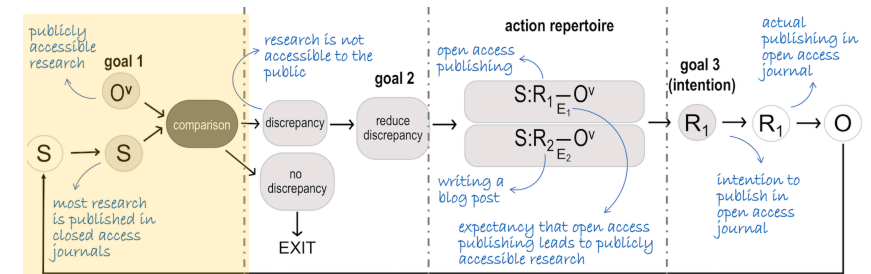
- Publicly accessible research not as important as e.g.,
  - prestigious journal
  - APCs



## I Increase value of relevant goal

- Direct persuasion
- Stress *existing* benefits (e.g., higher impact on societal debates; injunctive norms to communicate approval by others)
- Create *novel* benefits (e.g., accessibility awards or make accessibility an important quality criterion for the allocation of research grants )

“OA is seen as especially benefiting ECRs in career progression”  
(Nicholas, et al., 2020)





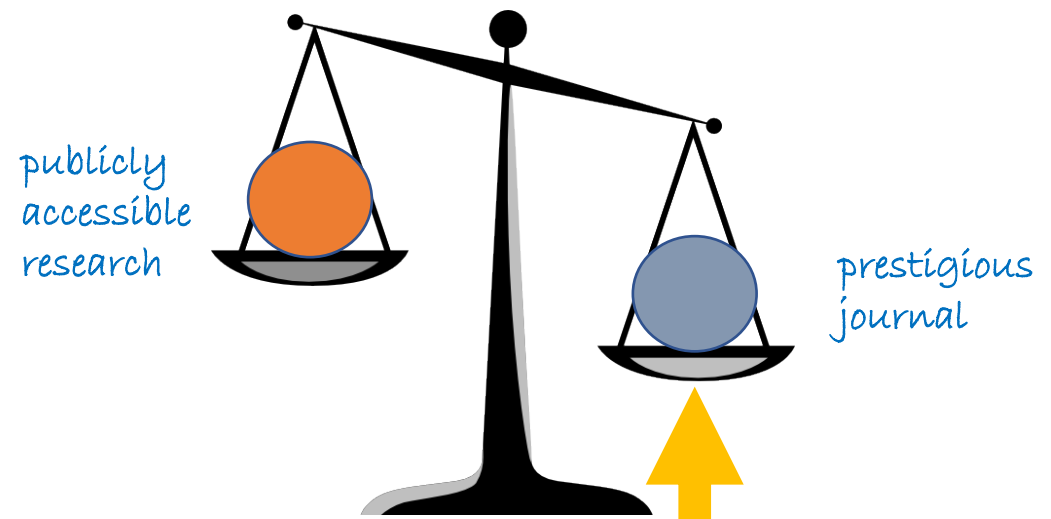
Values of Goals
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# Values of Goals

## ⚠ Low relative value of relevant goal

- Publicly accessible research not as important as e.g.,
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(Nature Publishing Group/Palgrave Macmillan, 2015)

## I Decrease value of conflicting goal

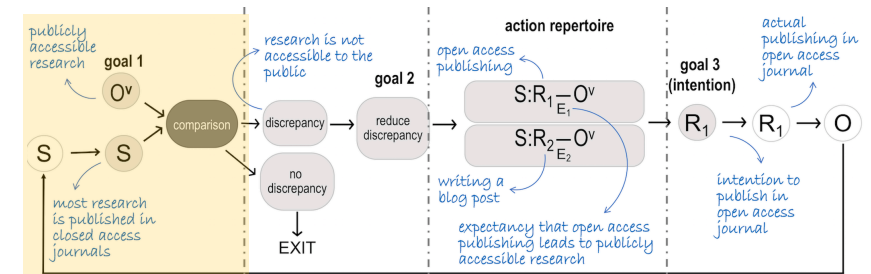
- Reduce benefits of conflicting goals
  - prestigious journal publications no longer metric for excellence, more weight to the degree to which research serves the public good (Alperin et al., 2019)



[www.sfdora.org](http://www.sfdora.org)

## I Minimize conflict between goals

- Offer prestigious open access journals
- Offer to pay APC's and to take care of administrative aspect (e.g., transformative agreements)
- DIAMOND journals



Values of Goals
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# Discrepancy Detection

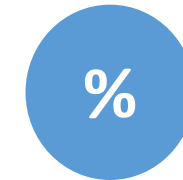


## Discrepancy underestimated or not detected

- Underestimation of, or failure to see inaccessibility of closed access journals to the public



## Illustrate inaccessibility

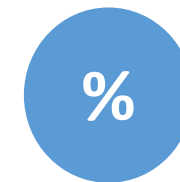


of world population has access

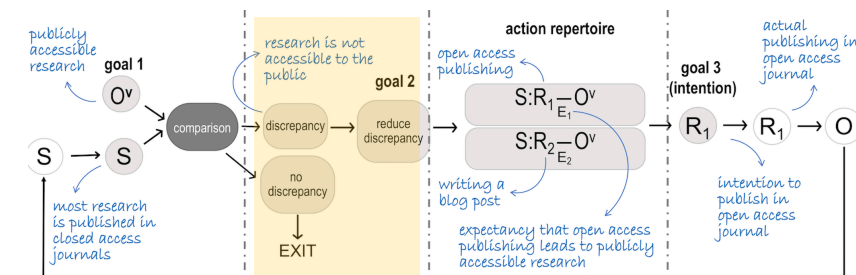


## Illustrate seriousness of consequences

ECRs from less prestigious universities spent on average



of their personal salaries on access



Values of Goals
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# Action Repertoire



## Desired behavior not in the action repertoire

- Option to publish in open access journals may not be known or not come to mind



## Low affordances of the environment

- Actual lack of response option: no suitable open access journal available



## Teach about OAP



<https://doaj.org>

Open science platforms at universities: [KU Leuven](https://www.kuleuven.be/open-science/open-science-at-ku-leuven):

<https://www.kuleuven.be/open-science/open-science-at-ku-leuven>



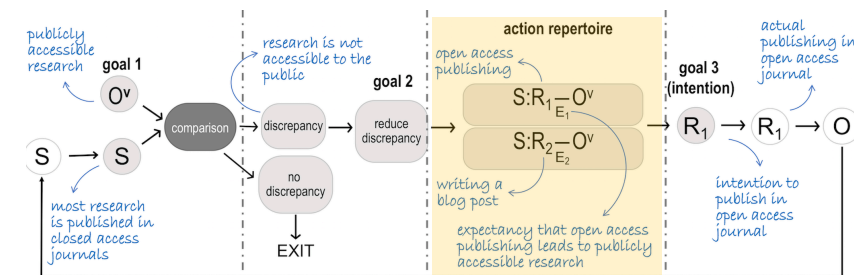
## Increase salience

Behavioral prompts



## Increase affordances

Increase range of open access journals





Values of Goals
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# Expectancies



## Low expectancy of desired behavior

- Low expectancy that own open access publishing leads to publicly accessible research



## Direct communication

*“every open access publication makes a difference”*



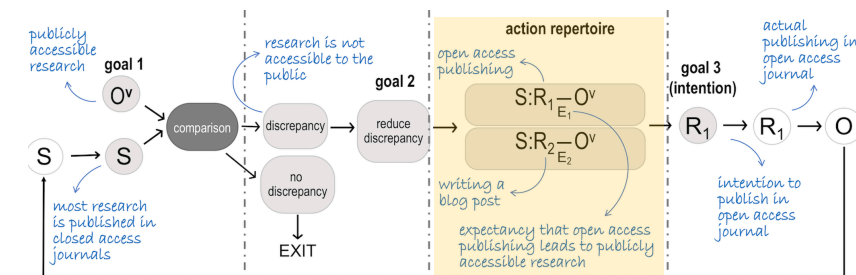
## Reframe to more achievable goal

- publicly accessible research domain
- accessibility for a certain group (e.g., alumni, professionals...)

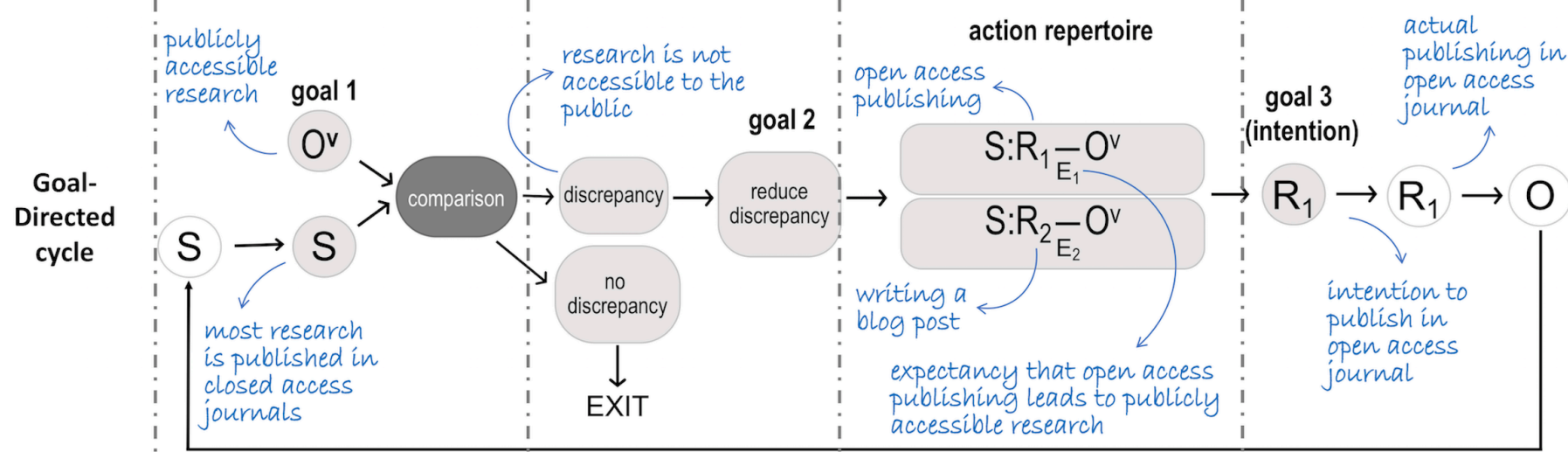


## Descriptive norm

*Communicate how many others already do it*



# The full picture

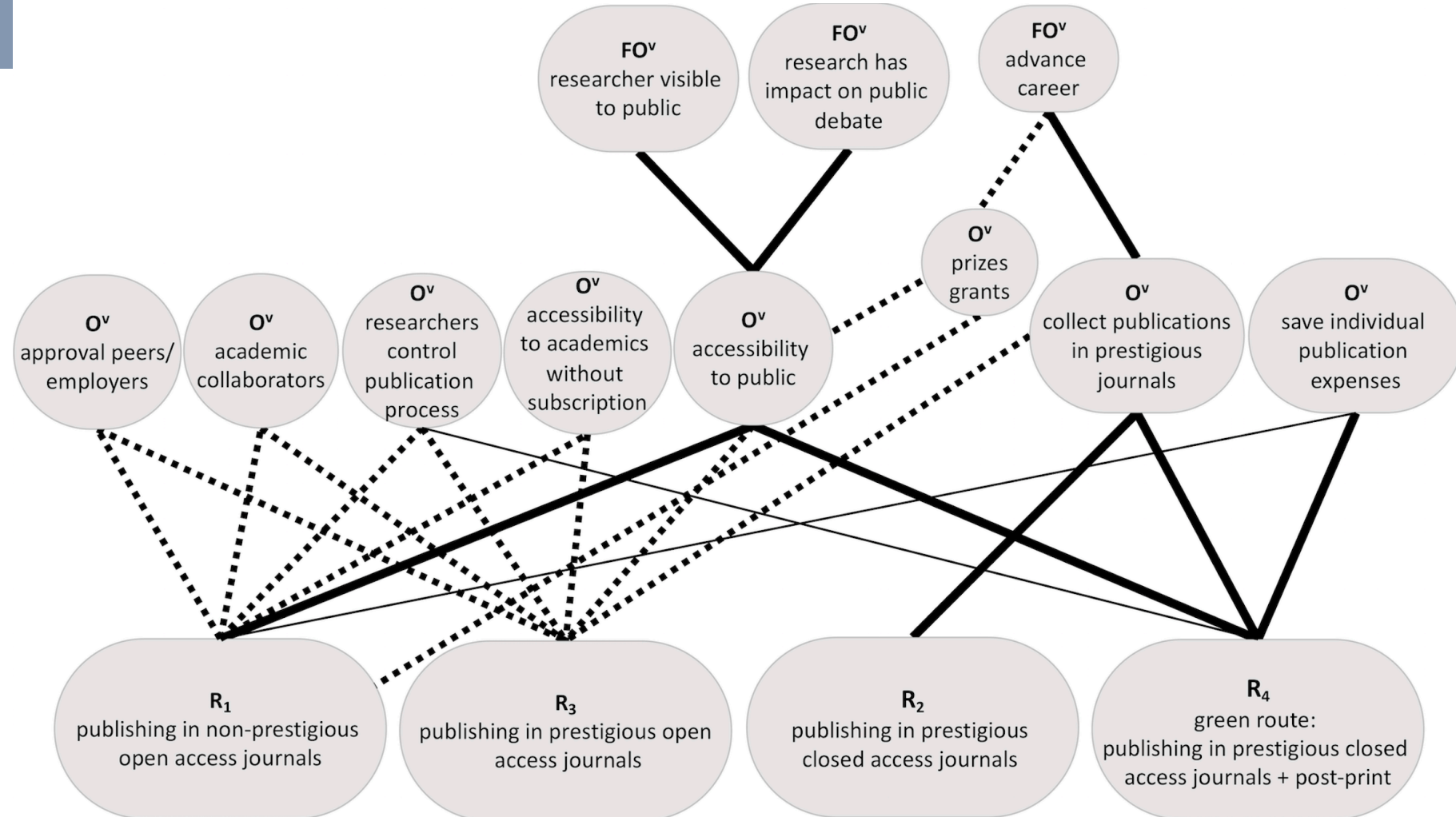


Köster, M., Moors, A., De Houwer, J., Ross-Hellauer, T., Van Nieuwerburgh, I., & Verbruggen, F. (2021). Behavioral reluctance in adopting open access publishing: insights from a goal-directed perspective. *Frontiers in Psychology*, 12, 1111.

	Low relative value of relevant goal ( $O^v$ ) Publicly accessible research not as important as e.g., prestigious journal <b>Status quo (S) not perceived</b> Research may not be perceived to be published in closed access journals	Discrepancy underestimated or not detected Underestimation of, or failure to see inaccessibility of closed access journals to the public	Desired behavior ( $R_1$ ) not in the repertoire Option to publish in open access journals may not be known or not come to mind <b>Low expectancy of desired behavior (<math>E_1</math>)</b> Low expectancy that own open access publishing leads to publicly accessible research	Low value of the behavioral intention Publishing in open access journals not sufficiently valued <b>Low environmental affordances</b> Researchers may face structural barriers (e.g., no suitable open access journals)
Problems	<p><b>Increase value of relevant goal</b></p> <ul style="list-style-type: none"> <li>Direct persuasion</li> <li>Stress <i>existing</i> benefits (e.g., higher impact on societal debates)</li> <li>Create <i>novel</i> benefits (e.g., accessibility awards)</li> </ul> <p><b>Decrease value of conflicting goals</b></p> <ul style="list-style-type: none"> <li>Reduce benefits of conflicting goals (e.g., prestigious journal publications no longer metric for excellence)</li> </ul> <p><b>Minimize conflict between goals</b></p> <ul style="list-style-type: none"> <li>Offer prestigious open access journals</li> </ul>	<p><b>Point out discrepancy explicitly</b></p> <ul style="list-style-type: none"> <li>Illustrate inaccessibility of closed access journals (e.g., the high costs paid by libraries for journal subscriptions) as well as the seriousness of its consequences (e.g., average percentage of salary scholars without subscriptions pay to gain access)</li> </ul>	<p><b>Inform about desired behavior</b></p> <ul style="list-style-type: none"> <li>Teach about open access publishing (e.g., open access platforms at universities)</li> </ul> <p><b>Increase salience of desired behavior</b></p> <ul style="list-style-type: none"> <li>Make open access publishing salient (e.g., use behavioral prompts)</li> </ul> <p><b>Increase expectancy</b></p> <ul style="list-style-type: none"> <li>Direct persuasion (e.g., “every open access publication makes a difference”)</li> <li>Reframe to more achievable goal (e.g., publicly accessible research domain)</li> <li>Communicate descriptive norm (i.e., how many others already do it)</li> </ul>	<p><b>Increase value of the behavioral intention</b></p> <ul style="list-style-type: none"> <li>Direct persuasion</li> <li>Stress <i>existing</i> benefits of open access publishing (e.g., more citations)</li> <li>create <i>novel</i> benefits (e.g., open access publishing as criterion for excellence)</li> </ul> <p><b>Increase environmental affordances</b></p> <ul style="list-style-type: none"> <li>Make environment conducive to open access publishing (e.g., extend range of open access journals)</li> </ul>
Interventions				

# The full picture

Köster, M., Moors, A., De Houwer, J., Ross-Hellauer, T., Van Nieuwerburgh, I., & Verbruggen, F. (2021). Behavioral reluctance in adopting open access publishing: insights from a goal-directed perspective. *Frontiers in Psychology*, 12, 1111.



# Conclusions

- Large-scale OAP requires large-scale behavior change
- Behavioral science may help in the transition towards OAP by
  - identifying structural barriers for researchers
  - identifying aspects need to be communicated and how
- general usefulness of such a behavioural analysis
  - may allow to address other related reluctances (e.g., adoption of repositories) and unrelated reluctances (e.g., environmental behavior)





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Tony Ross-Hellauer  
Inge Van Nieuwerburgh  
Frederick Verbruggen

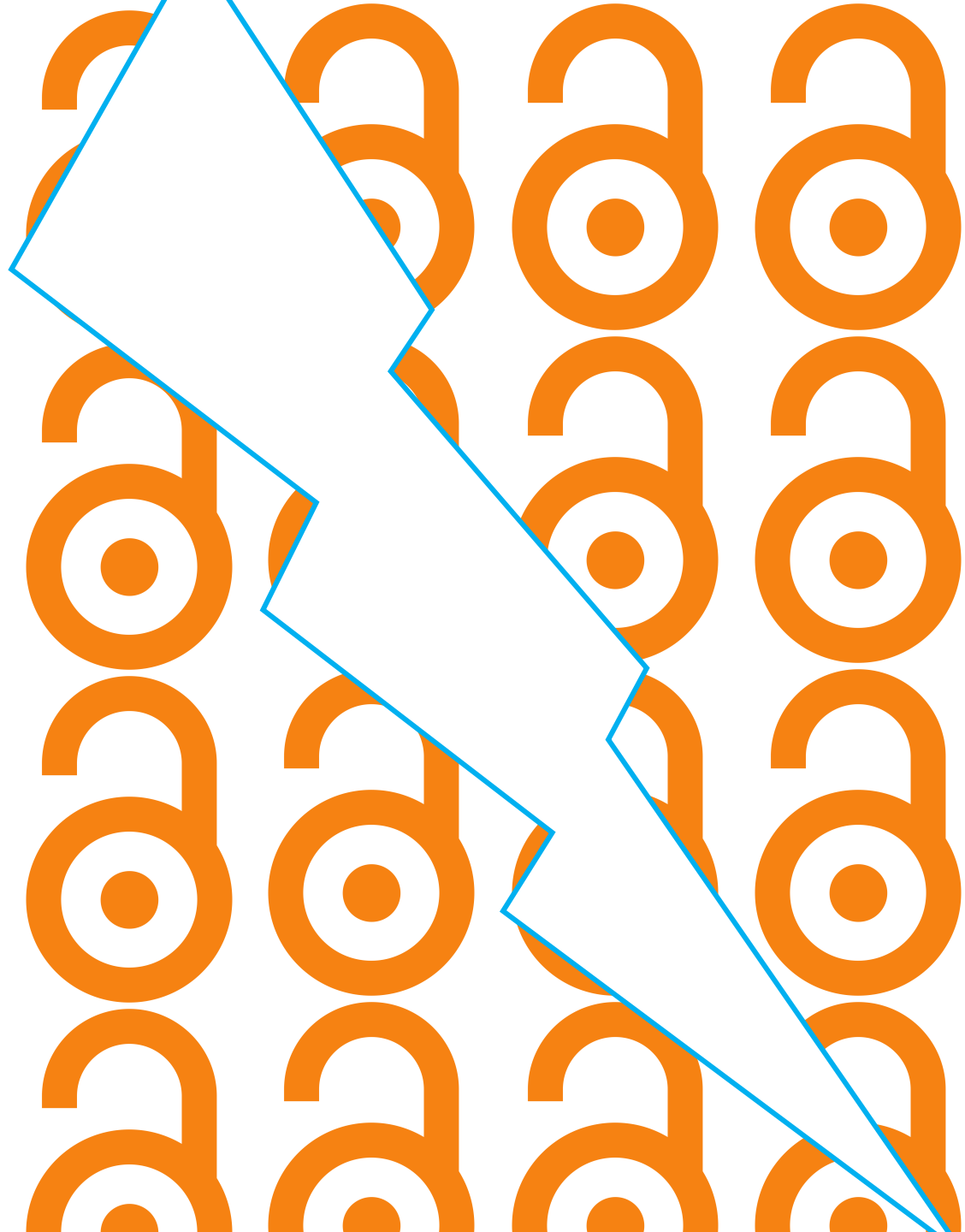
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