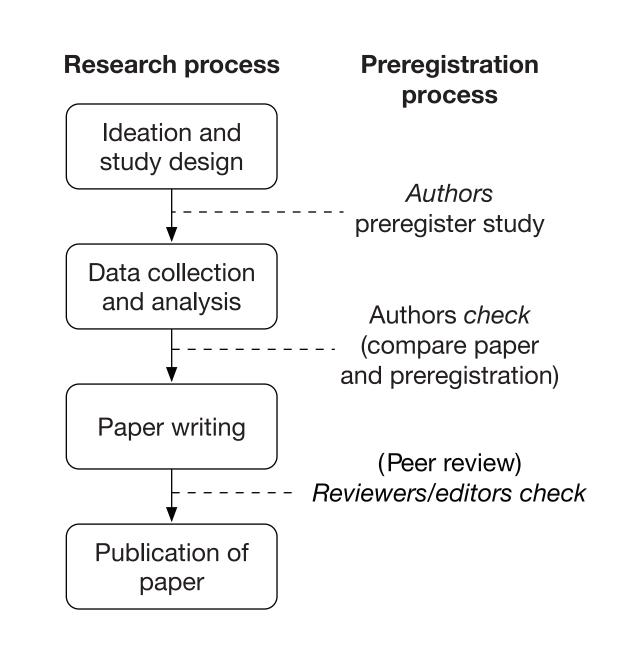
To achieve the goal of preregistration in practice, we need to support multiple perceived purposes of this tool, with considerations for different user roles and adoption barriers. And what about HCI?

Designing for Preregistration: A User-Centered Perspective

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Discipline

Preregistration has been proposed to be a tool for addressing the replication crisis, mainly used for experimental studies. However, it is unclear how well preregistration is working for its users.



17	Radomization	6	Explanation of existing data	3	Research questions	_ 1	Existing data
19	Transformations		Data collection procedure		Hypotheses	- 2	Hypothesis
20	Follow-up analysis	9	Sample size rationale	5	Exsiting data		Dependent variable
21	Inference criteria	11	Manipulated variables	8	Sample size	4	Conditions
23	Missing data	13	Indices	12	Measured variables	5	Analyses
24	Exploratory analysis	14	Study type	16	Study design	6	Outliers and exclusions
25	Analysis script (optional)	15	Blinding	18	Statistical models	7	Sample size
Fi	elds such as "Others" and :	the t	ritle of the study are omitted	22	Data exclusion		

To investigate preregistration in practice, we interviewed 14 (7F, 7M) users of preregistration.

PhD student	4	Psyc
Assistant professor	3	HCI
Associate professor	3	Beha
Professor	4	

Have written a preregistration? Have reviewed/edited a preregistration? Yes 13 Yes 7 ICI 2 No 1 No 6 ehavioral Econ 1 Unclear 1

We found two main purposes that users thought preregistration was for.

was for.

We make design recommendations:

1. Delimiting flexibility

Title

"So I feel like people are confusing disclosure, which often you want more the better, but I think the preregistration should be reserved for things that it's really important to know ahead of time... power analysis is not relevant for preregistration" [P10]

Design for multiple purposes

If preregistration templates reflect what the user considers to be the primary purpose, we can make them *dynamic*: showing only the questions that conform to the user's choice of purpose, be it delimiting flexibility or increasing transparency.

2. Increasing transparency

"I think [statistical] power is one of the biggest mistakes that are made in psychology, so not asking people to actually prove that they have the power of the test is a mistake..." [P6]

Design for different user roles

For authors who check preregistration and the manuscript "point-by-point", they may benefit from a tool that integrates experimental design with writing. For reviewers/editors who query the preregistrations, an interactive tooltip that calls out preregistered protocol in a manuscript may be helpful.

* In addition, different user roles (authors or reviewers) interact with preregistrations differently; barriers to adoption exist along discipline lines.

Design for different disciplines

Some users who do non-experimental work find preregistration alienating; for others, templates or examples do not exist. Community-based approaches such as workshops may help develop templates and norms for non-experimental research.



