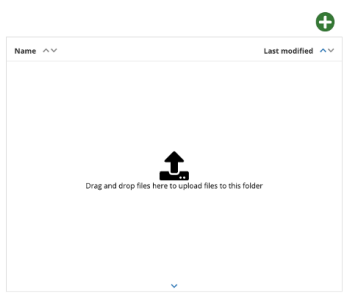# Instructions

This document includes the questions that will be when completing this registration template on OSF. Make a copy of this document and use it to plan and prepare for submitting your registration.

Questions with a red asterisk (*) are required.

Questions will offer one of the following input options:

●	Radio button	You will be provided with a series of options and may select only one.
☐	Check box	You will be provided with a series of options and may select as many as necessary.
Text box	Text box (short or long)	You will type in your response.
	File upload widget	You can upload a file as a response to this question. You may attach up to 5 files and cannot total over 5GB in size.

Metadata

Title

Description

Contributors

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Subject

Our system uses the [bepress taxonomy](#). Please select as many subjects as you please. Note, the more detailed and inclusive you are in your response makes it easier for others to find your work.

Tags (Optional)

Theory and Measurement
Background

Provide background on the theory, including situating it within the broader academic literature. If the theory is based on previously published works, include citations for the works used to formulate the theory for making the predictions. If the theory is original to this study, state explicitly that it has not been published elsewhere.

Scope Condition Cases

Specify the cases within the theory's scope conditions – i.e., the cases in which the researcher expects the theory to apply. Predictions should be registered for the maximum number of cases within the theory's scope conditions to avoid "cherry picking" cases in which the predictions are most likely to be accurate. To determine the universe of cases within scope, apply all factors that substantially bound the theory's applicability and at a minimum specify the cases within the theory's temporal and geographic scope. For the temporal scope, include specified dates (e.g., January 1, 2030) or a yet-to-be-determined date if the date is unknown at the time that the original predictions are registered (e.g., the date of the next general election in a given country).

Study Variables
Variable Specification

Specify the following variables in the theory: independent variable(s), primary outcome variable, auxiliary outcome variable(s) (if applicable), mediating variable(s) (if applicable), moderating variable(s) (if applicable).

At a minimum, the independent variable(s) and primary outcome variable must be specified as they are necessary for evaluating a theory's predictive power. The following variables may be applicable for some theories:

- auxiliary outcome variables that are not the theory's primary outcome but potentially reveal useful observable implications about the theory;

- mediating variables that explain how an independent variable affects the predicted outcomes; and,
- moderating variables that influence the independent variables' effect on the predicted outcomes.

Variable Relationships

Specify the directionality of the variables' predicted effects. At a minimum, state in what direction the independent variable is predicted to change the primary outcome variable value. This might be a predicted increase, decrease, or no change for a continuous outcome variable or a predicted occurrence or non-occurrence for a binary outcome variable.

Variable Measurement
Measurement and Data

Describe the process used to measure each variable. Specify the source of the raw data as well as how and when they are collected. Also include information on how the data are processed and, if applicable, transformed.

Missing Data

Specify how missing data is handled such as either dropping cases with incomplete data from the analysis or conducting interpolation.

Evaluation Metrics
Prediction Accuracy

Specify the metrics that will be used to evaluate the accuracy of predictions, at what time intervals will prediction accuracy be measured, and the rationale for selecting metrics to measure accuracy. If accuracy is to be measured by more than one metric, one should be chosen as the primary metric with alternate metrics included as robustness checks. The metrics might include: proportion of predicted outcomes correct, raw count of predicted outcomes correct, Brier scores, ranked probability scores, logarithmic loss.

At a minimum, an evaluation metric must be specified for predictions of the primary outcome variable and any auxiliary variables. If the theory includes mediating variables, consider also specifying metrics for evaluating the independent variables' accuracy in predicting these variable values. Mediating variables can be thought of as "intermediate outcomes," and thus correct predictions of their values can speak to the theory's overall predictive power.

Note: Independent variables that do not manifest the expected values stated in the predictions should not be counted for or against a theory's accuracy. Prediction registration aims to test the theory's predictive power, which entails predicting an outcome contingent on values of the independent variables. If a given case's independent variable values deviate from the values specified in the initial registration, the theory would no longer be expected to predict the outcome. Likewise, if the theory includes moderating variables and the values deviate from the stated values, the prediction for the cases with the deviation should not be counted for or against the theory's accuracy.

Confidence Levels

Consider providing uncertainty measures to express the degree of confidence in each prediction. Uncertainty measures might be ordinal (e.g., High Confidence, Moderate Confidence, Low Confidence), numeric (e.g., 1, 2, 3), or statistical confidence intervals. If researchers include confidence levels, state whether they will be used to weight cases as part of evaluating prediction accuracy. For example, a researcher testing the effect of public opinion on election outcomes may have uneven quality and quantity of opinion polling across countries. Thus, the researcher might choose to state differential levels of confidence for the predicted outcomes depending on the available polling data.

Write ""N/A"" if not applicable.

Alternative Baselines

Consider providing an alternative baseline measure for predictions for comparison with the theory being tested. These baselines might be derived from an alternative theory, prediction markets, predictions by superforecasters and artificial intelligence models, or a mathematical baseline such as 50-50 chance. Tailor alternative baselines to the claim of predictive power made by the researcher. For example, if a researcher seeks to evaluate whether a theory predicts election outcomes better than Large Language Model-based (LLM) artificial

intelligence, the alternative baseline would be the election outcome predictions made by selected LLMs such as ChatGPT or Claude. If an alternative baseline is provided, include all relevant information that an independent researcher would need to reproduce the results.

Write ""N/A"" if not applicable.

[ ]

Predictions
Predictions

Specify the predictions including, at a minimum, the independent variable values and the primary outcome variable values (see "Study Variables" section on the Theory and Measurement page). In addition to this registration document, the researcher may wish to post the predictions in a public forum such as a social media platform for ease of accessibility. Any posts of the predictions in a public forum should include a link to this registration for transparency.

[ ]

Update Criteria

Specify the criteria, if any, for which updates will be made to the initial predictions and describe how the predictions will be monitored to assess the potential need for updates. Categories of updates that researchers might consider include:

- Case Population Updates: New cases may be added if events render a previously out-of-scope case within the scope of the theory. Take, for example, a theory that aims to predict election outcomes globally. If a new election is called in a country after the researcher has registered the initial predictions, a prediction for the new election may be added to the population of cases. Likewise, a case may be dropped from the initial set of predictions if events render it out of scope such as a previously-scheduled election being cancelled.
- Independent Variable Updates: Independent variables may be updated if observed developments change their values to values other than those specified in the initial prediction registration. If a given case's independent variable values require updating during the study, the researcher subsequently recalculates the predicted outcome values and, if applicable, mediating variable values that the independent variables are theorized to affect. For example, a researcher testing a theory that democracies are less likely to go to war with each other might update their independent variables if a coup overthrows a democratically-elected government and revise the predicted outcome to be a greater likelihood of war.

- Moderating Variable Updates: Moderating variable may also be updated if observed developments change their values to values other than those specified in the initial predictions.

Note: Outcome variable and mediating variable values may not be updated without an update to the associated independent variable values in line with the theory.

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Additional Information
Conflicts of Interest (Optional)

Disclose any conflicts of interest related to the registration that could influence the researcher's impartiality. Importantly, if the researcher has any known influence over the value of the variables included in the theory, it should be described in detail.

<div style="border: 1px solid #000; background: #f2f2f2; height: 80px;"></div>

Acknowledgments (Optional)

Add acknowledgments for those who supported the study registration. State also any financial support provided for the study.

<div style="border: 1px solid #000; background: #f2f2f2; height: 80px;"></div>

References (Optional)

Add a list of references cited in this study registration.

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Template Attribution

This registration follows the structure of a community-developed template. More information about the original template is available in the citation below.

Miller, Andrew Cesare. "Registering Theory-Based Predictions in Political Science." PS: Political Science & Politics 58, no. 1 (2025): 155–61. https://doi.org/10.1017/S1049096524000404