Defaults, Disclosures, Advice and Calculators: One size does *not* fit all

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Complexity in financial decisions can be natural or artificial.

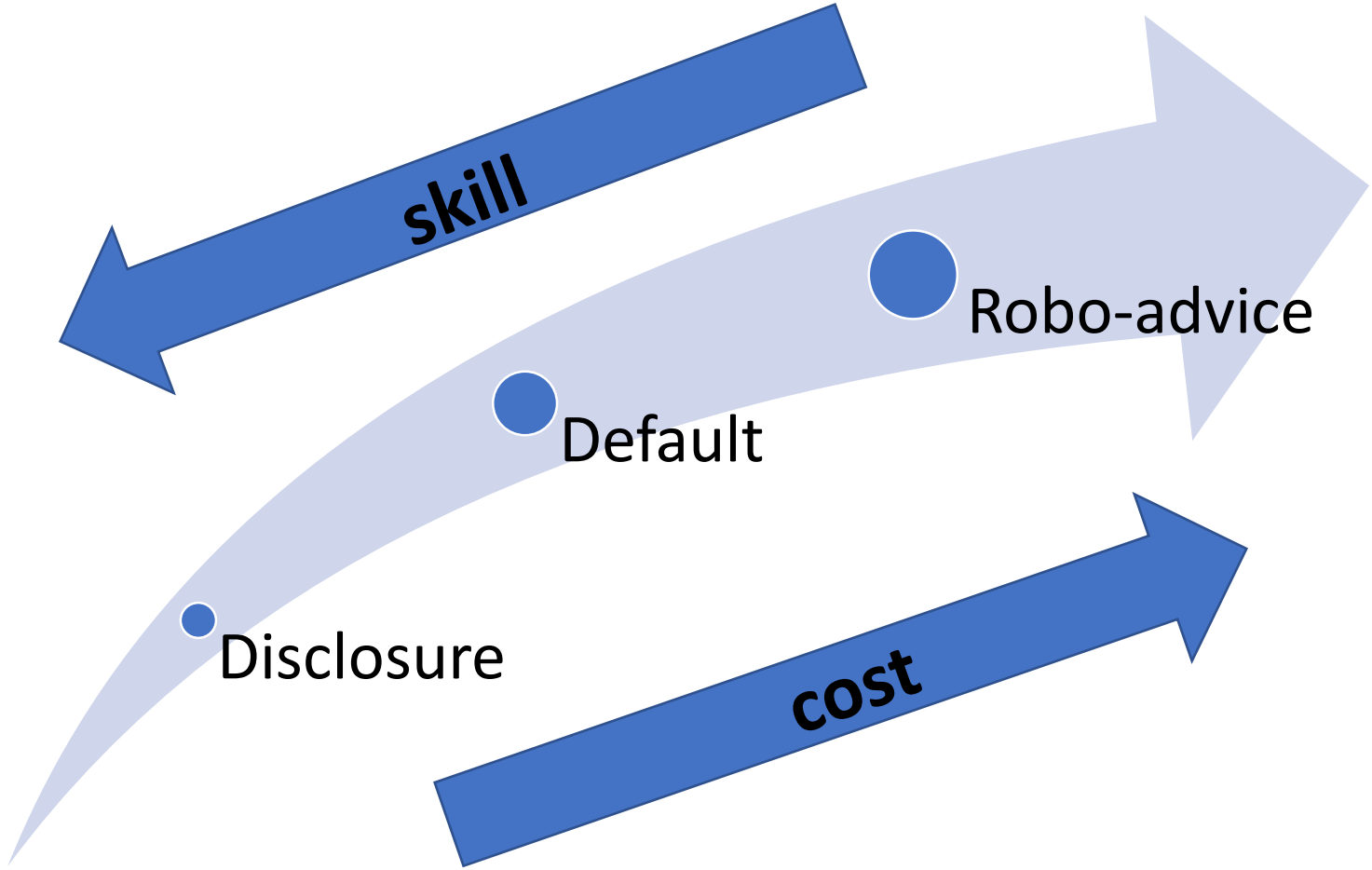
- Some decisions are naturally hard:
  - Savings decisions involving exponential growth
  - Investments with correlated, risky payoffs
  - Insurance for rare events

- Some decisions are made harder:
  - Complex pricing fosters “ignorance” and oligopoly power (Scitovsky 1950; Carlin 2008)
    - Direct fees + involuntary surcharges
    - New technical terms
    - Omitting important information

Can inexpensive, scalable interventions defeat artificial complexity?

- How do consumers develop skill for choosing?
- Is skill helped by:
  - ***a) disclosures;***
  - ***b) defaults;***
  - ***c) simple robots;***
  - ***d) smart robots?***

More or less intervention?
More or less skill?
More or less cost?



Experiment task: choose the lowest fee investment fund.

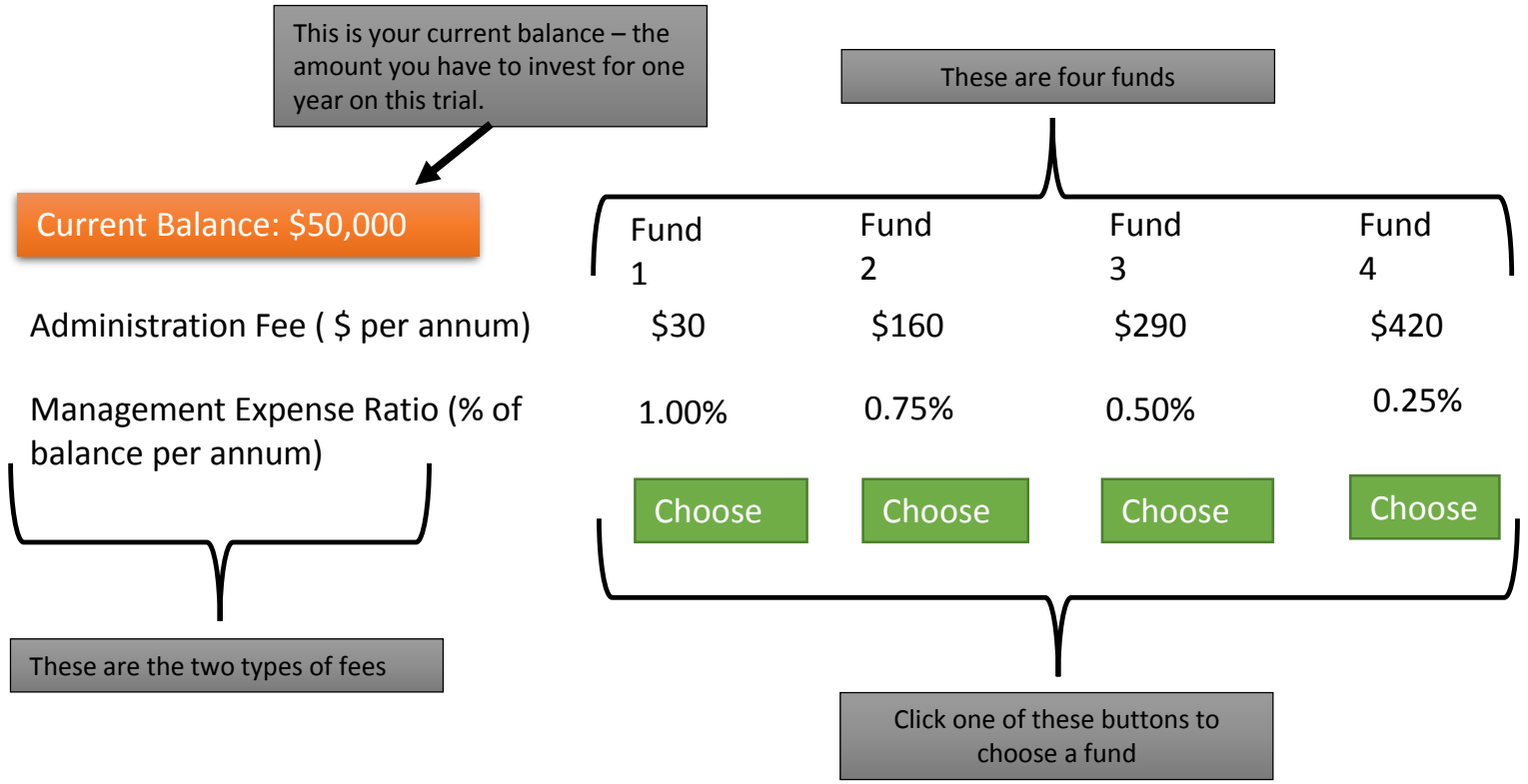
- Two on-line, incentive-aligned experiments
- Each with over 1000 participants
- Savers choose between one of four investment funds
- Account balances change at each of 40 rounds
- Goal is to invest in the least-cost fund
- Funds have two-part fee structure

Experiment 1 tests three types of “help”.

Experiment 1

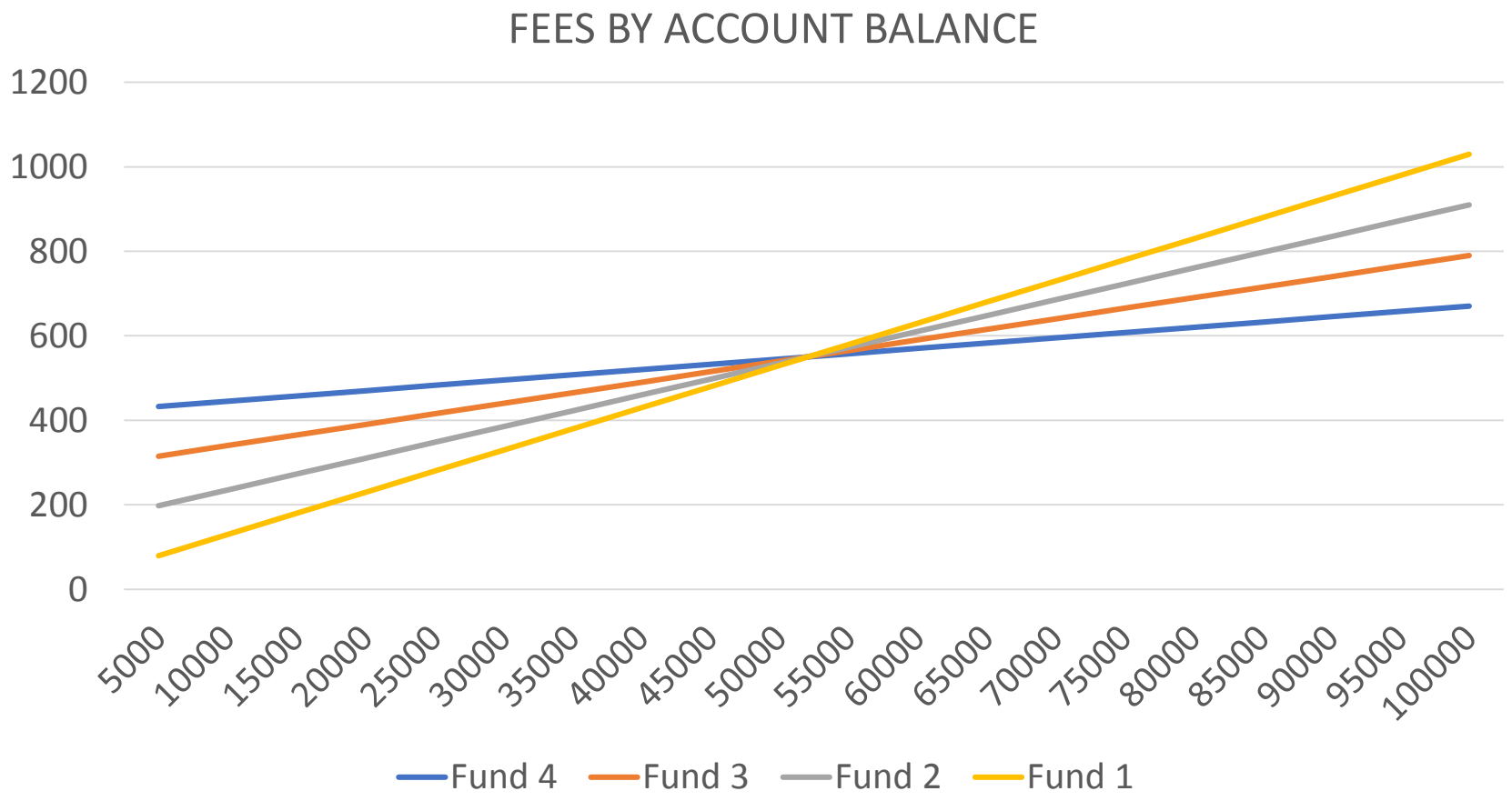
- **BASELINE**: no additional information
- **DISCLOSURE**: “For balances of $50,000 Fund 1 is the least cost fund”
- **DEFAULT**: “The preselected fund is the one that is least expensive for most investors”
- **ADVICE**: “You can seek advice about the least cost fund. The advice costs 1 point”

Example Screenshot



- 40 trials at different balances
- Correct answers pay 4 points
- Incorrect answers pay 0 points
- Advice costs 1 point; Nudges are free

Least-cost fund switches from Fund 1 to Fund 4 above $50K; Funds 2 and 3 are never optimal.



Disclosure treatment

For balances of $50,000 Fund 1 is the least cost fund

Current Balance: $100,000

	Fund 1	Fund 2	Fund 3	Fund 4
Administration Fee ($ per annum)	$30	$160	$290	$400
Management Expense Ratio (% of balance per annum)	1.00%	0.75%	0.50%	0.25%
	Choose	Choose	Choose	Choose

Default treatment

The preselected fund is the one that is least expensive for most investors.

If you want to invest in this fund click CONFIRM. If you do not, then make another selection.

Current Balance: $100,000

	Fund 1	Fund 2	Fund 3	Fund 4
Administration Fee ($ per annum)	$30	$160	$290	$400
Management Expense Ratio (% of balance per annum)	1.00%	0.75%	0.50%	0.25%
	Choose	Choose	Choose	Choose

CONFIRM

MAKE ANOTHER SELECTION

Advice treatment

You can seek advice about the least cost fund. The advice costs 1 point

Current Balance: $100,000

	Fund 1	Fund 2	Fund 3	Fund 4
Administration Fee ($ per annum)	$30	$160	$290	$400
Management Expense Ratio (% of balance per annum)	1.00%	0.75%	0.50%	0.25%
	Choose	Choose	Choose	Choose

CLICK HERE TO OBTAIN ADVICE ON INVESTING

The Advisor says: “At your current balance. Fund 4 is the least cost fund”

If you want to invest in this fund click CONFIRM. If you do not, then make another selection.

CONFIRM

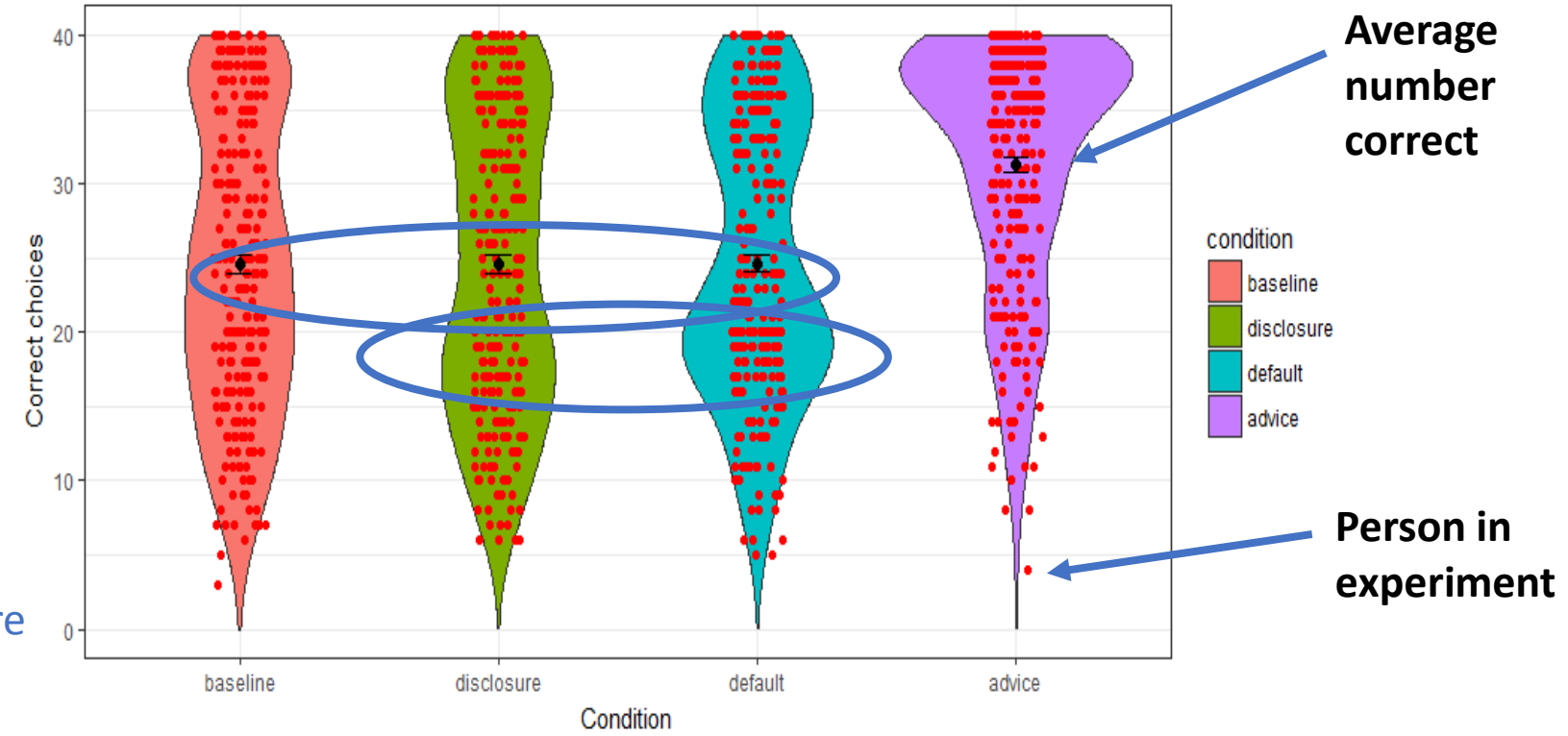
MAKE ANOTHER SELECTION

“Robo-advice” makes a significant difference.

Violin plots show the (smoothed) probability density of the data at different values.

No improvement in accuracy for Disclosure or Default relative to Baseline.

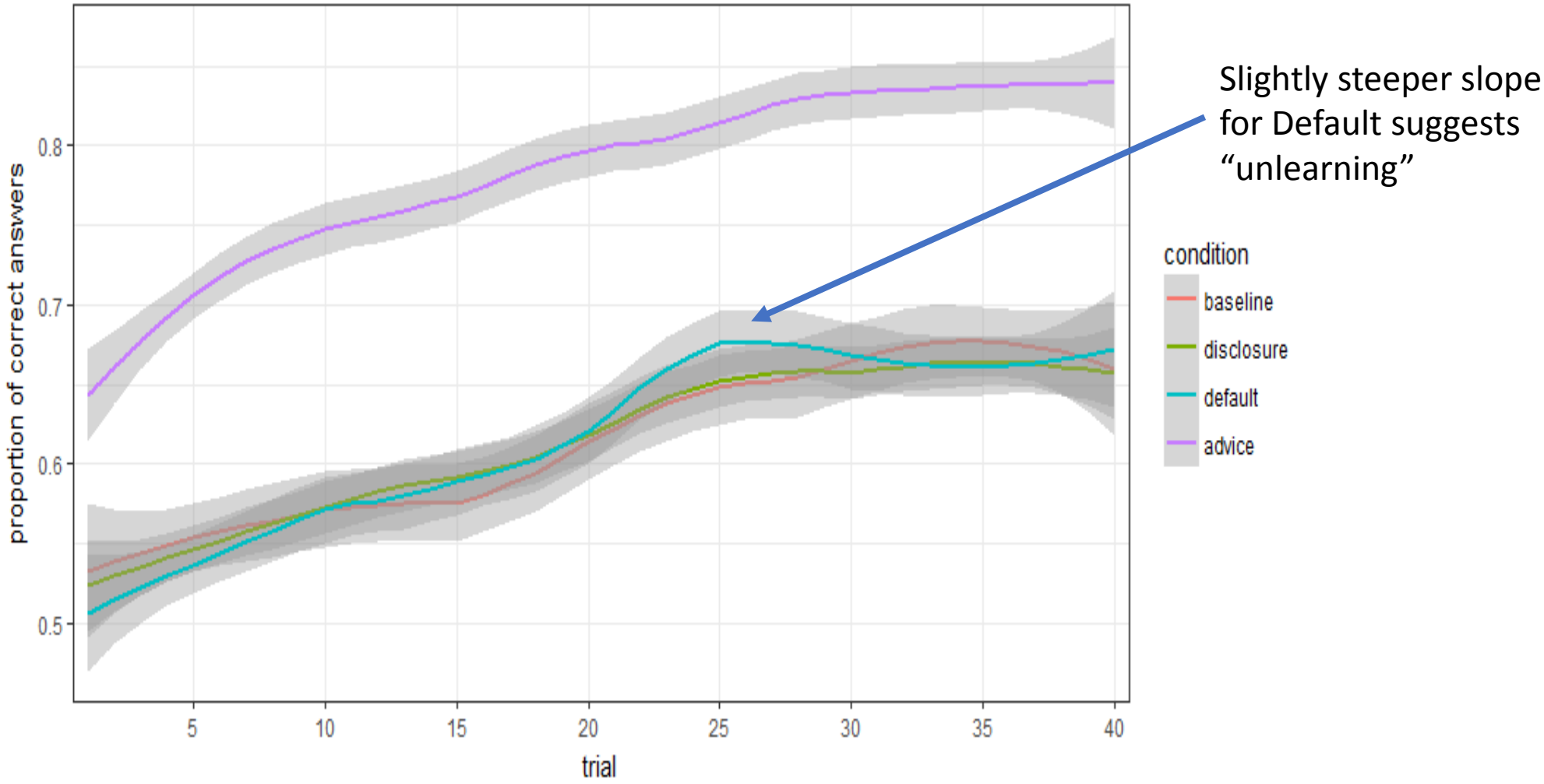
Bimodality in Disclosure and Default



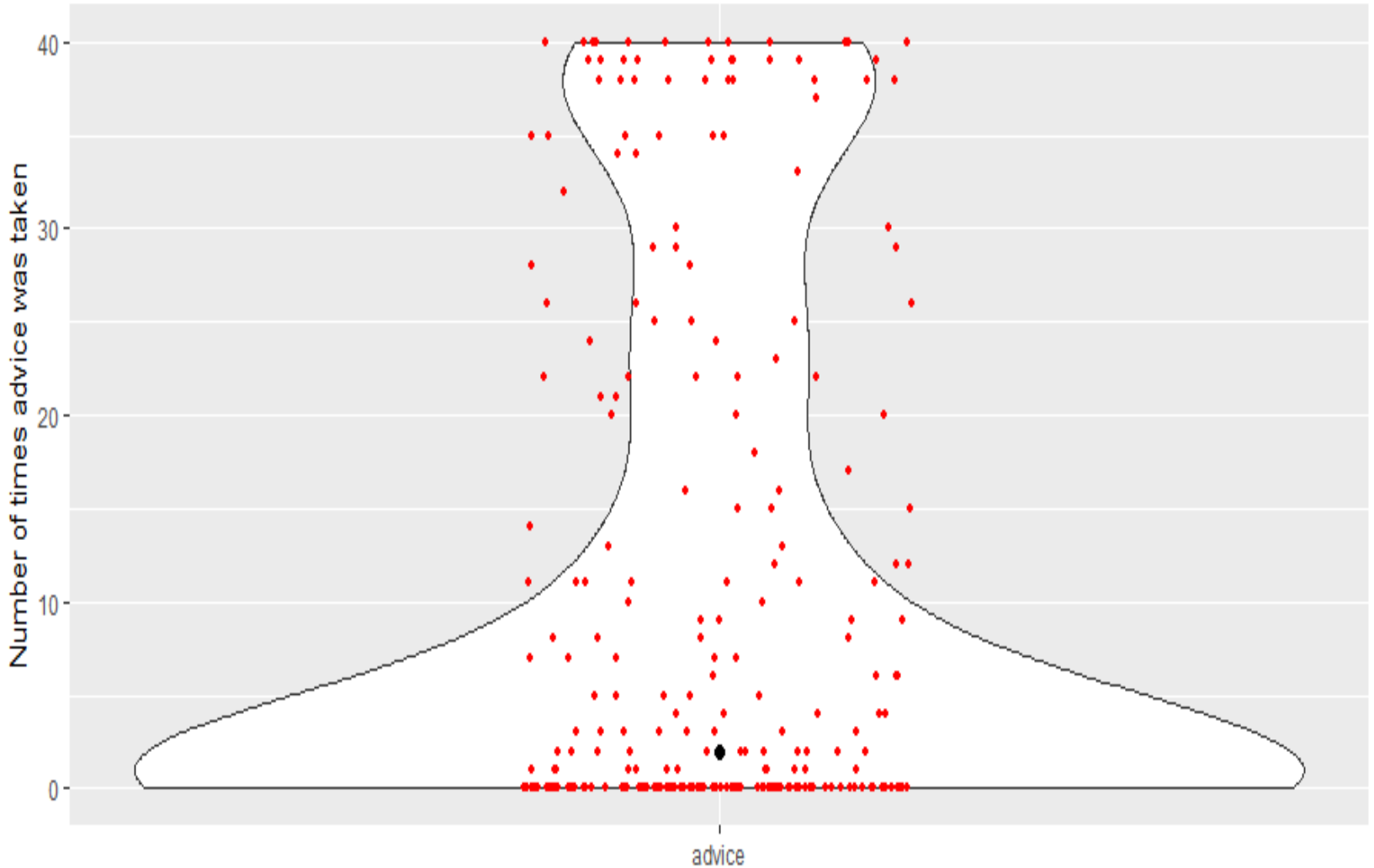
Average number correct

Person in experiment

Proportion of correct answers at each trial consistently higher for advice.



We find a large variation in number of times participants took advice.



Summary

- Most participants do better than chance (10/40)
- No improvement in accuracy for Disclosure or Default relative to Baseline.
- Evidence of **bimodality:**
  - some participants learn how to calculate the least cost fund,
  - others appear to (blindly) follow default and disclosure information.
- **Advice** leads to immediate and sustained **improvement**s in accuracy
- **Advice** leads to higher average earnings (114 points cf 98 points)
- **Default** conditions shows (probably) the steepest learning curve
  - some learning (or unlearning) that the default is not always correct.
- Some participants don't rely on advice at all; others use it for every choice

Next questions…

- Can we **boost** the **nudges**?
- What would make the hour glass figures into cocktail glasses?
- Where does “Robo-advice” fit?
- What happens when help is removed?

Experiment 2: help to learn the calculation steps; then “cold turkey”.

Experiment 2

- Phase 1:
  - All experiment 1 conditions (**BASELINE; DISCLOSURE; DEFAULT; ADVICE)** crossed factorially with presentation of **Simple** or **Smart Calculator**.
  - **Smart calculator** requires only data entry; costs 0.5 points
  - **Simple calculator** requires data entry and correct algorithm; costs 0 points
  - 20 rounds

- Phase 2:
  - All conditions given no help
  - 20 rounds

Basic Calculator Instruction for ALL conditions

OK

In addition to the information about the 4 funds, you will be able to use an on-screen calculator that may help you to work out which fund is the least expensive for your current balance.

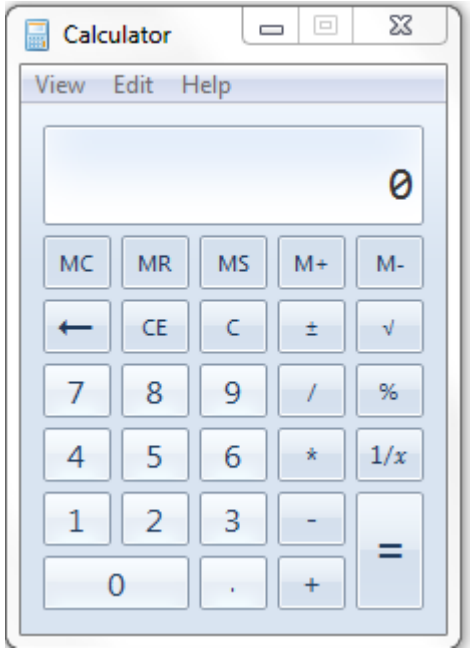
If you would like to use the calculator then you will need to access it by clicking the button on the screen. This will enable the calculator for that decision. You can enter information about as many of the funds as you like in order to compare fees for your current balance.

An example of how to enable the calculator and what the calculator looks like is shown below.

Access Calculator

Click this button to access the calculator.

If you access the calculator, the tool shown to the right will appear on screen



Smart Calculator Instruction for ALL conditions

OK

In addition to the information about the 4 funds, you will be able to use an on-screen calculator that may help you to work out which fund is the least expensive for your current balance.

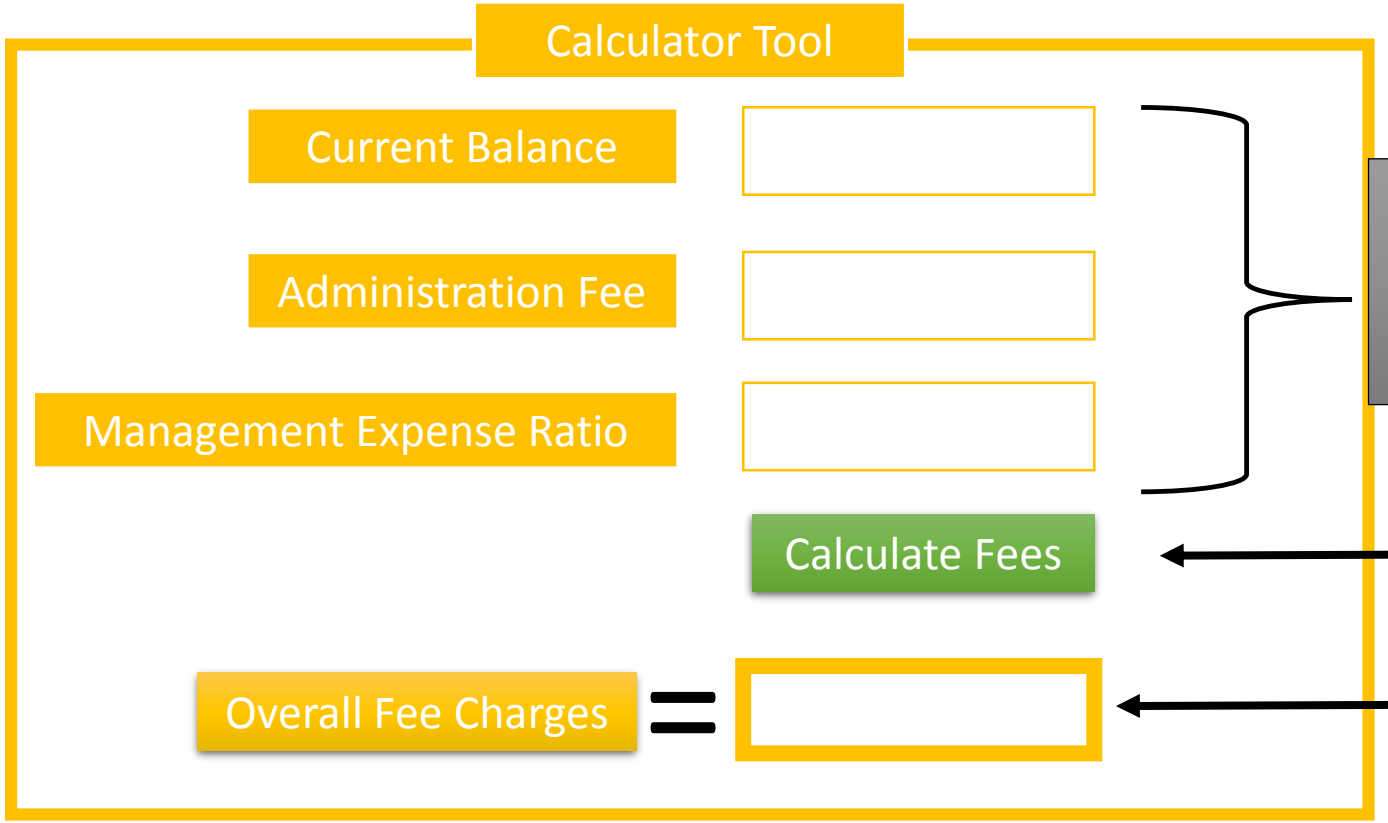
If you would like to use the calculator then you will need to pay a small charge of 0.5 points per use. This fee will enable the calculator for that decision. You can enter information about as many of the funds as you like in order to compare fees for your current balance.

An example of how to enable the calculator and what the calculator looks like is shown below.

Access Calculator

Click this button to access the calculator. Each time you access it 0.5 points will be deducted from your tally

If you access the calculator, the tool shown to the right will appear on screen

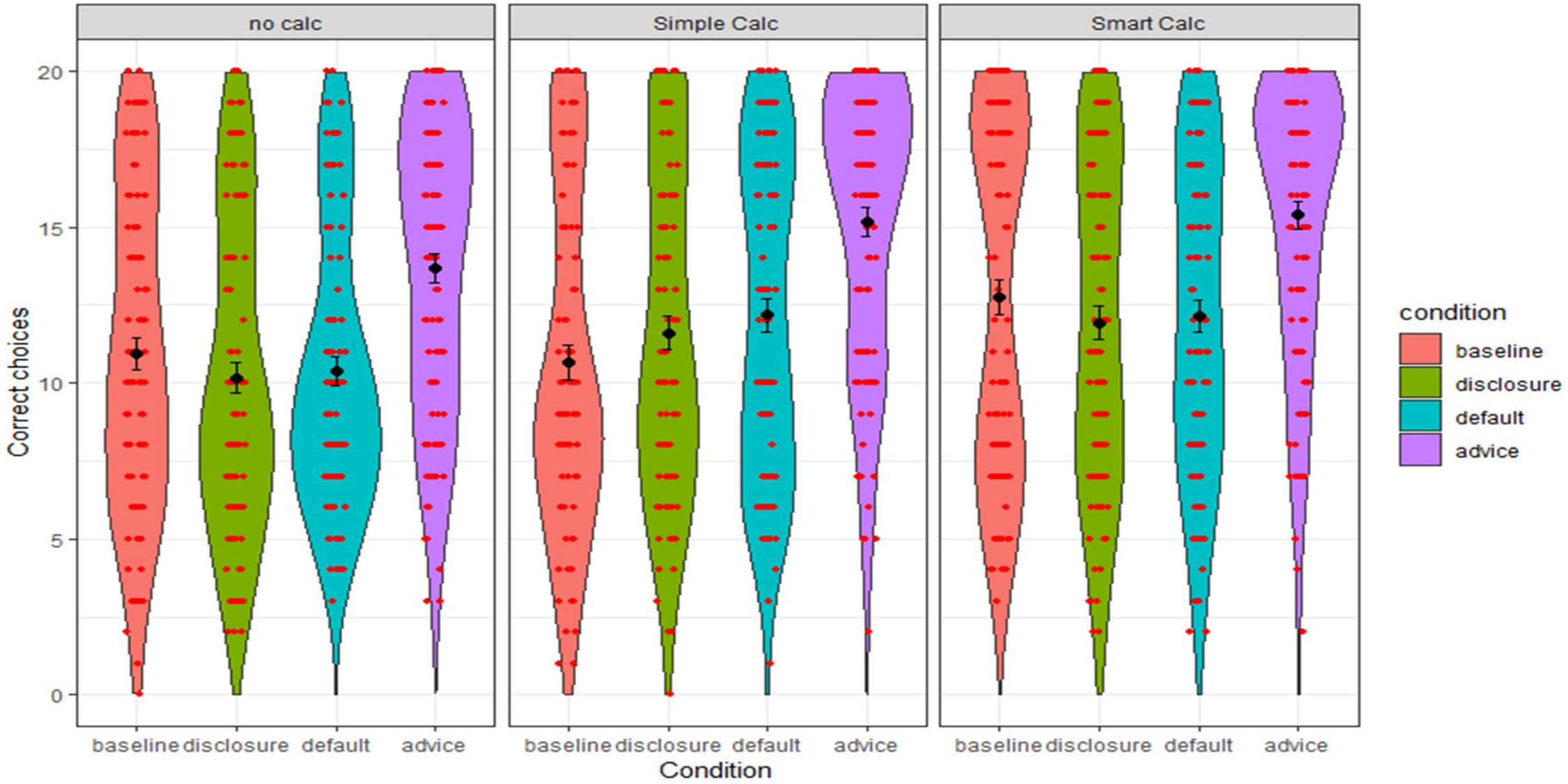


Enter the relevant information about the fund you are considering into each box

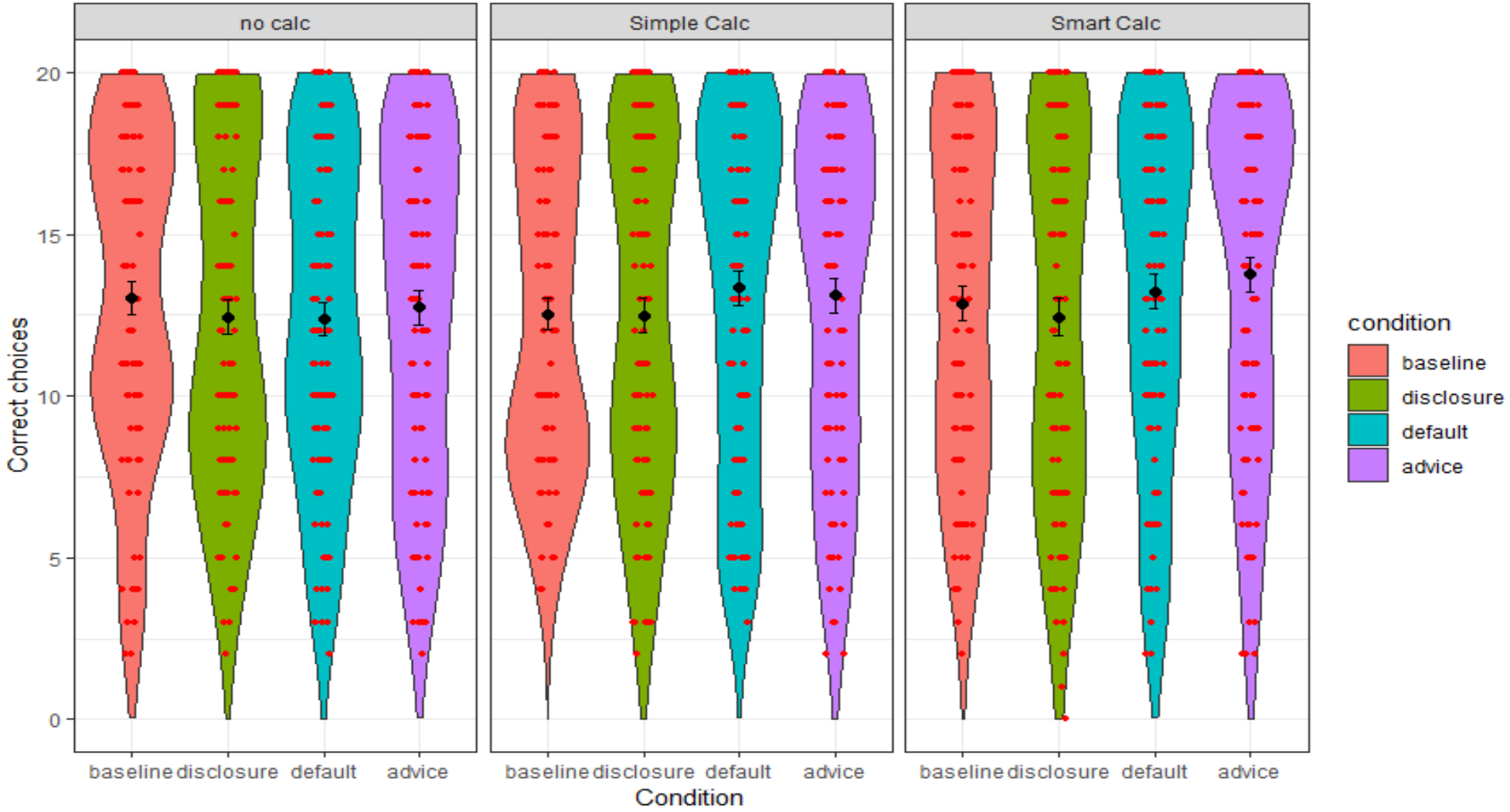
Press this button to calculate the fees

The overall fees charged for the fund will be displayed here

Phase 1: Providing simple or smart calculators to participants improved accuracy for all conditions; no interaction between calculator and condition.



Phase 2: Transfer phase results suggest a regression effect for Advice Treatment plus slight increase in accuracy for the other treatments.

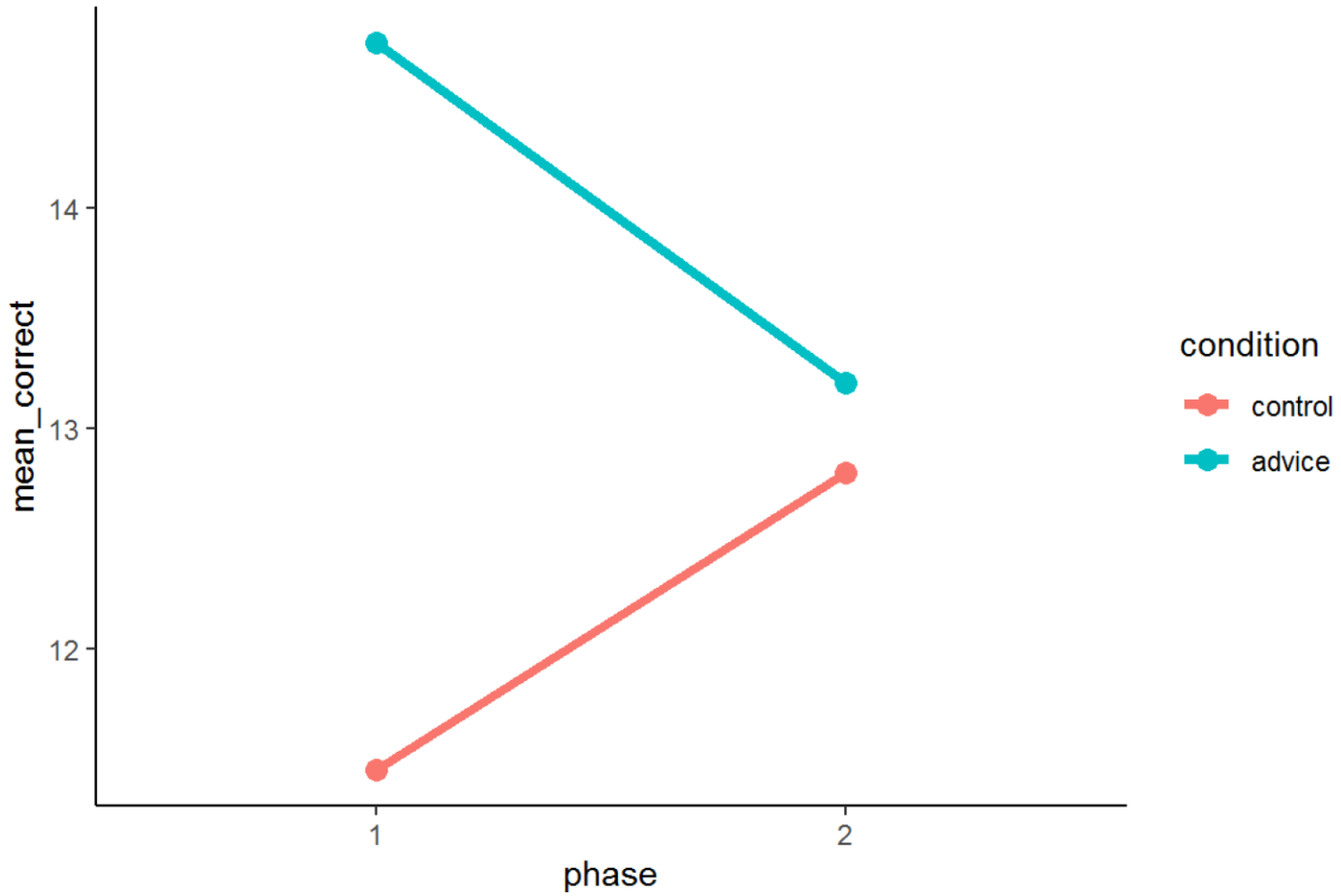


Summary of regression results

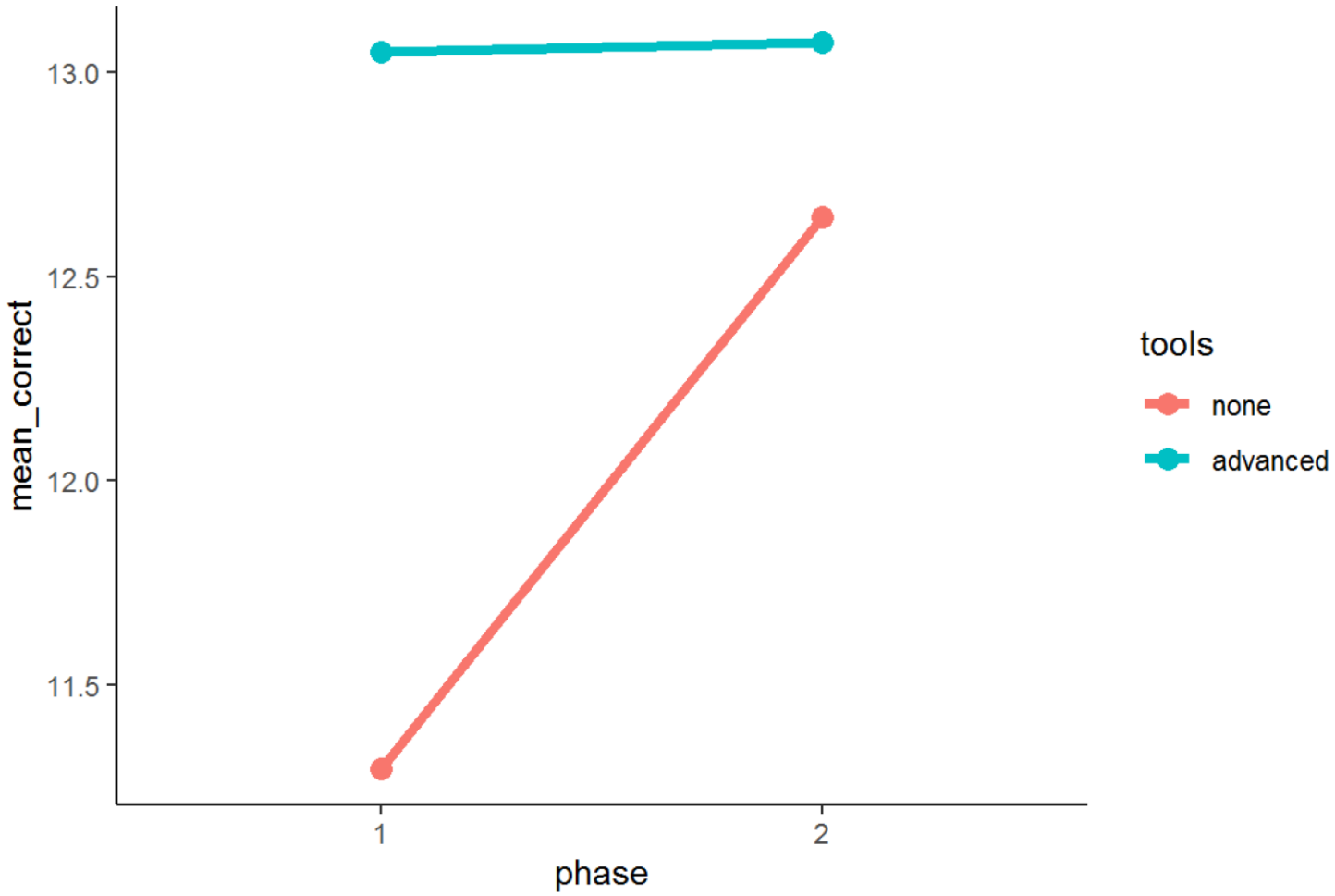
Main effects from logistic regression of correct answers on condition, tools, and phase, with individual participant random means:

- Advice does better than baseline;
- Default and disclosure do no better than baseline;
- Smart calculator does better than no calculator;
- Participants do better in transfer phase.

People with no advice do better in transfer phase; people with advice do worse.



People with no calculator do better in transfer phase; people with advanced calculator do not improve.



It’s important to boost consumers’ competence, not just nudge them towards a not-always-better option.

- Providing simple or smart calculators to participants improved average accuracy.
- No interaction between calculator and condition.
- Transfer of learning?
  - regression effect for Advice condition
  - Small increase in accuracy for others . It appears that over-reliance on advice when it is available led some participants to be unable to make choices on their own when advice was removed.
- Providers need to think carefully about the kinds of information they offer consumers
- Consumers need to understand limitations of defaults and disclosures