

TOWARDS AN UNDERSTANDING OF TRANSACTIONAL TASKS

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GOAL: Understanding how people go about completing (transactional) tasks

- Focus on transactional tasks: "tasks motivated by the intent of conducting a specific transaction, typically involving a monetary consideration or exchange"
- What is the perceived difficulty of those tasks?
- What type of support do users expect from the search engine? What functionality is lacking?
- Can we identify some behavioral patterns?

EXPERIMENT

- Laboratory study with CS bachelor students; two tasks in two difficulty levels
- Complete a task within a given time limit and fill out a response form
- Collected pre- and post-questionnaires and screen recordings

Task 1: Purchasing a product

- **(PRCA)** Find a laptop with given a set of min. requirements (processor, memory, etc.), with constraints on price and delivery date.
- **(PRCB)** Find a motor boat with a given min. specification (length, facilities, etc.), with constraints on price and delivery date.

Task 2: Travel planning

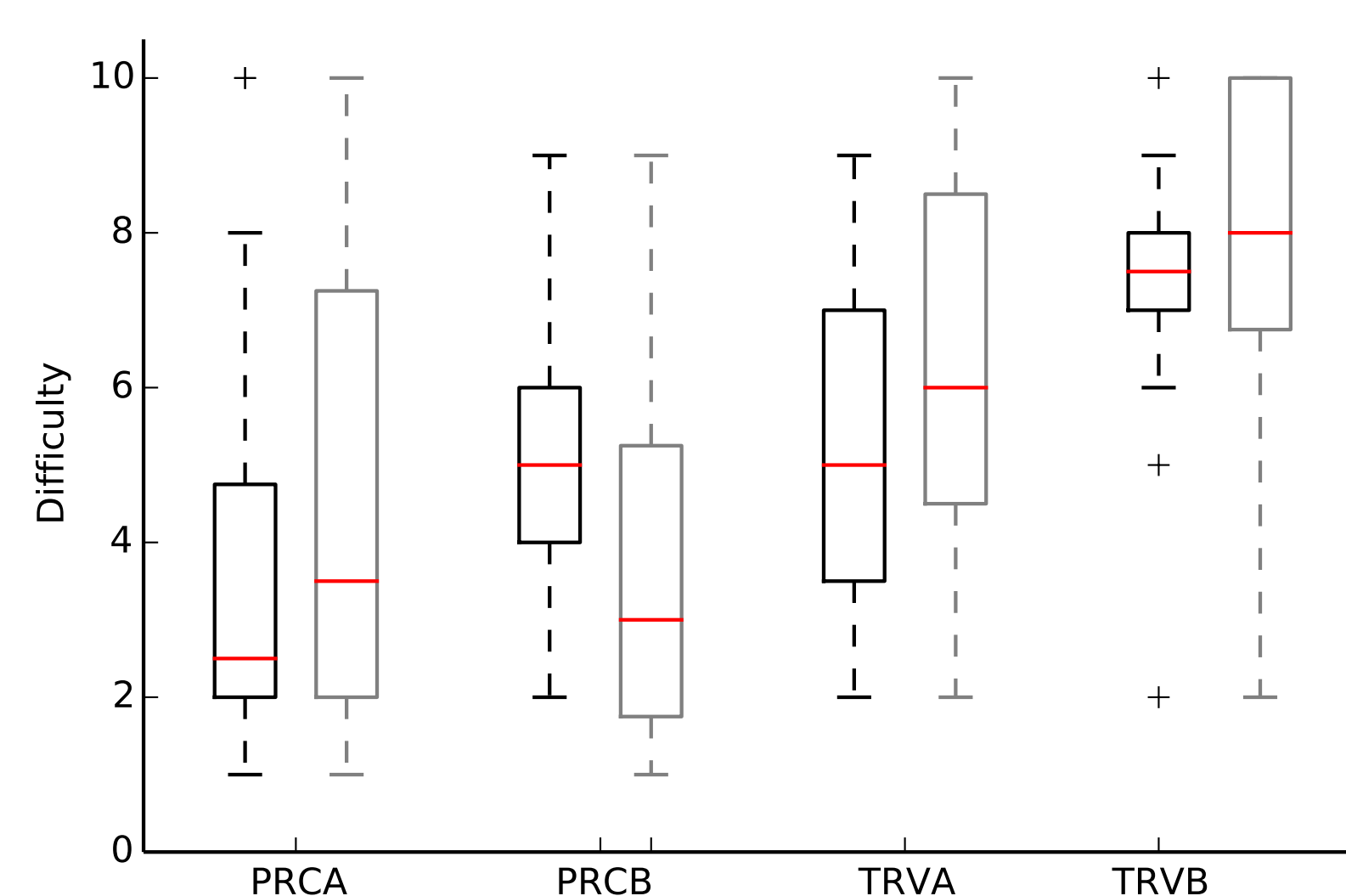
- **(TRVA)** Plan a conference travel to a neighboring country, given the travel dates and budget. Find flight, accommodation, a place to eat at, and five places to visit.
- **(TRVB)** Plan a holiday trip to a country on another continent visiting two cities. Find means of transportation, accommodation, places to eat at, and five places to visit.

RESULTS

- 60 responses, roughly evenly distributed across the 4 tasks

Perceived Difficulty

Level of difficulty as indicated by users before (black) and after (gray) completing the task.

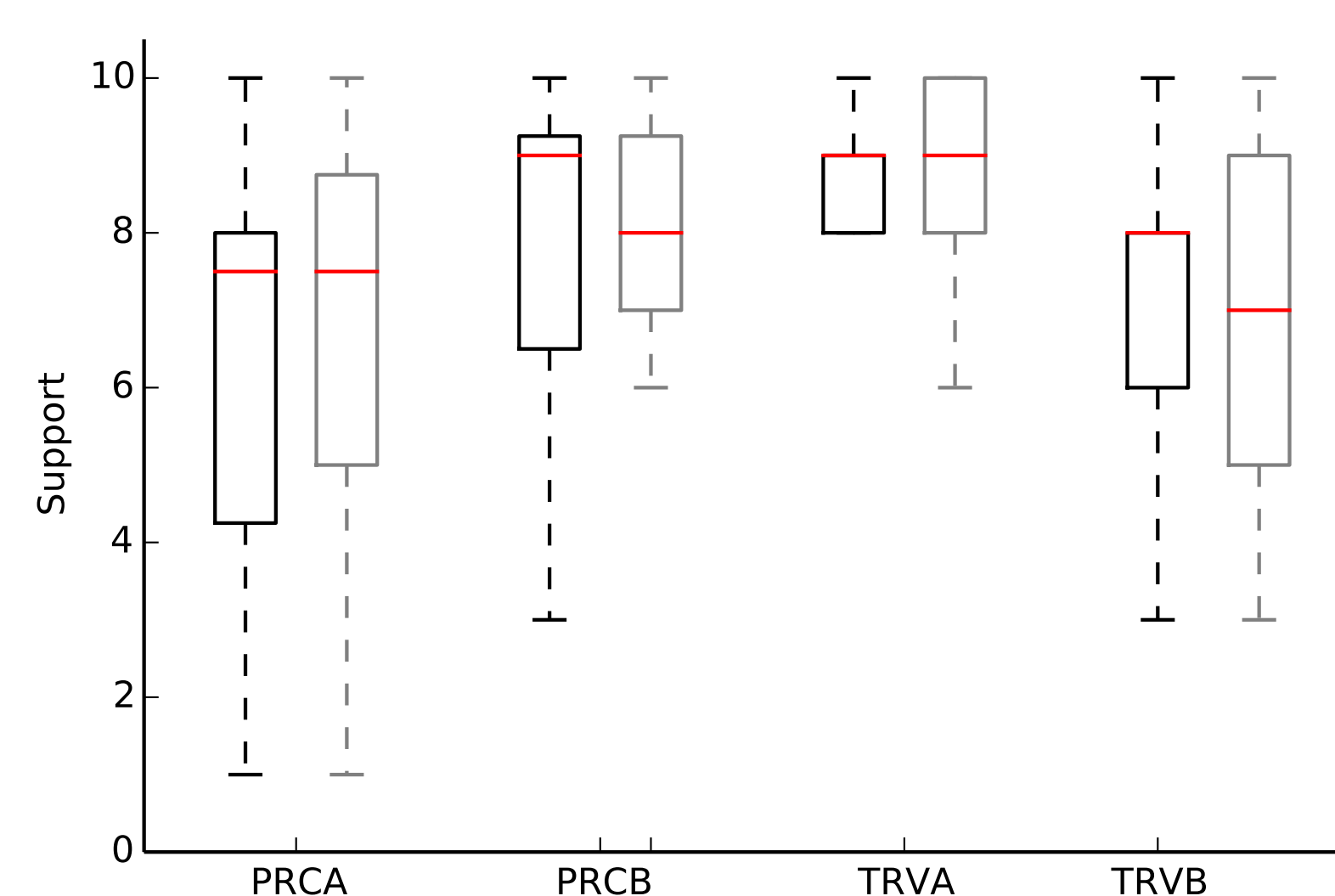


What makes a task easy/difficult?

- [+] Availability of search tools and services
- [+] Prior experience with similar task(s)
- [-] Fitting within the requirements/budget
- [-] Finding specific entities
- [-] Time limit

Search Engine Support

Level of search engine support as indicated by users before (black) and after (gray) completing the task.



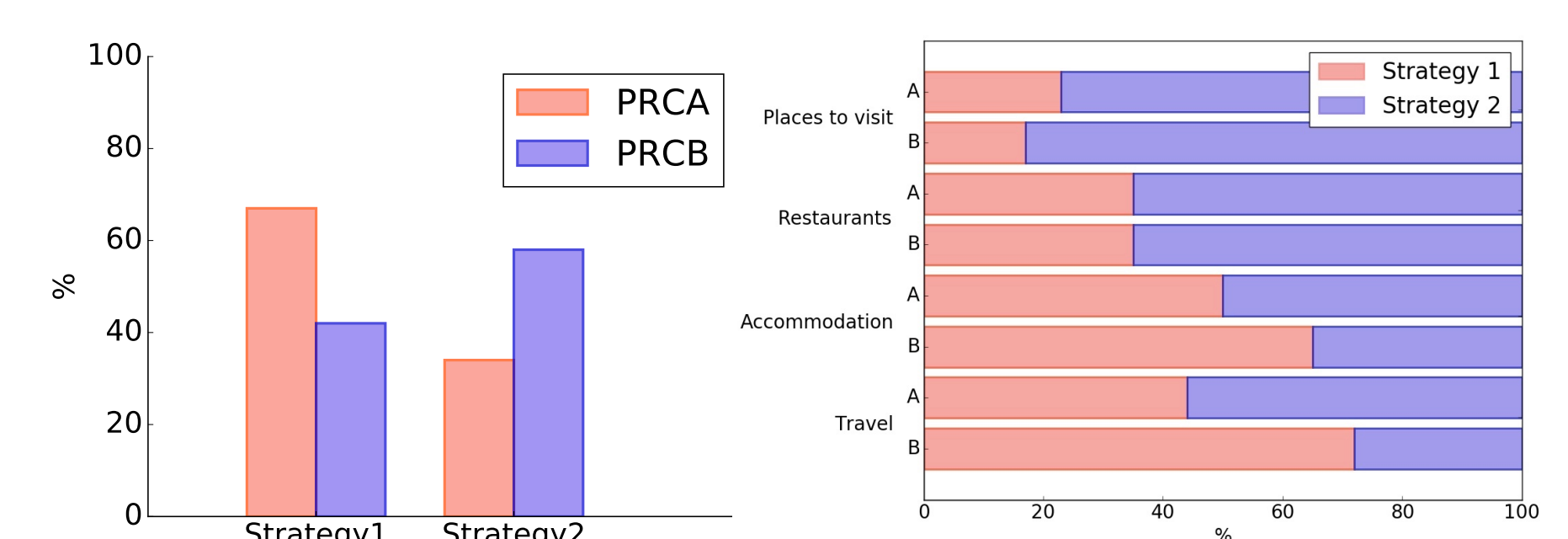
How well search engines support the completion of these tasks?

- For familiar tasks users have realistic expectations towards search engine support; for unfamiliar tasks they expect more than they could actually get
- Areas for improvement
 - Finding specific entities (products, hotels, etc.) and properties of entities (e.g., shipping date)
 - Additional filtering and sorting options on the SERP (similar to what specific verticals provide)

Task Completion Patterns

What search strategies can we observe?

- **Strategy 1:** Use the search engine to find a known site; navigate there and use the site's internal search and filter functionality to find the given item.
- **Strategy 2:** Use the search engine directly to locating the specific items; go to the specific website for further details and to conclude the transaction.



Which strategy do people use?

- For familiar tasks people tend to use Strategy 1, for unfamiliar ones Strategy 2.
- For complex tasks, people first break them down to a sequence of simple sub-tasks, then employ either Strategy 1 or 2 on those.