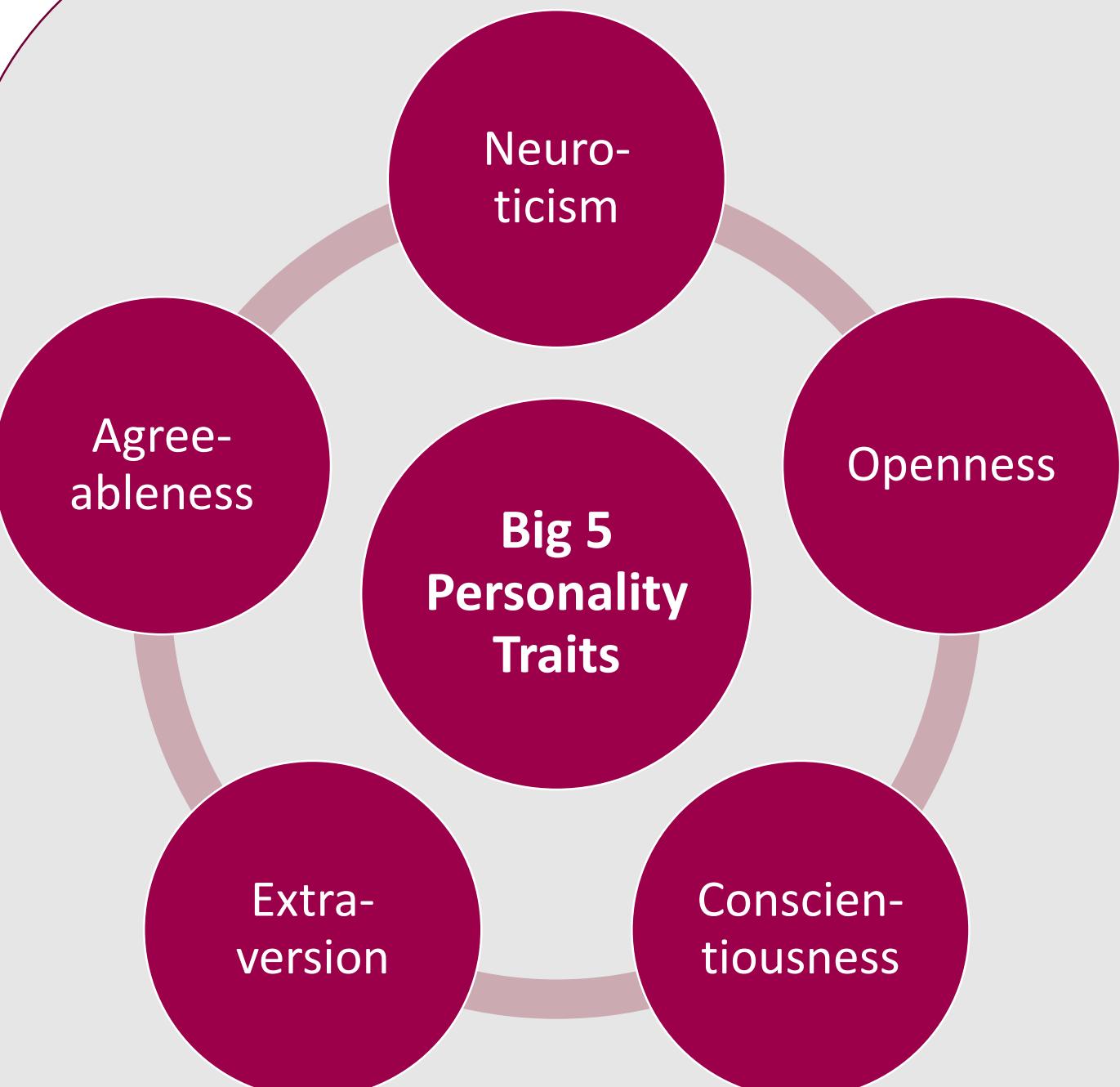


Personality and Information Behavior in Web Search

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1 Research Question



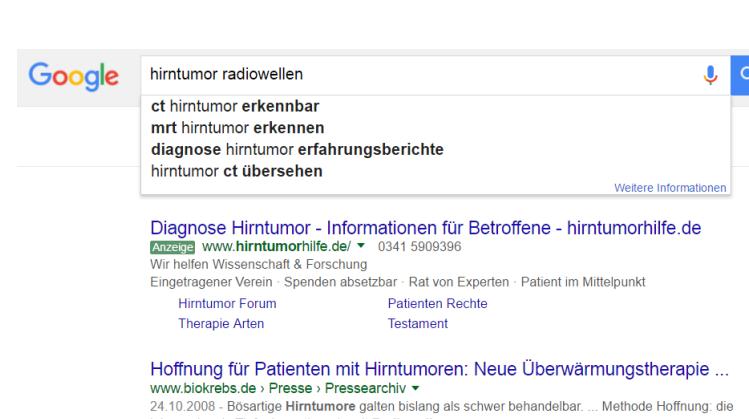
Recent research suggests that there is an **influence of personality** on different aspects of **Information Behavior**. However, there is a lack of research regarding **actual behavior** in the context of **Web Search** as a now dominant type of information behavior.

To operationalize the concept of personality we use the well known **Big 5 Personality Traits**. It depicts human personality on 5 scales.

tense, anxious	— Neuroticism —————→	stable, calm
shy, pensive	— Extraversion —————→	sociable, talkative
sloppy, flexible	— Conscientiousness —————→	dutiful, systematic
traditional, grounded	— Openness —————→	curious, tolerant
self-centered, direct	— Agreeableness —————→	friendly, altruistic

2 Methods

The study was conducted as a **laboratory experiment**. Participants had to perform **web search tasks** using *Google Chrome* on a laptop. The sample consisted of **30 participants**, mostly students.



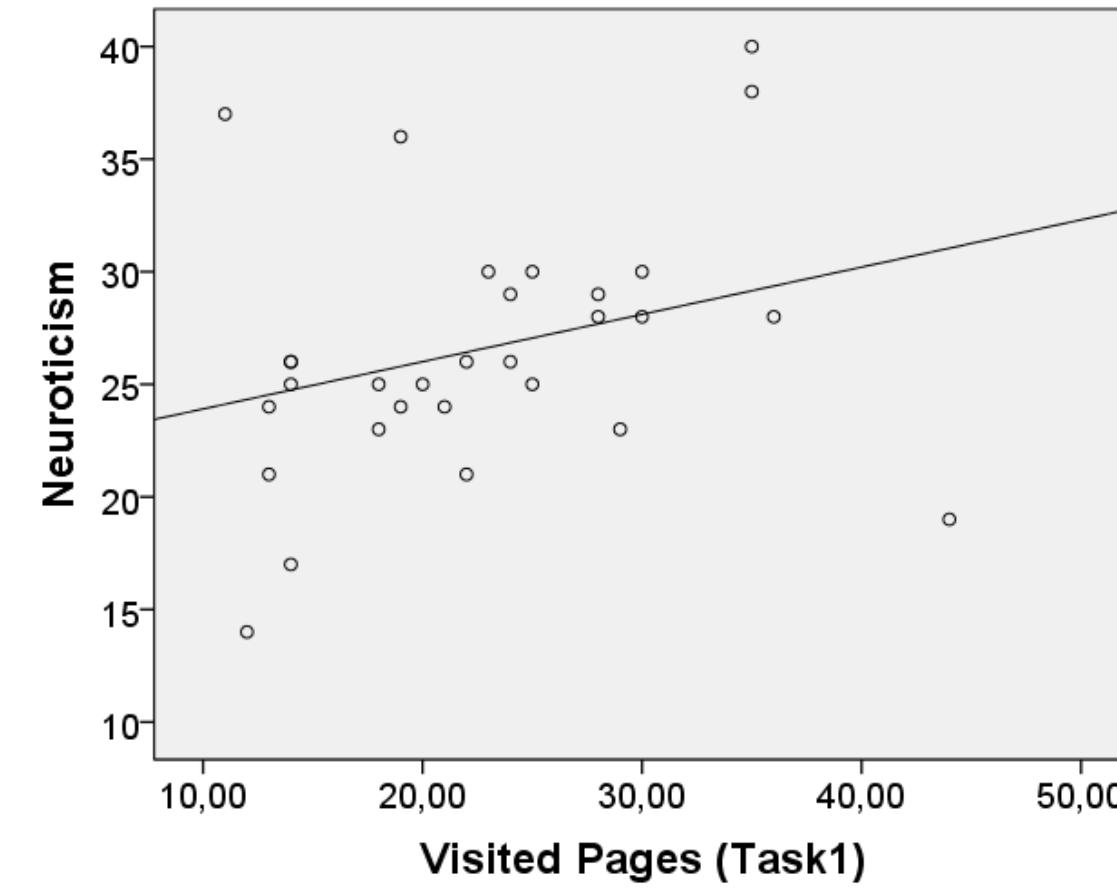
Participants had to **find information for a specific subjects** (Radio waves and brain tumours). They had to mark **relevant web documents** as favorites and store them in a "favorites" folder in their browser. For each task, participants had a time limit of 15 minutes. For the first task participants were supposed to find **five general pages, PDFs etc.** and store them. In the second task they had to explicitly look for **scientific literature** and mark three articles.

- Tasks were recorded using screen capture software
- With the help of a click-counter plugin and analysis of the videos **quantitative data** per Task was collected
- Variables are e. g. duration, number of clicks, number of pages, number of queries (also per minute), average/median/max rank, browser interaction
- Further data concerning the personal judgement of the subject's search was collected with **Post-Task-Questionnaires**
- The **Big 5 Traits** were operationalized with the **B5T**, a German questionnaire, which was presented to the participants at the end

3 Results and Discussion

Neuroticism

- Neuroticism correlates...:
 - ... positively with the **Number of Visited Pages**
 - ... positively with the **Back Button Usage**
 - ... negatively with the **Clicks per Page**
 - ... negatively with the **Query Length**

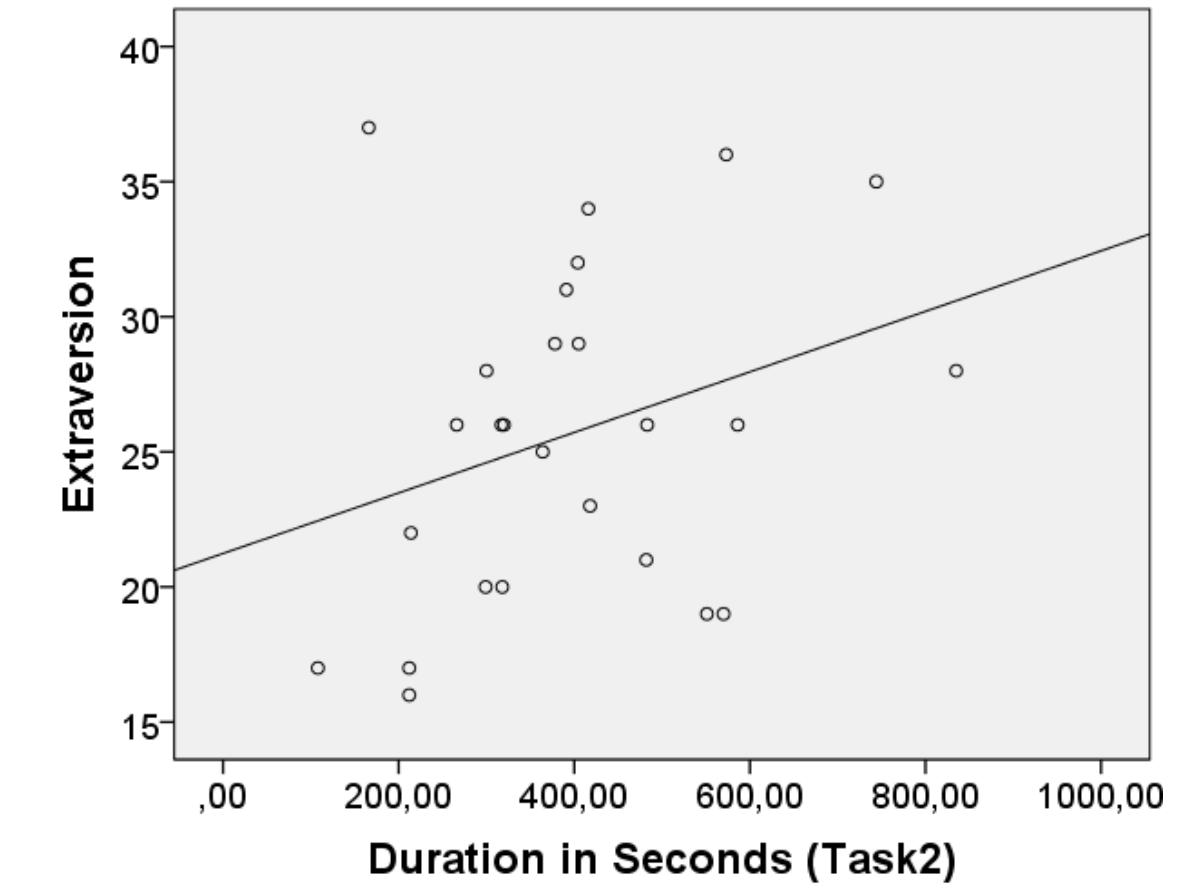


Participants with high Neuroticism:

- Visit **many pages** but **interact very little** with them → typical reservation of persons with high Neuroticism
- Have a relatively **short query length**
- The high level of back button usage **hints at problems with relevance judgement**, as results are clicked at first only to found irrelevant in the next step

Extraversion

- Extraversion correlates...:
 - ... positively with **Complexity Ratings for Task 2**
 - ... negatively with the **judgement of their own (scientific) information literacy**
 - ... positively with the **Duration for Task 2**

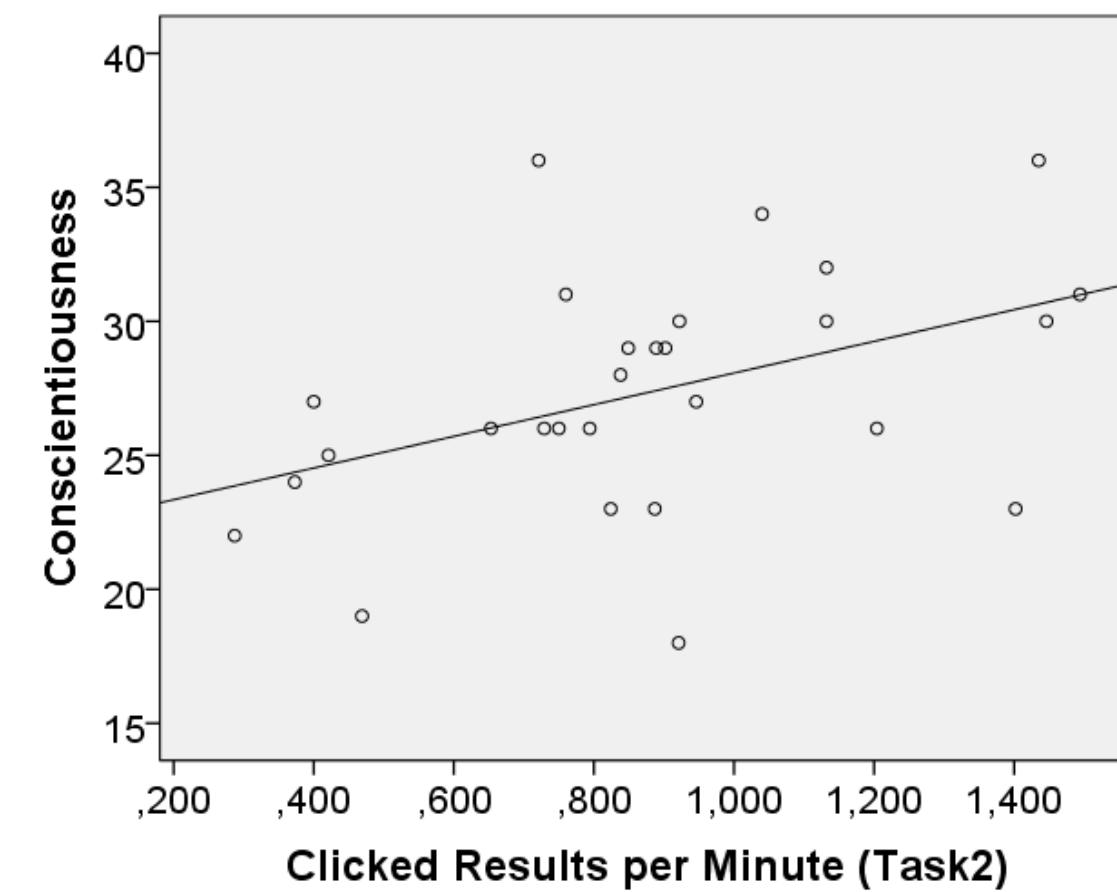


Extraverted Participants:

- Had **problems executing Task 2**, which required scientific information literacy
- Took **longer for the task**, judge it **more difficult** and have a **less favorable opinion of their own search capabilities**
- → Indeed, it has been shown that extraverted people concentrate on social interaction and tend to neglect their studies, what may explain their lesser competencies

Conscientiousness

- Conscientiousness correlates...:
 - ... positively with the **statement to search goal-oriented**
 - ... positively with the **Visited Pages per Minute**
 - ... positively with the **Clicked Results per Minute**
 - ... positively with the **Back Button Usage**

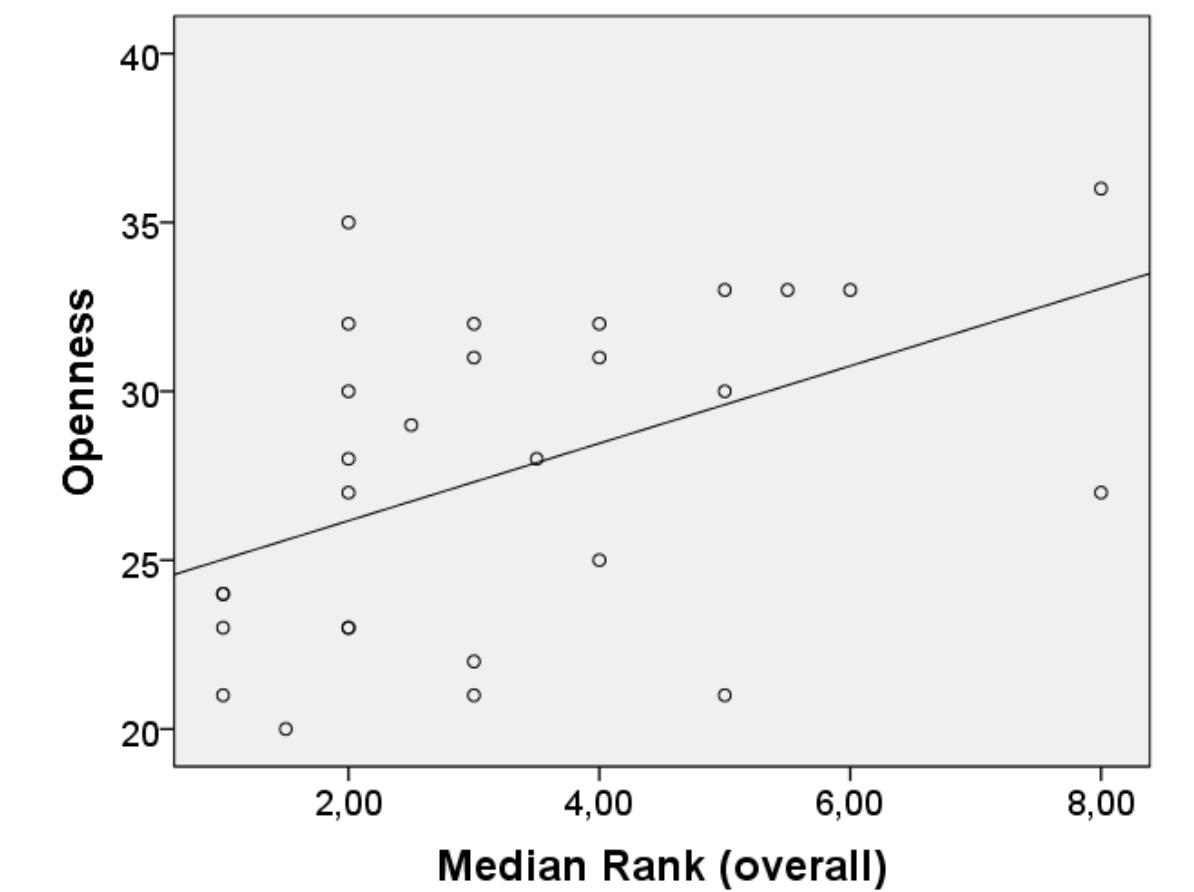


Conscientious Participants:

- Have a **high level of activity**
- Use an **exhausting exploitation of the search space** by visiting a lot of results
- tend to search in a rather **linear way** and more carefully, as they use more back button clicks and avoid multi-tab usage in the browser
- → overall **strategic and directed** in their search behavior
- Consistent to research, conscientious participants put **more effort into their search**

Openness

- Openness correlates...:
 - ... positively with the **Satisfaction with the Search Results**
 - ... positively with the **Duration**
 - ... positively with the **Median Rank of Results clicked on a SERP**



Participants with high Openness:

- Take **more time** for their search
- tend to click at **results at higher rank positions**, possibly on SERP two or three → may be related to the curiosities of open people
- Use a **broader but also more satisfying search strategy**

* Agreeableness didn't show any important results