

Grand Challenge Sessions: The Future of Research on the Mind

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The Human Mind Project's Grand Challenges is an invitation for people across the higher education sector, and beyond, to help shape the future of research on the mind. In the first exercise of its kind to be conducted across the mind and brain sciences, we are involving academics, researchers, and students in thinking about how we can build a stronger interdisciplinary foundation for new research on the mind. We have run a **Public Consultation** across academic disciplines, and now invite all speakers and participants at **The Human Mind Conference** to contribute to the next phase of the Grand Challenges. From your work with us during the two **Grand Challenges Sessions**, we will develop a series of recommendations for funders on new areas for interdisciplinary investigation, and how they can best support **new styles** of interdisciplinary research.

During these sessions you will be divided in to small groups. In each session you will be asked to complete a series of tasks, resulting in a defined group output at the end of each session.

Please take some time to look at the documents contained in this handout. The Grand Challenge Questions document contains 16 questions selected from our public consultation. The Criteria document contains 5 criteria which are the product of an interdisciplinary workshop held at Durham University. The Scoring Sheet will be used during Session One.

Session One: Criteria for Interdisciplinary Research

This session finishes at 7:00pm. We ask that you manage your time to get through all of the tasks below.

Aim: Produce a list of **criteria** for assessing interdisciplinary research projects on the human mind. The steps below provide a process for devising your criteria.

1. Take some time to read through this document, and introduce yourself to others in your group. Identify one person in your group to write on the flipchart.
2. Read through the Grand Challenge Questions document and Criteria document. Individually on your Scoring Sheet, score each Grand Challenge question from 0 to 100 according to your own personal preferences, where 0 is the least preferred and 100 is the most preferred. You must score one question 0 and one question 100. The Criteria document is provided as a prompt to help you think critically about the questions. You may wish to consult the criteria, but it's not required.
3. Take turns to report your scores to the group. Where someone has given a notably high or low score, this should be noted and explored. As you report on your scores, justify **why** you have given them by providing the **pros or cons** of the Grand Challenge question. The person nominated to write for your group should write all of the pros and cons on your flipchart.
4. As a group, go through the pros and cons you have identified. Use them as the basis of a list of new **criteria** for assessing interdisciplinary research on the mind. You can the Criteria document we have provided as a prompt, but we want to you think creatively and come up with new ideas.
5. By the end of the session, have your new criteria written on the flipchart.

Session Two: New Research Questions



Aim: Using the criteria you devised in the last session, generate **new questions** for future research on the human mind.

Your group working time will finish at 2:45 pm.

1. Revisit the criteria you devised yesterday, and read through the Grand Challenge questions.
2. As a group, use your criteria to devise **at least three** new research questions on the human mind. Your questions should meet as many of your interdisciplinary criteria as they can, and address issues which you believe are critical for future research. You may wish to adjust some of the Grand Challenge questions provided, or come up with something totally new.
3. By the end of the session, have your new questions written on the flipchart.
4. At 2:45 pm help yourself to tea or coffee, and move around the conference centre to look at the questions other groups have devised.

Thank you for participating!

Grand Challenge Questions



1. What is left out of the paradigms, models, and concepts of brain activity, for understanding the mind?
2. If the brain is material, the mind is, too, isn't it?
3. Can the mind's boundaries be extended through social relations and the use of artifacts?
4. Is there any analogy between the encoding strategies of networks of neurons, and the strategies used by colonies of insects and schools of fish?
5. We become who we are: To what extent are we socially patterned and developed?
6. How do we come up with heuristics to solve problems individually and relationally?
7. When we use the concept of 'consciousness', what do we really mean?
8. On the assumption that most of mental activity happens unconsciously, how do we adapt our view of ourselves?
9. Identity is shaped by history and zeitgeist: What would it be like to be oneself, a thousand years ago?
10. Under the hypothesis that the brain is a complex but entirely physical device, how should we understand agency and responsibility?
11. How does the mind generate the story of itself?
12. Can we account for the disparities between what we 'think' we do and what we 'actually' do?
13. How can we scientifically investigate how the mind works in real world scenarios?
14. Imaginative writing and art performance: Can these practices help to integrate the subjective qualities of human experience with the quantitative data of brain sciences?
15. Can better theories of the brain inform working practices, and policies about the mind?
16. How does culture shape emotion, and how does emotion interact with other mental processes?

Criteria for Interdisciplinary Research



1. **Tractable:** Is this question operationalizable for scientific scrutiny?
2. **Fresh:** Is this question inspirational, solid and relevant?
3. **Risky:** Would you advise an early career researcher to avoid this question?
4. **Feasible:** Would you bet on the success of this project?
5. **Inclusive:** Would you tackle this question with someone from a different department?

Scoring Sheet



Use the table below to score the Grand Challenge questions according to your individual preferences from 0 to 100, where 0 is the least preferred and 100 is the most preferred. You must score one question 0 and one question 100. The Criteria document is provided as a prompt to help you think critically about the questions. You may wish to consult it, but it's not required. As you score the questions, make notes on the reasons for the score in the space provided.

Question	Score 0 – 100	Notes
1. What is left out of the paradigms, models, and concepts of brain activity, for understanding the mind?		
2. If the brain is material, the mind is, too, isn't it?		
3. Can the mind's boundaries be extended through social relations and the use of artifacts?		
4. Is there any analogy between the encoding strategies of networks of neurons, and the strategies used by colonies of insects and schools of fish?		
5. We become who we are: to what extent are we socially patterned and developed?		
6. How do we come up with heuristics to solve problems individually and relationally?		
7. When we use the concept of 'consciousness', what do we really mean?		

<p>8. On the assumption that most of mental activity happens unconsciously, how do we adapt our view of ourselves?</p>		
<p>9. Identity is shaped by history and zeitgeist: What would it be like to be oneself, a thousand years ago?</p>		
<p>10. Under the hypothesis that the brain is a complex but entirely physical device, how should we understand agency and responsibility?</p>		
<p>11. How does the mind generate the story of itself?</p>		
<p>12. Can we account for the disparities between what we 'think' we do and what we 'actually' do?</p>		
<p>13. How can we scientifically investigate how the mind works in real world scenarios?</p>		
<p>14. Imaginative writing and art performance: Can these practices help to integrate the subjective qualities of human experience with the quantitative data of brain sciences?</p>		
<p>15. Can better theories of the brain inform working practices and policies about the mind?</p>		
<p>16. How does culture shape emotion, and how does emotion interact with other mental processes?</p>		