

SynBio-Questionnaire-A

This Questionnaire (Part A) was constructed within a project at the BioQuant-institute at the University of Heidelberg.

The questionnaire consists of three parts. Please answer the questions chronologically and try not to go back and forth between the parts of the questionnaire.

You can quit every time to fill in the questionnaire without any declaration of reasons. Your quitting will not cause any disadvantages for you.

Your responses will be kept confidential and stay anonymous. A fitting to individual participants is impossible.

At the end of the study we will please you to fill in the second part of the questionnaire. For the correct mapping of these two parts we need to ask you to insert a personal code.

It consists of the first letter of your mother's forename, the second letter of your place of birth and the first two numbers of your birthday (e.g. your mother's forename: **Anna**, your place of birth: Boston, your birthday: **26.03.1988**; **Ao26**)

Your code: _____

1. Have you ever heard of Synthetic Biology (e.g. read about it, watched something in the television, or else.)?

yes

no

2. Have you ever dealt with Synthetic Biology?

yes

no

3. If yes, please describe short in which extent you dealt with Synthetic Biology.

4. Please rate your knowledge concerning Synthetic Biology on a scale from 0-100 (with 0 = no knowledge 100 = expertise).

5. Have you ever dealt with following scientific fields?

a) Biology

yes

no

b) Gene technology

yes

no

c) Genetic engineering

yes

no

SynBio-Questionnaire-B

This Questionnaire (Part B) was constructed within a project at the BioQuant-institute at the University of Heidelberg.

The questionnaire consists of three parts. Please answer the questions chronologically and try not to go back and forth between the parts of the questionnaire.

You can quit every time to fill in the questionnaire without any declaration of reasons. Your quitting will not cause any disadvantages for you.

Your responses will be kept confidential and stay anonymous. A fitting to individual participants is impossible.

Please insert your personal code again:

It consists of the first letter of your mother's forename, the second letter of your place of birth and the first two numbers of your birthday (e.g.. your mother's forename: **Anna**, your place of birth: Boston, your birthday: **26.03.1988**; **Ao26**)

Your code: _____

Before it starts ...

6. Please rate your knowledge concerning Synthetic Biology again on a scale from 0-100 (with 0 = no knowledge; 100 = expertise).

1. Do you have the impression that you learned something about Synthetic Biology because of the little introduction?

yes

no

2. Please rate your learning gain concerning Synthetic Biology.

no learning gain

little

middle

high

very high

Part 1

In the following you will find attached 22 statements referring Synthetic Biology to which you can agree more or less. Please evaluate each statement on base of a scale with five options to response.

Please mark with a cross:

If you don't agree with the statement or find it inapplicable ... **„Strongly disagree“**

If you rather not agree with the statement or find it more inapplicable **„Disagree“**

If the statement is neither right nor wrong or you find it neither applicable nor inapplicable..... **„Neither agree nor disagree“**

If you rather agree with the statement or find it more applicable **„Agree“**

If you agree totally with the statement or find it applicable **„Strongly Agree“**

Please read every statement carefully and mark that response category that reflects your point of view the most. Please leave no statement out. Even if the responses to some statements might be difficult, choose that category that applies to you the most.

There are no right or wrong answers. You fulfill the aim of the questionnaire the best, if you answer each statement as truthful as possible.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I am in favor for Synthetic Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Even basic creatures (e.g. bacteria, protozoa) need to be protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. If Synthetic Biology gets an important part of our daily life, I would actively get involved against it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Synthetic Biology should get forbidden because it could be abused by terrorists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. With the help of Synthetic Biology big problems of the future could be solved (e.g. alternative energy, food production)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I would principally reject the rearing of human tissue (like organs or muscles) in the test-tube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The knowledge of Synthetic Biology right now is not enough to accept this development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The Synthetic Biology has concerning its applications more advantages than disadvantages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Germany should use the money for the solution of bigger problems than for Synthetic Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I think gene manipulations on higher creatures (e.g. mammals, birds, amphibian) is vey critical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Bio-reactors with genetically modifies algae which produce hydrogen out of sun light should be used all over the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I reject Synthetic Biology because a human can never be sure what consequences the genetically manipulation of organisms have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. If I'd have the opportunity to synthesize creatures from home and for my own benefit, I would do this	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
14. I reject the Synthetic Biology because I don't agree with related fields of science (like genetic engineering) neither	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The genetically manipulation of creatures is because of ethical or religious reasons indefensible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I agree in planting genetically manipulated plants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Germany should allow everybody the synthesis of genetically manipulated organisms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. If I hear the word genetically mutation I spontaneously think in monster.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. What researcher do in the field of Synthetic Biology seems not very transparent and cloudy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. The development of biological manipulated cleaning-agent makes sense to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. In the future I would try to avoid products, built by synthetically organisms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Synthetic Biology changes our perception of life fundamentally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 2

In the following part of the questionnaire you will find four open sentences and for each sentence different opportunities to complete it.

Please read every sentence really carefully and consider which of the responses could complete the sentence adequately. The sentences refer to your personal perception of Synthetic Biology. There are no right or wrong answers. Please mark for each sentence all responses that seem to be completing.

1. Synthetic Biology is ...

- a modern concept for biotechnology or gene technology.
- the development of artificial organisms "from the drawing table".
- the inserting of foreign genes to another organism.
- synthesis, that means artificial creation of genetic information
- in Germany forbidden by law.
- the genetic manipulation of a natural organism.

2. In difference to gene technology, Synthetic Biology...

- applies engineering principles.
- inserts not only one foreign gene but many genes into another organism.
- inserts also dissimilar genes into another organism (e.g. a gene from a human into a bacterium).
- uses other laboratory techniques that permits more manipulation than the old laboratory techniques.
- uses human cells as well.
- works with very new and not really approved laboratory techniques.

3. The systematic genetically manipulation of creatures is justifiable referring the following applications: ...

- medicine
- protection of environment
- food
- energy
- Information technique (IT)
- chemical industry
- computer and electronic

4. I could accept Synthetic Biology more, if ...

- exists a public online-database with all synthetic-biological developed organisms.
- research institutes get controlled by public investigators.
- I could have a personal look into the work of the research institutes.
- it doesn't have to change anything.

Part 3

The last part of the questionnaire consists of eight statements that might be used to describe your person. Read every statement carefully and consider, if this statement applies to you personally or not. Please evaluate each statement on base of a scale with five options to response.

Please mark with a cross:

- | | | |
|-----------|---|----------------------------|
| SR | If you don't agree with the statement or find it inapplicable ... | „strong rejection “ |
| R | If you rather not agree with the statement or find it more inapplicable
..... | „rejection“ |
| N | If the statement is neither right nor wrong or you find it neither applicable nor inapplicable..... | „neutral“ |
| A | If you rather agree with the statement or find it more applicable
..... | “agreement” |
| SA | If you agree totally with the statement or find it applicable | „strong agreement “ |

Please read every statement carefully and mark that response category that reflects your point of view the most. Please leave no statement out. Even if the response to some statements might be difficult, choose those answer that applies to you the most.

There are no right or wrong answers. You fulfill the aim of the questionnaire the best, if you answer each statement as truthful as possible.

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	<u>S</u>trong rejection	R ejection	<u>N</u>eutral	<u>A</u>greement	<u>S</u>trong agreement
1. I believe that pupils get confused if they listen to controversy speeches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I think that the law and social politics should change to adapt the changing world.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I think that we should listen to our religious authorities concerning religious and ethical questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I think that other moral concepts in other societies are not good for the people there	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I think that loyalty to the own ideals and principles are more important than open-mindedness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I am open minded and tolerant for the habits of other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. When people don't have a closed opinion at the age of 25, something is wrong with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I believe that the new moral of "unreserved freedom" doesn't really is a moral.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please answer the following questions:

1. Sex

- male
- female

2. Age: _____

3. Highest graduation

- no graduation
- General Certificate of Secondary Education
- general qualification for university entrance
- graduate degree

4. actual employment

- employed
- public servant
- self-employed
- student field of study: _____
- pupil
- unemployed
- other: _____

5. Religion

- religious confession: _____
- not religious/ atheist
- agnostic

Thank you for your participation!