

Draft Minute on Synthetic Biology for 2014 Canadian Yearly Meeting

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Synthetic biology, a field that has developed in the past decade, integrates engineering, genetics and computer science to produce new forms of life. It goes beyond the genetic modification of existing species to the manufacture of new ones. The possibilities are far reaching. Synthetic biology could be used to produce medications or replace human organs. Or it could be used to make biological weapons and products that destroy biological diversity.

In 2012, Canadian Yearly Meeting (CYM) judged that the new field of synthetic biology warrants the attention of Friends. CYM invited Monthly Meetings across Canada to address ethical and spiritual issues of synthetic biology during 2013. Information and support to do this was offered by the Canadian Friends Service Committee (CFSC). CYM would revisit the subject in 2014. Ten monthly meetings in Canada,¹ with the information kit provided by CFSC,² have formed Study Groups on synthetic biology and have applied Quaker testimonies.

Synthetic biology raises two pivotal questions that have received little public attention and discussion:³

- A. Who should make life and under what circumstances?
- B. Who should own life, in both its synthetic and natural forms?

Addressing these questions will require attention to:

Ecological aspects: how the new life forms might embed themselves within the biological, material and energy flows of ecosystems; and

Social aspects: how the new life forms relate to social justice issues — the ways human societies share resources, wealth and knowledge and serious consideration of the rights that are granted or not granted to these new beings.

Science alone cannot answer questions A and B. Due consideration of ethical, moral and spiritual issues is required. Religious thinking in Western societies has pursued two contrasting directions: the most common belief is that God has given human beings dominion over nature. This line of thought facilitates domination of the natural world. The less common belief is that God urges deep connection with nature, without exploiting it.

¹ Reports received from Annapolis Valley, Hamilton, New Brunswick, Ottawa, Montreal, Peterborough, Thousand Islands, Toronto, Vancouver, and Yarmouth Monthly Meetings.

² See: <http://quakerservice.ca/wp-content/uploads/2013/04/2013-CFSC-Synthetic-Biology-Kit.pdf>

³ The Synthetic Biology Project of the Woodrow Wilson International Center for Scholar's Science and Technology Innovation found "no federal activity" in four of the 17 recommendations of the (U.S.) President's Commission for the Study of Bioethical Issues, particularly Recommendation #10 "Ongoing Evaluation of Objections to Synthetic Biology." <http://www.synbioproject.org/scorecard/recommendations/>

Quakers have stood against violence directed at human beings — war, slavery and racism. But not until recently have Quakers addressed the human violence directed at nature. Such violence can be deliberate, for example, the destruction of the world's forests, or unintended, such as pollution of water tables by industrial agriculture. The Kabarak Call at the 2012 Friends World Conference asked Quakers around the world to "become careful stewards of all life... to work for the peaceable Kingdom of God on the whole earth, in right sharing with all peoples."

Over the years, humans have thoughtlessly enslaved nature, and the cumulative consequences now show in the form of climate change, species extinction, acidification of oceans, topsoil loss... The first Quaker statement about human slavery was in 1688; its legal abolition took nearly two centuries. Will it take that long for humans to achieve a reasonably right relationship with nature? We do not have the luxury of such a timeline.

We offer these recommendations for consideration at the 2014 Canadian Yearly Meeting:

1. Affirm the seven principles identified in *Principles for the Oversight of Synthetic Biology*,⁴ a document that makes many important recommendations including one reports from Monthly Meetings often stressed, "Protection of the public includes a ban on using synthetic biology to manipulate the human genome in any form..."⁵. Continue to work with the BRG on discerning ways to implement the seven principles:

- I. Employ the Precautionary Principle;
- II. Require mandatory synthetic biology-specific regulations;
- III. Protect public health and worker safety;
- IV. Protect the environment;
- V. Guarantee the right-to-know and democratic participation;
- VI. Require corporate accountability and manufacturer liability; and
- VII. Protect economic and environmental justice.

2. Request that CFSC, with the help of concerned groups such as the ETC Group⁶ and the Biotechnology Reference Group of the Canadian Council of Churches (BRG),⁷ provide Canadian Quakers with an annual, easily understandable update on synthetic biology;

3. Find opportunities at national, regional and local levels to link with other faith and community groups, including Indigenous peoples, to share insights and discernment about synthetic biology; and

4. Engage with other faith groups and interested parties, including organizations involved in research and/or manufacture in synthetic biology, to hold and/or participate in conferences that address ethical and spiritual aspects of synthetic biology.

⁴ http://libcloud.s3.amazonaws.com/93/ae/9/2287/2/Principles_for_the_oversight_of_synthetic_biology.pdf

⁵ *ibid.*, page 4

⁶ ETC Group tracks technology, biodiversity and corporate monopolies.

⁷ The CCC intervened at the Supreme Court of Canada in 2002 ("oncomouse case") which ruled against the patenting higher forms of life and, in 2012, was one of 100+ organizations signing on to *Principles for the Oversight of Synthetic Biology*.