



CAMBRIDGE
TEMPLETON CONSORTIUM

Prospectus

Introduction

The John Templeton Foundation has made \$3 million available for research grants to stimulate and sponsor new research insights directly pertinent to the 'great debate' over purpose in the context of the emergence of increasing biological complexity, ranging from the biochemical level to the evolution of life and the emergence of society and culture. This programme seeks to enrich and deepen the rigour, quality, and scientific and philosophical basis for this debate. The focus is primarily on innovative scientific and systematic research, but projects with strong philosophical or theological components are also encouraged. Grant proposals from all sides of this 'debate' are welcomed. The deadline for proposal summaries is May 9th, 2005.

The Consortium

The selection and evaluation of proposals will be managed by the Cambridge Templeton Consortium, consisting of

- Chair: Professor Derek Burke, Former Vice Chancellor of the University of East Anglia
- Biochemistry and Fine Tuning: Dr. Jonathan Doye and Dr. Ard Louis, Department of Chemistry, University of Cambridge.
- Evolutionary History and Contemporary Life: Evolution, Ecology, Ethology: Professor Simon Conway Morris FRS, Department of Earth Sciences, University of Cambridge.
- Becoming Fully Human: Social Complexity and Human Engagement with the Natural and Supernatural World: Professor Graeme Barker FBA and Dr. Chris Scarre, McDonald Institute for Archaeological Research, University of Cambridge.

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Topics and Scope

Biochemistry and Fine-Tuning: *to what extent can arguments analogous to "fine tuning" in physics and cosmology be applied to chemistry and biochemistry?*

- How optimal are life's nucleotide and amino-acid alphabets? How were these selected?
- Do the properties of proteins or protein interaction networks show any evidence of fine-tuning?
- Are there alternative solvents to water for the emergence and maintenance of life?
- Are there evidences of fine tuning and convergence in biochemical pathways (such as the Krebs cycle)?
- Does systems biology shed new light on the range of chemistries suited for the emergence of life?
- What is the relationship between randomness at the molecular level and emergent biochemical properties?
- Philosophical aspects and potential theological significance of biochemical fine tuning.

Evolutionary History and Contemporary Life: Evolution, Ecology, Ethology

- What features in common do evolutionary trends show?
- Is convergence of evolutionary importance?
- How well do we understand evolutionary simplifications?
- How can we define better the concept of character-complexes?
- How similar are social systems in different groups of organisms?
- How common are evolutionary reversals?
- To what extent do differently constructed nervous systems: e.g. mammalian and molluscan, achieve similar mental capacities?
- How similar are different modes of communication?

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Becoming Fully Human: Social Complexity and Human Engagement with the Natural and Supernatural World

- What is the nature and significance of convergences in cultural evolution (shamanism, the blossoming at certain times of monumental religious construction, sacrificial cults and potentially many others)?
- Is the spiritual sense a human universal or perhaps even more broadly found among other hominids?
- What does a study of the earliest symbolic cultures (as found at the Blombos cave site, for example) reveal about the connection of symbolism with being, spirit, and concepts of the transcendent?
- How do archaeologists evaluate the "religion-drives-innovation" thesis that is more often proposed in other fields of study and with other kinds of data?
- What do Neanderthal 'burials' imply about the evolution of a spiritual sense?
- Can a study of prehistory contribute to the debate in the social sciences about the nature and importance of human agency and purpose? The fact that archaeology rarely reveals individuals never mind their intentions does not necessarily mean all of culture change is due to extrinsic factors such as climate, outside of any kind of 'purpose'. Has the field progressed to the point where we may be able to newly enter this territory?
- How can we recognise the spiritual, the religious, and conceptions of the transcendent from archaeological data?
- What can we know of the religious or spiritual experiences of early Homo sapiens?
- What evidence is there for directionality in human asocial and technological development?

An expanded discussion of potential research topics, as well as an annotated bibliography and set of relevant web-links can be accessed online.

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Evaluation Criteria and Project Eligibility

While the core of this program is the funding of scientific research, proposals should demonstrate understanding of both the scientific and metaphysical discussions concerning the great debate over purpose. Proposals will primarily be evaluated on their intrinsic intellectual merit. The consortium is looking for highly innovative interdisciplinary proposals, including those that fall outside the traditional remit of research councils. We also encourage proposals with strong philosophical or theological components that closely connect to the interdisciplinary scientific focus of this programme.

Proposal evaluation will be based on:

- Potential for an innovative contribution to science relevant to the topic of inquiry.
- The clarity of the connection between the proposed research and the thematic nature of this programme.
- The likelihood of the research opening fruitful new lines of enquiry.
- The feasibility of the research in the given time frame.
- The qualifications of the applicant with respect to the proposed topic.
- The part a grant may play in career development.

Grants are available to support researchers working in academic and other research-active institutional contexts for projects of up to 2 years duration. Whilst all applicants must be engaged in original research and the applicant must be based at, or have a strong affiliation to, a recognised institution, the remit is left very largely to the discretion and interests of the applicant. Examples of acceptable use of grant funds include:

- Student or postdoc salary and benefits.
- Summer salary for academics.
- Organising workshops and/or inviting eminent individuals to host institutions.
- Support for specific projects during sabbaticals and assistance in writing or publishing books.

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- Support for projects that complement existing mainstream scientific research programmes by adding a philosophical or theological component (these may be through interdisciplinary collaborations).
- Modest expenses for computer equipment, travel, publication charges and supplies. provided that these items are clearly explained and justified in the proposal.
- The highest allowed overhead rate is 20% on salaries .

The Application Process

Applications should initially be submitted online as an outline proposal (termed the Initial Proposal). You will need to supply a draft budget, a summary of your project in no more than two pages single spaced, together with a two page c.v. that will be the subject to an initial screening. On the basis of this assessment the investigator may be invited to submit a Full Proposal, with a detailed description of the proposed research, full budget details, and a short statement of how the application fits into the applicant's present research programme. All full applications will be subject to external and confidential peer review, and will be evaluated and ranked in regard to the criteria described online. The deadline for the receipt of Initial Proposals is May 9th.

The Budget form is available to download online. Full instructions for completing the Budget form are included in the download.

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Timetable

Outline proposals are due on **May 9th** and should be submitted online.

Invitations to submit full proposals are expected to be made by **May 30th 2005**.

Full proposals will be due in **mid-June 2005**.

Grant award announcements are expected to be made by **July 30th 2005**.

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