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Revising the Declaration of Helsinki

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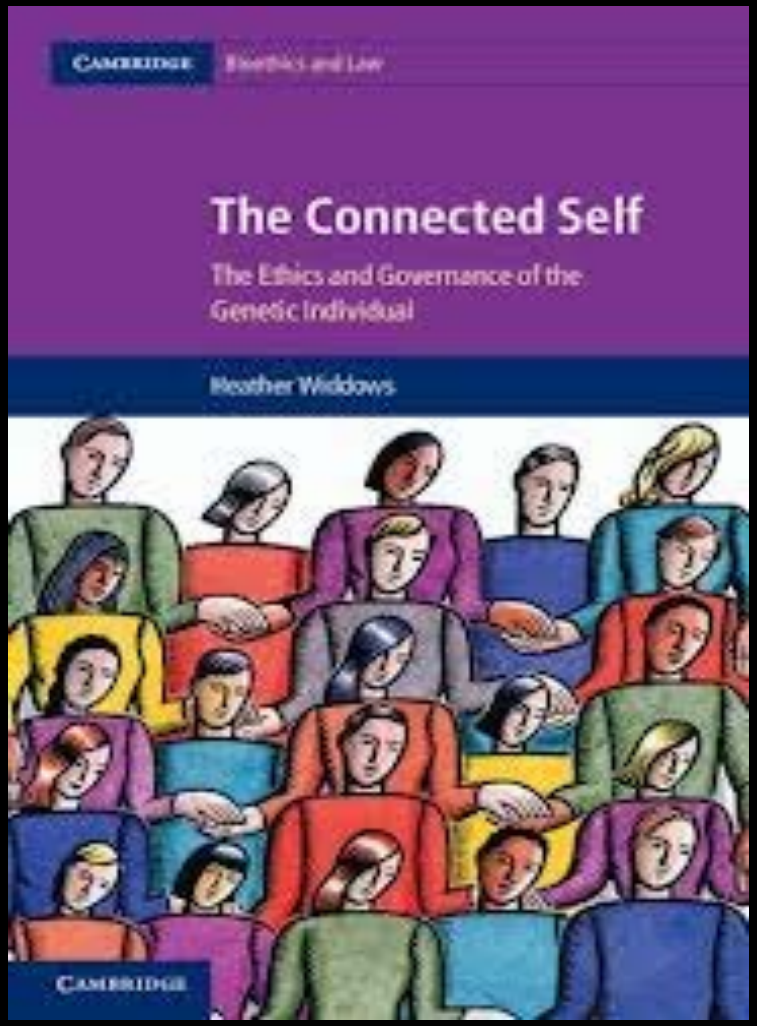

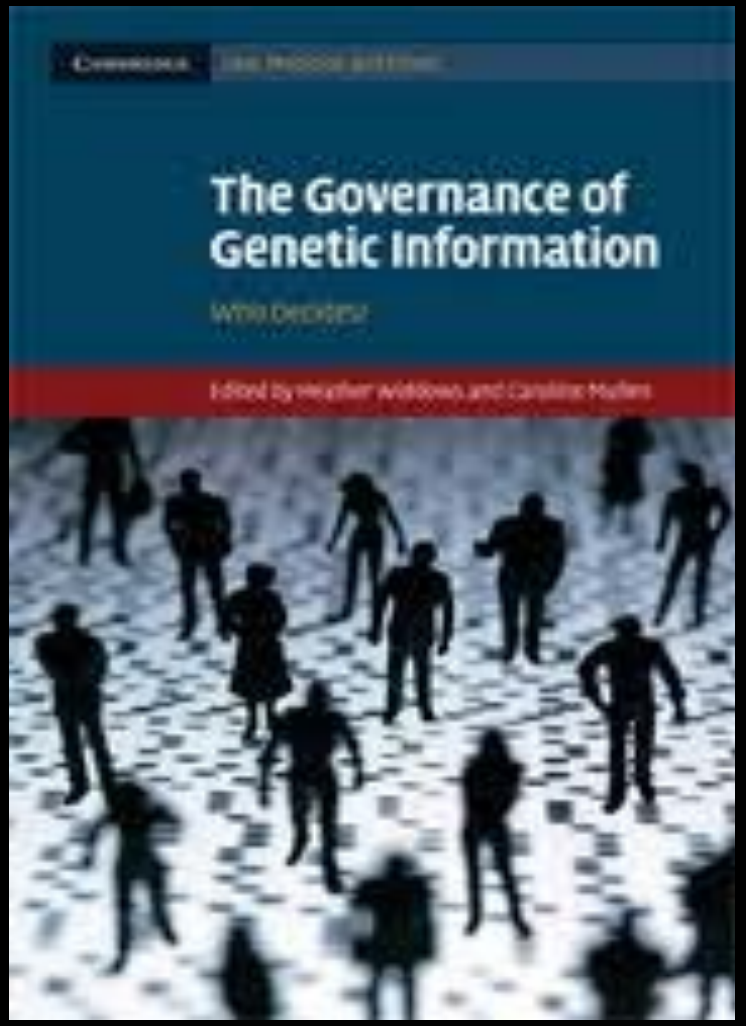

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Purpose & aims of research

“The primary purpose of medical research involving human subjects is to understand the causes, development & effects of diseases & improve preventive, diagnostic & therapeutic interventions (methods, procedures & treatments)” (Para 7, DoH)

“build a major resource that can support a diverse range of research intended to improve the prevention, diagnosis, & treatment of illness & the promotion of health throughout society” (UKB EGF 2007, p.3).

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To address the problem

1. Challenges of genetic material & information
   - Shared & identifying
   - Problematic for consent & confidentiality
2. Further challenges of biobanking
   - Future-orientated
   - Not *a* research project but *many*
   - Withdrawal problematic
3. Detailed redrafting to meet these challenges

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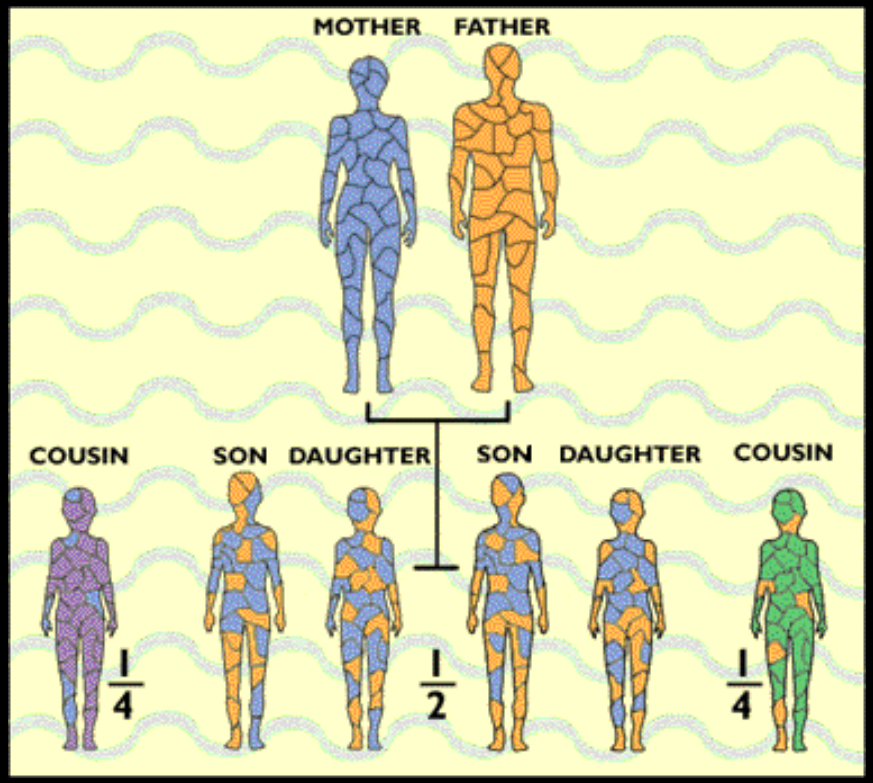
Shared *not* individual

"The key feature of genetic information is that it is typically information about a family, or even… about a larger community not just about an individual patient"

(Brock, 2001, p34)



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Identifying (& into the future)

1. **Comparison with genetic database**
2. **Triangulation**
3. **New technology & improved techniques**

“DNA is itself uniquely identifiable”

(McGuire, 2008, p75)

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1. By comparison (a bit like fingerprints)

"By analogy, for example, one could publish a set of fingerprints along with clinical phenotypes on the web, but these would be of limited use without knowledge of whose fingerprints they are. This argument is unacceptable for genomic data in a rapidly changing environment where 1) genotyping is becoming very accessible & inexpensive, 2) the ability to collect & share personal information is increasing, & 3) the ability to use genomic data to infer individual characteristics is largely unexplored & potentially powerful"

(Lin et al 2004, p.183)

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2. Triangulation

“a number of physical attributes can now be inferred from DNA analysis, such as gender, blood type, approximate skin pigmentation, & manifestations of Mendelian disorders”

(Lowrance & Collins, 2007, p.601)

Therefore identification by elimination is less difficult than one might imagine

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3. Improved technology & technique

Evidence to date suggests:

- **Technology moves faster than expected**
- **Data that was once 'un-identifying' becomes 'identifying' in an instant**
- **Identifiable individuals (& those related to them) are profoundly vulnerable**
- **To be ethical we should plan for identifiability**

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The faces behind UK Biobank
UK Biobank supporters
Ethics
News releases & coverage
Vacancies
Other studies
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About UK Biobank

UK Biobank is a major national health resource, and a registered charity in its own right, with the aim of improving the prevention, diagnosis and treatment of a wide range of serious and life-threatening illnesses – including cancer, heart diseases, stroke, diabetes, arthritis, osteoporosis, eye disorders, depression and forms of dementia. UK Biobank recruited 500,000 people aged between 40-69 years in 2006-2010 from across the country to take part in this project. They have undergone measures, provided blood, urine and saliva samples for future analysis, detailed information about themselves and agreed to have their health followed. Over many years this will build into a powerful resource to help scientists discover why some people develop particular diseases and others do not.

UK Biobank was established by the Wellcome Trust medical charity, Medical Research Council, Department of Health, Scottish Government and the Northwest Regional Development Agency. It has also had funding from the Welsh Assembly Government and the British Heart Foundation. UK Biobank is hosted by the University of Manchester and supported by the National Health Service (NHS). It works with researchers from a large number of British universities. The medical research project is a non-profit charity and had initial funding of about £62 million. UK Biobank has had additional funding of £6m for extra baseline measurements (such as the eye measures and saliva samples) and £25m for the next 5 years, 2011-2016 (such as storage of samples, and developing the online access facility that will allow scientists to use the Resource).

UK Biobank's Principal Investigator and Chief Executive is Rory Collins, who is also British Heart Foundation (BHF) Professor of Medicine and Epidemiology at the University of Oxford.

The Scottish Government | MRC Medical Research Council | Llywodraeth Cymuliad Cymru Welsh Assembly Government | British Heart Foundation | DH Department of Health | Supported by wellcome trust

Biobank challenges & informed consent

1. Future-orientated

- **Cannot be *informed* as projects *unknown* at the point of consent**

‘clinical research has specific aims, the aims of biobank research may be vague or non-existent at the time of the participants’ donation to the biobank’

(Skolbekken et al.2005, p336)

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Biobank challenges & informed consent

2. Large-scale research resource/library

- **Informed consent is always to *a specific* research project**
- **Biobank is *not* a research project**
- **But consent is used *as if* it were**
- **To seek consent as envisaged by the DoH would make Biobank research impossible**
- **Therefore new approaches needed**

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Biobank challenges & informed consent

3. Withdrawal

- DoH requires withdrawal without reprisal
- Withdrawal hard for biobanks
- UK Biobank withdrawal:
  - No further contact
  - No further access
  - No further use
- "UK Biobank would destroy their samples (although it may not be possible to trace & destroy all distributed anonymised sample remnants) & would only hold their information for archival audit purposes"
  (UKB EGF 2007, p.9)

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Different risks

- Risks of medical research which informed consent protects from:
  - Direct harm
  - Physical harm
  - Breaching of bodily integrity
  - Balancing risks & benefits
- Risks of biobanking research which informed consent *does not* protect from:
  - Identification
  - Stigma
  - Discrimination
  - Unwanted knowledge about disease & status
  - Cultural & economic harms

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Suggested changes to next version of Declaration of Helsinki.....

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2. Although the Declaration is addressed primarily to physicians, the WMA encourages other participants in medical research involving human subjects to adopt these principles. **All scientists involved in biobanking research should understand using participants' samples and data is research on human subjects.**

9. Medical research is subject to ethical standards that promote respect for all human subjects and protect their health and rights. Some research populations are particularly vulnerable and need special protection. These include those who cannot give or refuse consent for themselves and those who may be vulnerable to coercion or undue influence. **Vulnerability includes possible discrimination against families or wider communities, as a result of genetic research.**

11. It is the duty of physicians who participate in medical research to protect the life, health, dignity, integrity, right to self-determination, privacy, and confidentiality of personal information of research subjects. **Given the potential identifying nature of genetic material, promises of confidentiality should be proportionate and attention given to protection in instances of unintended identification.**

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14. The design and performance of each research study involving human subjects must be clearly described in a research protocol. The protocol should contain a statement of the ethical considerations involved and should indicate how the principles in this Declaration have been addressed. The protocol should include information regarding funding, sponsors, institutional affiliations, other potential conflicts of interest, incentives for subjects and provisions for treating and/or compensating subjects who are harmed as a consequence of participation in the research study. The protocol should describe arrangements for post-study access by study subjects to interventions identified as beneficial in the study or access to other appropriate care or benefits. In instances where this is not possible – such as biobanking – ethics committees or other mechanisms for ensuring that participant interest and affected others are respected throughout the lifetime of the biobank or for the duration which the data and samples are utilised must be put in place.

16. Medical research involving human subjects must be conducted only by individuals with the appropriate scientific training and qualifications. Research on patients or healthy volunteers requires the supervision of a competent and appropriately qualified physician or other health care professional. The responsibility for the protection of research subjects must always rest with the physician or other health care professional and never the research subjects, even though they have given consent. **This includes thought for third parties in instances, such as much genetic research, where the research is likely to impact upon family members or wider populations.**

18. Every medical research study involving human subjects must be preceded by careful assessment of predictable risks and burdens to the individuals and communities involved in the research in comparison with foreseeable benefits to them and to other individuals or communities affected by the condition under investigation. **It should be recognised that genetic research may have implications for family members of enrolled research subjects.**

□23. Every precaution must be taken to protect the privacy of research subjects and the confidentiality of their personal information and to minimize the impact of the study on their physical, mental and social integrity. **Given the potential identifying nature of genetic material, promises of confidentiality should be proportionate and attention given to protection in instances of unintended identification.**

24.In medical research involving competent human subjects, each potential subject must be adequately informed of the aims, methods, sources of funding, any possible conflicts of interest, institutional affiliations of the researcher, the anticipated benefits and potential risks of the study and the discomfort it may entail, and any other relevant aspects of the study. The potential subject must be informed of the right to refuse to participate in the study or to withdraw consent to participate at any time without reprisal. Special attention should be given to the specific information needs of individual potential subjects as well as to the methods used to deliver the information. After ensuring that the potential subject has understood the information, the physician or another

appropriately qualified individual must then seek the potential subject's freely-given informed consent, preferably in writing. If the consent cannot be expressed in writing, the non-written consent must be formally documented and witnessed. **In instances where this is not possible – such as biobanking research – ethics committees or other mechanisms for ensuring that participant interest and affected others are respected throughout the lifetime of the biobank or for the duration which the data and samples are utilised must be put in place.**

25. For medical research using identifiable human material or data, physicians must normally seek consent for the collection, analysis, storage and/or reuse. There may be situations where consent would be impossible or impractical to obtain for such research or would pose a threat to the validity of the research. In such situations the research may be done only after consideration and approval of a research ethics committee. **In instances of biobanking or other long-lived projects attention must be given to development over time to ensure continued ethical justification.**

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Thank you!

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