Research Fraud and Deceit

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Types of fraud and deceit

FABRICATION: Lying about things *having been* done that have not been done

- Data

- Protocols

- Analytical procedure

- Results

- Ethical review, consultation, etc.

EXCLUSION: Lying about things *not* having been done that have been done

- Data

- Protocols

- Analytical procedure

- Results

Types of fraud and deceit, cont.

OPACITY: Hiding relevant facts from peer review

- Selection criteria

- Laboratory and experimental protocols

- Assessment and evaluation criteria

- Data repositories

- Conflicts of interest (affiliatory, economic, political….)

PLAGIARISM: Claiming credit to work when undeserved

- Data theft

- Protocol theft

- Analysis theft

- Theft of results

- Publication theft

- Undeserved authorship (giving or receiving)

What is bad about fraud and deceit?

- Lying and deceitfulness is *generally* a bad thing

- Acting directly in opposition to the ultimate objectives and values of science

- Misguiding the direction of science

- Risking that bad procedures are adopted in medical practice

- Risking the carreers and reputations of colleagues

- Risking one's own carreer and personal well-being

- Risking the well-being of one's close ones

- Risking the reputation of one's university, research field, etc.

- Discrediting science in the public eye

- Undermining the building blocks of a modern and well-functioning society

- Having one's publications retracted (≈ invalidated as science)

- Punishment by law: jail-time, compensation

Famous cases

- Joachim Boldt (anaesthesiology): over 100 papers retracted, stripped of academic title andf fired, further police investigation re. Embezzlement

- Didrik Stapel (social psychology): at least 30 falsified and retracted articles, criminal conviction to community service and fired from university and stripped of title

- Marc Hauser (evolutionary psychology): retractions and fired from Harvard

- Woo-Suk Hwang (stem cell research): prison time

- Scott S. Reuben (anaesthesiology): over 20 retracted papers

- Milena Penkowa (neurology): retracted papers, fired, prison time + further police investigation of embezzlement of funds

COMPUTER SCIENCE
- Mahesh Visvanathan and Gerald Lushington (computer science):major portion of research plagiarised, several retracted articles

- Javad Sababeh and Karim Mohammadi (computer science): plagiarism and retraction of papers

Note: In the age of big data research, computer scientists will be all over the place!

How Should Scientific Fraud and Deceit Cases be Handled?

- Universities and research agencies know the territory

- Peer review is an embedded tradition to build on

- Cases can be hidden from the public before decisions are made

- Conflicts of interest risk is obvious

- Legal security: informal punishment, appellation opportunity, etc. Better with agencies and courts?

- Many cases involve ordinary criminality: misuse or embezzlement of funds, libel, perjury, harm…. – Criminal law more apt, but weak tradition