Science is the systematic enterprise that builds and organizes knowledge in the form of explanations and predictions about nature and the universe. Technology is the collection of techniques, method or processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation, or any other consumer goods.

Science may derive technological development, by generating demand for new instruments to address a scientific question or by illustrating technical possibilities previously unconsidered. In turn, technology may derive scientific investigation, by creating demand for technological improvements that can only be produced through research and by raising questions. Engineering, on the otherhand is application of these scientific knowledge for practical purpose of the design, construction, maintenance or operation of system, machine or structure. Engineering and science should never cross certain ethical line. Moral notions and practices invitably get influenced by science and engineering. A through understanding of such interaction is very important. Anticipatory ethics is a new approach that integrates ethics to technology and development.

An important component of science and engineering research and practice is the desire to "get it right". A central focus of science and engineering is thus the knowledge and skills scientists and engineers need to ensure
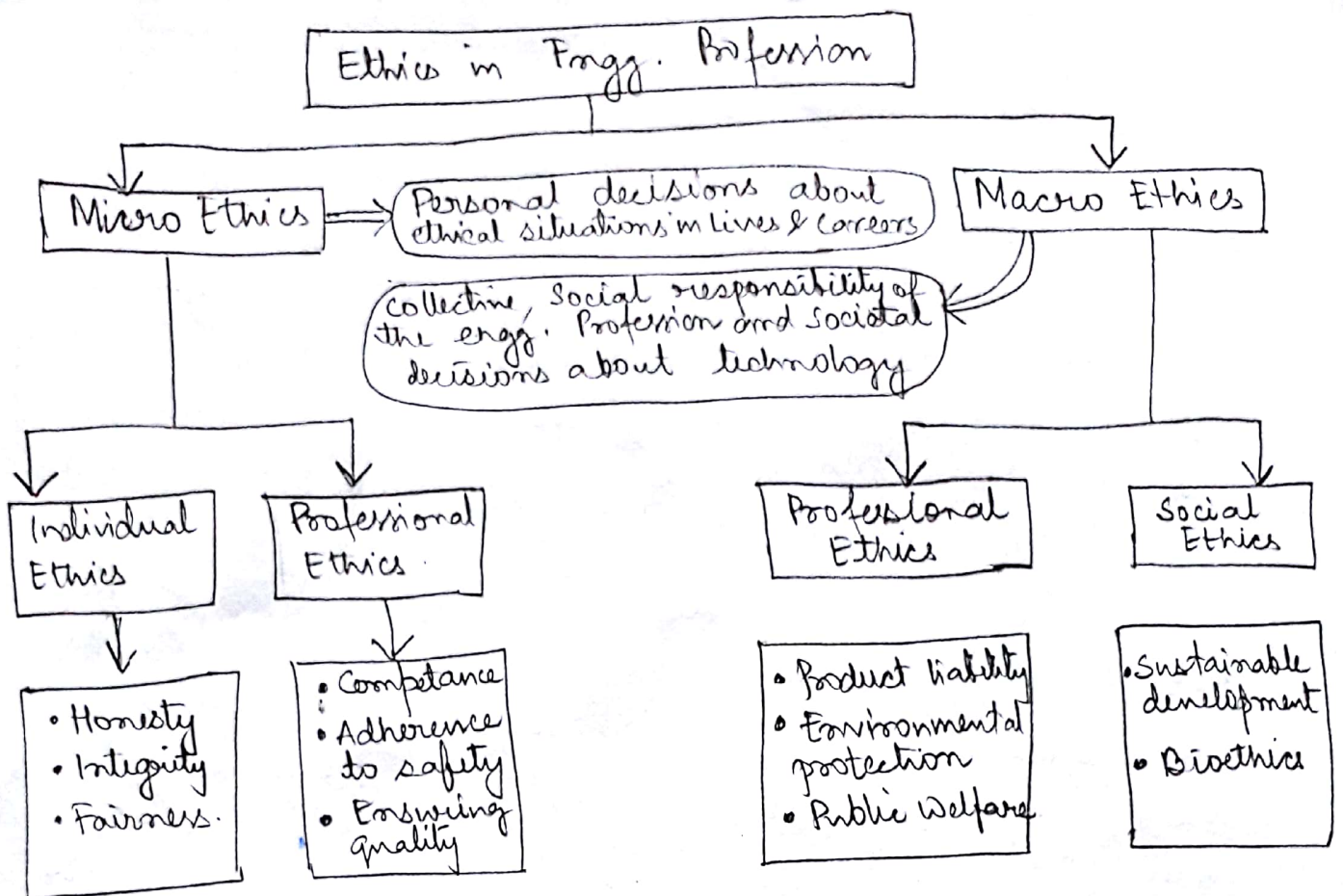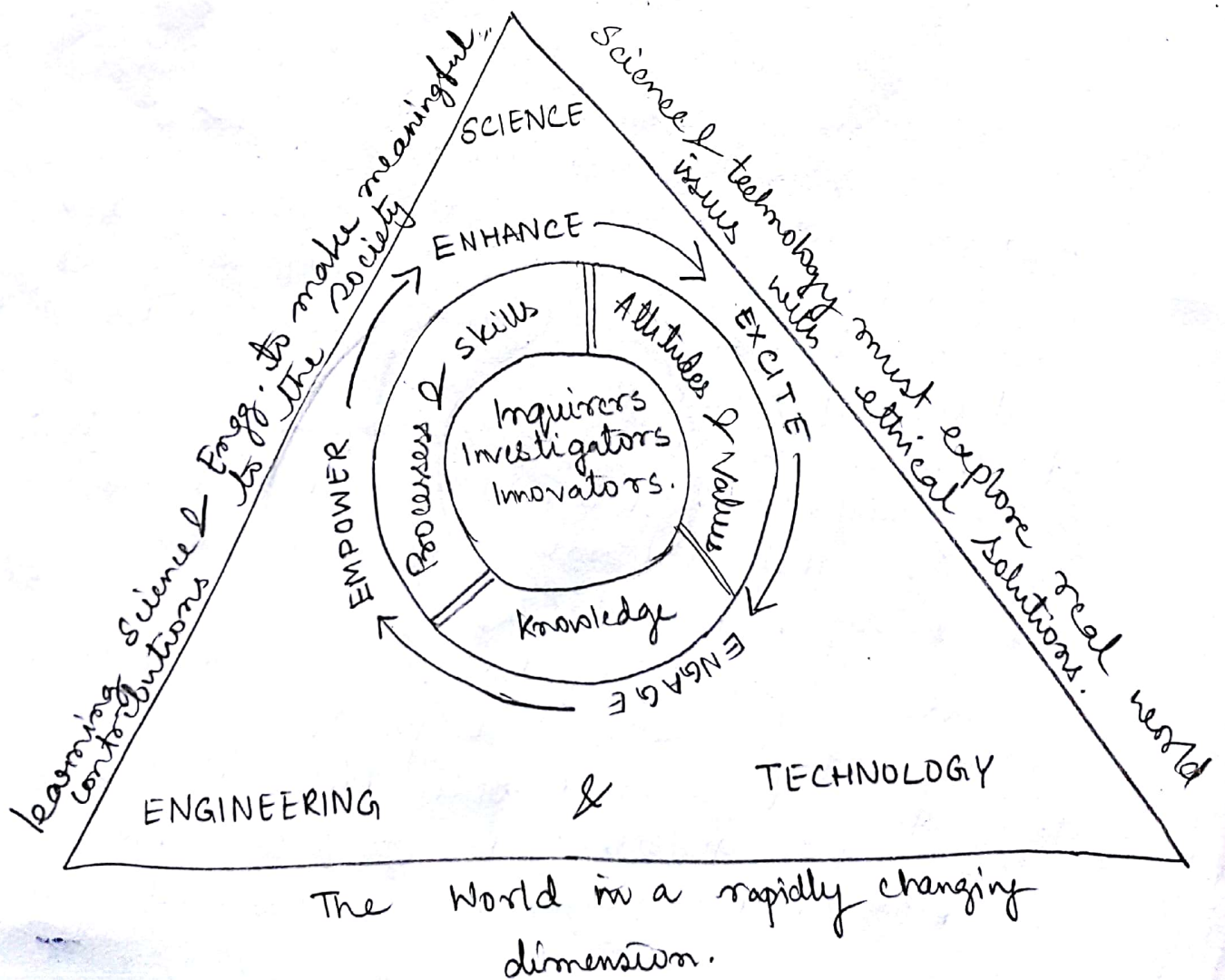
Ethics in Engg. Profession

Micro Ethics → Personal decisions about ethical situations in lives & careers ← Macro Ethics

Collective, Social responsibility of the engg. Profession and Societal decisions about technology

Individual Ethics

Professional Ethics

Professional Ethics

Social Ethics

Individual Ethics →
- Honesty
- Integrity
- Fairness.

Professional Ethics →
- Competance
- Adherence to safety
- Ensuring quality

Professional Ethics →
- Product liability
- Environmental protection
- Public Welfare

Social Ethics →
- Sustainable development
- Bioethics

Figure 2.

The World in a rapidly changing dimension.

that their work meets the highest standards of empirical and theoretical adequacy.

Ethics in engineering means acceptable behaviour in practice of engineering.

- Motive of their knowledge and skills is to enhance the human welfare
- Striving to increase the prestige and honour in engineering profession.
- Serving the public and their employee with complete honesty and being non discriminating.

The following schematic diagrams would explain, i) the model of ethics, ii) What Engineering would be like when it goes with ethical principles and iii) How a society would be when science would inform and seek to improve technology would the society and make life easier and better with ethical means.
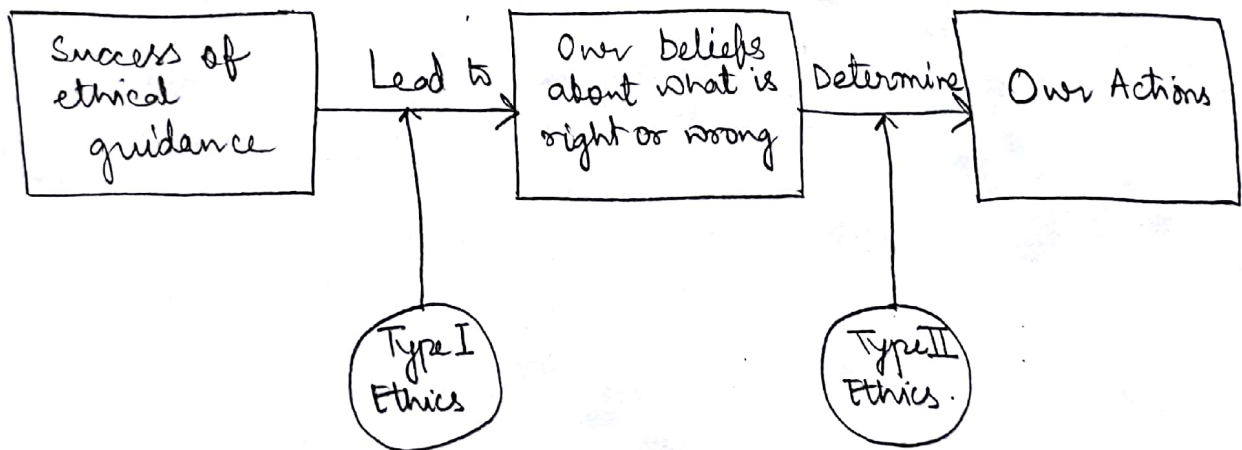

Fig1: Model of Ethics.

Understanding the true relation between Science, technology/Engineering and Ethics would pave the way to a successful society.