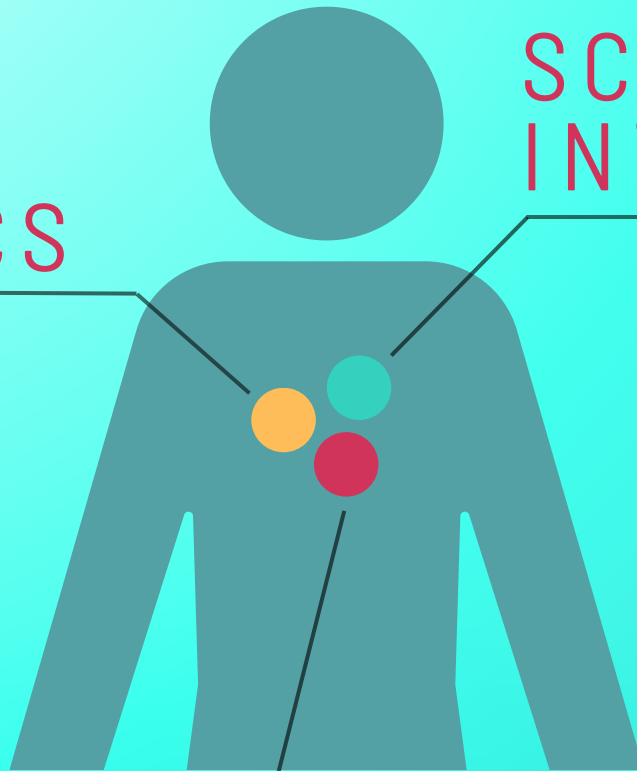UNIVERSITÉ
DE LORRAINE | DOCTORAT

SCIENTIFIC
INTEGRITY

ETHICS

DEONTOLOGY

3 PILLARS
TOWARD A
RESEARCH OF
EXCELLENCY,
ETHICS
AND RESPONSIBLE

ETHICS, DEONTOLOGY, SCIENTIFIC INTEGRITY :
three related yet very different concepts.

The fields of ethics, deontology and scientific integrity have to be distinguished from one the other, even though they all aim at targeting scientific excellency.

ETHICS

The big questions arisen by science progress and their societal repercussions

Individual/personal dimension, related to one's own values

Cultural dimension that invites discussion

=>"act in consciousness"

DEONTOLOGY

Obligations and duties imposed to a profession, a function or a responsibility (collective dimension)

The existence of codes of deontology within some professions (normative value of deontology)

Control on links of interest and hold of several activities/jobs at the same time

The lack of respect for deontology can lead to sanctions (breach of professional ethics): deontology has a legal character

SCIENTIFIC INTEGRITY

Rules that govern the practice of research

Refers to expectations that imply probity, honesty, rigor, transparence, impartiality, integrity...

"Classical" breaches to SI:
Fraud
Falsification
Plagiarism
Completed with a "grey zone" that includes among others criticizable behaviors related to publications, or research hiding links of interest

« Ethics invite us to reflect on the values that motivate our actions and their consequences, and appeals to our sense of morality and responsibility. Deontology brings together the duties and obligations imposed on a profession, a function or a responsibility. As for scientific integrity, it concerns the "good" conduct of research practices.»
https://www.cnrs.fr/fr/ethique-deontologie-integrite-scientifique-et_-lancement-dalerte

ETHICS REFERS TO A SET OF MORAL VALUES THAT ALLOW US TO DEFINE LIMITS AND DUTIES. IT ANALYSES THE RELATIONSHIP OF THE ONESELF TO THE WORLD, AND THE BEHAVIOR OF PEOPLE IN SOCIETY.

It can be individual (what are the values I hold, personally or professionally) or collective (the values attached to a work group, to a community of stakeholders, can make it possible to define the rules or standards that are then applied within deontological framework). Within professional life, ethics gathers all the moral values of oneself (or a group of people) in the practice of their professional activity.

Ethics is a reflective process; it leads to taking "a step aside" to look at what motivates one's action in order to choose the most appropriate conduct.
Without being a synonym of the word, ethics is close to morality and often echoes to universal moral principles: no stealing, no lying, etc...

Ethics applied to research leads to being aware of the social and societal impacts that the object of research can have, and can produce debates on the stakes of an innovation (GMOs or the use of nuclear power for the production of electricity for example)

In the field of health, research involving human beings (RIPH in French) require that an ethical opinion be issued (via a Committee for the protection of people or a research ethics Committee (1), depending on the type of research) before the research begins. The focus will most particularly be on the benefits/risks ratio; if the scale leans towards risks for a minimal benefit, the research might not be that relevant.

Bearing an ethical view allows to contribute to scientific rigor questioning what is right for the person involved or more broadly for society, on the means chosen to achieve the result (would it be good or bad, appropriate or inappropriate etc...?), and on the consequences of the research.

(1) At the Université de Lorraine : Research Ethics Committee (Comité d'Éthique de la recheche) – UL (CER-UL)

DEONTOLOGY CAN BE DEFINED AS THE SET OF MORAL OBLIGATIONS, RIGHTS AND DUTIES THAT EACH MUST RESPECT WITHIN THE FRAME OF THEIR PROFESSIONAL ACTIVITY.

The deontological principal that are most frequently mentioned are integrity, probity, dignity, impartiality, secrecy and discretion, neutrality, secularity, obedience to hierarchy, and professional confidentiality. Conflicts of interest prevention and holding multiple posts declaration can be added to the list.

A certain number of profession adopted their own deontological code:

- Magistrates
- For doctors, dental surgeons and midwives: The State Council enacted a deontological code under the form of a decree (article L.4127-1 of the public health code), specific to each of the three professions and prepared by their respective professional boards. To be noted: even though it has no judicial value, the Hippocratic oath is considered as one of the founding texts of medical deontology
- Lawyers
- Architects
- Police
- Etc.

The Civil Service Code, in its wording resulting from law n°2016 of 20 April 20, 2016 on deontology and the rights and obligations of civil servants, reaffirms the fundamental values of public service by including in the general status of civil servants the obligations of dignity, impartiality, integrity, probity, neutrality and respect for secularity.

DEONTOLOGY

DEONTOLOGY

The code also introduces the notion of **conflict of interest**, specifying that it is the duty of a public servant to immediately put to an end or prevent from any conflict of interest that can or might include them (interference between one person or several people, on the personal or professional level, and public or private interests that could jeopardize the objectivity of a decision, the neutrality of one person or lead to taking illegal interests for example).

It reinforces the rules on the fact of **holding multiple posts**, not allowing anymore to accumulate a full time job with an auto entrepreneur status, create or take over a firm matriculated on the commercial register or on the occupation register. It is also forbidden for public servants to participate in boards of direction of profit-making companies or associations.

However, the public servant who has a full time occupation can, if they request it, be authorized by their hierarchical authority to have a part time occupation (of a minimum of 50% of their work time) to create or take over a company, and to exercise, as such, a private lucrative activity, under certain conditions.

The decree n°2017-519 of April 10, 2017 introduces the obligation to designate within the three public services (State, local and hospital) a deontology referent (2) in charge of dealing with the reported breaches in deontology and give any public agent (civil servant or contract employee) who would request it, useful advice on the respect of deontology principles of public service.

(2) The UL Deontology Referent works in conjunction with an internal UL Deontology Commission.

« SCIENTIF INTEGRITY AS DEFINED IN <u>ARTICLE L. 211-2 OF THE RESEARCH CODE</u> REFERS TO ALL THE RULES AND VALUES THAT MUST GOVERN RESEARCH ACTIVITIES IN ORDER TO ENSURE THEIR HONEST AND SCIENTIFICALLY RIGOROUS CHARACTER (3).

It applies to any scientific field and is based on respect for good practice defined by the scientific community, thus contributing to the quality of scientific results.

Violating good scientific practice can lead to a breach of scientific integrity, the most common forms being scientific fraud commonly known as FFP (fabrication, falsification, plagiarism):

- **Fabrication :** making up data or results and having them considered authentic, producing false data, etc.
- **Falsification** : selectively excluding data, intentionally misinterpreting data, manipulating images, etc.
- **Plagiarism :** using the work, the ideas (formalized), the contents (text, image, graph, table, etc.) in whole or in part as your own without the consent of its author or without quoting your sources appropriately (breach of copyright).

It may also include, but is not limited to, altering the authorship or denying the role of other researchers in publications (for example, not respecting the right author order or forgetting an author), refraining from publishing research results, self-plagiarizing (referring to significant portions of your own publications without quoting the original), unnecessarily extending the bibliography of a study, ignoring alleged breaches of scientific integrity of other researchers, etc.

Another possible breach is the lack of transparency regarding the potential links of interest between a researcher and a person or a private or public structure and that may affect their neutrality.

The circular letter n°2017-040 of March 15, 2017 from the Ministry of National Education, Higher Education and Research, related to scientific integrity policy, requires signing stakeholders of the Deontology Charter of research careers to appoint a Scientific Integrity Referent (4) within their structure.

The mission of these referent people is to address, usually with the help of a Scientific Integrity Committee, the breaches of SI they are made aware of and to promote the SI within their structure. They are coordinated at the national level within a RESINT (RESeau INTégrité scientifique) network.

(3) Circular-letter NOR MENR1705751C n°2017-040 of March 15, 2017 related to scientific integrity policy within higher education institutions and their groupings, research organizations, scientific cooperation foundations and institutions contributing to the public service of higher education and research
(4) The UL Scientific Integrity Referent works in conjunction with a Scientific Integrity Committee.

To illustrate or to go further….

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- MOOC Ethique de la recherche ; Université de Lyon ; plateforme Fun Mooc
- DROLET Marie-Josée ; « Six types de situations éthiques inhérentes à la pratique professionnelle : les comprendre pour mieux les repérer » ; 2019 ; Nutrition Science en évolution, 17(2), 9-13 ; https://doi.org/10.7202/1066309ar
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- CHARMILLOT Maryvonne ; « Procédures éthiques et postures épistémologiques : comment valoriser la diversité des démarches de recherche ? » : 2017 ; dans BURTON-JEANGROS Claudine (dir.) ; L'Éthique (en) pratique : la recherche en sciences sociales, Sociographe n° 34, Université de Genève, pp. 19-39 ; https://www.unige.ch/sciences-societe/socio/fr/publications/dernierespublications/sociograph-34-sociological-research-studies

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- AUBIN Emmanuel ; « La déontologie dans la fonction publique » ; Ed. Gualino ; 2020 -ZARCA Alexis (sous la direction de) ; « Les outils au service de la déontologie » ; Ed. Dalloz ; 2020
- « Charte française de déontologie des métiers de la recherche » ; 2015 ; consultable sur https://www.hceres.fr/fr/documentation-integrite-scientifique

Scientific integrity:
- CORVOL Pierre ; « Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique » (rapport remis à Thierry Mandon, Secrétaire d'Etat chargé de l'Enseignement Supérieur et de la Recherche) ; juin 2016
- GALLIE Emilie-Pauline, VALLA Pierre, BEER Marie-Caroline ; « Les dispositifs de prévention en faveur de l'intégrité scientifique dans les établissements d'enseignement supérieur et de recherche » (rapport) ; IGESR ; juin 2020
- MOOC Intégrité scientifique dans les métiers de la recherche ; Université de Bordeaux ; plateforme Fun Mooc
- https://www.hceres.fr/fr/documentation-integrite-scientifique : divers documents et publications sur l'intégrité scientifique
- https://anr.fr/fr/lanr/engagements/lintegrite-scientifique/
- La Mission à l'intégrité scientifique du CNRS : https://mis.cnrs.fr/mis/
- ALLEA ; « Code de conduite européen pour l'intégrité en recherche »