



An introduction to data ethics

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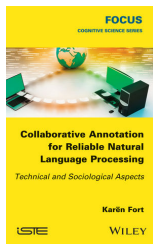


Sources of inspiration

- ▶ Coursera MOOC from the University of Geneva (2018): *Le Bien, le Juste, l'Utile. Introduction aux éthiques philosophiques*
- ▶ edX MOOC from the University of Michigan (2018): *Data Science Ethics*
- ▶ *Ethical IT Innovation* (2016). S. Spiekermann. CRC Press.
- ▶ *L'éthique aux interfaces entre biologie/santé et sciences de l'information* (2016). H. Chneiweiss. (with his approval)
- ▶ *L'éthique appliquée* (2010). M. Marzano. PUF
- ▶ Wikipedia

Where I'm talking from

- ▶ Language resources creation for NLP, esp. using crowdsourcing



- ▶ Ethics and NLP



Feedback from the DIY

Definitions

Motivation and Goal

A Question of Time

To finish

What did you learn?

- ▶ as a citizen
- ▶ as a NLP specialist

Feedback from the DIY

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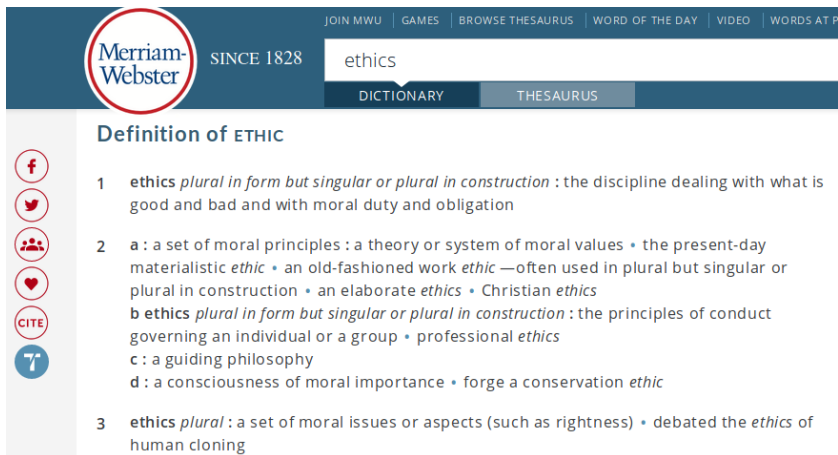
Motivation and Goal

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Ethics?

soft law



The screenshot shows the Merriam-Webster website interface. At the top, there is a navigation bar with links for 'JOIN MWU', 'GAMES', 'BROWSE THESAURUS', 'WORD OF THE DAY', 'VIDEO', and 'WORDS AT P'. The Merriam-Webster logo is on the left, with 'SINCE 1828' next to it. A search bar contains the word 'ethics'. Below the search bar are two tabs: 'DICTIONARY' (selected) and 'THESAURUS'. On the left side of the page, there is a vertical sidebar with social media icons for Facebook, Twitter, and a group of people, along with a 'CITE' button and a '7' icon. The main content area is titled 'Definition of ETHIC' and contains three numbered definitions.

Merriam-Webster SINCE 1828

ethics

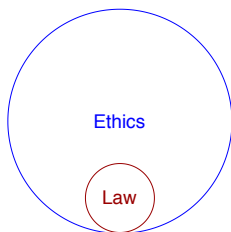
DICTIONARY THESAURUS

Definition of ETHIC

- ethics** *plural in form but singular or plural in construction* : the discipline dealing with what is good and bad and with moral duty and obligation
- a** : a set of moral principles : a theory or system of moral values • the present-day materialistic *ethic* • an old-fashioned work *ethic* —often used in plural but singular or plural in construction • an elaborate *ethics* • Christian *ethics*
b *ethics plural in form but singular or plural in construction* : the principles of conduct governing an individual or a group • professional *ethics*
c : a guiding philosophy
d : a consciousness of moral importance • forge a conservation *ethic*
- ethics** *plural* : a set of moral issues or aspects (such as rightness) • debated the *ethics* of human cloning

<https://www.merriam-webster.com/dictionary/ethics>

Ethics is not law

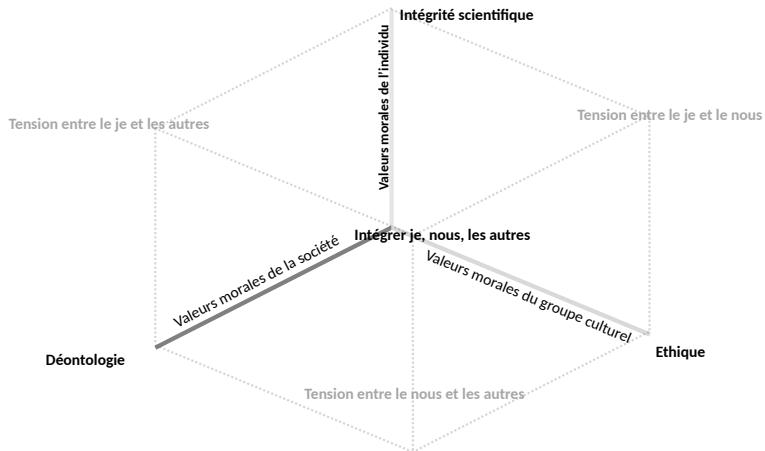


Law: sets minimum standards (rules and regulations)

vs

Ethics: sets maximum standards (guidelines)

Ethics vs scientific integrity vs deontology



Courtesy of J. Haiech (Univ. of Strasbourg)

Ethics vs scientific integrity vs deontology



Ethique / Intégrité / Déontologie:

→ *trois piliers de l'excellence scientifique*

Ethique en recherche	Intégrité scientifique	Déontologie du fonctionnaire
Les grandes questions que posent les progrès de la science et leurs répercussions sociétales	Les règles qui gouvernent la pratique de la recherche	Le contrôle des liens d'intérêts & cumuls d'activité des fonctionnaires
Dimension culturelle: doit se discuter en permanence	Dimension universelle: s'impose comme un code professionnel	Loi Le Pors 1983 rév. 2016: "Le fonctionnaire exerce ses fonctions avec dignité, impartialité, intégrité et probité"
Des comités	Des référents chercheurs	Des référents juristes



From Olivier Le Gall, CoFIS

What do you know about ethics?

- ▶ well-known ethical issues?
- ▶ ethical institutions?
- ▶ famous thinkers?
- ▶ well-known texts/documents about ethics? turning points?

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Why should you care?

- ▶ because you are a citizen
- ▶ because ethical products sell better [Spiekermann, 2015]
- ▶ because if you don't as NLP specialists, others with less knowledge will

What this course will (hopefully) bring you

No ready-made solution

BUT

tools to think by yourself

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Who's dealing with it?

Is (techno)Science Necessarily Good?

(some) Turning Points in the XXth century

To finish

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A very old question (the oldest?) in a brave new world



From Lysippe — Eric Gaba (User:Sting),

July 2005., CC BY-SA 2.5

Ethics is a domain from...



What discipline/domain thinks a lot about ethics?



(some) French institutions dealing with ethics (in general)

- ▶ **CNIL**: Commission Nationale de l'Informatique et des Libertés
- ▶ **CCNE**: Comité consultatif national d'éthique
- ▶ **CERNA**: Commission de réflexion sur l'éthique de la recherche en sciences et technologies du numérique d'Allistene (now integrated into the CCNE)
- ▶ **COMETS**: Comité d'éthique du CNRS
- ▶ **CEI**: Comité d'éthique de l'Inserm
- ▶ **COERLE**: Comité opérationnel d'évaluation des risques légaux et éthiques (Inria)

International institutions dealing with ethics (in NLP)

- ▶ ACL ethics committee:
 - ▶ Co-chairs: Min Yen Kan, Yulia Tsvetkov, Karën Fort
 - ▶ Members: Luciana Benotti, Mark Drezde, Pascale Fung, Dirk Hovy, Jin-Dong Kim, Malvina Nissim

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Is (the outcome of) science necessarily good?

Are there things that are possible to do that we agree we should not?



(c) <https://www.starwars.com/databank/clone-troopers>

Is (the way we do) science necessarily good?

Are there things that are possible to do that we agree we should not?

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The Nuremberg Code

originated before, but finalized during "the Doctors' Trial" (1947)



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10 main principles, including:

- ▶ Respect of the subject:
 - ▶ informed consent
 - ▶ freedom to quit the experiment
- ▶ Beneficence:
 - ▶ favorable risks/benefits balance
- ▶ Justice:
 - ▶ positive results for society

The Belmont Report [Bel, 1979]

originated from "Tuskegee Syphilis Experiment" (1932-1972)



By National Archives Atlanta, GA

The Belmont Report [Bel, 1979]

originated from "Tuskegee Syphilis Experiment" (1932-1972)



The report includes 3 main principles:

- ▶ Respect of the subject:
 - ▶ informed consent
- ▶ Beneficence:
 - ▶ favorable risks/benefits balance
- ▶ Justice:
 - ▶ fair selection of the subjects

Tableau 1. Bref historique des textes fondateurs de l'éthique et exemples des raisons de leur rédaction

Codes éthiques fondateurs	Code de Nuremberg (traduction française in ²⁷)	Déclaration d'Helsinki	Rapport Belmont
Quand, où ?	1947, Etats-Unis	1964, Finlande (dernière révision de 2000)	1978, Etats-Unis
Qui ?	Juges du Tribunal militaire américain de Nuremberg	Association médicale mondiale (AMM)	Commission nationale américaine pour la protection des sujets humains dans la recherche biomédicale et comportementale
Pourquoi ? Précisions	<ul style="list-style-type: none"> Expériences des médecins nazis sur des prisonniers en camp de concentration Trois officiels nazis et vingt médecins impliqués, dont : <ul style="list-style-type: none"> Heinrich Himmler : mécène et directeur de la médecine nazie, parfois surnommé « le meurtrier du Siècle ». Met en œuvre la solution finale Josef Mengele : tortures, sévices corporels lors d'expériences médicales absurdes et inhumaines entraînant souvent la mort, à Auschwitz Aribert Heim : vivisection humaine sur les détenus de Mauthausen 	<ul style="list-style-type: none"> Fait suite aux atrocités de la Seconde Guerre mondiale AMM : association internationale de médecins (fondée en 1947 à Paris) dont le but humanitaire est de mettre en place les normes les plus rigoureuses dans le domaine de la médecine, l'éthique et l'enseignement médical 	<ul style="list-style-type: none"> Création le 12 juillet 1974 du National research act (Loi publique 93348 sur la recherche) Tuskegee : expériences sur la syphilis (1932-1972, Etats-Unis) : ouvriers agricoles noirs et pauvres, non traités par les médecins (diagnostic donné : « mauvais sang ») pour observer l'évolution de la maladie, et ce même après l'efficacité avérée du traitement à la pénicilline. L'expérience cesse en 1972, lorsque le Washington Star²⁸ révèle l'affaire. N'a jamais donné de résultats concluants Willowbrook : étude sur l'hépatite (1950-1960, Etats-Unis) : virus délibérément inoculé à des enfants placés en établissements psychiatriques. Selon le formulaire de consentement signé par les parents, est administré un vaccin et non le virus. Justification d'alors : ces enfants seraient infectés de toute manière ; en participant à l'étude, ils seraient mieux soignés.
Principes généraux	<ul style="list-style-type: none"> Bienfaisance : rapport risque/ bénéfice favorable Respect du sujet de recherche : consentement volontaire, capacité de consentir, possibilité de quitter l'essai Justice : utilité pour la société 	<ul style="list-style-type: none"> Bienfaisance : rapport risque/ bénéfice favorable Respect du sujet de recherche : consentement informé Justice : distinction entre recherche thérapeutique ou non Responsabilité : pas uniquement au chercheur, avis extérieur nécessaire (comité d'éthique) 	<ul style="list-style-type: none"> Bienfaisance : rapport risque/bénéfice favorable (distinction entre risques «minimes» et risques «plus que minimes») Respect du sujet de recherche : consentement éclairé Justice : sélection équitable des sujets
Forme	Dix principes fondamentaux	Loi consensuelle, nombreux paragraphes	Paragraphes agencés en trois catégories éthiques et applications

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WYHTR: What You Have To Remember

A bit of work



- ▶ it's a question of time (spent questioning/thinking)
- ▶ others have thought about it before (get inspired)
- ▶ no ready-made solution

A presentation (to be done during the last TD, Oct 17th)

On a subject you choose (I can help), related to ethics in NLP (a bit like the DIY you just did):

- ▶ on Oct 17th (1 pm-3.5 pm / 3.5 pm-6pm)
- ▶ groups of 3
- ▶ 20 min. of presentation, 10 min. for questions
- ▶ make it:
 - ▶ professional
 - ▶ sober
 - ▶ a deep analysis of an issue

A bit of thinking

Should we use the medical research results obtained in the concentration camps during the Second World War?

<https://www.nejm.org/doi/full/10.1056/NEJM199005173222006>



(1979).

The Belmont report : Ethical principles and guidelines for the protection of human subjects of research.



Chenaud, C., Gigon, F., Ricou, B., and Merlani, P. (2008).

Le consentement éclairé pour la recherche aux soins intensifs en suisse : quelle solution ?

Rev Med Suisse, 4:2691–2695.



Dittrich, D. and Kenneally, E. (2012).

The Menlo Report: Ethical Principles Guiding Information and Communication Technology Research.

Technical report, U.S. Department of Homeland Security.



Spiekermann, S. (2015).

Ethical IT Innovation: A Value-Based System Design Approach.

CRC Press.