Programme of advanced academic doctoral studies –

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Scientific research, communication and deontology

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Course outline

1. Deontology of scientific research and communication
   - 1.1. Copyright law
   - 1.2. Plagiarism and plagiarists
   - 1.3. Misconduct in scientific communication
2. The doctoral thesis as a scientific paper

Deontology of scientific research and communication

- **Copyright**
  - Copyright law
  - Plagiarism and plagiarists

- **Misconduct in scientific research and communication**
  - Circumstances and causes
  - Forms of misconduct

1.1. Copyright law

Work – any specific, real, original, intellectual literary, artistic or scientific creation, irrespective of its nature, form of expression, value or aim.

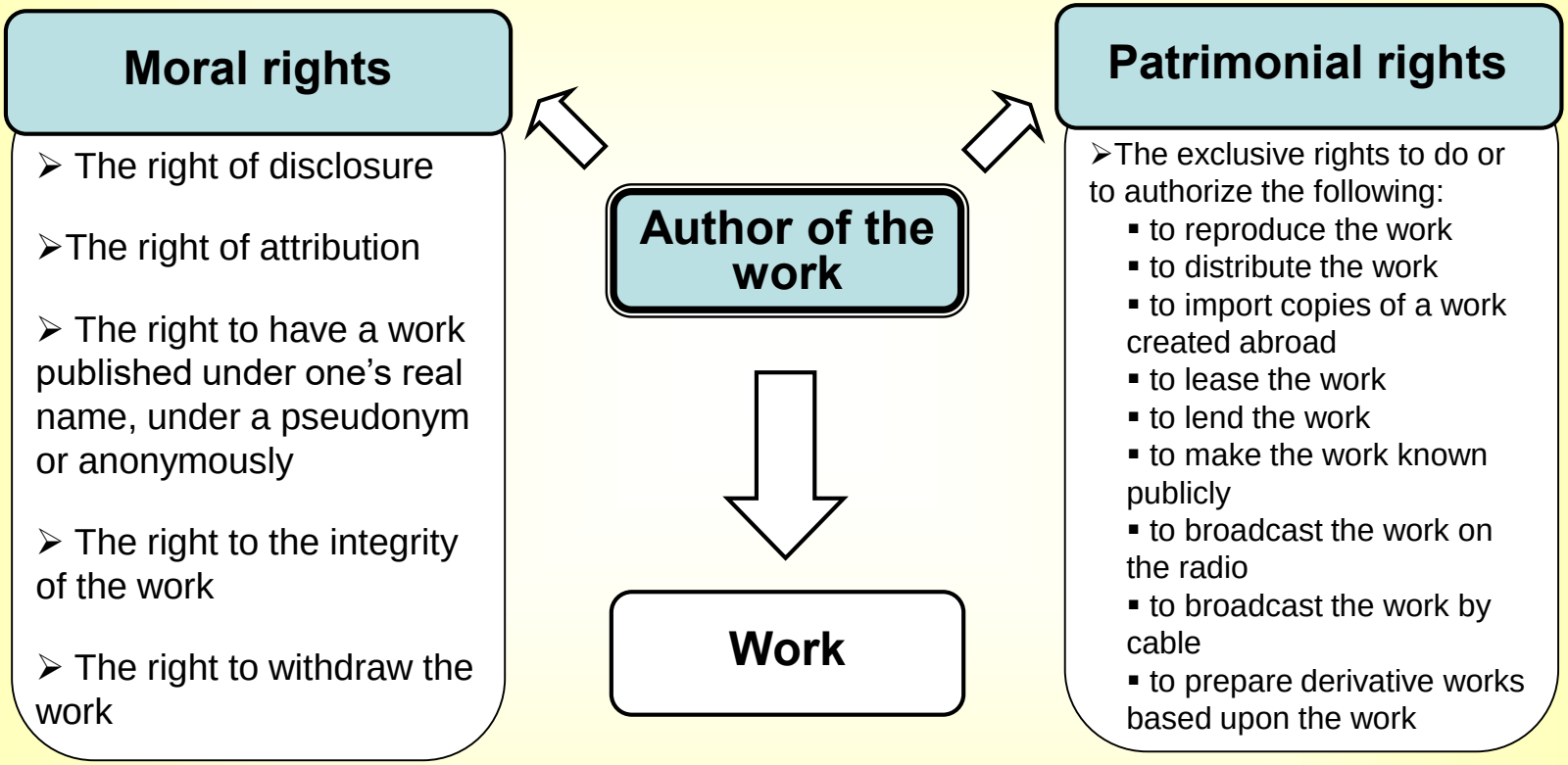
- a piece of work becomes a **copyright object** by its simple manifestation as a product of intellectual creation;
- the **author of the work** is the natural person/persons who created that work or, in the absence of any evidence to the contrary, the person/persons under whose name the work was communicated.

Copyright on a piece of work of intellectual creation refers to the person / persons considered as the authors of that piece of work, and is granted by law.

- **Moral rights** promote and protect the personality and the public image of an author, in terms of the work they have created.
- **Patrimonial rights** regulate the ways in which and the conditions under which the author may use and make the most of the work created.

Law no. 8/1996 states the legislation in Romania concerning copyright and related rights. At present, this law, amended by including the following legislative acts, is still in effect: *Law no. 285/2004*; *Emergency Ordinance 123/2005, Law no. 329/2006 and law 202/2010 (http://www.legi-internet.ro/legislatie-itc/drept-de-autor/legea-dreptului-de-autor.html)*.

1. Deontology of scientific research and communication



1. Deontology of scientific research and communication

Copyright protection, and protection of patrimonial rights, in particular, refers mainly to the **way in which the content of a work is presented**, i.e. the way in which it is distinctively expressed by language, structure, spatial and temporal design, stages of development, specific features, etc.

- **Copyright protection does not apply to** the ideas, theories, concepts, scientific findings, methods, principles, inventions, etc. themselves expressed in a work, irrespective of the way in which they have been borrowed, written, explained or expressed within that work.
- **Authors may transfer**, under well-determined conditions and by legal agreement, their patrimonial rights to other natural persons/legal bodies, **by claiming and getting fair remuneration**, appropriate to the worthiness of the work in question.

Copyright infringement, acc. to Law no. 8/1996 may lead to **civil or criminal penalties**.

To transfer = *to convey one's right to another person, on grounds of a transfer agreement; to waive.*

1. Deontology of scientific research and communication

In exceptional, well-defined circumstances, copyright law allows **the use of a work** already available to the public **for free, without the author's consent.**

- Copyright law allows short, fair **quotations,** justified by their purpose (e.g. analysis, comment, review, example, etc.); the source of the work and the name of the author should be indicated.
- The above provisions are applicable to the works of intellectual creation available on the **public domain**, with no obligation to indicate the source of the work and the name of the author**:**
  - works without copyright ownership or copyright claims;
  - public information and facts found in reference works such as encyclopedias and teaching materials, and respectively, facts, theories, ways of thinking and acting familiar to those working in specific science and technology related fields;
  - works free of copyright restrictions, provided for non-commercial use, that can be used by anyone for any other purpose.

1.2. Plagiarism and plagiarists

Plagiarism - an action (but also the **result** of such an action):

- wrongful appropriation of another author's work of intellectual creation, protected by copyright law, in whole or in part, irrespective of the way in which and the extent to which it was carried out;
- reproducing, as if one's own, a work that has already been made public, in whole or in part, without the acknowledgement of the copyright holder, as required by law;
- presenting, as if one's own, a work of intellectual creation, in whole or in part, by quotation or by disguised paraphrasing;
- taking and using in one's own publicly presented works, within legal bounds, ideas, words, expressions, logical structure, tables, figures, etc. from a copyright material, without clear reference to the original work and to its author(s), as required by law;

to DISGUISE = to hide the true character of something, of a situation, etc. (by a counterfeit form or appearance); to conceal, to dissimulate.

1. Deontology of research and scientific communication

Plagiarism is, and will always be, an act of intellectual or/and material fraud, irrespective of its cause (ignorance and negligence for unintentional plagiarism, or malevolence for intentional plagiarism) and of its manifestation,

Avoiding the risks of unintentional plagiarism involves the systematic application of legal provisions and best practice guidelines in the act of **quoting** and **paraphrasing** the content of other authors' scientific papers:

- **Quoting** is the exact reproduction, in one's own works, of passages from the works of other researchers.
  - important, clearly stated ideas and phrases;
  - other researchers' acknowledged opinions, related to the validity of one's own research findings.
  - By using the autor´s words, **word for word**, we are doing a **citation** and it will be between double quotation "… xxx…yyy…zzz…".
- **Paraphrasing** means restating ideas taken from other scientific publications in one's own paper, by rephrasing the original text without altering its meaning.
  - linguistic rephrasing;
  - rephrasing by logical reordering.

1. Deontology of research and scientific communication

The roots and implicitly, **the causes of intentional, premeditated plagiarism** are various and complex, the most important having to do with unethical behaviour.

Such plagiarists lack basic moral values, aiming for a rapid climb to the top of the professional and social ladders, but uncapable of long-term, skills-based commitment in open competition with competent, hard-working and honest competitors.

There has been a considerable rise in academic plagiarism detection and, consequently, in the public exposure of plagiarism, mainly due to**:**

- the significant increase in number of *online*, high-quality scientific papers and journals;
- the globalisation of science, which has greatly facilitated the smooth exchange, both mediated and unmediated, of scientific information among researchers all over the world;
- the development and implementation of efficient plagiarism detection software;
- the ever stronger involvement of scientific communities in the identification and sanctioning of misconduct, in general, and of plagiarism and plagiarists, in particular.

1.3. Misconduct in scientific communication

Circumstances and contributing factors

- Contemporary scientific research is a complex and extensive lucrative activity. Despite appearances, the battle for research funding is harsh and cannot always avoid **conflicts of interest, influence peddling and even corruption.**
- Completing certain research projects of great difficulty, based on experiments difficult to reproduce, under conditions that may have affect the security and the health of those involved, can put great strain on the availability and morality of scientific researchers.
- In order to increase the chances of research funding, some researchers (unfortunately, quite a few) unjustly 'inflate' the number, importance and relevance of their scientific papers.
- The following factors contribute directly to the risk **of misconduct** in scientific communication:
  - ever greater efforts to attain and maintain the standards of quality and performance required by truly competitive scientific research;
  - self-preservation, excessive ambitions and pride and moral instability of certain scientific researchers;
  - inflated quantitative criteria for scientific publication at the great expense of quality.

1. Deontology of research and scientific communication

Forms of misconduct

- in the presentation and exploitation of empirical research findings:

- presentation of empirical data altered by gross errors, such as the omission to apply statistical tests to assess and validate the data;
- presentation of false data, obtained by the selective omission of certain real, inconvenient data, and possibly, their replacement with fabricated data, consistent with *a priori* opinions or points of view;
- presentation of fake, fabricated data as findings of a real, yet never performed experiment;
- incomplete/inaccurate description of the methods of investigation applied, so that the experiment in question could not be reproduced;
- faulty and/or deliberately biased interpretation of the findings of an empirical research otherwise performed thoroughly and accurately;
- simultaneous or successive presentation of the same empirical data in several scientific papers, without any mention of it;
- submission for publication, or even worse, simultaneous publication, partially or entirely, of a paper in several scientific publications (self-plagiarism).

Forms of misconduct

- in assuming and claiming authorship:

- assuming authorship of copyright ideas, expressions, data, images, etc. (plagiarism);
- incomplete citation of some major bibliographical references used in a scientific paper partially or entirely;
- public communication, in one's own papers, of information or knowledge accessed/acquired unlawfully, in confidence or from other researchers' unpublished papers;
- public communication of a scientific paper written by a team of researchers, without the individual consent on the final version of the paper of all team members;
- public communication of a joint scientific paper on one's behalf, without the consent of each team member;
- assuming unlawful authorship, from a position of authority (e.g. superior/supervisor), of a paper written entirely by young researchers enrolled in specific bachelor, master, doctoral, etc. programmes;
- assuming and claiming authorship of a scientific paper with no real contributions, for the purpose of increasing one's scientific 'production';
- excessive self-citation;
- citation, for whatever purpose, of minor or even unopened bibliographical references.

Forms of misconduct

- conflicts of interest:

- assuming and claiming authorship of one/several scientific papers as public recognition, out of will or of obligation, of some nonexistent contributions of researchers who are in conflict of interests with the real authors of the papers in question;
- disguised evaluation of previous conflicts of interests, or of those arisen during scientific research or communication;
- interested or biased (for or against) lack of objectivity in the assessment of scientific papers submitted for publication or of those included in the application forms for academic or scientific position;
- analytical assessment of certain papers is replaced by consensual acceptance (majority vote in selected communities), as a form of rejecting diverging opinions;
- deliberate disregard and/or concealment of certain negative, harmful effects caused by the investigated phenomena and processes, and respectively, by the application of research findings.

2. The doctoral thesis as a scientific paper

Premises

- From the available multitude of scientific communication channels and presentation forms, the main providers of scientific information are as follows :
  - **original scientific papers,** reviewed by experts and published in scientific journals or proceedings;
  - **scientific research reports**, assessed and validated by competent authorities, in general, and **doctoral theses**, in particular.

- Most of the opinions, solutions and methods recommended throughout this course can also be applied in the planning, editing and communication of scientific papers with different forms of presentation.

Features of doctoral theses?

2. The doctoral thesis as a scientific paper

Credo [Niall Mc Mahon, 2005, http://www.niallmcmahon.com/planning_a_thesis.html]

Start reading about how to do it,

'learning-by-searching'

Start watching how others do it,

'learning-by-interacting'

Start doing it.

'learning-by-using'

2. The doctoral thesis as a scientific paper

Design

Content of future scientific paper?

Team of researchers – authors — PhD CANDIDATE

Main message of the paper?

Keywords and provisional title of the paper?

Target audience — OFFICIAL BOARD

Communication channel — INTERACTIVE COMMUNICATION AND PUBLICATION

Content of a doctoral thesis?

- accurate, trustful reflection of the findings resulted from a scientific research process, promoting innovative and original elements meant to assess one's knowledge improvement in the field

- convincing evidence of the candidate's ability to independently perform a significant scientific research activity

Design

Thesis structure options [Paltridge, 2002]

Traditional Simple

1. Introduction
2. Literature Review
3. Materials and Methods
4. Results
5. Discussion
6. Conclusions

☆ ☆ ☆

Topic Based

1. Introduction
2. Topic 1
3. Topic 2
4. Topic 3
5. Conclusions

2. The doctoral thesis as a scientific paper

Design

Thesis structure options [Paltridge, 2002]

Traditional Complex ☆ ☆ ☆

1. Introduction
2. Literature Review
3. (Background Theory)
4. (General Methods)
5. Study 1
   - Introduction
   - Methods
   - Results
   - Discussion
6. Study 2
   - Introduction
   - Methods
   - Results
   - Discussion
7. Study 3
   - Introduction
   - Methods
   - Results
   - Discussion
8. Discussion
9. Conclusions

Topic Based

1. Introduction
2. Background to the Study
3. Research Article 1
   - Introduction
   - Literature Review
   - Materials and Methods
   - Results
   - Discussion
   - Conclusions
4. Research Article 2
   - Introduction
   - Literature Review
   - Materials and Methods
   - Results
   - Discussion
   - Conclusions
5. Research Article 3
   - Introduction
   - Literature Review
   - Materials and Methods
   - Results
   - Discussion
   - Conclusions
6. Conclusions

2. The doctoral thesis as a scientific paper

Design

Update constantly!

State of the art:

- critical and creative synthesis of primary, important and innovative bibliographical resources;
- emphasis on current scientific and technical problems and on the methods and means needed to solve them;
- identification of the problems that can be approached and solved within the doctoral school the candidate is enrolled in;
- correspondingly oulining the objectives, strategy and methods used in the future doctoral research

Final conclusions:

- revision of doctoral research findings and their relation to the initially assumed objectives and to the information in specialized literature ;
- presentation of one's original contributions in terms of concepts, methodology and content;
- detailed description of the methods, means and actions needed for future exploitation and development of the research findings

Bibliography

- information and documentation resources used in the elaboration of the thesis;
- publications reporting on the findings resulted from doctoral research

Editing

- Editing from initial/final to complex/in progress;
- Real time/spontaneous editing and review/previously scheduled editing, initial and final;
- Editing according to scientific research logic – defining the problem, launching hypotheses and potential solutions, testing, validation and generalization;
- Integrative editing, by correlating the new elements (ideas and evidence) and the findings and conclusions reported in previously edited sections;
- Editing by constant consideration of the opinions of research team members, of the scientific supervisor, and possibly, of expert reviewers.

2. The doctoral thesis as a scientific paper

Communication

- There are no legal regulations concerning the extent of a doctoral thesis, the quality requirements mainly targeting the content; the length of a doctoral thesis is usually around 150 pages;
- Given its interactive nature, the public defense of the doctoral thesis before the Examination Committee and before a specialized audience is/should be the final validation of doctoral studies:
  - the examination committee assesses the quality of the thesis as a scientific paper
  - the committee and the audience assess the candidate's scientific research abilities and skills by asking questions and exchanging competent opinions on the specific topic of the thesis
- High-quality PhD theses usually:
  - focus on some important and relevant research topics,
  - promote original approaches and contribute significantly to the development of the field,
  - uses available specialized literature to the best, in a professional manner, to design the research plan and to validate the findings,
  - meet the requirements of scientific editing,

UPT link: http://www.upt.ro/Informatii_studii-universitare-de-doctorat_266_ro.html
https://www.upt.ro/Informatii_phd-studies_266_en.html

- **Regulations for doctoral degrees**

1) Institutional regulations for the organization and development of academic doctoral studies at UPT

http://www.upt.ro/administrare/dgac1/file/2011-2012/regulamente/Anexa_10_CartaUPT_Regulament_doctorat.pdf

2) WORK INSTRUCTIONS: Public defense of doctoral theses at UPT

http://www.upt.ro/img/files/2018-2019/doctorat/HCA_nr71_06-2018_Instructiune_de_lucru_sustinere_publica.pdf